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Invertir en la población rural

Evaluación temática del apoyo prestado por el FIDA a la adaptación de los pequeños agricultores al cambio climático

Nota para los representantes en la Junta Ejecutiva

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Para **examen**

La siguiente revisión a la Evaluación temática del apoyo prestado por el FIDA a la adaptación de los pequeños agricultores al cambio climático se ha publicado en aras de exactitud. La revisión se refiere a la actualización del cuadro 13 del apéndice.

Índice

Agradecimientos

Esta evaluación temática comenzó bajo la orientación estratégica general de Oscar A. García, ex Director de la Oficina de Evaluación Independiente del FIDA (IOE), y finalizó bajo la orientación estratégica de Indran Naidoo, actual Director de la IOE. Fabrizio Felloni, ex Oficial encargado y actual Director Adjunto de la IOE, también aportó orientación estratégica a lo largo de todo el proceso. Dirigió la evaluación Suppiramaniam Nanthikesan, Oficial Principal de Evaluación de la IOE. La IOE reconoce con gratitud el tiempo y la energía aportados por las 742 personas entrevistadas y los 238 participantes en la encuesta electrónica que contribuyeron considerablemente a la base empírica de la presente evaluación.

El FIDA da las gracias a las oficinas en los 20 países en que se habían realizado estudios de caso, los funcionarios gubernamentales y las unidades de ejecución de proyectos por su paciencia, dedicación y apoyo a esta evaluación durante la pandemia.

Asimismo, la IOE desea expresar su sincero agradecimiento a la Dirección del FIDA, en particular a la División de Medio Ambiente, Clima, Género e Inclusión Social (ECG) y el Departamento de Administración de Programas (PMD), por el incansable apoyo prestado de forma repetida durante toda la evaluación.

Los consultores nacionales Berhanu Assefa, Juan Bol, Ana Ciolan, Chiabou Dadi, Ileana Alfaro De Holt, Elsa Furtado, Zein Hassan, Niranjan Khadka, Samat Kalmuratoy, Bakary Kone, Hyachinte Ndolennodji, Benard Muok, Prosper Niyonsaba, Laurien Ngirabanzi, Jose Peres, Albert Rakotonirina, Hany Shalaby, Sonia Suazo, Pakiza Shirinova y Netra Timsina prestaron un apoyo inestimable durante las condiciones adversas causadas por la pandemia representando al equipo de evaluación en sus respectivos países.

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Los exámenes documentales, los análisis de datos y los estudios de caso de países correspondientes a la evaluación contaron con el apoyo de Prashanth Kotturi (Oficial de Evaluación), Massiel Jiménez (Analista de Evaluación) y las consultoras de investigación Alice Formica, Margarita Borzelli Gonzales, Ioanna De Barros-Hatcher, Giulia Polastri, Laura Silici y Marion Triquet.

Serena Ingrati, Federica Raimondo y Valeria Parracino prestaron apoyo administrativo. Norah De Falco, Sarah Pasetto y Alexander Voccia, de la Unidad de Comunicación de las Evaluaciones de la IOE, contribuyeron a los aspectos editoriales y de comunicación de la evaluación y se encargaron de su supervisión.

El informe aprovechó los comentarios formulados por dos asesores independientes de la evaluación: Gonzalo Hernández Licona, ex Secretario Ejecutivo del Consejo Nacional de Evaluación de la Política de Desarrollo Social de México, y Rob van den Berg, ex Director de la Oficina de Evaluación Independiente del Fondo para el Medio Ambiente Mundial y ex Presidente de la Asociación Internacional de Evaluación del Desarrollo.

Resumen

Contexto y justificación

1. En 2019 la Junta Ejecutiva aprobó una propuesta de evaluación temática de la contribución del FIDA a la adaptación de los pequeños agricultores al cambio climático. El mandato del FIDA de invertir en la población rural pobre para mejorar la producción de alimentos y la seguridad alimentaria y erradicar la pobreza en las zonas rurales va indisolublemente ligado a la prestación de apoyo a la adaptación de los pequeños agricultores al cambio climático.

2. La agricultura en pequeña escala representa a escala mundial el 75 % de las tierras agrícolas y aporta más del 80 % de los alimentos consumidos en el mundo en desarrollo. Se prevé que el aumento de las temperaturas y los cambios en los regímenes de lluvias, sumados a incrementos en la frecuencia y la magnitud de los fenómenos meteorológicos extremos (como inundaciones, sequías y ciclones) y a cambios en la estacionalidad de los patrones meteorológicos, eleven la vulnerabilidad de los pequeños agricultores al cambio climático. Recientemente, el Grupo Intergubernamental de Expertos sobre el Cambio Climático de las Naciones Unidas (IPCC) advirtió de que el cambio climático avanzaba a mayor ritmo de lo previsto y que la vida en la Tierra haría frente a consecuencias catastróficas si no se adoptaban medidas drásticas de inmediato[1].

3. Las evaluaciones que se ocupan específicamente de la vulnerabilidad de los pequeños agricultores al cambio climático siguen siendo limitadas, aunque se dispone de amplia información sobre los efectos previstos del cambio climático en la agricultura y en las medidas de adaptación necesarias para reducir esos efectos al mínimo. Además, los mecanismos financieros de apoyo a las medidas de adaptación dirigidas a beneficiar a los pequeños agricultores a menudo también están fragmentados o son inadecuados.

4. En este contexto, en los últimos 30 años los proyectos del FIDA han ayudado a los pequeños agricultores pobres que viven en condiciones agroecológicas marginales o desfavorables a gestionar de forma sostenible los recursos naturales y aumentar la productividad agrícola, incluso en condiciones climáticas adversas. El Fondo calificó formalmente la adaptación al cambio climático como prioridad institucional en la Octava Reposición de los Recursos del FIDA (FIDA8) (2010-2012). Desde entonces, ha movilizado más de USD 500 millones para financiar intervenciones de adaptación al cambio climático. En el marco de la próxima FIDA12 (2022-2024) el FIDA se ha comprometido a velar por que el 40 % de su programa de préstamos y donaciones se centre en el clima.

5. La prolongada interacción del FIDA con el programa sobre el cambio climático, la labor de incorporación de la adaptación al cambio climático en sus operaciones y la ampliación de las inversiones climáticas justifican de forma apremiante y oportuna la necesidad de emprender una evaluación completa que haga balance y aporte enseñanzas para mejorar las intervenciones del FIDA, en curso o futuras, dirigidas a fortalecer de forma sostenible la resiliencia climática de los pequeños productores. El FIDA y otras instancias disponen de nueve años más para cumplir las metas expuestas en la Agenda 2030 para el Desarrollo Sostenible en relación con la adaptación al cambio climático, lo cual supone una duración de apenas un ciclo y medio de proyectos. En consecuencia, urge que la presente evaluación aporte los datos que el FIDA necesita para corregir el rumbo cuando sea procedente.

[1] IPCC (2021): "Sixth Assessment Report Climate Change 2021 – The Physical Science Basis".

6. Esta evaluación tenía por objeto examinar y evaluar críticamente el desempeño del FIDA en las siguientes esferas principales: i) fortalecimiento de la capacidad de los pequeños agricultores para gestionar los riesgos ligados al cambio climático; ii) incorporación de la adaptación al cambio climático en los programas y proyectos del FIDA para reforzar la capacidad de los pequeños productores de adaptarse de forma ambientalmente sostenible, y iii) prestación de apoyo a la ampliación de los enfoques que tienen en cuenta el clima en todos los niveles.

7. A continuación, se resume el enfoque general y las principales constataciones y recomendaciones procedentes de la evaluación.

Enfoque y metodología

8. La evaluación se centró en la medida en que la labor del FIDA ha promovido la resiliencia climática de los medios de vida de los pequeños productores y ha mejorado la seguridad alimentaria de estos. La recopilación de datos, la síntesis empírica y el análisis y la comunicación de los resultados se enmarcaban en torno a tres preguntas generales:

   i) ¿Cómo han influido las intervenciones del FIDA en la capacidad de los pequeños productores y sus comunidades de adaptarse al cambio climático, especialmente en el caso de los más vulnerables al cambio climático, como las mujeres, los jóvenes y los pueblos indígenas? ¿Qué ha funcionado y por qué? ¿Qué oportunidades se han dejado pasar?

   ii) ¿En qué medida ha podido el FIDA aprovechar sus operaciones para fortalecer la capacidad de adaptación al cambio climático de los pequeños agricultores a escala local, subnacional y nacional mediante asociaciones y ampliando las intervenciones y los resultados de desarrollo satisfactorios, promoviendo políticas favorables, fortaleciendo las capacidades institucionales y mejorando la estructura financiera en materia de adaptación? ¿Qué ha funcionado y por qué? ¿Qué oportunidades se han dejado pasar?

   iii) ¿En qué medida está preparado el FIDA para hacer frente a los problemas, actuales y previsibles, que la adaptación plantea a los pequeños agricultores y para cumplir los compromisos asumidos en el marco de la FIDA11 y reposiciones posteriores?

9. **Alcance.** El alcance de la evaluación fue amplio. Abarcó todas las regiones geográficas y países en que operaba el FIDA; la totalidad de intervenciones, proyectos y estrategias en los países del FIDA conexos (programas sobre oportunidades estratégicas nacionales (COSOP) y notas sobre las estrategias en los países) y el modelo operacional del FIDA en materia de adaptación al cambio climático (incluidos los compromisos institucionales asumidos al respecto en el marco de las reposiciones, la movilización de recursos, y las estrategias, orientaciones e instrumentos institucionales). La evaluación abarcó el período transcurrido desde que el FIDA declaró prioridad institucional la adaptación al cambio climático en 2010 (2010-2019).

10. **Criterios de la evaluación.** La evaluación aplicó criterios esenciales como la pertinencia, la eficacia y el impacto. El análisis se centró también en cuestiones de coherencia y sostenibilidad, y se hizo uso de una teoría del cambio y de una matriz de evaluación que sirvieron de base a la preparación de los estudios de caso por países, los exámenes documentales, los instrumentos de evaluación y un protocolo de entrevistas.

11. **Consultas.** Las deliberaciones iniciales con el Comité de Evaluación y los preparativos de la evaluación comenzaron en abril de 2020. A continuación se mantuvieron debates con la Dirección en el marco del taller de autoevaluación de la Dirección (junio de 2020) y dos consultas con el grupo del consorcio central de

aprendizaje (CCA): la primera en abril de 2021, para examinar los mensajes procedentes de la recopilación y el análisis de los datos, y la segunda en junio de 2021, para examinar el proyecto de informe de evaluación. El CCA, integrado por expertos técnicos del FIDA en materia de clima y medio ambiente y personal directivo, se creó para fortalecer el sentido de apropiación de la evaluación en la totalidad del Fondo y reforzar la pertinencia de esta para el organismo.

12. **Proceso de evaluación.** En junio de 2020 se celebró un taller de diseño con el equipo de evaluación y con destacadas partes interesadas del FIDA a fin de ultimar la teoría del cambio y el diseño de la evaluación. Se realizó un examen documental de todos los documentos pertinentes y un análisis de la cartera para contribuir a la selección y contextualización de los estudios de caso. La recopilación de datos y su análisis tuvieron lugar de julio de 2020 a abril de 2021. La redacción del informe y la garantía de su calidad fueron posibles mediante una serie de interacciones internas y externas entre mayo y agosto de 2021.

13. En vista de las considerables restricciones de viaje debidas a la COVID-19, los datos se recopilaron partiendo de exámenes amplios de documentos teóricos y de la cartera, así como gracias a la interacción a distancia con personal del FIDA, destacados informantes y partes interesadas y a fuentes secundarias. Cuando los controles por la pandemia de los respectivos países lo permitieron, consultores nacionales realizaron visitas sobre el terreno y entrevistaron a beneficiarios, mientras que el equipo internacional de evaluación participó a distancia.

14. **Recopilación, análisis y comunicación de los datos.** Los datos primarios procedieron de 20 estudios de caso de países (llevados a cabo en 20 países) que abarcaban 35 proyectos (y representaban el 14 % de la cartera del FIDA en materia de clima) determinados mediante muestreo intencional estratificado, un estudio sobre el estado de preparación del FIDA para cumplir los compromisos en materia de adaptación al cambio climático, estudios sobre tres temas de aprendizaje (ampliación, gestión de los conocimientos e interacciones del nexo entre seres humanos y ecosistemas), un análisis de datos geoespaciales de sistemas de información geográfica (SIG) en nueve de los países en los que se habían realizado estudios de caso y dos encuestas en línea. Se entrevistó a más de 700 partes interesadas y beneficiarios, y respondieron a la encuesta 227 miembros del personal del FIDA y de los proyectos.

15. Los datos secundarios procedieron de anteriores evaluaciones realizadas por la IOE, una evaluación rápida de datos de publicaciones sujetas a examen *inter pares* y de carácter no convencional sobre la materia, lo cual supuso escanear 1338 artículos y analizar 91 documentos, y datos SIG (disponibles para 5 de los 20 estudios de caso).

16. Para obtener los datos se triangularon los métodos y las fuentes. Las fuentes de datos constaban de exámenes documentales, datos primarios recopilados por el equipo de evaluación y datos secundarios. Esta base empírica aportó respuestas a todas las preguntas formuladas en la matriz de evaluación, que a su vez sirvió de base a la redacción del informe de evaluación.

17. **Garantía de calidad.** Se solicitaron y obtuvieron comentarios sobre el proyecto de informe aportados por i) un grupo consultivo independiente externo de dos miembros; ii) un examen *inter pares* en el ámbito de toda la IOE; iii) la Dirección del FIDA, para determinar posibles errores fácticos o de interpretación, y iv) el grupo del CCA, para determinar posibles omisiones de datos esenciales que pudieran modificar sustancialmente las constataciones de la evaluación y posibles errores fácticos y de interpretación.

Principales constataciones

18. La evaluación se centró en la medida en que las iniciativas respaldadas por el FIDA habían ayudado a los pequeños productores a adaptarse a los efectos del cambio climático. A continuación, se resumen las principales constataciones en relación con las tres preguntas generales indicadas antes.

19. **Pregunta 1:** ¿Cómo han influido las intervenciones del FIDA en la capacidad de los pequeños productores y sus comunidades de adaptarse al cambio climático, especialmente en el caso de los más vulnerables al cambio climático, como las mujeres, los jóvenes y los pueblos indígenas? ¿Qué ha funcionado y por qué? ¿Qué oportunidades se han dejado pasar?

20. **Gracias a la experiencia del FIDA de trabajo con comunidades marginadas en el sector agrícola rural, a menudo en condiciones climáticas y ambientales adversas, el Fondo se encuentra en situación de abordar la aceleración de los riesgos derivados del cambio climático y entender la adaptación al cambio climático como prioridad estratégica institucional.** Durante el último decenio, el Fondo ha registrado avances importantes en el apoyo a la adaptación de los pequeños productores al cambio climático, ha convertido la respuesta al cambio climático en prioridad institucional, ha movilizado financiación para el clima y ha destinado a la respuesta al cambio climático una mayor proporción de su programa de préstamos y donaciones. También ha creado una dependencia específica con capacidad técnica para incorporar respuestas al cambio climático en todas las intervenciones y ha elaborado orientaciones e instrumentos pertinentes de apoyo a la ejecución.

21. **El FIDA ha evaluado los riesgos climáticos en todas sus estrategias y operaciones en los países y ha incorporado la respuesta al cambio climático en todas las intervenciones en las que el riesgo climático se califica de "moderado" o "alto".** Además, los programas sobre oportunidades estratégicas nacionales (COSOP) y las operaciones aprobados después de 2015 eran pertinentes para las contribuciones determinadas a nivel nacional de los países de conformidad con el Acuerdo de París de diciembre de 2015. Todas las intervenciones han ido dirigidas a zonas en las que se concentraba la población pobre. Las Directrices operacionales sobre focalización, revisadas recientemente[2], han puesto de manifiesto la importancia de tener en cuenta la vulnerabilidad climática, y en proyectos recientes se ha empezado a incorporar este aspecto crítico en su focalización.

22. **El programa de transversalidad del FIDA carece de un marco conceptual claro y de orientaciones operacionales sobre la manera de reforzar la resiliencia climática de los pequeños productores, junto con su resiliencia ambiental y socioeconómica.** Todavía no se dispone de orientaciones institucionales para evaluar objetivamente la resiliencia climática y someter a seguimiento los resultados al respecto. Ello ha limitado la capacidad de analizar las vías críticas que conducen a la resiliencia climática en el marco de las estrategias en los países. También ha limitado la capacidad del FIDA de convertir la resiliencia en un concepto evaluable en todos los procesos de diseño y garantía de calidad del diseño de los proyectos y las funciones de supervisión de la ejecución (como las misiones de supervisión de proyectos). A falta de orientaciones institucionales, se corre el riesgo de que proliferen marcos conceptuales puntuales, lo cual dificulta la comparación del desempeño de distintos proyectos y la agregación de los resultados. También se carece de orientaciones claras para determinar las respuestas de adaptación al cambio climático que van más allá de "no causar daños" y sirven para restaurar ecosistemas degradados sin dejar de garantizar su seguridad nutricional y económica.

[2] Directrices operacionales sobre focalización revisadas (EB 2019/127/R.6/Rev.1).

23. **La insuficiencia de capacidad constituye un obstáculo destacado en la mejora del desempeño en materia de adaptación al cambio climático.** El análisis del FIDA pone de relieve notables deficiencias en la capacidad técnica de incorporar respuestas en materia de adaptación al cambio climático y darles seguimiento en la Sede y en los proyectos; es probable que ello prosiga hasta 2024 y años posteriores. No obstante, se está procurando poner remedio a esta falta de competencias. El Plan para el personal, los procesos y la tecnología: inversión en el capital humano especializado se encuentra en fase de ejecución inicial. La capacidad en materia de adaptación al cambio climático deberá ampliarse aún más cuando la proporción del programa de préstamos y donaciones destinada al clima aumente del 25 % en el marco de la FIDA11 al 40 % en el marco de la FIDA12. Actualmente no se tienen indicios de que se esté planificando una evaluación del aumento previsto de la capacidad de adaptación al cambio climático.

24. **Pregunta 2:** ¿En qué medida ha podido el FIDA aprovechar sus operaciones para fortalecer la capacidad de adaptación al cambio climático de los pequeños agricultores a escala local, subnacional y nacional mediante asociaciones y ampliando las intervenciones y los resultados de desarrollo satisfactorios, promoviendo políticas favorables, fortaleciendo las capacidades institucionales y mejorando la estructura financiera en materia de adaptación? ¿Qué ha funcionado y por qué? ¿Qué oportunidades se han dejado pasar?

25. **El FIDA procura intensificar el apoyo institucional para fortalecer las actividades no crediticias, como el fomento de la gestión de los conocimientos o las asociaciones para ampliar los resultados. El futuro de la capacidad del FIDA de reforzar satisfactoriamente a escala la resiliencia climática de los pequeños agricultores depende de la disponibilidad de fondos adicionales para promover actividades no crediticias.** Los recursos siguen planteando dificultades, y la ejecución de actividades no crediticias es una debilidad recurrente detectada por varias evaluaciones independientes. En vista de las estrechas interrelaciones entre el cambio climático y los ecosistemas, no es posible lograr una resiliencia al cambio climático a largo plazo si solo se presta atención a las explotaciones o las comunidades. Además, a falta de recursos, la práctica sistemática de la ampliación y las actividades no crediticias y del aporte de orientación y recursos humanos necesarios para su ejecución siguen siendo insuficientes. Disposiciones como el Programa de Resiliencia Rural pueden aportar la flexibilidad necesaria para dedicar parte de los recursos programáticos al fortalecimiento de las actividades no crediticias. Sin embargo, este mecanismo todavía no se ha aplicado, y estará disponible principalmente para intervenciones en África y determinados países de ingreso bajo.

26. **Pregunta 3:** ¿En qué medida está preparado el FIDA para hacer frente a los problemas, actuales y previsibles, que la adaptación plantea a los pequeños agricultores y para cumplir los compromisos asumidos en el marco de la FIDA11 y reposiciones posteriores?

27. **A medida que el FIDA extrae enseñanzas de la experiencia, su enfoque en materia de adaptación al cambio climático evoluciona y avanza por un buen camino.** Durante el último decenio, el FIDA ha elaborado y actualizado su estrategia climática, y sigue mejorando el entorno institucional de las respuestas de adaptación al cambio climático. Por ejemplo, ha establecido una unidad específica con capacidad técnica para incorporar este tipo de adaptación en sus intervenciones, y sigue revisando políticas, estrategias y directrices (la política de donaciones, las directrices operacionales sobre focalización, la estrategia de gestión de los conocimientos y las orientaciones en materia de estrategias y operaciones en los países). Además, el FIDA ha elaborado una orientación que incorpora los temas transversales prioritarios (Procedimientos del FIDA para la Evaluación Social, Ambiental y Climática (2015)) que ha actualizado dos veces (2017 y 2020). Introdujo nuevos instrumentos para orientar la adaptación al cambio climático y

diseñó instrumentos nuevos como el Marco de Adaptación, provisto de una base de datos sobre opciones de adaptación. Estas medidas han ayudado a poner en primer plano la necesidad de no quedarse en la gestión de los riesgos sin más y velar por que se materialicen los beneficios para los pequeños productores de las respuestas apropiadas al cambio climático y por ayudar al FIDA a avanzar por el buen camino abordando los obstáculos que dificultaban el desempeño.

28. **Los enfoques de focalización siguen mejorando.** Al hacer frente a la desigualdad de género y promover el empoderamiento de las mujeres en las respuestas climáticas, la mayoría de los diseños anteriores se centraban más en el establecimiento de metas y cuotas en cuanto a la participación de las mujeres en los beneficios. Los diseños recientes cada vez abordan más las causas últimas de la desigualdad de género, como las normas y creencias en materia de género, la titularidad de los ingresos y los bienes y el acceso al crédito. Uno de cada tres proyectos aprobados en 2019 tenía un diseño tendente a la transformación en materia de género, lo cual superaba la meta del 25 % fijada en la FIDA11. Las respuestas climáticas del FIDA se focalizaban en zonas geográficas y comunidades en que se concentraba un mayor volumen de población pobre. Los cambios recientes en sus directrices sobre focalización son indicio de que el FIDA reconoce la necesidad de llegar también a los pequeños agricultores más marginados y vulnerables a los efectos del clima, y en los proyectos más recientes se reconoce el papel de la vulnerabilidad climática en la focalización. El cambio climático contribuye a las tensiones entre los pequeños productores marginados, especialmente en sistemas de producción distintos (como la explotación agrícola-ganadera sedentaria y el pastoreo nómada) que se disputan el uso de la tierra y los escasos recursos hídricos. Las operaciones en los países cada vez mejoran más sus enfoques al respecto, por ejemplo, en la región del Sahel. En la orientación del FIDA todavía no se presta suficiente atención a la prestación sistemática de apoyo para mejorar el diseño y la ejecución de operaciones que se ocupan de esta cuestión mediante enfoques comunitarios de carácter participativo.

29. **El FIDA ha demostrado que tiene a su disposición capacidades y visión para mejorar la resiliencia económica, climática y ambiental de los pequeños productores mediante un conjunto sólido de intervenciones apropiadas.** En la presente evaluación se determinó que las respuestas climáticas de 5 de los 20 estudios de caso cumplían la norma de "no causar daños" o la superaban mediante sus medidas de restauración del paisaje. Estas intervenciones a nivel del paisaje se centraban en soluciones naturales a las amenazas climáticas subyacentes valiéndose de una colaboración estrecha con los beneficiarios y las partes interesadas durante el diseño y la ejecución. De ellas se extrajeron importantes enseñanzas para mejorar la respuesta del FIDA en materia de adaptación al cambio climático, como ocurrió con los seis estudios de caso que se aproximaban a la meta de "no causar daños" y con los otros nueve estudios de caso cuyas intervenciones reconocían la importancia de "no causar daños" a los ecosistemas, si bien estaban lejos de conseguirlo.

30. **A la vez, la evaluación constató que había que subsanar otras deficiencias de cierta magnitud para que el FIDA pudiera cumplir los compromisos en materia de adaptación al cambio climático asumidos en el marco de la FIDA12.** Entre las medidas necesarias para subsanar estas deficiencias cabe mencionar:

    i) establecer mecanismos para garantizar el aprendizaje institucional sistemático a partir de la experiencia operacional a fin de reproducir el éxito obtenido por las respuestas climáticas en cuanto a "no causar daños" a los ecosistemas en los cinco estudios de caso, y velar por que en las intervenciones que se aproximan a esa meta, así como en las que están lejos de ella, se extraigan enseñanzas para crear entre los pequeños productores una resiliencia climática ambientalmente sostenible. Para

cumplir este objetivo es fundamental un sistema de seguimiento que detecte los casos de éxito y acumule conocimientos para reproducir a escala más amplia estos focos de éxito aislados;

ii) pasar a un programa de transversalidad de adaptación al cambio climático orientado a los resultados que reciba de la Sede apoyo y orientación adecuados;

iii) invertir tiempo y recursos suficientes para fortalecer la calidad del diseño de las respuestas de adaptación al cambio climático y propiciar la aceptación por parte de los Gobiernos;

iv) diseñar y aplicar, en la medida de lo posible, respuestas de adaptación al cambio climático dirigidas a "no causar daños" y "favorecer a todas las partes";

v) disponer de enfoques sistemáticos para aprovechar los resultados de los proyectos a fin de generar impacto a nivel del paisaje y más allá mediante actividades no crediticias eficaces;

vi) adoptar un marco de resultados y un sistema de seguimiento sólidos para vigilar los progresos del FIDA en cuanto al fortalecimiento de la resiliencia climática y determinar las mejores prácticas;

vii) remediar la falta de aptitudes relativas a las capacidades técnicas apropiadas en materia de adaptación al cambio climático dentro del FIDA y de las unidades de gestión de proyectos, y

viii) garantizar una visión y un compromiso comunes de la Dirección y el personal a fin de emprender medidas imprescindibles en materia de adaptación al cambio climático.

31. La labor de descentralización en curso es necesaria para que las capacidades del FIDA estén más cerca de los países, los beneficiarios y los asociados a fin de potenciar el impacto de sus operaciones, incluidas las vinculadas con respuestas de adaptación al cambio climático. A la vez, es probable que la transición a las nuevas disposiciones en el período 2021-2023 tenga consecuencias en la lucha contra los obstáculos mencionados y, por consiguiente, en el cumplimiento de los compromisos en materia de adaptación al cambio climático asumidos en el marco de la FIDA11 y la FIDA12. Los riesgos correspondientes deben determinarse y gestionarse.

Recomendaciones

32. Como se señalaba antes, el IPCC ha advertido de que la vida en la Tierra haría frente a consecuencias catastróficas si no se adoptaban medidas drásticas de inmediato para plantar cara al cambio climático. En consecuencia, el FIDA debe abordar con urgencia los obstáculos determinados en la sección de conclusiones del informe principal (párrafos 290 a 301). Con dicho fin, a continuación se presenta un conjunto de recomendaciones viables. En ellas se reconocen las interrelaciones entre estos obstáculos. También se parte del hecho de que las respuestas de adaptación al cambio climático incorporadas no solo se ven afectadas por las dificultades en la obtención de resultados de resiliencia conexos, sino que también van ligadas a los obstáculos al desempeño operacional general.

33. **Recomendación 1:** Actualizar la Estrategia y Plan de Acción del FIDA sobre el Medio Ambiente y el Cambio Climático (2019-2025) para hacer frente integralmente a los obstáculos al desempeño en materia de adaptación al cambio climático, entre otras cosas, en relación con lo siguiente:

34. En el marco de la actualización de esta estrategia, presentar un marco de recursos y resultados en el que figuren estimaciones de los recursos financieros y humanos necesarios para cada producto de las esferas de acción.

    i) Aprovechando la experiencia operacional reciente del FIDA y de otros agentes de desarrollo, establecer y difundir un marco conceptual institucional en materia de resiliencia climática a fin de orientar los diseños, elaborar marcos de resultados y vigilar los resultados obtenidos en los proyectos. Garantizar que las unidades de gestión de los proyectos disponen de capacidades adecuadas para comprender y vigilar los resultados en materia de resiliencia. En la medida de lo posible, ese marco debería coincidir con las prácticas de otros agentes internacionales para facilitar la labor conjunta y la coherencia entre los esfuerzos nacionales por someter a seguimiento los resultados de resiliencia en materia de adaptación al cambio climático.

    ii) Actualizar los indicadores básicos institucionales de resultados relacionados con la adaptación al cambio climático para dar cuenta de los cambios efectivos en materia de resiliencia climática en consonancia con este marco conceptual. Valiéndose de su experiencia en la aplicación y el seguimiento de las medidas de adaptación al cambio climático, el FIDA debería ajustar periódicamente sus indicadores institucionales para medir la resiliencia climática.

    iii) Asignar suficientes recursos financieros y humanos para que el uso de información geoespacial pertinente (derivada de bases de datos espaciales o imágenes satelitales, que cada vez están más disponibles) pueda incorporarse en el marco de seguimiento y evaluación de las operaciones del FIDA basado en los resultados a fin de vigilar sistemáticamente los resultados en materia de resiliencia y validar estas observaciones mediante visitas sobre el terreno.

    iv) Para diseñar correctamente las medidas de adaptación al cambio climático es preciso conocer en profundidad las dificultades y prácticas relacionadas con el cambio climático a nivel del proyecto y del país. Para garantizar que los procesos de garantía de calidad del FIDA radicados en Roma disponen de ese tipo de conocimientos especializados, y en consonancia con las prácticas de otras instituciones financieras internacionales, se establecerá un grupo encargado del examen *inter pares* externo. Para cada intervención, el grupo deberá estar formado por expertos para el contexto del que se trate provistos de conocimientos de las condiciones locales a fin de potenciar y garantizar la pertinencia de la respuesta de adaptación al cambio climático. Los exámenes del grupo se incorporarán sin fisuras en el actual proceso de garantía de calidad y se llevarán a cabo a la vez que se solicitan contribuciones a todos los demás participantes en el examen. El FIDA debería velar por que se reserve el tiempo necesario a este examen externo. Se espera que los grupos reduzcan la necesidad y la frecuencia de modificaciones considerables de los diseños durante los exámenes de mitad de período, lo cual potenciará la eficacia y la eficiencia de las respuestas de adaptación al cambio climático.

35. **Recomendación 2:** Ampliar la orientación en materia de adaptación al cambio climático para incorporar soluciones de restauración a fin de cumplir el compromiso del FIDA de ir más allá de "no causar daños" y restaurar el medio ambiente. Cuando sea viable, ello supondrá incorporar soluciones que favorezcan a todas las partes y respuestas de adaptación al cambio climático que generen resiliencia económica, climática y ambiental.

i) La orientación deberá aprovechar los ejemplos satisfactorios del FIDA (incluidos los determinados en los estudios de caso). Para garantizar la pertinencia y la eficacia de esa orientación, en su redacción deberán participar representantes de los equipos encargados de la ejecución de los proyectos responsables del éxito de los proyectos.

ii) Además, cuando sea necesario, el FIDA debería adoptar medidas concretas para promover la aceptación por parte de los Gobiernos de soluciones que favorezcan a todas las partes. Con dicho fin, el FIDA debería crear una base de conocimientos sobre soluciones viables de adaptación al cambio climático con fines de restauración a partir de su experiencia en la materia y velar por que se destinen a la promoción capacidades, recursos financieros y tiempo suficientes en todos los niveles, desde el local al nacional.

36. **Recomendación 3:** El FIDA debería emprender un análisis de la competencia y las aptitudes del personal necesarias para diseñar, aplicar y supervisar el suministro de la financiación para el clima del 40 % del programa de préstamos y donaciones conforme a la FIDA12. Este análisis podría aprovechar el reciente estudio sobre recursos humanos y centrarse en las necesidades de recursos humanos de las respuestas de adaptación al cambio climático. La determinación de las necesidades debería abarcar no solo al personal del FIDA, sino también al personal de proyectos. Mediante el estudio se deberían determinar plenamente los riesgos provisionales planteados por el proceso de descentralización en curso para el cumplimiento de los compromisos en materia de adaptación al cambio climático asumidos en el marco de la FIDA11 y la FIDA12 y para la gestión de dichos riesgos, al igual que deberían determinarse las competencias y aptitudes necesarias en todos los niveles de un FIDA descentralizado. Sobre la base de las constataciones de este estudio, el FIDA debería actuar para subsanar los déficits de capacidad determinados.

37. **Recomendación 4:** El FIDA debería dar prioridad sistemáticamente a las actividades de ampliación y otras actividades no crediticias aportando recursos específicos. El futuro de la capacidad del FIDA de fortalecer satisfactoriamente a escala la resiliencia de los pequeños productores al cambio climático depende de la disponibilidad de fondos adicionales para promover estas actividades en los países y, cuando sea viable, a escala regional y mundial. Con dicho fin, el FIDA debería:

i) extraer enseñanzas de sus experiencias satisfactorias y facilitar el sentido de apropiación gubernamental y las asociaciones con los Gobiernos;

ii) destinar a estas actividades recursos, capacidades y tiempo suficientes;

iii) incorporar en los diseños de los proyectos estas actividades, acompañadas de objetivos y metas, y trazar una estrategia de cumplimiento de estas metas; las actividades conexas deberían proseguir durante toda la ejecución de los proyectos y no solo hasta el final del ciclo de los proyectos;

iv) garantizar apoyo y orientación adecuados para facilitar las actividades no crediticias, conforme a lo convenido en el marco de la fase 2.0 de la descentralización, y

v) establecer incentivos y mecanismos de rendición de cuentas para obtener resultados mediante estas actividades (o avanzar en su obtención).

38. **Recomendación 5:** Elaborar y aplicar el marco y estrategia de asociaciones que se necesita para obtener los resultados determinados en los COSOP y las operaciones conexas. En el marco se debería i) indicar las asociaciones específicas necesarias para ampliar, intensificar la divulgación, gestionar los conocimientos y fortalecer las capacidades técnicas en materia de adaptación al cambio climático del FIDA y las

unidades de gestión de los proyectos; ii) proponer enfoques para el establecimiento de estas asociaciones; iii) presentar los productos y resultados que se esperan de las asociaciones, y iv) calcular los costos correspondientes (si los hubiera).

39. **Recomendación 6:** El FIDA debería garantizar el aprendizaje institucional sostenido a partir de la experiencia operacional para mejorar el desempeño actual y futuro en el ámbito de la adaptación al cambio climático.

i) Para extraer enseñanzas del éxito obtenido es preciso determinar las respuestas de adaptación al cambio climático que han surtido efecto; establecer mecanismos para mantener debates con el fin de comprender los factores que han contribuido al éxito; sobre la base de esos debates, determinar posibilidades de diseño para las que esta experiencia sea pertinente y las operaciones en curso que pudieran beneficiarse de ella, y, por último, aprovechar los debates para adoptar medidas dirigidas a mejorar los diseños pertinentes y fortalecer las intervenciones en curso.

ii) En los debates deberían participar, como mínimo, los equipos pertinentes encargados de la ejecución de los proyectos, los miembros de las misiones de supervisión y el personal pertinente del Departamento de Estrategia y Conocimientos (SKD) y el PMD. Según proceda, podrá darse cabida a otros asociados y a expertos en la materia externos.

iii) Deberán establecerse objetivos y metas a nivel institucional y de las unidades, y se determinará la rendición de cuentas en relación con la obtención de resultados de aprendizaje. Con dicho fin, el FIDA debería examinar periódicamente los progresos y actualizar sus enfoques. Los resultados de aprendizaje deberían formar parte del marco de gestión de los resultados y comunicarse con periodicidad anual.

iv) En el ámbito institucional, el marco de aprendizaje debería vincularse con la Estrategia y Plan de Acción del FIDA sobre el Medio Ambiente y el Cambio Climático (2019-2025) (dentro de la esfera de acción 2).

Main Report

Contents

Abbreviations and acronyms

ABC	African Banking Corporation
ACC	Adaptation to Climate Change
ACCESOS - ASAP	Economic Inclusion Programme for Families and Rural Communities in the Territory of Plurinational State of Bolivia
ACS-USAID	Alianza para el Corredor Seco
ADB	Asian Development Bank
AD2M AD2M-II	Project to Support Development in Menabe & Melaky Regions Project to Support Development in Menabe & Melaky Regions Phase II
AEDD	Agence de l'Environnement et du Développement Durable
AF	Adaptation Fund
ALM	Adaptation Learning Mechanism
AMCC	Alliance Mondiale Contre le Changement Climatique
AMAT	Adaptation Monitoring and Assessment Tool
ANAS	Agência Nacional de Água e Saneamento
APR	Asia and the Pacific Division
ARRI	Annual Report on Results and Impact
ASALs	Arid and Semi-Arid Lands
ASAP	Adaptation for Smallholder Agricultural Programme
ASHAP	Adaptation for SmallHolder Agricultural Programme
BIRDP	Butana Integrated Rural Development Project
CA	Conservation Agriculture
CAPs	Community Action Plans
CAR	Community Access Roads
CARD	Climate Adaptation in Rural Development
CATIE	Centro Agronómico Tropical de Investigación y Enseñanza
CBD	Convention on Biological Diversity
CBINReMP	Community-Based Integrated Natural Resources Management Project
CBO	Community Based Organisations
CCA	Climate Change Adaptation
CBNRM	Community-Based Natural Resource Management
CCRIP	Coastal Climate Resilient Infrastructure Project
CDD	Convention to Combat Desertification
CFAs	Community Forest Associations
CIF	Climate Investment Funds
CGIAR	Consultative Group for International Agricultural Research
CLE	Corporate Level Evaluation
CLP	Core Learning Partnership
CMO	Caribbean Meteorological Office
COI	Core Outcome Indicator Measurement Guidelines
COP	Conference of Parties

COSOP	Country Strategic Opportunities Programme
CReLIC	Climate Resilient Local Infrastructure Center
CSN	Country Strategy Notes
CSPE	Country Strategy and Programme Evaluations
DFID	Department for International Development
EB	Executive Board
ECD	Environment and Climate Division
ENRM	Environment and Natural Resource Management
ESA	East and Southern Africa Division
ESAP	Environmental and Social Assessment Procedures
EU	European Union
EX-ACT	Ex-Ante Carbon-balance Tool
FAO	Food and Agriculture Organization
DAC	Development Assistance Committee
DFID	Foreign Commonwealth and Development Office (FCDO) (Formerly DFID)
DPLF	The Department of Pastures, Livestock and Fisheries
DRM	Disaster Risk Reduction and Management
DRR	Disaster Risk Reduction
DRRP	Disaster Risk Reduction Program
DSF	Debt Sustainability Framework
EBA	Ecosystem-Based Adaptation
EB	Executive Board
ECD	Environment and Climate Division
ECG	Environment, Climate, Gender and social inclusion division
EDPs	Economic Development Poles
ESA	Environment and Social Assessment
ENRM	Environment and Natural Resources Management
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMAP	Energy Sector Management Assistance Program
EVI	Enhanced Vegetation Index
FFS	Farmer Field Schools
FTE	Full-Time Equivalent
GCF	Green Climate Fund
GCF-GGWI	Great Green Wall Initiative of Sahel
GEF	Global Environment Facility
GHG	Green House Gas
GIS	Geographic Information System
GoB	Government of Bangladesh
GoR	Government of Rwanda

GPR	Global Engagement, Partnerships, and Resource Mobilization Division
GRIPs	Grants and Investments Projects System
GT	Geospatial Technologies
HR	Human Resources
HDTN	How-to-do-notes
I3N	Initiative les Nigériens Nourrissent les Nigériens
IAMDP	Integrated Agricultural and Marketing Development Project
ICIMOD	International Center for Integrated Mountain Development
ICRAF	International Centre for Research in Agroforestry
ICRISAT	International Crop Research Institute for Semi-Arid Tropics
IDB	Inter-American Development Bank
IE	Independent Evaluation
IFI	International Financial Institution
IGEBU	Institut Géographique du Burundi
INDCs	Intended Nationally Determined Contributions
INMG	Instituto Nacional de Meteorologia e Geofísica
IOE	Independent Office of Evaluation
IPCC	Intergovernmental Panel on Climate Change
IRECR	Inclusive Rural Economic and Climate Resilience
ISABU	Institute of Agricultural Sciences of Burundi
IUCN	International Union for Conservation of Nature
IWMI	International Water Management Institute
KCEP-CRAL	Kenya Cereal Enhancement Programme Climate Resilient Agricultural Livelihoods Window
KFS	Kenya Forest Service
KM	Knowledge Management
LAC	Latin America and the Caribbean
LAPAS	Local Adaptation Plans for Action
LDCF	Least Developed Countries Fund
LGED	Local Government Engineering Department
LLRP	Lowlands Livelihoods Resilience Project
LMDP	Livestock and Market Development Programme
LMRP	Livestock Marketing and Resilience Programme
L-FFS	Livestock Farmer Field Schools
MAEP	Ministries of Agriculture, Livestock and Fisheries
MCC	Millennium Challenge Corporation
MEEF	Ministry of Environment, Ecology and Forests IN Mali
MINAGRI	Ministry of Agriculture and Animal Resources in Rwanda
MIS	Management Information System
MP	Micro Projects
MOSAICC	FAO's Modelling System for Agricultural Impacts of Climate Change

MTR	Midterm Review
MSRI	Mountain Societies Research Institute
M&E	Monitoring and Evaluation
NAPs	National Adaptation Plans
NAPAs	National Adaptation Programme of Action
NDCs	Nationally Determined Contributions
NDMA	National Drought Management Authority
NDVI	Normalized Difference Vegetation Index
NEB	Northeast Brazil
NEN	Near East, North Africa and Europe Division
NEMA	National Environment Management Authority in Uganda
NGO	Non-Governmental Organization
NICADAPTA	Adapting to Markets and Climate Change Project in Nicaragua
NR	Natural Resources
NRM	Nuclear Magnetic Resonance
NSDI	National Spatial Data Infrastructure
KCEP-CRAL	Cereal Enhancement Programme - Climate Resilient Agriculture Livelihoods Programme
KFW	German Credit Institution for Reconstruction
KM	Knowledge Management
KNAU	Kyrgyz National Agrarian University
KSRLPI	Kyrgyz Scientific Research Livestock and Pasture Institute
KWS	Kenya Wildlife Service
OECD	Organization for Economic Cooperation and Development
OPR	Operational Policy and Results Division
ORMS	Operational Results Management System
PAPAM	Fostering Agricultural Productivity Project
PARSAT	Project to Improve the Resilience of Agricultural Systems in Chad
PASADEM	Food Security and Development Support Project in the Maradi Region
PASIDP	Participatory Small-Scale Irrigation Development Programme
PASP	Climate Resilient Post-Harvest and Agribusiness Support Project
PASSIP	Participatory Small-Scale Irrigation Development Programme
PBAS	Performance-based allocation system
PCDP	Pastoralist Community Development Programme
PCR	Project Completion Report
PCRP	Planting Climate Resilience in Rural Communities of the Northeast Brazil
PCRV	Project Completion Report Validation
PDRs	Project Design Reports
PICSA	Participatory Integrated Climate Services for Agriculture
PIPARV-B	Agricultural Production Intensification and Vulnerability Reduction Project
PMI	Sustainable Production, Markets and Institutions Division

PoLG	Programme of Loans and Grants
POSER-C	Rural Socio-Economic Opportunities Programme
PPA	Project Performance Assessment
PPE	Project Performance Evaluation
PRECIS	Project to Strengthen Resilience of Rural Communities to Food and Nutrition Insecurity
PRELNOR	Restoration of Livelihoods in the Northern Region
PRODAF	Family Farming Development Programme in Maradi, Tahoua and Zinder Regions
ProDAF-Diffa	Family Farming Development Programme in the Diffa Region
PRLP	Regional Poverty Reduction Plans
PRODEFI	Value Chain Development Programme
PROFIT	Programme for Rural Outreach of Financial Innovations & Technologies
PROVATI3	Promote Resilience of Vulnerable Through Access to Infrastructure, Improved Skills and Information
PRO-LENCA	Competitiveness & Sustainable Rural Dev Project in South Western border Corridor
PSD	Participatory Scenario Development
PSFP	Private Sector Financing Programme
PTL	Project Technical Lead
RAB	Rwanda Development Board
RAM	Rwanda Association of Manufacturers
REA	Rapid Evidence Assessment
REMA	Rwanda Environmental Management Authority
RDDP	Rwanda Dairy Development Project
RS	Remote Sensing
RTA	Reimbursable Technical Assistance
RUFIP	Rural Finance Intermediation Programme
RUWANMU	Ruwanmu Small-Scale Irrigation Project
RYAP	Rural Youth Action Plan
SACCO	Savings and Credit Co-operative Organisations
SAIL	Sustainable Agriculture Investments and Livelihoods
SCCF	Special Climate Change Fund
SECAP	Social, Environmental and Climate Assessment Procedures
SDGs	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency
SLM	Sustainable Land Management
SNNPR	Southern Nations and Nationalities People's Region
SNRLP	Sustainable Natural Resources and Livelihoods Programme
SR	Stock Routes
SPIU	Single Project Implementation Unit
SR	Stock Routes
SSTC/KM	South-South and Triangular Cooperation/knowledge management

SUDNAIP	Sudan's National Agriculture Investment Plan
TCI	Targeted Capacity Investment
TE	Thematic Evaluation
ToC	Theory of Change
UCA	University of Central Asia
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UTaNRMP	Cereal Enhancement Program – Climate Resilient Agricultural Livelihoods Program
WCA	West and Central Africa Division
WFP	World Food Program
WSRMP	Western Sudan Resources Management Programme
WUA	Water Users' Associations
WWF	World Wildlife Fund
2RP	Rural Resilience Programme
3S	Sustainability, Stability and Security

Corporate-level Evaluation

I. Background

1. This section presents the rationale for the evaluation, the conceptual framework and definitions related to climate change adaptation (CCA), the theory of change, the evaluation methodology and the constraints faced.

A. Introduction

2. In December 2019 at the 128th session, the Executive Board approved the proposal for a thematic evaluation of IFAD's contribution to smallholder farmers' adaptation to climate change.[3] IFAD's mandate to invest in poor rural people to enhance food production and food security and to eradicate poverty in rural areas is inextricably linked to supporting smallholder farmers' adaptation to climate change.[4]

3. **Climate change directly impacts on smallholder agriculture**[5] that constitutes 75 per cent of the world's farms,[6] 60 per cent of the global agricultural workforce[7] and the source of over 80 per cent of the food consumed in the developing world.[8] Rising temperatures and changing patterns of precipitation, coupled with an increasing frequency and magnitude of extreme weather events (such as floods, droughts and cyclones) and changes in the seasonality of weather patterns are expected to increase the vulnerabilities of smallholder farmers to a changing climate. A recent report from the United Nations Inter-governmental Panel on Climate Change (IPCC) warned that climate change is accelerating at a faster pace than previously projected and that life on earth is poised for catastrophic consequences unless drastic and immediate action is immediately taken.[9] A 2018 report of the IPCC[10] also drew attention to the impacts of climate change on ecosystems, to the rapidly narrowing opportunities to act and to the limited experiences regarding effective adaptation at transformative scales. A global temperature increase of two degrees Celsius will exacerbate hunger due to climate change,[11] seriously stress marine and terrestrial ecosystems, result in almost two billion people having to live in water-scarce environments[12] and magnify the inequalities between women and men.[13]

4. In recognition of the urgency of the situation, the goals set out in the UN 2030 Agenda for Sustainable Development include CCA and environmentally sustainable development.[14] The formulation of these Sustainable Development Goals (SDGs) came in the wake of important international agreements on climate-related issues, including the United Nations Framework Convention on Climate Change (UNFCCC, 1992), the Kyoto Protocol (1997), the Paris Agreement 2015 and the agreement to establish the Conference of the Parties.[15]

5. Assessments that specifically address the vulnerability of smallholder farmers to climate change remain limited even when extensive information is available on the projected impacts on agriculture and on adaptation measures needed to minimize those impacts.[16] Over half of the world's undernourished people are rural

[3] IFAD, 2019, p. 31
[4] IFAD, 2016
[5] IFAD, 2009
[6] Lowder et al., 2016
[7] Fyfe, 2002
[8] UNEP and IFAD, 2013
[9] IPCC, 2021
[10] IPCC, 2018
[11] World Food Programme, Climate Action Portal, accessed on 23rd February 2021: https://www.wfp.org/climate-action.
[12] UN Water Portal, accessed on 23rd February 2021: https://www.unwater.org/water-facts/scarcity/.
[13] UNFCCC Portal, accessed on 23rd February 2021: https://unfccc.int/gender.
[14] Sustainable Development Goals 2,12,13,14.
[15] See https://www.eesi.org/policy/international for a time line of major United Nations climate negotiations.
[16] Donatti et al., 2019

smallholder food producers.[17] Smallholder agriculture is disproportionately threatened by unpredictable weather patterns, shifting seasons, frequent natural disasters and other climate risks.[18]The financial mechanisms for supporting adaptation measures to benefit smallholders is also often fragmented and inadequate.[19]

6. **In this cotext, during the past 30 years, IFAD projects have assisted poor rural smallholders living in marginal and/or unfavourable agro-ecological conditions to sustainably manage natural resources and increase agricultural productivity even under adverse climatic conditions**. In 2004, IFAD became an accredited implementation partner to GEF with financing approved for CCA marking the point where CCA became an explicit objective of IFAD (IFAD also became an accredited entity of Adaptation Fund (AF) in 2010 and for Green Climate Fund (GCF) in 2018). It also recognized CCA as an explicit priority with its Eighth Replenishment 2010-2012 (IFAD8).[20] In 2010, a climate change strategy was adopted and the flagship Adaptation for Smallholder Agricultural Programme (ASAP I) launched in 2012 to support smallholder investment in climate resilience.[21] The Social, Environmental and Climate Assessment Procedures (SECAP), mandatory since 2015, was an important mechanism to mainstream climate change. Strengthening environmental sustainability and climate resilience constituted one of the three strategic objectives in the 2016-2025 Strategic Framework. In 2018, the IFAD Strategy and Action Plan on Environment and Climate Change 2019-2025 fused climate and environment strategies and committed to reduce exposure and vulnerability to climate change for 24 million rural smallholder farmers by 2025[22]. The IFAD11 mid-term review estimated that 34 per cent of IFAD's total investments in 2019 (equivalent to US$568 million) was directed towards climate finance.[23] The key milestones are further elaborated in Chapter 2 (Table 2).

7. **IFAD's long engagement with climate change adaptation, efforts to mainstream CCA in its operations, and expanded climate investments provide a compelling and timely case for a comprehensive evaluation to take stock and learn lessons to improve ongoing and future IFAD interventions in strengthening smallholder climate resilience in a sustainable manner**. Contributions to CCA have been included in the Independent Office of Evaluation's project level evaluations, in the project completion reports since 2015, in select impact assessments of CCA projects, and in the mid-term review of ASAP I. Yet, no independent or self-evaluation is available on how well IFAD interventions, policies, and strategies have acted together to strengthen climate resilience of smallholders, or more explicitly, on IFAD's overall development effectiveness in this area. Hence the rationale for this thematic evaluation.

8. **The objectives of the evaluation** were to critically review and assess the performance of IFAD across a number of areas, including a) support for smallholders' efforts to manage climate change risks; b) mainstreaming CCA into IFAD programs and projects to strengthen smallholders' climate adaptation capacity in an environmentally sustainable manner, and; c) scaling up successful climate-responsive approaches.

9. **To better contextualize IFAD's performance in this area, its business model towards CCA was compared with other IFIs and select UN agencies,** as described later in this chapter.

[17] IFAD, 2011; Lloyd et al., 2018
[18] UN General Assembly, 2018
[19] UNEP, 2018
[20] Annex II provides a chronology of key climate change milestones for IFAD
[21] Budget 298 million (contributions coming from United Kingdom, Canada and Belgium). The programme used grants to incentivize farmers to adapt climate-resilient practices.
[22] IFAD, 2018
[23] IFAD adheres to the Multilateral Development Bank's Methodologies for Climate Finance Tracking (p.1) to determine climate finance.

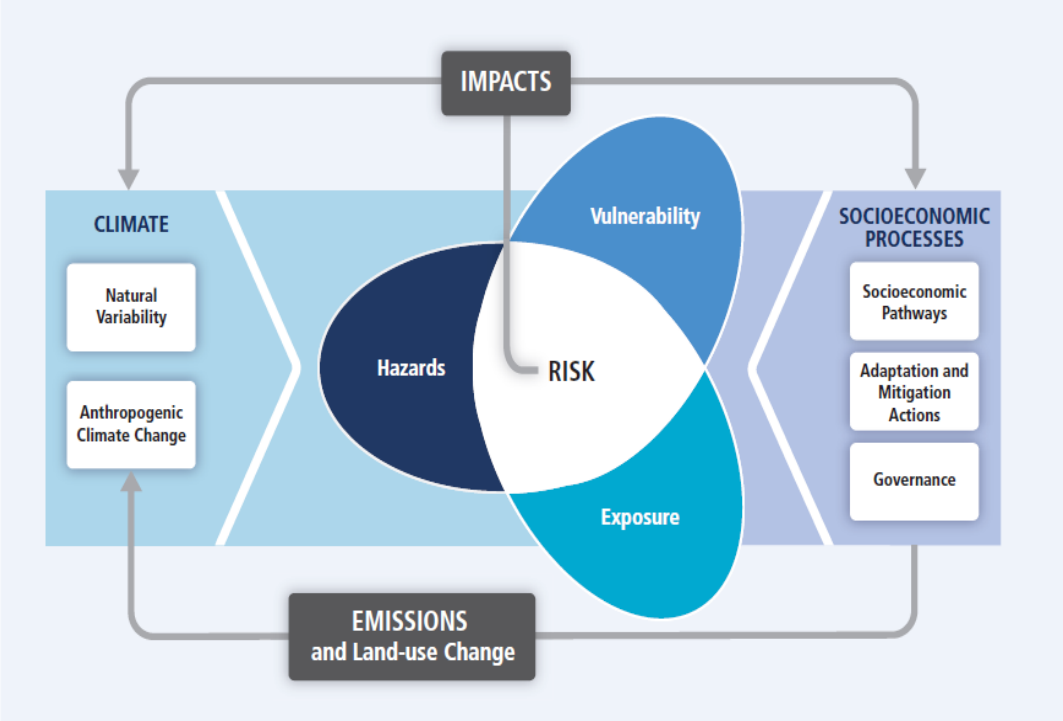
B. Definitions and Concepts

10. According to UNFCCC, the term "**climate change**" refers to "a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods".[24] The concept of "**climate risk**" relates to the potential adverse consequences of a climate-related hazard on people's lives, livelihoods, health and well-being; ecosystems and species; economic, social and cultural assets; services (including ecosystem services); and infrastructure. Climate risks affect human systems as well as natural systems and are often represented as the probability of the occurrence of hazardous events or trends, multiplied by the impacts of these events or trends should they occur. Risk results from the interaction of vulnerability, exposure and hazards (Figure 1).

11. IPCC defines climate "**adaptation**" as the process of adjustment to actual or expected effects of climate change in order "to moderate harm or exploit beneficial opportunities"[25]. The term resilience "**resilience**" is defined by the IPCC as "the capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure while also maintaining the capacity for adaptation, learning and transformation".[26]

Figure 1

Inter dependencies between climate drivers, risks, impacts and responses



Source: IPCC (2014).

[24] UNFCCC, 1992, p.3
[25] IPCC, 2018b, p. 542
[26] IPCC, 2018b, p. 557

12. While closely interdependent, CCA measures and environmental sustainability measures are not synonymous and may involve trade-offs. Within the framework of sustainable development ('development that meets the needs of the present without compromising the ability of future generations to meet their own needs'),[27] IPCC (2018b) defines (environmental) sustainability as a dynamic process that guarantees the persistence of natural and human systems in an equitable manner. In other words, it is about pursuing goals for the human system (such as equity, food security) while preserving (or restoring degraded) natural systems. This sustainability consideration is not automatically embedded in climate adaptation approaches. Like in any development intervention, efforts to address sustainability of the natural system need to be brought in as central elements in designing climate adaptation response. These similarities and differences have long posed challenges for development interventions and efforts to identify the most appropriate climate adaptation interventions for promoting and interpreting resulting outcomes.

13. It is thus necessary to situate the adaptive responses of smallholders and their capacities in the context of localized climate risks in order to assess the adequacy and appropriateness of responses to the identified risks. If the magnitude of climate risks outstrips the existing response capacity, then smallholders will need external assistance in recognizing localized risks, identifying existing smallholder responses and knowledge, and determining the appropriateness and adequacy of the enhanced adaptation response and its impact on the ecosystem and on the relevant socio-economic systems. With the rate of climate change accelerating, periodic reassessments of risks in areas more prone to climate threats are needed to ensure the adequacy and magnitude of the intended intervention or response. The ability of the organization to recognize and adaptively respond to changing climate risks is a critical aspect of this evaluation.

14. The inhabitants of all locales facing climate risk require adaptive strategies, and this is particularly relevant for smallholders and the rural poor, for whom disruptions that affect their food security and livelihoods carry a far greater risk. This implies that CCA must be scaled to reach all poor smallholders facing climate risks. Where the impacts of climate change and adaptation responses are at the local scale it is essential that successful actions are then replicated or up scaled to other locales with similar conditions to ensure widespread, systematic adjustments to climate change. Larger scale adaptive responses such as at landscape or watershed scales might already be at a sufficient scale.

15. **Additional definitions**: *Transformative change*. IFAD12 focuses on achieving transformative change. Given the urgency of the need to engage with the climate crisis, *climate response needs to be not only effective but transformative*. At the corporate level, IFAD has not yet defined transformative change.[28] By reviewing the literature on the subject, this evaluation presents some key attributes of transformational change.[29] These include, for example, changes in mindset and behavior of smallholders and duty bearers in recognizing the importance and investing in CCA. Transformative change catalyzes system level changes to reach beyond project boundaries, generating multi-level (local, subnational, national and global), cross sector (agriculture, environment, health, gender, finance) links and influencing decision-making. Building transformational change also requires sound root-cause analysis of development and sustainability challenges and taking into account the intended and unintended consequences of human system actions on ecosystems.

[27] IPCC 2018b. The definition of (environmental) sustainability in the IPCC Glossary borrows from the 1987 UN World Commission on Environment and Development report: 'Our Common Future'
[28] Some IFAD reports refer to transformative change and attempt to provide definition specific to sectors. For example, Rural Development Report 2016.
[29] Blue Marble Evaluation (https://bulemarbleeval.org/), Better Evaluation (https://www.betterevaluation.org), Centre for Evaluation Innovation (https://www.evaluationinnovation.org), American Evaluation Association's Systems in Evaluation (https://www.systemsinevalution.com), to name a few.

16. *Scaling up*. IFAD's Operational Framework for Scaling up Results defined scaling up as expanding, adapting and supporting successful policies, programmes and knowledge so that they can leverage resources and partners to deliver greater impacts to a larger number of rural beneficiaries in a sustainable way. Scaling up, in addition to replicating or expanding approaches or results to improve outreach can also mean moving a project forward into a more developed, complex phase, possibly involving new components, configurations and stakeholders. It could also involve mainstreaming a certain approach into policy.[30]

17. *Human system - ecosystem nexus*. Environmental sustainability requires not only that global warming is arrested, but also that other critical challenges confronting the planet such as loss of biodiversity and compromised quality of land, air, and water do not reach critical thresholds such that the planet cannot sustain life. Climate change affects smallholder agriculture and ecosystems. The status of ecosystems in which smallholdings are located affects farm production, its sustainability and the options available for improving system resilience. At the same time, smallholder actions affect these ecosystems both positively and negatively and through their ecosystem interactions, smallholder agriculture also moderates the rate of climate change. This intended and unintended interaction between the human system and ecosystem represents the so-called 'nexus' and determines the environmental sustainability of CCA responses.

18. *Win-win solution* is used in this evaluation to refer to the CCA responses that seek to collectively achieve climate, economic and environmental resilience. In addition to strengthening economic and climate resilience, these responses recognize any negative impact of agricultural practices on ecosystems and aim to restore degraded environments to ensure environmental sustainability. In other words, deep adaptation goes beyond the "do-no-harm" approach and attempts to reverse the damage to the surrounding ecosystem.

19. *Farmers.* IFAD operations defines farmers as people engaged in agricultural activities and/or agricultural related businesses. These activities or businesses relate to crop production, livestock, capture fisheries and agroforestry. In this evaluation, pastoralists and agro-pastoralists are assumed to be a sub-set of farmers.

Measuring climate resilience

20. ***To date, IFAD does not have a corporate definition or measurement framework to assess climate resilience***.[31] Given this context, this evaluation draws on the necessary elements of a working definition and framework that is consistent with the current development literature, the practices of other IFIs and the most recent attempts by IFAD country offices and regions to define and measure resilience.

21. **IFAD recognized that the concept of climate resilience may be applied to an entire system or its components and to all hazardous events or a subset of events.[32]** Resilience applied to particular components or a particular subset of hazardous events is referred to as 'specified resilience' and must be qualified by the response to the specific questions 'resilience to what?' and 'resilience of whom?' The IPCC definition corresponds to general resilience, which is relevant to all systems (social, economic and ecological/environmental) and considers all

[30] IFAD, 2015c

[31] As discussed subsequently, in 2015 September IFAD produced a 'How to Do Note' on 'Measuring climate resilience' that presented different approaches to measuring resilience without prescribing any specific approach. Corporate Results Management Framework of IFAD11 provides four core indicators for aggregating climate resilience results (see paragraph 141, footnote 110 of this report). These indicators, such as number of groups supported, number of hectares brought under CCA technologies provide critical output level indicators that contribute to smallholder resilience but do not measure the actual outcome level changes to climate resilience, such as reduced variations in income over time, or extent to which degraded eco-systems were restored, to name a few.

[32] Walker et al, 2004; Folke et al 2010; Elmqvist 2014; Carpenter et al. 2001

hazardous events. IFAD[33] recognized the need to work with 'specific' resilience that is applicable to strengthening the well-being and food security of smallholder farmers and their communities. For instance, the concept note of ASAP (2011) adopted the IPCC definition as a starting point, and defined specific resilience to climate shocks and stresses, of smallholders and their communities at farm and landscape levels. *Shocks* were understood to be extreme events such as floods, cyclones, droughts, and *stressors* covered prolonged low-intensity effects such as rising temperatures and their consequences.[34]

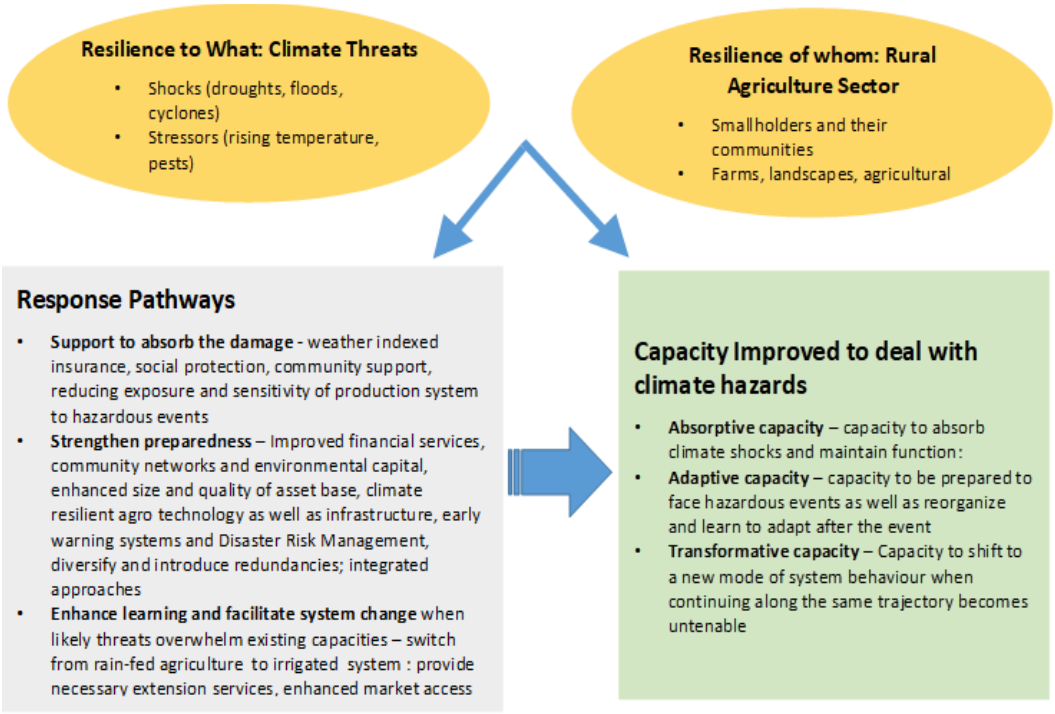
22. **Consistent with the literature on resilience, IFAD treats climate resilience as a measure of the** capacity to adapt to climate change effects. As will be discussed in the subsequent chapters, corporate framework to conceptualize and measure climate resilience is yet to be in place. While an IFAD-wide guidance that is consistent with international practices is absent, a number of efforts are under way at the regional level to develop such a framework and use it to track improvements to CCA in projects. The Resilience Scorecard in the LAC region is one such example[35]

23. ***Climate Resilience is widely referenced in the literature and practices of other IFIs such as the World Bank in terms of three types of capacity: absorptive capacity, adaptive capacity and transformative capacity***. Absorptive capacity is the capacity to absorb shocks and maintain function; adaptive capacity is the capacity to be prepared for the next event or recover from one by reorganizing an agricultural production system and learning in order to adapt; and transformative capacity is the capacity to shift into a new mode of system behavior when continuing along the same trajectory becomes untenable.[36] This understanding and definition is also reflected in more recent climate responses from IFAD (for instance, the World Bank and IFAD joint project in Ethiopia, Lowlands Livelihood Resilience Project (2019-2026)). Figure 2 summarizes this conceptual resilience framework for rural agricultural sector.

Figure 2

[33] IFAD, 2015d
[34] IFAD, 2011a
[35] IFAD produced a 'How To Do: Measuring Climate Resilience' in 2015 (HDTN) which provided alternative methods to measure climate resilience, without offering a preferred approach. LAC Region piloted efforts to operationalize one of these approaches and developed Resilience Scorecards to measure resilience through proxy indicators: https://intranet.ifad.org/documents/20143/1443189/Understanding+and+monitoring+Resilience+Lac+11+April+2018.pptx/e4e85961-3d2b-11f9-c101-6d5d873c1379. This approach was also being tested in APR with ECG support.
[36] Boltz et al., 2019; Folke et al., 2010; Helfgott, 2018

A conceptual framework for climate resilience in rural agricultural sector



24. ***The framework outlined above is consistent with the idea that climate resilience is intricately linked to overall development resilience***. The pathways above show the importance of other types of resilience in shaping climate resilience. For instance, climate change related absorptive and adaptive capacities are in turn, linked to initial asset base (economic), environmental capital and community support (social capital), to name a few.

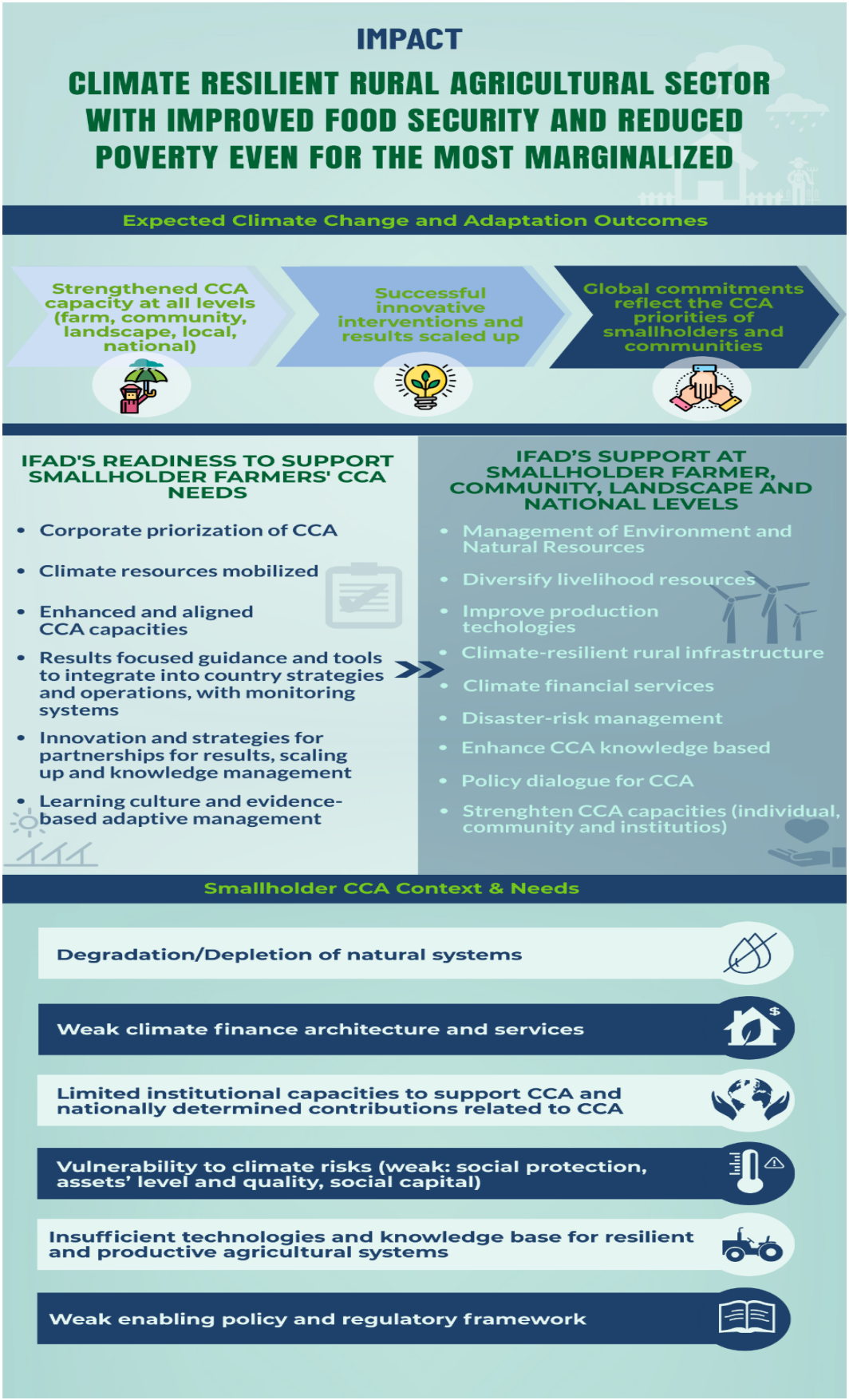
C. Theory of Change

25. Strengthening smallholder farmers' adaptation to climate change is a priority for IFAD. To develop an operational theory of change for IFAD's CCA response, the evaluation collected evidence from IOE project performance evaluations from 144 relevant projects that were completed between 2004[37] and 2018. Based on this evidence a schematic system-level nested theory of change (ToC) was developed by the evaluation team and validated by key stakeholders during the design finalization workshop and by key informants throughout the evaluation. The key elements of the high-level ToC are presented in Figure 3 and the more detailed theory of change content including key assumptions and risks is presented in Annex 2.[38]

[37] 2004 marks the first year when IFAD became an implementation agency for GEF and started incorporating climate adaptation into its operations.
[38] IFAD strategy and action plan on environment and climate change 2019-25 presents a theory of change for the organization. However, it pertains to both environment and climate change and not specific to climate adaptation. ASAP does not provide a corporate level ToC for climate adaptation. The ToC of this approach paper draws upon the results framework and the concept note of ASAP.

Figure 3

High-Level Theory of Change



26. The ToC in Annex II identifies and defines the necessary pre-conditions and steps to achieve socially and environmentally sustainable CCA of smallholder agricultural communities. The ToC sets out an 'outcomes pathway' by which the process of change and their causal linkages are related chronologically as well as their increasing spatial impact. In this TE, five 'pillars' or domains were identified. The first pillar is IFAD's corporate resources and instruments which ensure that the organization is fit for purpose. These include having an appropriate priority and strategy to mainstream and target CCA, the relevant technical and financial capabilities and tools to manage development programmes in-country and to build national capacities, the partnerships to foster collaboration with governments and agencies, and appropriate monitoring and evaluation systems in place to ensure effective project implementation and learning emerges from the investment. Collectively, these provide the basis for providing relevant support to smallholders and ensuring the design and implementation of projects will meet external scrutiny and required levels of quality.

27. The second pillar relates to defining and identifying the adaptation needs of smallholders and their communities, including the most vulnerable and food insecure. IFAD can ensure that their activities will be effective across key areas. These include addressing climate risks, ensuring projects are environmentally sustainable and socially inclusive of the most vulnerable smallholders, incorporating local knowledge into design and ensuring actions are context appropriate. Projects are expected to deliver efficiency in terms of time inputs and resources, seek opportunities to up-scale and promote innovative solutions to contribute to the wider knowledge base through learning.

28. Feeding into the third pillar, sound design and implementation by IFAD should lead to positive programme and project effects for smallholders through strengthened adaptation responses and climate resilience, with consequences for livelihoods and income sources (farm and non-farm activities). Smallholders and their communities will become more resilient, reflected in improved and diversified smallholder earnings, enhanced food security, and strengthened supporting institutions and a positive enabling policy environment. Livelihoods for poor rural populations including landless, youth and others will be addressed through developing off-farm and on farm-related enterprises in smallholder communities. A positive enabling environment is achieved through transforming policies and regulations to support adaptation and sustainability.

29. It is also important that IFAD funded interventions are targeted to improve or at least maintain the condition of local ecosystems, by ensuring natural-human interventions are explicitly addressed, that sustainable land and water management practices are promoted, that land degradation, deforestation and biodiversity losses are minimized and opportunities for carbon sequestration are achieved to limit carbon emissions. IFAD programmes should also support governments and national institutions to build capacity. This will ensure integration of CCA approaches into future rural development activities and advocate ongoing support to smallholders and the rural poor. Dialogue and learning to strengthen the enabling policy and regulatory environments at sub-national, national and international levels (e.g. UNFCCC) should also be a key programme effect.

30. As reflected in the fourth pillar, successful IFAD programme and project outcomes need to be considered for different timeframes, both immediate and for the longer-term. For example, in terms of achieving enhanced resilience to climate risks, it will be important to expand the knowledge base, with learning and advocacy platforms at both national and international levels to facilitate CCA for smallholders including the most vulnerable. There will also be a priority to develop synergies with international agencies, NGOs and others to disseminate best practices and to co-design integrated support services to build adaptive capacity.

This will require a suitable climate-informed knowledge platform with IFAD and partners as users and contributors at global and country levels to scale successful adaptation. If the complexity of smallholder-landscape-ecosystem interactions or the specific vulnerabilities of women and disadvantaged groups are not sufficiently understood and addressed, then IFAD's adaptation efforts may adversely affect the environment and sustained resilience will be at risk.

31. Finally, as represented in the fifth pillar, the longer-term impact from IFAD smallholder climate intervention would consequently lead to sustainable agricultural development. Here, three priority areas are relevant, including (i) long-term poverty reduction and social equality (improving well-being, livelihoods and food security and empowerment), (ii) sustainable ecosystems management (human-natural interventions are explicitly recognised and ecosystem functions and services protected) and (iii) tangible contributions to society, knowledge and policy accrue. This includes, for example, informing debates on sustainable and healthy diets, improved health and education of smallholders and vulnerable communities, increased national coping capacity and global attention to climate justice, and greater fiscal justice at national and trans-national levels.

D. Methodology

32. **Key evaluation issues:** This evaluation focused on the extent to which IFAD-supported initiatives have helped smallholders adapt to the impacts of climate change by promoting climate-resilient livelihoods and improving their food security. The over-arching questions were identified from an initial round of consultations, then validated during the design workshop with IFAD Management representatives. Three over-arching questions were identified:

    (i) What difference have IFAD interventions made in the ability of smallholders and their communities to adapt to climate change, particularly in the case of those most vulnerable to climate change, such as women, youth and indigenous peoples? What has worked and why? Have opportunities been missed?

    (ii) To what extent has IFAD been able to leverage its operations to strengthen smallholder farmers' CCA capacity at the local, sub-national and national levels through partnerships and by scaling up successful interventions and development results, promoting enabling policies, strengthening institutional capacities and improving the financial architecture for adaptation? What has worked and why? What opportunities have been missed?

    (iii) To what extent is IFAD equipped to address the existing and projected adaptation challenges facing smallholder farmers and to meet its commitments under IFAD11 and beyond?

33. **Scope.** The scope of the evaluation was comprehensive. It covered all geographic regions and countries in which IFAD operates; all related IFAD interventions-project as well as country strategies (COSOPs/CSNs); and IFAD's business model related to CCA (including, relevant corporate replenishment commitments, resource mobilization, as well as corporate strategies, guidance and tools). The evaluation covered the period since CCA was declared as a corporate priority by IFAD in 2010 (2010-2019).

34. **Evaluation criteria.** The evaluation adopted key criteria including relevance, effectiveness and impact. Analysis also included issues related to coherence and sustainability. In conjunction with a 'theory of change' and evaluation matrix were used to inform the development of country case studies, desk reviews, evaluation tools, and an interview protocol.

35. **Consultations**: Initial discussions with Evaluation Committee (EC) and preparations for the evaluation commenced in April 2020, followed by discussions

with management through the management self-assessment workshop (June 2020). Two consultations were held with the core learning partnership group (CLP). First in April 2021 to discuss emerging messages after the data collection and analysis and the second in June 2021 to discuss the draft evaluation report. CLP comprises of IFAD technical experts in climate and environment and managers, and was established to strengthen IFAD-wide ownership of the evaluation and to strengthen its relevance to the organization.

36. **Evaluation process**: A design workshop was held with the team and key IFAD stakeholders to finalize the theory of change and evaluation design (June 2020). A desk review of all relevant documents and portfolio analysis was conducted to assist the selection and framing for the case studies. The data collection and analyses were completed between July 2020-April 2021. The report was drafted and quality assured through a series of internal iterations between May-August 2021.

37. **Data collection and Analysis.** The evaluation employed multiple lines of evidence to ensure that all interests were represented. Primary data was collected through reviews of key program and policy documents, an extensive and systematic portfolio review of 256 projects, twenty detailed case studies (involving 20 countries), two e-surveys, and interviews and group discussions with representatives at headquarters. The evaluation also collected secondary data through a Rapid Evidence Assessment, collecting available geo-spatial data, and three learning theme studies.

Primary data

38. *Document review***.** The evaluation team conducted an extensive review of relevant documents including: i) IFAD's Strategic Frameworks, Replenishment reports and other strategy documents related to CCA since 2010; ii) the four versions of Social, Environment Climate Assessment Procedures (SECAPs) beginning with 2009; iii) country strategic opportunities papers (COSOPs), and country strategy notes (CSN) approved since 2010; iv) documentation of IFAD's ongoing efforts and thinking to improve climate responses, such as the Rural Resilience Programme (2RP); iv) relevant self-evaluations conducted by IFAD management, including the seven impact assessments of climate responses conducted as of 2019 (Bangladesh, Chad, Ethiopia, Malawi, Mexico, Rwanda and Tajikistan) and v) related knowledge products, such as research and evaluative studies on smallholder adaptation and agriculture conducted by other development partners.

39. *Portfolio Review*. Documents for 256 projects identified as addressing climate risk and approved 2010 to 2019. Chapter II elaborates how projects addressing climate threats were identified and provides and overview of the portfolio analysis.

40. *Case studies***.** Altogether 20 case studies were conducted involving 35 projects (Annex I- Table 1) constituting 14% of the IFAD portfolio of climate responses. These incolved key informant interviews as well as collection of monitored data. Interviews were held with government officials, other actors (World Bank, EU, and FAO), research organizations, Non-Government Organizations, private sector organizations, farmers' organizations and other beneficiaries and key civil society organizations active in CCA. Smallholders and target groups were interviewed during field visits by national consultants and by evaluation team members.

41. Due to the COVID-19 outbreak and travel restrictions, the case studies were all undertaken remotely with field visits by national consultants, wherever possible (13 of 20 countries). This also necessitated extensive desk-based document and portfolio reviews and remote engagement with IFAD staff, key informants and stakeholders, and from secondary sources. When country pandemic controls permitted, national consultants conducted site visits and beneficiary interviews, with remote participation by the international evaluation team. In addition, an in-

country expert panel was constituted to verify important project claims, when feasible. The technical experts were chosen from academia or watchdog NGOs.

42. *Sampling strategy for case studies*. Country-level case studies were selected using a purposive sampling strategy to ensure representation across a number of criteria including: type and severity of climate risk, agricultural ecologies, typology of climate adaptive activities, type of agricultural system, income status, and development context, fragility status, availability of geospatial data and maturity level of. IFAD was committed to mainstreaming of CCA at project and COSOP levels so countries were chosen as the unit of analysis. Hence, the sampling strategy included not only project level characteristics but also relevant country characteristics. Based on project design documents, each project was scored for the number of characteristics (types of climate activities, types of climate risks, agro-ecological conditions, to name a few) it represented, and ranked. Inputs from IFAD management during management self-assessment workshop and subsequent communications were used to refine the characteristics used for ranking and projects were selected based on ranking. It should be noted that, consistent with the case study approach, the purposive sampling aims not to simply create a microcosm of the project universe, but aims to capture the key elements necessary to be analyzed. Highlights of some of the key characteristics of the cases studied are presented in Table 1 below.

Table 1

Select Descriptive Statistics of Portfolio of CCA Case Studies

Description	*Statistics*
Total number of projects in case studies	35 (14% of the universe of CCA projects)
Total case studies (case study countries)	20
Share of ASAP funded projects	50%
Share of projects with supplementary CCA finances	69%
Share of ongoing projects	71%
Share of projects approved after SECAP was introduced (2015)	43%
Share of projects in countries with fragility situation	25%
Share of projects in LIC/LMIC	72%

Source: IOE Elaboration of Case Studies

43. *Institutional Readiness Study. I*nputs from interviews at IFAD Headquarters was undertaken to feed into the formative part of the evaluation analysing IFAD's readiness to deliver on its future commitments. Semi-structured interviews and group discussions were held with IFAD senior managers, country directors, regional programme teams, technical specialists based in IFAD Headquarters as well as IFAD hubs and country offices, as well as, select Executive Board representatives. The institutional readiness analysis also benefitted from the case studies which explicitly assessed the institutional readiness to deliver at the regional and country level.

44. *Online surveys* were used to collect views and experience from IFAD and project country staff regarding IFAD's CCA response (see Annex VIII). The surveys were conducted between February - March 2021 and results used to triangulate

evidence from the case studies and document review. The surveys drew response from 136 project staff and 102 IFAD staff- totaling 238 respondents.

***Primary data collection involved interviews with 742 beneficiaries and stakeholders and responses from 238 IFAD and Project staff*.**

Secondary Data

45. *Geo-spatial data*. Given the challenges to collecting primary data, the evaluation team also considered the availability of geospatial data, in particular geographic information system (GIS) data to inform case studies. Due to the dramatic increase in the availability, accessibility and quality of satellite imagery, Earth Observation and Geospatial Technologies have allowed the study of earth surface phenomena and features in much greater detail than ever before. Related Earth Observation and Geospatial instruments are increasingly being used for monitoring and tracking key aspects of climate resilience interventions. The study analysed available geospatial information to determine the extent to which the data could be used for monitoring results, achieving project milestones, and for geographical targeting in IFAD operations. Five of the 20 case studies benefited from GIS data.

46. *Evidence from IOE evaluations*. The evaluation team also reviewed evaluations undertaken by IOE including Evaluation Synthesis Reports on Environment and Natural Resource Management (2016)[39] IFAD's Support to Infrastructure (2020),[40] and Corporate Level Evaluations such as IFAD support to Innovations in Smallholder Agriculture (2020).[41] Case studies also benefitted from ongoing or recent Country Strategy and Programme Evaluations and from evidence emerging in recent PPEs.

47. *Rapid Evidence Assessment (REA)*[42]**.** An REA was undertaken to supplement the primary evidence collected from IFAD projects and programmes with key lessons and recommendations from relevant peer-reviewed (scientific) and grey literature on *building smallholders' adaptive capacity to climate variability and change*. Altogether 1338 documents were scanned and 91 selected to cull relevant evidence. This provided a transparent, rigorous and repeatable synthesize from non-IFAD sources in the areas of knowledge management, scaling up and human system-ecosystem nexus. It was the first such exercise undertaken by IOE in its evaluations.

48. *Learning theme-studies***.** The TE aimed to promote learning from this evaluation. IFAD12 emphasizes the importance of achieving transformative changes. Among the many factors contributing to transformative changes, this evaluation identified three themes critical for successful programming for CCA: i) Effective knowledge management - strengthening the knowledge base based on experience and using evidence to improve solutions; ii) scaling up - designing and implementing with an aim to scale up results and projects or designing projects at scale provide another key pathway to transformational change; and iii) ecosystem-human system nexus - sustainability is key to transformation and long term sustainability of climate response is ensured when ecosystems are restored, or at the least not harmed. IFAD recognizes the importance of this nexus in the Strategy and Action Plan on Environment and Climate Change 2019-25.

[39] ESR on Environment and Natural Resource Management, 2016: https://www.ifad.org/documents/38714182/39721113/ENRM+ESR.pdf/016771c9-3f3f-4759-b0ec-89b0c52661a1
[40] https://www.ifad.org/documents/38714182/42473795/ifad_esr_thematic_02.pdf/1f804fa9-9f09-70ea-2d0d-6c61606ed932
[41] https://www.ifad.org/documents/38714182/42473795/ifad_esr_thematic_02.pdf/1f804fa9-9f09-70ea-2d0d-6c61606ed932
[42] Compared to regular literature review, REA provides a much broader and deeper analysis of both peer reviewed and grey literature and adopts a highly structured sampling protocol to limit the sample biases. It is a recognised technique for gathering evidence in a robust, transparent and tractable way.

49. **Data analysis and reporting.** Methods and sources were triangulated to arrive at evidence. The sources of data included document review, primary data collected by the evaluation team and secondary data. This evidence-base provided the answers to all questions in the evaluation matrix, which in turn provided the basis for drafting the evaluation report.

50. **Quality assurance**. Feedback on the draft report was sought and obtained from: i) A two-member external independent advisory panel; ii) IOE-wide peer review; iii) IFAD management, to identify any factual or interpretive errors; and iv) the CLP, to identify any omission of key evidence that could materially change the evaluation findings as well as factual and interpretive errors.

51. **Comparing with other IFIs**. The evaluation compared IFAD's support structure for CCA responses in other IFIs and UN actors. Only the organizations that had recently conducted corporate level, independent, climate response related evaluations were selected. The evaluation findings provided an external frame of reference with regard to the critical success factors in providing CCA responses. Based on this comparisons with these organizations were made: World Bank, Food and Agriculture Organization, Adaptation Fund, Global Environment Facility and Inter-American Development Bank. The analysis was based on findings from related independent evaluations conducted by these organizations, combined with a group discussion with evaluation offices. Table 5 was prepared based on this information and validated by respective management units.

52. **Evaluation Process and Key milestones**

- The TE was initiated in October 2019 and discussed with the Evaluation Committee in its April 2020 session
- Design workshop, June 2020.
- Management Self-Assessment Workshop, June 2020
- Desk reviews, and interviews with IFAD managers in headquarters, and case studies, July 2020 - April 2021.
- Rapid Evidence Assessment, March 2021
- Three learning theme studies, December 2020- April 2021
- Data Analysis, February – June 2021. Weekly Zoom meetings of the evaluation team to discuss relevant issues, identify key messages emerging from case study data
- Reporting and quality assurance, May – Aug 2021
  - ✓ Key messages workshop with Core Learning Partnership group (CLP), April 2021
  - ✓ CLP Discussion on draft evaluation report, July 2021
  - ✓ IOE peer review of draft report, June 2021
  - ✓ Management review of draft reprt, July 2021
  - ✓ Evaluation Advisory Panel review of draft report, July 2021.

E. Constraints

53. The evaluation was planned and started before but largely conducted after the COVID-19 outbreak so field visits by the evaluation team were not possible. This made it difficult to gain a comprehensive view of the national context, climate risks and the adequacy and appropriateness of the project interventions response relative to local context and climate risks, and to identify unintended and unexpected effects. Use of national consultants helped address some of these gaps. To supplement this evidence, geospatial data was collected where feasible,

and analysed. While these proved to be of limited value in assessing results, they proved useful in other issues, for instance, assessing the efficacy of geographic targeting or relevance of IFAD infrastructure to local needs.

II. Mainstreaming Climate Change Adaptation (CCA) in IFAD and its Evolution

54. This section provides an overview of the IFAD Climate Change Adaptation portfolio and reviews the IFAD Adaptation Business Model. An overview of the key findings of evaluations of similar entities concludes the section. This section provides the context and perspectives to inform framing the study and its analysis.

A. Overview of IFAD Portfolio of CCA

Operations

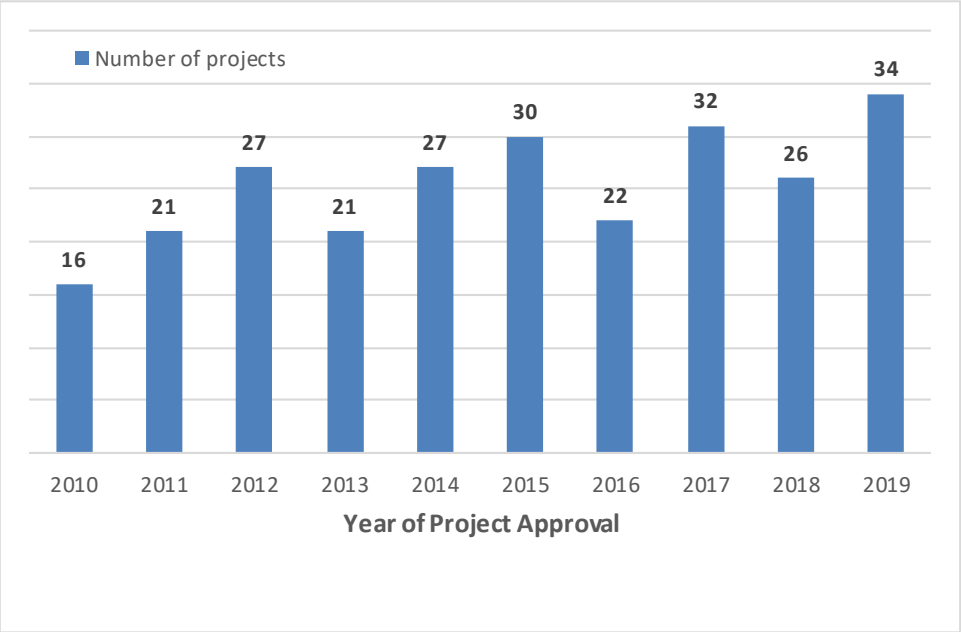
55. **IFAD smallholder projects have strong CCA focus**. The evaluation considered all IFAD interventions contributing to smallholder adaptation to climate change. To identify interventions with climate response, two criteria were considered: (i) Projects faced climate risk(s); and (ii) Project activities plausibly contributed to smallholders adapting to the climate risks they faced. The climate risks faced by the projects were determined from the PDR and relevant COSOP. When information was not available, PDRs of recent projects in the geographical area were reviewed. To determine plausible contribution of project activities to address climate risks, the evaluation compiled all CCA activities listed in the PDRs of all 41 ASAP projects and identified relevant categories of activities (see Annex IX for details) that address specific climate threats. The project activities and climate risk were compared with this list to determine if the project activity could plausibly contribute to addressing the climate risk. This approach came from the recognition that IFAD has a long history of working in areas with adverse and variable climate conditions, well before CCA became an organizational priority in 2010. IOE analysis of project design reports shows that even when the intent to address the climate risks is not explicitly declared, many IFAD interventions facing climate risks have activities similar to those CCA projects facing similar climate risks in similar conditions and are deemed to meet Multilateral Development Banks' criteria. Hence, they likely contribute to CCA.

56. As discussed in Chapter 1, this evaluation focuses on the climate response during 2010-2019. Of the 294 projects approved by the Executive Board during this period, 256[43] or 87 per cent identified climate risks and provided CCA support as part of their projects. Figure 4 presents the distribution of project age within the CCA portfolio of IFAD operations.

[43] Review of project design reports.

Figure 4

Age of Projects in CCA Portfolio



Source: IOE elaboration.

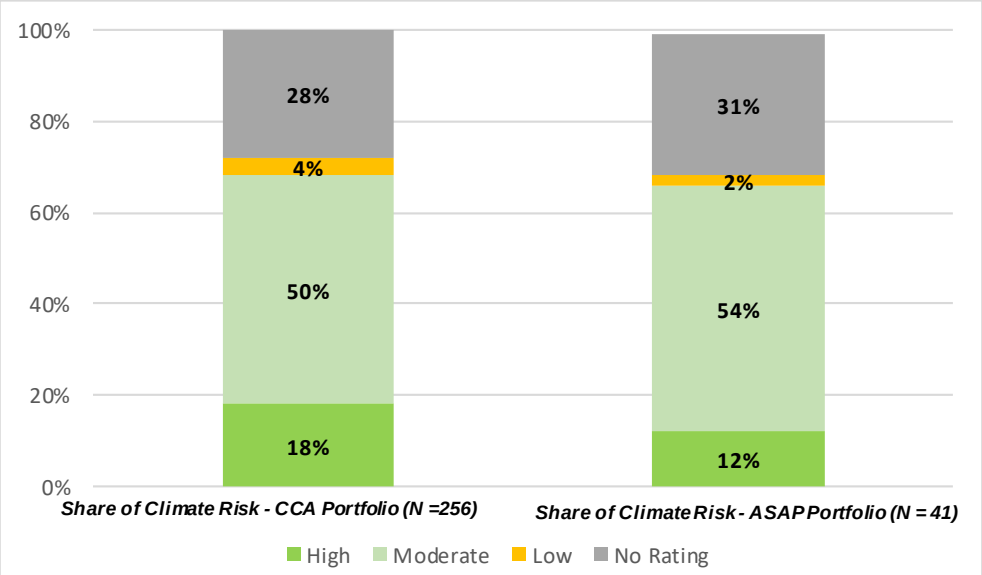
57. **Engaging with climate risks**. Of the projects with risk ratings, 95 per cent addressed moderate or high climate risk situations. However, it should be noted that only three quarters of the climate projects (187 of 256) actually provided ratings of climate risks. This is because formal guidelines to assess risk ratings became effective under the Social, Environmental and Climate Change Assessment Procedures (SECAP) in January 2015.[44] The risk level ratings were provided by the project delivery teams based on SECAP guidance.[45] Figure 5 presents a summary of climate risk rating across projects.

[44] SECAP guidelines were updated in 2017 and later in 2020. 44 projects approved prior to 2015, retroactively included the climate risks.

[45] It should be noted that an independent assessment function of climate risks was initiated only when Operational Policy and Results Division (OPR) was created in mid-2018. It uses standardized international climate risk sources to ensure accurate classification. While this is certainly a step in the right direction, given the local and context specific nature of climate risks, it is not clear to what extent quality assurance at headquarters could ensure an accurate classification without full knowledge of the local context.

Figure 5

Distribution of Climate Risks in Operations



Source: IOE Elaboration from Project Design Reports.

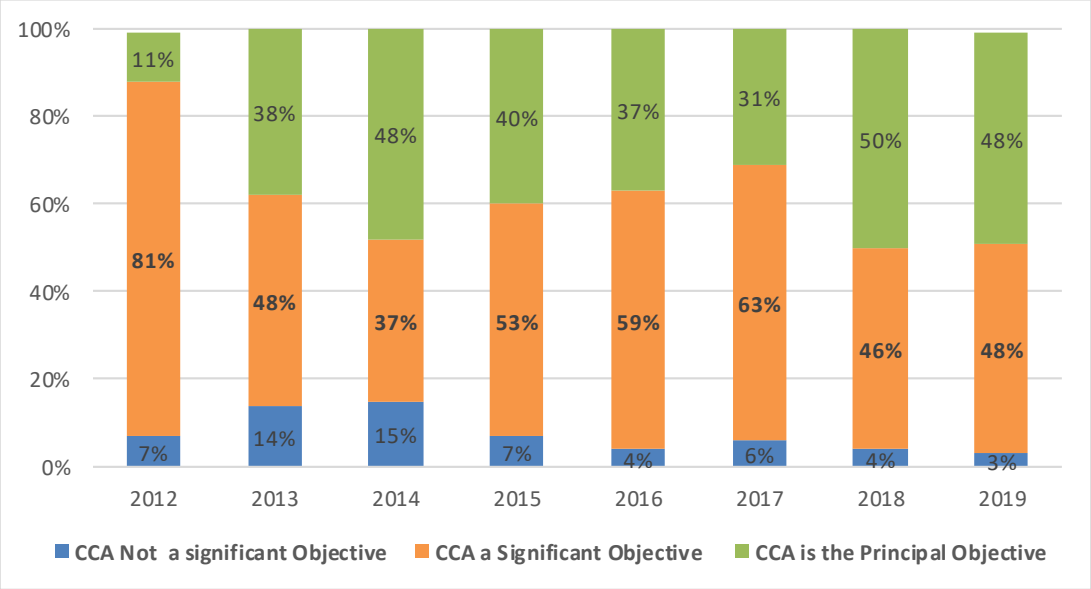
58. Mainstreaming CCA in IFAD involves a wide range of climate threats occurring in diverse agro-ecological zones and using a range of agricultural production systems.[46]

59. **Evolving prioritization of climate change**. The importance of CCA actions to projects was assessed by the evaluation team using the OECD DAC Rio Markers which focus on whether the objectives of the project were the principal (main) project objective, significant (one of main) or not significant.[47] Figure 6 presents the distribution of the intensity of project engagement with climate risks, as described above. There is a shift from significant to principal importance after 2013 following the introduction of ASAP in 2012. After fluctuating, projects approved in 2018 and 2019 show that nearly half those with climate responses appear to have CCA as a principal objective.

[46] Examples of climate threats include increasing temperature, varying rainfall, increasing frequency and intensity of weather extremes, glacier melt, and changing onset of seasons. IFAD works in a range of agro-ecological zones (mountain slopes, valleys, steppe, coastal zones) and with a range of agricultural production systems such as rain-fed agriculture, irrigation-based agriculture, cropping systems and livestock and pastoralism.

[47] https://www.oecd.org/dac/environment-development/Revised%20climate%20marker%20handbook_FINAL.pdf.

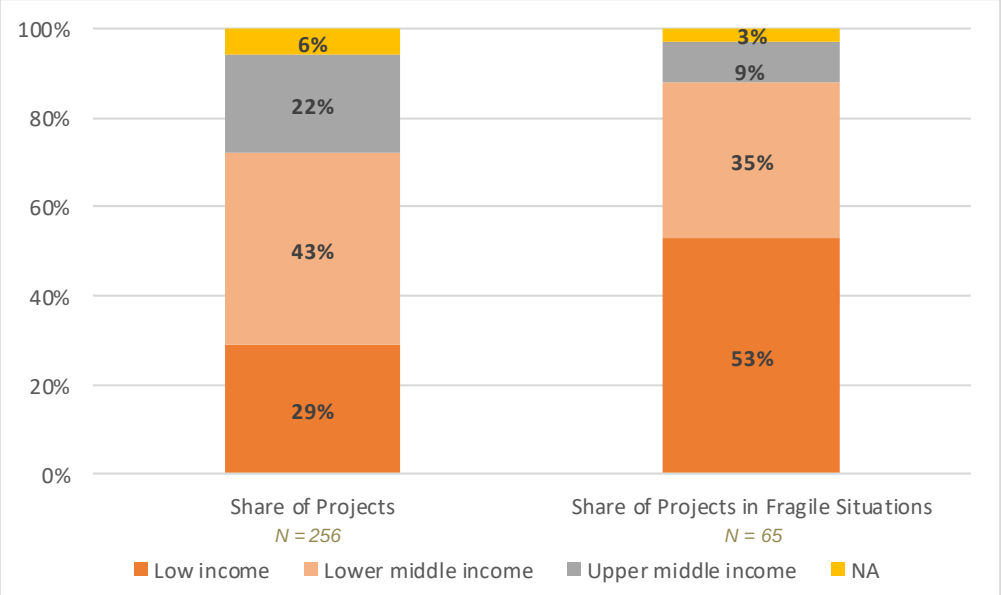
Figure 6
Prioritization of Climate Change Adaptation in IFAD Operations (OECD DAC RIO markers)



Source: IOE Elaboration from Project Design Reports.

60. **Climate response in different country contexts**. Nearly three quarters of the climate projects (72 per cent) are located in low or lower middle income countries and remaining share was invested in upper middle income countries[48] (Figure 7). Similarly, based on IFAD's listing of countries with situations of fragility, 25 per cent of the portfolio is located in countries with fragility situations at approval,[49] and 88 per cent of these projects are located in low or lower middle income countries (Figure 7).

Figure 7
Income Status and Fragility Situations in Portfolio Countries

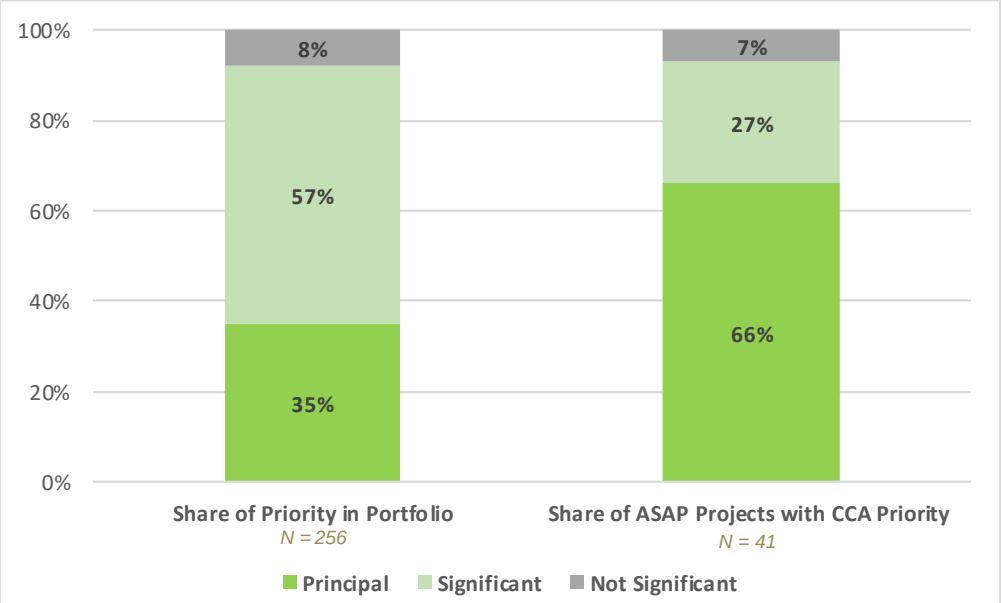


Source: IOE Elaboration from Project Design Reports, World Bank income classification, and IFAD listing of countries with situations of fragility.

[48] Income status was determined from the World Bank income classification.
[49] Design reports identified the project to be located in countries with fragility situations. This determination of situation of fragility was made by IFAD in line with the World Bank system of classification.

61. **ASAP projects are twice as likely to have CCA as a primary objective.** ASAP was the largest smallholder adaptation programme in the world[50] and it included 41 projects. The country case studies considered 35 projects in 20 countries with 17 ASAP projects. Figure 5 shows that when climate risk ratings are available, ASAP and non-ASAP project are located in moderate or high climate risk situations. Two thirds of ASAP-supported projects have CCA as their primary objective, nearly double the share of projects in the general portfolio (Figure 8).

Figure 8
Prioritizing CCA: ASAP Supported Projects and Overall Portfolio



Source: IOE Elaboration from Project Design Reports based on OECD DAC Rio Markers Guide.

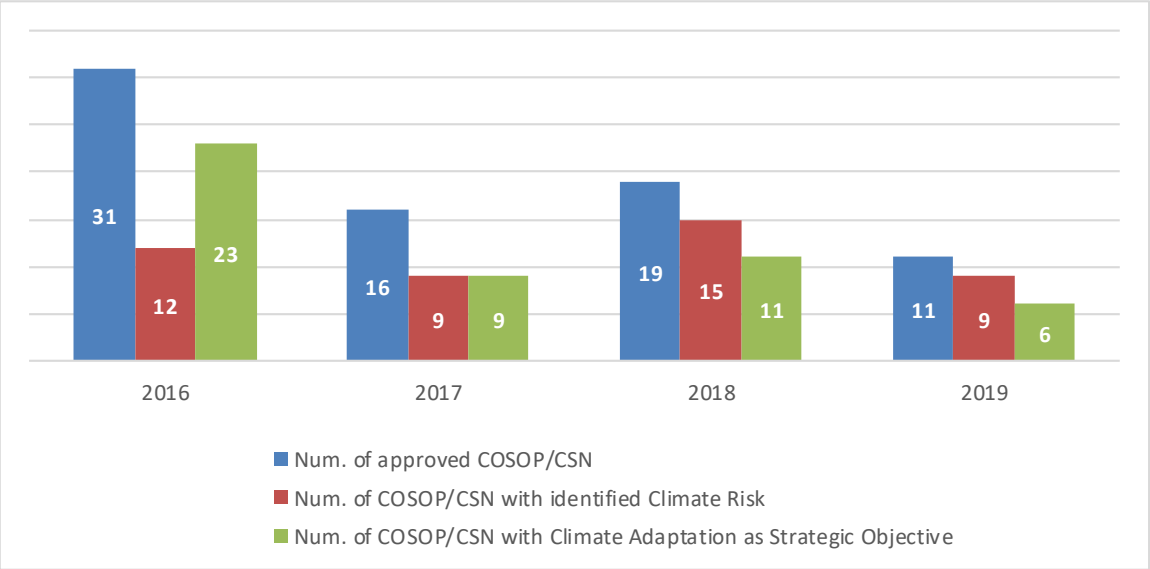
Country Strategies

62. This study reviewed Country Strategic Opportunities Programmes (COSOPs) and Country Strategy Notes (CSN) approved during the period 2010-2019 to the country strategies that identified climate risks and prioritized CCA as an objective or as an area of interest.[51]

63. **Nearly half the country strategies approved since SECAP, reported climate threats**. Of the 93 reviewed 46 COSOPs/CSNs identified climate threats and rated climate risks while 58 identified CCA as a priority. It should be noted that 27 of the 58 (47 per cent) COSOP/CSNs identifying CCA as a priority did not rate the climate risk. Nearly all COSOP/CSNs with climate risk rating were in medium or high climate risk situations. As seen from Figure 9, since 2016, there is a steady increase in the share of COSOP/CSNs identifying climate risks.

[50] IFAD – ASAP website: https://www.ifad.org/en/asap, accessed on 13/05/2021
[51] Analysis does not include all COSOPs and CSNs released since 2010 as a few were missing from IFAD databases.

Figure 9
COSOP/CSN – Climate Risk Level and Prioritizing Climate Change Adaptation Response

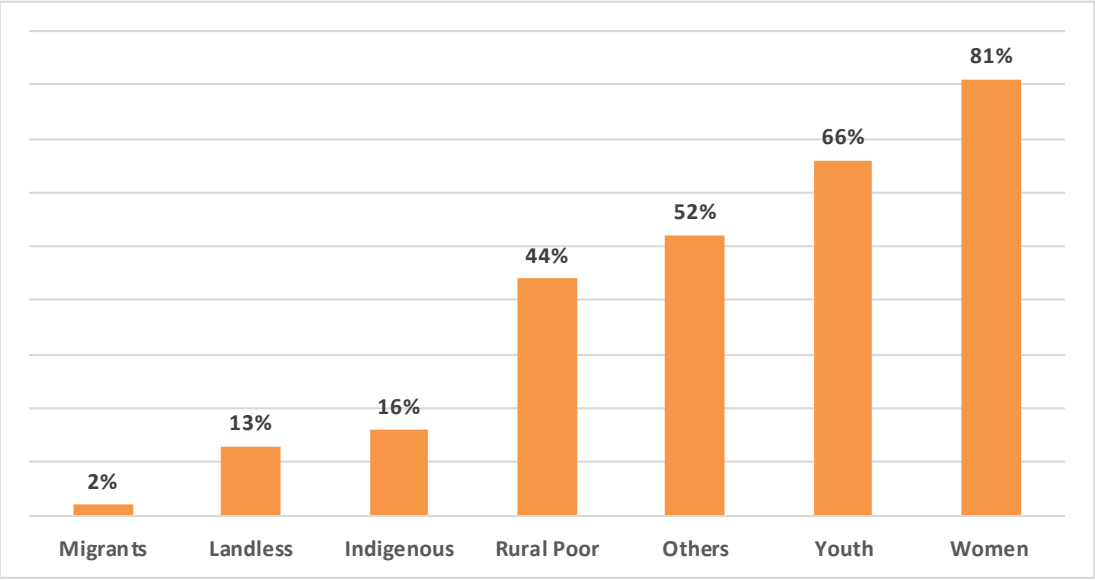


Source: IOE Elaboration based on IFAD database for COSOPs/CSNs.

Target Groups in climate response

64. **Majority of CCA response explicitly target women and gender issues.** Among projects and COSOP/CSNs identifying climate risk[52] (Figure 10), women were the primary targeted group (81%) followed by and youth (66%). CCA response usually has more than one target group. As will be discussed later, this also means one in five CCA response did not target women and gender issues while IFAD10 committed to mainstreaming gender issues in all its development activities.

Figure 10
Representaiton of Target Groups in IFAD's Climate Change Adaptation Response



Source: IOE Elaboration based on Project Design Reports

[52] Target groups were identified from the 256 project and 58 COSOP/CSNs reports that identified climate risk. Results were validated by comparison to supervision mission reports, mid-term reviews, project completion reports, COSOP reviews and any independent evaluations where available. Each project or country strategy usually has more than one target group.

B. Development of the IFAD Climate Response Business model

65. **Key milestones of the evolution of IFAD business model for CCA.** IFAD's approach to prioritizing climate response is to mainstream it into "prevailing business concepts, strategies and processes so that they can become the norm and improve the effectiveness of development investments. Along these lines, climate mainstreaming for IFAD means integrating climate related risks and opportunities into IFAD investment programmes by establishing the necessary institutional mindset, expertise, tools and processes."[53] Table 2 below provides an overview of the key milestones of IFAD's climate change adaptation response.

Table 2

Milestones of IFAD's engagement in the climate change adaptation response

Year	*Event*	*Reference Document*
2004	As an accredited implementing organization of GEF, IFAD gets financial approval for its first project to explicitly address CCA	
2009-2010	IFAD8 declares combating climate change as an operational priority	Report on the consultation on Eighth replenishment of IFAD resources
2010	IFAD approves the first climate change strategy.	IFAD Climate Change Strategy 2010
2010	Environment and climate division (ECD) formed	
2011	IFAD strategic framework (2011-15) recognizes resilience to climate change as an objective. IFAD 9 Commits to address CCA.	IFAD Strategic Framework 2011-15. IFAD-9 resource replenishment consultations report.
2011	IFAD prepares the concept note for Adaptation of Smallholder Agriculture Programme (ASAP)	ASAP Concept Note
2012	Newly approved IFAD9 has three commitments on CCA.	IFAD9 commitments
2012	ASAP-I approved	
2015	Newly approved IFAD10 has 4 commitments related to CCA, including a commitment to mainstream CCA in 100 percent of project designs. In addition to IFAD9 indicator two new CCA related indicators introduced in IFAD10.	IFAD10 commitment document
2015	Social, Environmental and Climate Assessment Procedures (SECAP) replaces IFAD's Environmental and Social Assessment Procedures (ESAP). Recognition of climate change in the safeguards document. Serves as the primary tool to mainstream CCA in IFAD operations.	SECAP document 2015
2016	IFAD's 2016-25 strategic framework recognizes CCA as one of the three strategic objectives	IFAD 2016-25 strategic framework
2016	ASAP II designed as a technical assistance and knowledge management window for adaptation; IFAD10 calls for COSOPs to analyse NDCs and respond to country CCA needs	ASAP II concept note
2017	Updated SECAP document released to account for the mainstreaming commitments of IFAD10	IFAD 2017 SECAP document
2018	Newly approved IFAD11 commits that "*project budgets will be categorized to respond to the Rio markers and, in addition to ensuring that 100 per cent of projects mainstream climate concerns, Management will ensure that at least 25 per cent of IFAD's PoLG is specifically climate-focused*".	IFAD11 commitment document
2018	New IFAD strategy and action plan for environment and climate change 2019-25 released integrating CCA and mitigation strategies with its environment strategy for the first time. Among other things, reiterates the need for COSOPs to respond to related country needs and NDCs	IFAD Strategy and Action Plan on Environment and Climate Change 2019-2025

[53] IFAD, 2016b, p. 4

2018	Environment, climate, gender and social inclusion division (known by acronym ECG) formed to mainstream these areas in IFAD Operations	
2019	IFAD began tracking climate finance using Multilateral Development Bank methodology (to fulfill its commitments under IFAD11 to allocate 25 per cent of PoLG to climate response)	IFAD11 commitment document
2020	SECAP updated and provides standards for assessing CCA interventions; Rural Resilience Programme formulated to bring all IFAD climate response under one umbrella.	SECAP 2020 document; Guidance on scoring adaptation options
2020	IFAD12 Consultations underway which envisages switching from a project-based approach to a programming approach, which covers climate response as well	IFAD12 Consultations

Source: IOE Elaboration

66. Operationally, IFAD launched its first major initiative to promote CCA action through its Adaptation of Smallholder Agriculture Programme (ASAP) in 2012. This programme offered a supplementary funding window to finance additional qualitative and climate resilience dimensions in IFAD projects. In addition, the Social, Environmental and Climate Assessment Procedures (SECAP) was introduced in 2015 to integrate social, environmental and climate change assessments into IFAD investment designs and has been a key instrument for mainstreaming CCA in IFAD operations.

Corporate-level priorities, strategies

67. **Corporate priorities continue to intensify Commitments to CCA** (see Table 3 for details). IFAD declared CCA as a corporate priority with IFAD8 and approval of a climate strategy in. IFAD10 and 11 continued this prioritization and agreed to mainstream CCA in 100% of the projects and country strategies (COSOPs). They also included CCA related indicators in their respective Results Management Frameworks. IFAD11 committed to focus 25 per cent of the PoLG on climate response activities.[54] This climate focus of the PoLG was increased to 40 per cent in IFAD12.[55]

[54] IFAD 2015, IFAD 2018b
[55] IFAD, 2021

Table 3

Corporate CCA Priorities

IFAD8	*IFAD9*	*IFAD10*	*IFAD11*	*IFAD12*
2010-2012	*2013-2015*	*2016-2018*	*2019-2021*	*2022-2024*
Stresses the importance of addressing Climate Change Adaptation(CCA)	Stresses the importance of addressing Climate Change Adaptation(CCA)	RMF integrates CCA related indicators.	RMF CCA related indicators refined.	RMF CCA adds an indicator; Biodiversity strategy by 2021 Develop specific agro-biodiversity initiatives to improve management and restoration of water or land ecosystems by 2022
CCA is one of the operational priorities	CCA continues to be an operational priority	Climate risks will be mainstreamed in 100% of IFAD's operations	Mainstreaming commitment continues	Mainstreaming commitment continues
Required a corporate climate strategy	Dedicated funding window for adaptation established (ASAP Trust Fund)	All new country strategies include analysis of countries' NDCs under the Paris Agreement	Invest 25% of PoLG (2019-2021) in climate-focused activities	Invest 40% of PoLG in climate response activities

Source: IOE Elaboration from IFAD replenishment reports (IFAD8 through IFAD12).

68. Similarly, IFAD's Strategic Frameworks 2011-2015 and 2016-25 prioritized CCA. The 2011-2015 Framework recognized climate change as a critical factor in addressing food security and made climate response one of the nine thematic areas of focus.[56] The next Framework (2016-2025) made CCA as one of the three strategic priorities of the Fund.[57]

69. **Corporate climate strategy is also evolving with the intensifying commitments to CCA**. The first climate strategy was approved in 2010. It called for all operations, resource mobilization as well as knowledge, innovation and advocacy to be climate smart. It recognized the need for strengthening the organizational structure and capacities as well as leveraging partnerships for advocacy and results. To facilitate climate smart operations, the Strategy advocated for all new COSOPs and programme documents to systematically reflect climate and environmental risks and opportunities. It targeted improving the guidelines for formulating COSOPs to include climate change issues and strengthening Environment and Social Assessment (ESA) tools. It emphasized the importance of partnerships with local communities and using local knowledge in designing projects. It prioritized enhancing knowledge management along with global and national advocacy for climate responses. To finance climate smart operations, it sought additional supplementary fund through strategic partnerships with GEF, AF, UNFCCC, BioCarbon fund and others. It also saw the need to create an Environment and Climate Division (ECD), ensure modest increase in the climate related technical capacity in the organization in the form of climate and environment experts, including regional environment and climate specialists.[58]

70. IFAD Strategy and Action Plan on Environment and Climate Change (2019-2025) integrates IFAD's strategies to address the environmental and climate challenges

[56] IFAD, 2010
[57] IFAD, 2016
[58] IFAD, 2010b

facing smallholder farmers. The new strategy aims to address the rapidly expanding scope of climate response within IFAD to meet the replenishment commitments and the climate objectives of IFAD's Strategic Framework 2016-2025. It continues and extends the approach of the first strategy in focusing on resource mobilization, knowledge management, strengthening environment and climate interventions, enhancing organizational capacity, refining the guidance and tools (SECAP) and leveraging partnerships for policy engagement and more effective interventions.[59] Both strategies emphasized the need to integrate climate considerations from the very early stages of design.

Climate Resources – Complementary and Supplementary Funds

71. **IFAD continues to expand its partnerships and mobilized over US$500 million as climate finance during 2010-2019**. As described under IFAD climate strategy (2010, 2019), expanding the resource base for climate responses has been a priority since it became an organizational priority. IFAD has several dedicated complementary and supplementary funds for CCA. Supplementary funds are provided mostly on a grant basis[60] to boost incentives to integrate climate response into wider smallholder development programmes and policies in partner organisations and governments. These funds are received from external donors (e.g. international organizations and funds, bilateral partners, foundations and the private sector). The conditions of managing the funds are bilaterally agreed between IFAD and the financing partner. Supplementary funds are allocated outside IFAD's performance-based allocation system (PBAS) and grant allocation systems. These funds seek to leverage the financing from IFAD's core resources through loans and DSF grants. The sources of these funds are briefly discussed below.

72. **Adaptation for Smallholder Agriculture Programme (ASAP)**. The Adaptation for Smallholder Agriculture Programme (ASAP) is a multi-year programme launched in 2012 with support from 12 donors to mainstream CCA in IFAD. Under the programme, a trust fund was set up to provide grants linked to IFAD loans that promote CCA in small-scale agricultural sector.

73. **Adaptation for Smallholder Agriculture Programme II (ASAP II)**. In 2016, IFAD started a technical assistance window known as ASAP II. The focus of ASAP II was on tool development, capacity building and technical assistance to mainstream climate change concerns into overall IFAD operations. Unlike IFAD grants, ASAP II grants can be used for activities which are usually financed through IFAD's administrative budget.

74. **Adaptation for Smallholder Agriculture Programme Plus (ASAP+)**. For IFAD12, IFAD has established ASAP+ window as a follow up to ASAP. In ASAP+, 5-10 per cent of the funds could be set-aside within the programme to support the development of project designs, participatory consultations, backstop project monitoring and implementation supervision, research and innovation, develop technical tools to enhance delivery of results,[61] just as in ASAP II.

75. **Adaptation Fund (AF)**. IFAD was first accredited to the Adaptation Fund in 2010 as a Multilateral Implementing Entity (MIE) and re-accredited in 2016 and 2020. The Adaptation Fund has supported five IFAD projects totalling US$35.5 million as of 2020 December.[62] AF support is directed to countries that are party to the Kyoto Protocol and in need of resources to meet urgent adaptation needs related to rural agricultural development and disaster risk reduction.

76. **Global Environment Facility (GEF), Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF)**. The first IFAD CCA project was approved in 2004 and climate activity was funded by GEF. Since then 62 GEF

[59] IFAD, 2018
[60] Green Climate Fund provides a mix of loans and grants.
[61] Rural Resilience Programme: https://webapps.ifad.org/members/eb/131R/docs/EB-2020-131-R-INF-4.pdf
[62] Ibid. The five projects were in Georgia, Iraq, Lebanon, Moldova and Sierra Leone.

projects were approved totalling US$256.5million for activities such as sustainable land and water management, watershed/ecosystem management and rangeland management. The funding for adaptation mainly comes through through Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF).[63]

77. **Green Climate Fund**. IFAD became an Accredited Entity to GCF in 2016 and signed the Accreditation Master Agreement in September 2018 which opened the door for IFAD to submit funding proposals. IFAD is accredited to apply for both loans and grants for medium-sized projects up to US$250 million (inclusive of cofinancing) with a category B or C environmental risk rating.[64]

78. The supplementary funds mobilized during 2010-2019 for climate response from these sources amounts to US$518 million.

Financial Instruments

79. IFAD uses loans, debt sustainability grants and IFAD grants to finance its operations. The resources for these finance instruments are drawn from the core resources of IFAD mobilized through replenishments from member states.[65]

80. **Loans**. IFAD provides loans on highly concessional, blend and ordinary terms. Each of these terms carry varying terms of maturity, grace period, concessionality and amortization schedule.

81. **IFAD grants.** IFAD has a grants programme financed through its core resources (replenishment). Under the current grants policy approved in 2015 up to 6.5 per cent of Programme of Loans and Grants (PoLG) can be made available for grants to be used for non-lending activities such as partnerships, knowledge management and policy dialogue. IFAD grants cannot be approved and used for activities that IFAD would normally undertake with its own administrative budget.[66] The grants policy was revised and becomes effective in 2022 January. There are notable changes to the existing policy as discussed in Section C.

82. **Debt Sustainability Framework grants.** IFAD introduced the policy on Debt Sustainability Framework (DSF) in 2007. DSF allowed IFAD to lend to debt distressed countries on grant basis. Based on a classification done by International Monetary Fund and World Bank, countries are classified as Green, Yellow or Red. Green countries are lent on a loan basis, yellow countries are lent money on a 50 per cent highly concessional loan and 50 per cent grant basis while countries classified as red are lent money on full grant basis.

Dedicated institutional setup and management arrangements for mainstreaming climate response

83. **IFAD set up a dedicated unit to mainstream CCA response in its country strategies and operations and piloted programming arrangements**. The Environment and Climate Division (ECD) was formed in 2010, following CCA becoming an operational priority under IFAD8 and the first climate change strategy approved in 2010. ASAP was established in 2012 as a dedicated financing window to mainstream climate response in IFAD operations. ECD became the nodal division to implement IFAD's adaptation agenda and to manage climate supplementary funds such as ASAP and GEF (see the previous section for details).

ECD housed the expertise related to environment and climate change while the Policy and Technical Advisory division housed other thematic expertise such as

[63] Flexcube System, accessed on 12th March 2021.
[64] Categories of ratings for environmental risks (A, B or C) correspond to those established on ESAP and SECAP 2015. With the introduction of SECAP 2017 and updates in SECAP 2020, the Fund shifts from a three-tier risk rating (A, B or C) to a four-tier rating (high, substantial, moderate, or low).
[65] Another instrument called Reimbursable Technical Assistance (RTA) was approved by the Executive Board in 2012. However, this product is yet to gain traction. As of 2020, there are two ongoing RTAs in Saudi Arabia and Mauritius.
[66] IFAD, 2015b

rural finance, gender, youth, livestock, water management, fisheries, value chains, institutions etc.

84. In 2018, an organizational change introduced changes and ECD was converted into Environment, Climate, Gender and Social Inclusion Division (ECG). It was assigned the responsibility of mainstreaming all four priority themes of IFAD - Climate Change, Gender, Youth and Nutrition. It also continued to be responsible for managing the ASAP financing window. All other technical expertise was grouped into another newly formed division, Sustainable Production, Markets and Institutions Division (PMI).

85. IFAD's mainstreaming approach envisages ECG's involvement in design and supervision missions. The IFAD project design guidelines require setting up project delivery team which is responsible for design and supervision of each operation. The project delivery team is headed by a project technical lead (PTL) from ECG or PMI, with ECG providing technical lead in cases such as when Environment and Social Risk is rated as A (high risk) or in projects with high climate risk or in blended IFAD/Climate Fund projects. The PTL is an integral part of the project delivery team designing and supporting a project. While the CD is accountable for the project design and carries primary responsibility, PTL contributes to the design — the Project Concept Note (PCN), Project Design Report (PDR) and the President's Report. During implementation, PTLs ensure backstopping of ongoing projects through participation in supervision missions.[67] Monitoring framework, including for climate response component, is setup in the Project Implementation Manual, and implemented by the Project Management Unit. Core indicators related to CCA, along with other project results are uploaded in the corporate online database, Operational Results Management System.

86. Together with the Global Engagement, Partnerships, and Resource Mobilization Division (GPR), ECG is responsible for mobilizing climate resources for IFAD. Since 2019, it is also responsible for producing the annual climate action report that reports on IFAD's progress towards climate mainstreaming and the results achieved on the ground.

Human resources – Capacities and Capabilities

87. **Recent studies find that IFAD's capacities and capabilities fall short to be able to deliver on existing and future CCA commitments.** In the context of ongoing reforms in terms of People, Process and Technology, IFAD commissioned a three-phase study of human resources. The study, conducted by an external agency (McKinsey & Company, 2019-2020), assessed IFAD's current workforce composition, capacity (staff headcount) and capabilities (skills) as well as the future requirements. Relevant findings are summarized in Table 4 below. The study was not intended to identify gaps in specific priority areas (such as Climate change) and deals with broad categories (such as programme management, technical specialists). It should be recognized that while changes to PoLG under different replenishments may be very limited, the composition of delivery is dramatically shifting towards climate response - climate focus was 25 per cent of PoLG under IFAD11 and increased to 40 per cent under IFAD12. As such, the overall gaps and needs may not fully reflect the specific needs in this area

Table 4

Skill mapping overview, differences between skill groups [68]

Category of staff	*Average proficiency level in 2019*	*Average needed proficiency in 2020*	*Average needed proficiency 2030*	*Gap foreseen in 2020*	*Gap foreseen in 2030*

[67] IFAD, 2020
[68] Rated on a scale 1 to 5 with 1 being the lowest capacity and 5 the highest.

Cross-cutting theme of Environment and Climate Change	2.51	3.65	3.65	1.14	1.14
Technical Specialists	2.23	3.00	3.46	0.76	1.23
Programme Management for Agricultural Development	2.69	3.06	3.38	0.37	0.69
Economists and Results Specialists	2.89	3.33	3.61	0.44	0.72
Communication and Knowledge Management	3.26	3.34	3.66	0.07	0.39

Source: McKinsey Human Resource Study (2019).

88. Taking a closer look at the capacities available for mainstreaming CCA, this evaluation reviewed the data from Human Resource Division on the sanctioned number of fixed term positions in Environment, Climate, Gender and Social Inclusion division of IFAD (ECG). In ECG, staff are categorized by clusters, one of which is environment and climate change cluster (ECC). ECC has seen its positions increase from 17 in 2016 to 22 in 2020. McKinsey study finds that the Fund needs 33 more FTE staff in Programme Management, Technical specialists to meet the current demand and predicts that the gap will widen in 2024.

Guidance and Tools

89. **IFAD put in place guidance and tools to mainstream CCA and adaptively updated them in line with evolving corporate priorities and lessons from experience.** IFAD recognized that the environment was particularly important for rural poor people as they were largely dependent on the natural resource base for their livelihood and hence more vulnerable to natural resource degradation and environmental pollution. IFAD adopted **Environmental and Social Assessment Procedures**[69] in 2009 to ensure that its operations avoid adverse impacts on people and the environment.

90. **ESAP** Procedures were updated and expanded in 2015 to realize IFAD's new commitment to achieve 100 per cent climate mainstreaming for all new projects by 2018 and to better align with safeguard requirements across Multilateral Financial Institutions such as the Global Environment Facility (GEF). **Social, Environmental and Climate Assessment Procedures (SECAP)** became effective since 2015 January.[70] It provided the information necessary to formalize IFAD's approach to assess the nature and degree of (social, environmental and climate) risks, potential impacts, and opportunities relevant to IFAD interventions. In addition, it calls for specifying the risk mitigation measures to be taken and tracked throughout the life cycle of the intervention. It provided supporting material to guide IFAD missions in systematically introducing necessary mitigation measures into all operation as well as in developing RB-COSOPs and use this assessment in the quality enhancement and decision-making processes. SECAP made it mandatory for all projects under IFAD10 onward to undertake climate risk screening and was seen as the primary instrument to mainstream climate considerations in all IFAD's interventions - COSOPs, CSNs, programmes and projects.[71]

91. **SECAP was updated in 2017 to better clarify the mandatory elements, improve the alignment of the procedures with those of other IFIs**, and to better reflect IFAD's complementary policies[72] and climate mainstreaming agenda.[73] Notable changes introduced includes improved tools and methods to assess and

[69] ESAP was issued in December 2008 as a President's Bulletin (PB/08/23) and reviewed by the EB in April 2009.
[70] Approved by EB in December 2014
[71] IFAD, 2014
[72] Including, but not limited to, polices on targeting (2016), gender equality and women's empowerment (2012), indigenous peoples (2009).
[73] IFAD10 (IFAD, 2015), IFAD Strategic Framework (2016-2025) (IFAD, 2016).

document risks, clarifying and expanding mandatory requirements, and strengthened monitoring systems. (Grants and Investments Projects System (GRIPS), Operational Results Management System (ORMS) to reflect project cycle entry points and compliance monitoring and reporting).[74] In terms of environmental and social risks, it made it mandatory for all category B projects to have SECAP review note including a matrix for Environmental and Social Management Plan (ESMP) at design. Required all category A projects to have a Environmental and Social Impact Assessment (ESIA) at design. For project with moderate climate risk classification, it required a basic climate risk analysis at design, and required an in-depth climate risk analysis for projects with high climate risk classification.[75]

92. In addition to SECAP, IFAD has produced several guidance notes on specific issues. A partial list of 'How to' Notes related to climate resilience is presented in Annex III.

C. Ongoing Evolution of IFAD Climate Response Business Model

93. **Programming arrangements, policies, guidance and tools** are **rapidly evolving and briefly summarised here.** At the core **IFAD12** reflects a stronger commitment to climate responses by increasing the climate focus of PoLG from 25 per cent under IFAD11 to 40 per cent.[76] IFAD's revised Operational Guidelines to Targeting emphasized social inclusion and integration of the mainstreaming themes. Targeting strategies were intended to provide an entry point to effectively mainstream its thematic priorities, thereby improving the quality of mainstreaming and measurement of results in mainstreamed themes.[77]

94. The Fund has committed to mobilize US$500 million in supplementary **climate and environment finance** by 2025 with at least US$200 million in IFAD11,[78] envisaging more collaboration with the GCF. In addition, to attract more climate resources IFAD12 envisages new programmes, such as the Private Sector Financing Programme (PSFP) and the Rural Resilience Programme (R2P) is discussed below.

95. IFAD again **updated SECAP** in 2020 to better address the Fund's evolving business model, to improve its relevance to identifying and integrating transformational climate responses, to better align with international best practices, and to cover new and emerging social and environmental issues relevant to IFAD operations. In addition to guiding risk management, the updated SECAP aimed at providing guidance to maximizing the gains of interventions through scoping, assessing and selecting the climate themes to be integrated in IFAD's interventions. The updated SECAP includes other new features such as a climate change standard, changes to social and environmental risk, and an automated integrated management system to track compliance and results.[79]

96. In 2020 IFAD developed an **Adaptation Framework** to help projects identify feasible adaptation options to climate risks identified through the SECAP process.[80] It is accompanied by an Adaptation Options database populated with 120 adaptation options synthesized from good practices and lessons learned from adaptation actions from past IFAD climate response, including ASAP. The selected options can be assessed using tailored multi-criteria analysis.[81]

[74] Grants and Investments Projects System (GRIPS) to better reflect project cycle entry points and Operational Results Management System (ORMS) to improve compliance monitoring and reporting.
[75] IFAD, 2017
[76] IFAD12 climate adaptation targets include: 1.9 million hectares of land brought under climate-resilient management; 11, 500 groups supported to sustainably manage natural resources and climate related risks; develop specific initiatives for enhanced IFAD engagement in the Sahel and Horn of Africa regions.
[77] IFAD, 2021
[78] IFAD, 2019b
[79] IFAD, 2020b
[80] https://www.ifad.org/en/web/knowledge/-/publication/adaptation-framework-tool
[81] In addition, a few tools were recently developed through ASAP II. For instance, Climate Adaptation in Rural Development (CARD) resilience tool, first launched in March 2019 is continuing to evolve (currently applied in North Africa region). This helps predict crop yields of established varieties under different climate risk scenarios. This has been used in six projects and four country strategies as of October 2019 (IFAD, 2019b). Another tool jointly developed with FAO is

97. The Rural Resilience Programme (R2P) is a new **Programming arrangement** (IFAD 2020e)**.** This umbrella programme brings together IFAD's existing and new key climate and environmental initiatives under a common coordinating framework.[82] It is composed of three pillars: Enhanced programme for Adaptation to Smallholder Programme (ASAP+) that builds on the lessons from ASAP1 and ASAP2, the Initiative for Sustainability, Stability and Security in Africa (3S Initiative), and the Green Climate Fund umbrella programme for the Great Green Wall Initiative of Sahel (GCF-GGWI). The three pillars state the aim to go beyond do-no-harm and restore degraded ecosystems and provide climate adaptation and mitigation responses. They also face different primary challenges,[83] have different geographic focus, and involve different sources of funding.[84] The day-to-day management will be undertaken by an inter-divisional coordination unit comprised of experts across a number of IFAD Divisions. An Advisory Committee will oversee the strategic directions of the programme. The programme Trust Fund is already approved and it will dedicate resources to provide technical assistance to projects to strengthen the design and pursue non-lending activities.

98. This all takes place within the context of improvements to complementary policies and strategies of IFAD, such as Decentralization 2.0 (2021-2023), the Knowledge Management Strategy (2019), revised Operational Guidelines for Targeting (2019), the revised Project Restructuring policy (2018) and the revised Grants Policy (if approved will become effective in January 2022)

D. Review of Experience of Other Organizations

99. In identifying the practices of other relevant actors to compare with IFAD's CCA response, the report sought first practices with evaluative evidence. To identify such evidence, this study reviewed all recent evaluations conducted by major IFIs, climate funds and UN agencies on their CCA responses. This study identified the following actors with recent evaluations: Adaptation Fund, Global Environment Facility, Green Climate Fund, Inter-American Development Bank, the World Bank and Food and Agriculture Organization (FAO). Based on a review of evaluation documents and focus group discussions with the managers of these evaluations, this review identified markers in the areas of institutional and technical capacity, sustainability and exit strategies, mainstreaming CCA in operations, alignment with safeguards and policies and related monitoring and evaluation. The following paragraphs compares the experience of key IFIs and FAO among UN agencies. In addition, the evaluation conducted document review and used interviews to identify more comprehensive markers of the CCA business model: such as having a climate strategy/policy in place, dedicated units set up to guide CCA mainstreaming, guidance, tools and safeguards made available, ear marked climate resources, and communities of practice operational to promote knowledge-exchange, These details are provided in Table 5. **It can be seen that in all these aspects IFAD compares well with other IFIs considered in this study.**

100. **Institutional and technical capacity**. Which capacity, where and when are important questions related to technical capacities. Adequate climate expertise is needed. However, it has to be available when it is needed most - during critical times such as all phases of design, including the very early phase, and during implementation. It should also be available at the right level - for instance, capacities are needed at the project level during implementation and within the

the Ex-Ante Carbon-balance Tool (EX-ACT) that is a land-based accounting system measuring carbon stocks and GHG emissions per measure of land. This aims to help projects to estimate their potential mitigation benefits.

[82] The programme will address the commitments of the three Rio conventions – the UN Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD) and Convention to Combat Desertification (CCD) while contributing to 15 of the 17 SDGs.

[83] ASAP+ faces climate threats, 3S faces food insecurity and migration and the Great Green Wall Project faces environmental degradation and water shortages as primary challenges.

[84] 3S and GGWI will focus on Africa (GGWI will be focussed on the 13 contiguous countries from West Africa to Horn of Africa), while ASAP+ has no geographical focus.

units designing projects during project design. The Inter-American Development in its evaluation titled "Climate Change at the IDB: Building Resilience and Reducing Emissions" highlighted the importance of technical capacity within the organization on climate change and recommended that the institution invest heavily in building capacity in the organization through creation of dedicated 'group' with a cross-cutting mandate across departments.[85] Similarly, FAO's evaluation on CCA found gaps in capacities in country offices of FAO to engage with government on CCA and recommends that FAO build staff capacity at the country level in the area of CCA.[86]

101. **Sustainability and exit strategies**. The Adaptation Fund evaluation found that sustainability strategies were not sufficiently taken into account in the project design phase. The same evaluation found that project teams sought to address this issue during implementation, as the majority of projects had developed exit strategies.[87] Similarly, GEF's evaluation of Special Climate Change Fund (SCCF) found that a higher-level impact in the form of scaling up was constrained, mainly due to difficulty in securing sufficient resources and/or mainstreaming the work within national budgets.[88]

102. **Mainstreaming of climate change into operations**. The evaluation of the Adaptation Fund observed that the project designs do not closely analyse the adaptation logic.[89] FAO evaluations noted that climate smart agriculture has served as a high level concept in FAO for its interventions in CCA and mitigation. However, the same is not sufficiently reflected in operations in the field, through its projects. FAO's operations were also found to have insufficiently mainstreamed gender concerns, with substantial gaps in gender mainstreaming, particularly at country level.[90] World Bank evaluation recommended developing reference guidelines for incorporating climate risk management into project and program design, appraisal, and implementation.[91]

103. **Alignment with internal guidelines, policies and national policies and coherence**. The projects developed by the Adaptation Fund were not uniform regarding the application of the Fund's Environment and Social Policy. GEF found its projects to be strongly country driven and well aligned with national environmental and sustainable development policies. The evaluation, however, found that the relevance of GEF's support to other, non-adaptation GEF focal areas—and to GEF's global environmental benefits—was limited.[92] GCF's evaluation of adaptation interventions found that Project-level interactions between GCF proposals and projects of other climate funds, multilateral partners and the private sector were not yet systematically identified nor actively pursued. However, the evaluation also noted that there is increasing coordination in the recent years.[93]

104. **Monitoring and Evaluation**. All evaluations (Adaptation Fund, IDB, GEF, GCF, FAO, World Bank) have highlighted the need to strengthen M&E systems. The IDB evaluation recommends structuring an M&E system that "deepens IDB's ability and incentive to track its activities and results related to climate change mitigation and adaptation."[94] GEF's evaluation found the data available on M&E system to be inaccurate. In the World Bank, the evaluation recommended that to track progress, the Bank Group should mobilize resources and collaborate with national and international partners to create and test practical, sensitive, and specific indicators **that capture the following dimensions of vulnerability, resilience, and**

[85] IDB – OVE, 2014
[86] FAO, 2015; FAO, 2021
[87] Tango International, 2018
[88] GEF IEO, 2018
[89] Tango International, 2018
[90] FAO, 2015; FAO, 2021
[91] IEG, 2013
[92] Tango International 2018; GEF IEO, 2018
[93] Binet et al., 2021
[94] IDB – OVE, 2014, p. xii

adaptive capacity. It suggests that the World Bank should create indicators that measure various dimensions of vulnerability, resilience and adaptation. Similarly, the GCF evaluation noted that the institution does not have a specific approach regarding adaptation or achieving and measuring impact in its adaptation portfolio. As such, the impact of adaptation interventions cannot be monitored with the current set of indicators.[95]

[95] GEF IEO, 2018; IEG, 2013; Binet et al., 2021

Table 5

Comparison of CCA Policy, Strategy, Guidance and Institutional Setup of Other Organizations

Criteria	*IFAD*	*World Bank*	*Asian Development Bank*	*Inter-American Development Bank*	*FAO*	*GCF*	*Adaptation Fund*	*Global Environment Facility*
Is there a corporate climate response policy/strategy in place?	YES IFAD Strategy and Action Plan for Environment and Climate Change (2019-2025)	YES Climate Change Action Plan 2021 - 2025	YES Climate Change Operational Framework 2017–2030;Operational Plan for Operational Priority 3 - Tackling Climate Change, Building Climate and Disaster Resilience and Enhancing Environmental Sustainability	YES Climate Change Action Plan 2021 - 2025 and Climate Change Sector Framework Document	YES FAO Strategy on Climate Change 2017 and an action plan with results framework	YES Updated Strategic Plan for the Green Climate Fund: 2020-2023	YES Medium-Term strategy 2018 - 2022	YES Climate Change Focal Area Strategy (part of GEF-7 Programming Directions)
Does the organization have safeguards for interventions related to climate change adaptation (CCA) and environment and natural resources management (ENRM)?	Social, Environmental, Climate and Climate Assessment Procedures(SECAP)	YES World Bank Environment and Social policy	YES Environment Safeguards: A Good Practice Sourcebook (Draft Working Document)	YES Environment and Safeguards Compliance Policy. (new Environmental and Social Policy Framework will take effect in Sept 2021)	YES Environment and Social Management guidance (2015) and newly published FAO's Framework for Environmental and Social Management (FESM)	YES GCF Environment and Social Policy	YES Environment and Social Policy (amended March 2016)	YES Policy on Environmental and Social Safeguards
Does the organization have dedicated funds for Climate Investments?	YES (Supplementary Funds)	YES • • Climate Investment Funds (which includes Clean Technology Fund (CTF) Strategic Climate Fund (SCF))	YES • Climate Change Fund • Urban Climate Change Resilience Trust Fund Irish Trust Fund for Building Climate and Disaster Resilience	YES Canadian Climate Fund for the Private Sector in the Americas; NCD Accelerator Fund; UK Sustainable Infrastructure Program, and accredited to a variety of financial intermediary funds (Green Climate Fund, CIFs, etc.)	YES Multi-donor Trust funds to support clime response related projects/programmes	YES 100% of GCF funding is for climate response	YES • Single country project window • Regional project window • Innovation: large and small projects window • Enhanced direct access • Readiness program • Learning grant	YES •GEF is mostly focused on mitigation efforts with the exception of the following two CCA windows: Least Developed Countries Fund (LDCF) •Special Climate

							• Project scale-up grant	Change Fund (SCCF)
Does the Results and Resources Framework of corporate strategies/priorities include indicators related to strengthening climate resilience (or strengthening climate adaptive capacity)?	IFAD Strategic Framework 2016-2025; Resources Management Framework of IFAD11	YES Operational Guidance for Monitoring and Evaluation (M&E) in Climate and Disaster Resilience-Building Operation	YES Results Framework Indicators (women's resilience to external shocks strengthened, people with strengthened climate and disaster resilience, etc.)	YES IDB Group Corporate Results Framework 2020-2023 (Beneficiaries of enhanced disaster and climate change resilience, Habitat that is sustainably managed using ecosystem-based approaches, Installed power generation capacity from renewable sources)	YES FAO Strategy on Climate Change - Primary indicator's FAO's role (Number of countries that identify institutional capacity needs and/or develop capacity for CCAM delivery, Amount of finance targeted at CCAM in food and agriculture that is mobilized with FAO support, etc.)	YES Mitigation and adaptation performance measurement frameworks	YES Strategic Results Framework (Increased adaptive capacity of communities to respond to the impacts of climate change, Increased ecosystem resilience in response to climate change-induced stresses)	YES. The LDCF/SCCF has its own Results Architecture for Adaptation. . While GEF Results Framework is not focused on CCA (only one of the 11 indicators deals with resilience at the eco-system level)
Is there a dedicated unit to support climate response/ENRM? Are there adequate capacities in place?	YES	YES Climate Change Group	YES Climate Change and Disaster Risk Management Division in Sustainable Development and Climate Change Department	YES Climate Change and Sustainable Development Division with 22 staff; Environmental and Social Solutions Unit and the Environmental and Social Risk Unit also have key functions on climate issues	YES Office of Climate Change, Biodiversity and Environment	YES	YES	YES Entire GEF is dedicated to ENRM and Climate Response. Specifically, there is a CCM unit in the GEFSEC, and there is a dedicated unit for LDCF/SCCF.
Is there dedicated guidance to identify climate resilience needs to analyse pathways to strengthen climate resilience in countries?	•NO	YES Resilience rating system	YES ADB-WB are currently developing country climate risk profiles to inform country partnership strategies in countries	YES A Framework and Principles for Climate Resilience Metrics in Financing Operations and Disaster and Climate Change Risk Assessment Methodology	YES Climate resilient practices Typology and guiding material for climate risk screening; Making climate sensitive investments in agriculture-approaches, tools and selected experiences	YES Adaptation: Accelerating action towards a climate resilient future	YES Proposal development guidance specifies the use of country strategies, development plans; adaptation reasoning and risk screening	NO This was noted as a deficiency, including by the STAP

Is there a community of practice for climate response or knowledge platform for successful climate responses?	YES	YES WB Climate Change Knowledge Portal for Development Practitioners and Policy Makers	NO	YES Technical working groups and communities of practice for sustainable infrastructure, disaster and climate risk management, etc.	YES The Technical Network on Climate Change	YES iLearn Green Climate Fund	YES Community of Practice for Direct Access Entities	YES/NO. The following platforms exist but are not dedicated to CCA or even climate• The International Waters Learning Exchange and Resource Network (IW: LEARN) • Global Platform for Sustainable Cities (GPSC)
Has the organization developed adequate processes, instruments and tools to promote climate change and adaptation strategies in its operations?	YES SECAP, How to Do Notes, ExACT, Adaptation Framework	YES • World Bank Urban Risk Assessment • Energy Sector Management Assistance Program (ESMAP) Hands-on Energy Adaptation Toolkit • World Bank's Resilient Cities Program, CityStrength • Confronting Climate Uncertainty in Water Resources Planning and Project Design : The Decision Tree Framework	YES •Climate Risk Management Framework: Climate risk screening and assessment of projects (Screening through online tool AWARE for Projects, sector-specific technical guidance on climate proofing infrastructure, capacity building course for ADB staff)	YES • Regulatory framework quality indexes for private investment (Climatescope) • Promotion of good practices (e.g. Infrascope and Envision) Climate Change Sector Framework document	YES FAO Adapt (Framework Programme on Climate Change Adaptation) - 2011 - FAO's Modelling System for Agricultural Impacts of Climate Change (MOSAICC) Self-evaluation and Holistic Assessment of Climate Resilience of Farmers and Pastoralists (SHARP), Global Agro-Ecological Zoning (GAEZ), Aqua-Crop water productivity model, Agro-ecological zoning (AEZ)	YES GCF Programming Manual - An introduction to the Green Climate Fund project cycle and project development tools for full-size projects • GCF readiness and preparatory support programme	YES Operational Policies and Guidelines including how projects are assessed against adaptation reasoning Medium-term strategy 2018-2022	YES GEF projects are country driven and developed at the request of country focal points (with the exception of small grants that are mostly CSO driven and pure private sector projects). There are tracking tools in use at the project level. Also, there are the RAPTA guidelines developed by STAP.

Has the organization developed internal guidance coherent with the national environmental and sustainable policies?	Procedures and Guidance for Country Strategies (2019)	YES World Bank Reference Guide to Climate Change Framework Legislation	YES Environmental Assessment Guidelines	YES Implementation Guidelines for the Environment and Safeguards Compliance Policy NDC Invest (mechanism to support LAC countries to develop and implement NDCs)	YES Addressing agriculture, forestry and fisheries in national adaptation plans • Agriculture, Forestry and Fisheries in National Adaptation Plans (NAP-Ag Guidelines) • Forest and Landscape Restoration Mechanism • Blue Growth Initiative	YES National adaptation plans	YES Guidance document for Implementing Entities on compliance with the Adaptation Fund	YES All GEF projects are country driven and developed at the request of country focal points (with the exception of small grants) with guidance on GEF priorities, strategies and procedures.

Source: IOE Elaboration based on interviews with agency evaluation units and units related to climate response, and review of evaluations

III. Relevance of IFAD response to Climate Change Adaptation

105. This section presents the findings related to the relevance of IFAD's CCA response. An overall summary of the assessments of relevance in the 20 case studies is summarized in Annex I Table1. The analysis presents IFAD's comparative advantage in providing CCA response. This is followed by assessments of the relevance of CCA response to i) national climate priorities, ii) CCA related demand and needs of target groups, and iii) IFAD's mandate, priorities and practices. The evidence base for this chapter comes from analyses of relevant IFAD corporate documents, the portfolio of 256 projects and 93 COSOPs/CSNs with CCA response, two E-Surveys conducted among IFAD staff and project staff, and the 20 case studies.

A. IFAD Comparative Advantage in CCA and its prioritization

106. IFAD is the only IFI with the specific mandate to eradicate poverty and hunger by investing in poor rural people through financial and technical assistance to agriculture and rural development projects. To fulfil its mandate, during the past four decades IFAD acquired experience and expertise in working with the rural agricultural sector around the globe, mostly facing challenging agro-ecological conditions. This experience positions the Fund well to address the worsening threats from climate change and to place climate change and adaptation at the core of its strategy. It established a dedicated unit to provide technical support to design its climate response and provide implementation support. Moreover, during the past decade, it mobilized over US$500 million as climate finances to support smallholder farmers adapt to climate change. Finally, in addition to its mandate and record of accomplishment of supporting CCA efforts within the rural agricultural sector, IFAD is seen as a neutral trusted partner for the governments, farmer organizations and the rural poor.

107. CCCA is a significant or principal objective in 92 per cent of the portfolio of 256 projects incorporating climate response that were approved during 2010-2019. The proportion of projects declaring CCA as a principal objective showed a noticeable increase from 11 per cent in 2013 when ASAP was introduced, to 48 per cent in 2019

B. Relevance of CCA operations to country CCA priorities (Nationally Determined Contributions, National Adaptation Plans)

108. **Overall, IFAD's interventions related to CCA were well aligned with the Nationally Determined Contribution (NDC) commitments of host countries.** IFAD has recognized the need to support Member states in addressing the effects of climate change. IFAD9, committed that all new operations and country strategies (COSOPs and CSNs) would be aligned with national CCA priorities including the NDCs (as per Paris Agreement 2015), and identify climate risks. IFAD11 committed to incorporate an analysis of the CCA-related NDC commitments in all country strategies. By doing so, IFAD aligned its interventions with the international priorities on climate change adaptation, such as those of the Paris Agreement [96]. Table 1 in Annex IV shows that all COSOPs and operations in case studies contributed to the NDCs.

109. All interventions in the case studies were relevant to the NDCs, including some with very high relevance. *Nepal*'s ASHAP project sought to operationalize the National Adaptation Programme of Action (NAPAs) at the local level, thereby directly

[96] IFAD, 2018b

contributing to Nepal's NDCs. The project supported preparing and implementing Local Adaptation Plans for Action, which were local level iterations of NAPAs based on local level analysis of risks, vulnerabilities and interventions required. Similarly, Chad's PARSAT project was designed as one of the building blocks of Chad's National Strategy Against Climate Change (2017). PARSAT regions of interventions, Batha, Guéra and Hadjes-Lamis were identified by the NDC[97] as among the most climate vulnerable regions of the country and it chose the two NDC priorities of land and water conservation and implementation of soil restoration works as its focus. Bolivia's ACCESOS Program was highly relevant to the country's NDC focus on structural solutions to climate crisis. Moreover, the ACCESOS Program was developed through a community-based approach and supported investments aimed at reducing vulnerabilities related to water scarcity.

C. Relevance (maintaining relevance) of CCA interventions facing climate threats and changing contexts

110. **The continued relevance of the selected CCA case studies was demonstrated in those cases where project areas were affected by actual climate threats during the implementation period**. This allowed for a real-time testing of both the relevance and the effectiveness of the selected climate-related solutions in these projects. The affected project countries include Bangladesh (cyclone and floods), Cape Verde and Moldova (drought), Nicaragua and Honduras (heavy tropical storms and rain in late 2020). In general, these practical experiences have demonstrated a high relevance of the climate and resilience elements included in these projects to face climate risks.

111. An ASAP Midterm Review conducted by external consultants found that ASAP projects strengthened smallholder capacities to deal with shocks and stressors and were flexible to adopt multiple changes to deal with changing climatic conditions.[98]

112. A note of caution should be made here regarding the longer-term relevance of the supported interventions. While the climate threats tested the *immediate* relevance of IFADs operations, the longer-term relevance of the project interventions should be assessed taking into account longer-term effects of interventions such as ecosystem sustainability. This is discussed under nexus between human and the ecosystems (see discussion of this elsewhere in this report).

113. **In cases that faced political instabilities or changing climate priorities during implementation, the projects accommodated significant modifications after a Midterm Review to ensure continued relevance of their CCA components** such as Mali (PAPAM) and Bolivia (ACCESOS). At the start of PAPAM in Mali, in 2011, the interventions covered areas with development potential for the targeted production systems across the country. However, after the 2012 political turmoil and the armed conflicts in the northern regions of the country, the project area was restricted to the southern regions of Kayes and Sikasso. As such, the eventual intervention area was limited to the Sudanian and Sudanian-Guinenan agro-climatic zones in the country. In Bolivia, the country signed on to the Paris Declaration and introduced NDCs in 2015 in the midst of ACCESOS implementation (2013-2019). The project faced other challenges as well and the MTR recommended realignment of the project with the country's NDCs, which led to significant modifications as, outlined in the previous section to maintain relevance to country's CCA priorities.

114. **Relevance of CCA designs to local contexts was uneven.** In over 25 per cent of the case studies, interventions (projects with climate response) needed substantial revisions to the original design to ensure the relevance of CCA responses to local contexts even when external context had not changed since the

[97] Republic of Chad, 2015
[98] Leavy et al., 2020

design**.** In an E-survey of project staff of IFAD operations, 61 per cent reported that significant modifications had to be made to the design to implement properly. If the modifications were not identified at the beginning of implementation, such revisions were undertaken following a Midterm Review (MTR). While such adjustments demonstrated a flexibility to effect changes, they also indicated a recurring issue of designs not getting the local or country context right. Invariably, these changes came at the cost of implementation delays and reduced time window to deliver results. Design weaknesses included weak conceptualization of climate and resilience (for example, PRO-LENCA project in Honduras), weak integration of climate activities with other project components (for example, ACCESOS programme in Bolivia which faced not only changing priorities of the country but also design issues), existing social conflict/tensions not originally recognized by the project design (for example, PRODEF-II in Burundi).

115. In the PRODEFI-II in *Burundi*, the MTR found that the benefits of reduced water and soil erosion mostly went to the less poor segments of the target group and benefits to the poorest were at best, temporary. The project adjustments following the MTR addressed the targeting issue and adopted anti-erosive measures that protected downhill areas and stabilized and enriched the hillside. The MTR of LMRP (Sudan) identified the challenges faced the project during implementation to address the social tensions and recommended a shift from developing Community Adaptation Plans as envisaged by the project design to developing Climate Resilience Community Village Plans to ensure a bottom-up approach, integrated landscape planning and climate resilience focus that were necessary to address the existing tensions between pastoral and agricultural systems.

116. **Long duration of COSOPs with extensions limit their relevance to fast changing IFAD priorities, approaches and country priorities.** COSOPs and operations were designed for a six-year period and were often extended. This means the evaluation period of 2010-2019 amounted to a cycle and a half, while as noted earlier IFAD's business model had evolved rapidly during this period. Yet, case studies showed that projects approved during the course of COSOPs were designed in full alignment with IFAD's evolving priorities and approaches even when COSOPs were not. In addition, as discussed, the existing operations were modified to ensure alignment after a MTR. The high relevance scores of the vast majority of the case studies showing nearly 90 per cent of case studies showing moderately satisfactory or better relevance (Figure11) is a testament to this flexibility of operations to adopt to changes.

D. Relevance to climate vulnerable target groups

117. In general, **Project designs focused CCA interventions in geographical areas where the poorest and most vulnerable population groups were concentrated. However, the projects were less consistent in reaching, addressing the needs of the most marginalized, and climate vulnerable smallholder farmers**. Case studies showed that nearly a third of the climate responses made attempts to use climate vulnerability for targeting.[99] Of these, 50 per cent were in projects approved after the introduction of SECAP. Case studies also showed that projects used climate vulnerability for targeting but most often climate vulnerabilities associated with different agro-ecological zones and production systems in selected geographic areas were not considered to refine targeting (see details in Annex V Table 5).

118. A good example of including climate vulnerability in targeting among the "older" projects was the ACCESOS in Bolivia (2013-2019). The overall ACCESOS identified 52 municipalities based on poverty maps. For the ASAP funded climate component, the following two additional criteria were included to narrow the selection to 15-16

[99] Recent revisions to IFAD's targeting guidelines (IFAD 2019 (d)), includes climate vulnerability as one of the criteria to target

municipalities: i) *municipal level vulnerability to climate change*, integrating variables of exposure, sensitivity and adaptive capacity, using future climate scenarios suggested by the IPCC; and ii) a criterion on *territorial continuity* between municipalities and a hydrographic basin, allowing for mitigating of environmental problems associated with climate change. The selection involved a highly participatory design process with close involvement of target groups (mainly indigenous peoples) within the selected municipalities and communities. In summary, the final targeting involved a combined use of poverty maps, vulnerability assessment tools and comprehensive field consultation observations by the IFAD design team.

119. Recent projects that included climate vulnerability in their targeting include Belize, Burundi, Cape Verde, Chad, Honduras and Mali, with Belize providing a good example of the use and periodic update of climate vulnerability maps. In *Burundi*, it became clear during implementation of PRODEFI-II that it had overlooked and marginalized a large number of very climate and economic vulnerable households on the hills; the project activities were focused on the marshland areas. As a result, a more inclusive and integrated watershed management approach was adopted that targeted the entire community land base including the hills and the marshlands.

120. **The information base for determining local climate risks and vulnerability requires a mix of local knowledge with external/scientific data[100],** as evidenced from the findings of the rapid evidence assessment (REA), a review of existing literature**.[101]** Among the case studies, some of the successful climate responses were found to involve *community-based targeting*. For instance, the ACCESOS in Bolivia, working with communities jointly developed geo-referenced community 'talking maps' (*mapas parlantes*)[102] on the basis of scientific data, satellite maps and traditional knowledge to identify key climate risks and adaptation priorities within the communities. In other projects, comprehensive *consultation processes* with target groups during the design process added a high level of local knowledge into the design stage (for example, the projects in Belize, Bangladesh, Kyrgyzstan and Nepal). However, **the majority of case studies lacked this bridging between scientific and local knowledge.**

E. Relevance to social inclusiveness (women, youth, indigenous peoples)

121. The analysis of this section focuses on the extent of inclusion of women, youth, indigenous peoples, as well as marginalized segments in community-based approaches in IFAD interventions. The inclusion analysis takes into consideration not only the outreach to these targets but also how well their needs were addressed by CCA activities.

122. **Overall, the evaluation found the projects were continuing to improve their social targeting**. The challenges were in the design as well as implementation of IFAD operations. Most designs did not have differentiated and integrated analyses of targets, particularly the marginalized ones (such as, women, youth, indigenous peoples, pastoralists, landless people, migrants and other vulnerable groups) [see Annex V Table 5 for details]. There were significant gaps in integrating relevant targeting capacities and strategies in project design and implementation. *IFAD's*

[100] Local knowledge relates to smallholders' experience from successful agricultural practices in dealing with past climate events, including indigenous practices. External/Scientific Knowledge relates to: 1) Knowledge of (present and future) climate risks facing smallholders from climate modelling; 2) Solutions to these risks from past experiences elsewhere that may not be available at the local level.
[101] IOE-IFAD, Building adaptive capacity of smallholders to climate variability and change: key findings from REA 2021. Final Technical Report 06 April 2021, background document to this thematic evaluation.
[102] Talking maps or "mapas parlantes" in Spanish, is a participatory mapping methodology which depicts layers of information documenting past, present and future scenarios that reflect the most important aspects of the local territory and the management of natural resources. See IFAD (2009): "Good practices in participatory mapping". https://www.ifad.org/documents/38714170/39144386/PM_web.pdf/7c1eda69-8205-4c31-8912-3c25d6f90055

Revised Operational Guidelines on Targeting (2019) [103] calls for future projects to have dedicated social inclusion/targeting expertise and clear targeting strategies in project implementation units.

123. **In addressing gender inequality and women's empowerment in climate responses, IFAD's performance is mixed.** Majority of the project designs did consider how gender-related interventions were expected to shape women's and men's different vulnerabilities to climate change impacts and their capacities to adapt to those impacts. The full portfolio of CCA responses (approved during 2010-2019) showed that three quarters of the projects aimed to include women smallholder farmers. Moreover, after IFAD placed greater focus on having gender transformative projects under IFAD10 (2016-2018), one in three climate projects approved in 2019 were designed to be gender transformative higher than the IFAD11 target of having 25 per cent of the projects gender transformative.

124. At the same time, analysis of project design reports show that there was inadequate focus on capacity-development processes through which women, men, producer groups, community leaders and other institutions could develop robust gender-responsive climate vulnerability and capacity assessments in support of CCA plans and adaptive management. One in five CCA interventions in the full portfolio (and nearly a third of interventions in the case study portfolio) did not adequately consider gender inequality issues and women's empowerment. Thereby, fail to meet the IFAD10 commitment to include in all development activities gender inequality issues.

125. In the designs, there was strong emphasis on establishing of targets and quotas for women's participation**,** either in project activities or in leadership roles in producer groups and/or community committees. Efforts were made to promote participation of women in CCA activities, such as receiving relevant training or access to loan services. These are necessary steps. *However, they did not always translate into addressing the root causes of gender inequality nor did they present the expected changes to their conditions resulting from their participation*. Consequently, many projects did not really engage with gender norms, roles and relations and how the CCA activities were expected to promote gender equality and women's empowerment. This would also require stronger efforts to engage with men (for example, community leaders), as well as partner institutions with strategic gender positions (such as service providers, institutions with responsibilities for land and labour allocation).

126. Recent IOE evaluations of all projects share these findings. The ARRI 2020 concluded that beneficiary inclusion was being built into project designs but the focus was more on ensuring participation through quotas (on the principle that equal opportunities will reduce economic inequalities) and less on transformative approaches.[104] IOE Evaluation Synthesis Report on Gender Assessment and Learning Review (2018) found that many stakeholders in projects may intuitively understand transformations in the ways that gender roles and behaviours are critical to the success of projects, it was difficult to conceptualize 'gender-transformative' looks without sufficient guidance. [105]

127. ***Exceptions to this pattern were noted*** in case studies. In *Moldova*, the Supervision Mission (2020) recognized the need to go beyond the share of women participation as a measure of women's empowerment and the project agreed to collect qualitative data from women on their perceptions regarding their social, economic empowerment, access to programme resources and opportunities on an equal basis as men, and the contribution of the project to these. In *Burundi*, the MTR of PRODEFI-II noted that those with little or less access to land, such as

[103] IFAD, 2019d
[104] IOE-IFAD, 2020c
[105] IOE-IFAD, 2017

women and youth, were mostly left behind and as a corrective measure small livestock/short cycle animal raising activities were included to better target both women and youth.

128. **Targeting of youth is still at an early stage in IFAD projects and the evaluation found only weak or indirect targeting of youth in the country case studies**. Even though 62 per cent of the portfolio of projects with climate response had youth as target groups, there was little evidence to see the content of activities address the specific needs of the youth. In the E-survey of Project Staff, 37 per cent reported that their CCA project did not have a youth strategy and when there was a strategy, only 55 per cent addressed the CCA needs of the youth. Findings from ARRI 2020 (see IOE-IFAD 2020c) echoed this observation and noted that the livelihoods of young people were facing two main challenges: i) access to assets, goods and services; and ii) a lack of opportunities to acquire new skills. In December 2018, IFAD Executive Board approved a Youth Action Plan (RYAP) that commits to mainstreaming youth in all COSOPs and 50 per cent of future projects under IFAD11.[106] This confirmed the need for a more specific approach to youth targeting in IFAD projects to address these two challenges.

129. **Indigenous peoples were targeted well in the case studies from LAC region.** *O*ut of the portfolio of 256 projects with CCA response, 15 per cent targeted the indigenous peoples. LAC and APR regions accounted for 88 per cent of these projects. None of the case studies in APR region included targeting indigenous communities. In the case studies in LAC region, the projects in Bolivia and Honduras included a very high share of indigenous communities. The NICADAPTA in Nicaragua was less explicit in targeting indigenous peoples. The experience from the project cases show that, when indigenous communities exist in countries, the decision to target indigenous peoples or not was closely linked to the national policy and priority setting.

F. Relevance to the competing interests among the marginalized

130. **Project designs did not always pay sufficient attention to assessing the potential competing interests of different types of stakeholders/production systems over the use of land and water resources to avoid exacerbating existing social tensions.** In most case studies in the Sub-Saharan Africa, project designs and implementation approaches lumped different target and user groups together and lacked differentiated analyses and engagement strategies with these groups. Specific IFAD guidance on community based approaches to address social conflicts and tensions in project designs would have helped.

131. For example, deep social tensions exist between sedentary crop-livestock systems and (semi-) nomadic pastoralists in almost over the entire Sahel region of Africa. The conflict is fuelled by the contest over the use of land and water resources. Although, project design documents in these cases do refer to the existing social tensions over natural resources access, no clear guidance or transparent mechanism was provided on how to respect and/or secure these competing interests during implementation. This was observed in the Chad, Mali, Niger and Sudan case studies, where the projects aim at enhancing water access and management for sedentary mixed crop-livestock systems in regions that technically would also be of interest to dry season access to water and fodder for (semi-) nomadic pastoralists.

132. In the cases of Chad, Mali and Niger, the project design documents noted the existence of transhumant pastoralism in the intervention areas but did not put in place a transparent mechanism to address their competing interests concerning

[106] IOE-IFAD, 2020c, RYAP defines "youth-sensitive" project as one that (i) describes youth and its context-based challenges and opportunities in the project design analysis; (ii) informs a targeting strategy that explicitly targets youth with concrete objectives and activities to achieve impact in priority areas; and (iii) allocates resources to deliver activities targeting youth

access to water and land resources. In Sudan, the implementation of the LMRP project ignored the experience under previous WSRMP (funded by IFAD in Sudan), which promoted a more inclusive approach to natural resource governance, such as co-management of stock routes. This approach contributed to more equitable access to natural resources, improved NRM as well as to reducing tensions between pastoralists and settled farmers. This oversight was corrected by the MTR (2018) which recommended instituting co-management mechanism to ensure sustainable Stock Route management, share resources and minimize conflict between pastoralists and farmers.

133. It should be noted that the recent Lowlands Livelihoods Resilience Project (LLRP) of Ethiopia (approved in 2019) recognized and addressed the longstanding contest over rangelands and access to pasture and water as a source of conflict that added to the challenges of sustaining climate resilience and livelihoods.

G. Relevance of financial instruments

134. As described in Chapter 2, the grant related financial instruments (supplementary and complementary funds, DSF, grant instruments such as ASAP, AF, GEF and GCF) used to integrate climate responses in loan services were considered in this analysis. The relevance of these instruments are considered from two perspectives: Were the instruments *deployed* to address high climate risks? And were the instruments solely *used* to promote and mainstream CCA responses in IFAD operations?

135. **The relevance of the <u>deployment</u> of the financial instruments was high.** Nearly all (37 of 39) projects supported by these instruments had climate responses to either a moderate or a high risk context (Table 6). In addition, the relevance of the different sources of CCA supplementary funds to IFAD practices is summarized in Table 7.

Table 6
Cross tabulation of climate risks with climate finance instruments in the CCA portfolio

	Level of climate risk assessed				
	1 High	*2 Moderate*	*3 Low*	*Risk identified without rating*	
Grant Financing	*num. of projects*	*num. of projects*	*num. of projects*	*num. of projects*	*Total number of projects*
Adaptation Fund		3			3
ASAP	4	24	1	12	41
GEF[107]		4	1	9	14
GCF	2			1	3
Total	6	31	2	22	61

Source: IOE Elaboration.

Table 7

[107] One project in Sudan was approved prior to 2010 and hence, was not included here.

Comparison of key sources of supplementary funds for CCA

	GEF (LDCF, SCCF)	*ASAP, ASAPII, ASAP+*	*GCF*
Duration of Partnership	IFAD6-Present (2004-Present)	IFAD9-Present (2012-Present)	IFAD11 2016 - Present (*GCF Board Approved IFAD as an accredited entity in October 2016 and the AMA was signed in 2018)
Contribution to IFAD's CCA Response	First to fund CCA response in IFAD operations (2004). To promote climate response, supports stand-alone CCA projects as well as mainstreaming CCA into operations. Total GEF projects 62 totaling US$256.5 million)	Fully integrated into IFAD operations.	Inadequate evidence-base to assess.
Extent of integration into IFAD operations	GEF funded components are approved separately from the rest of the project and subject to GEF approval processes. (For instance, a third of GEF funded projects had a lag of more than one year between approval by IFAD and approval by GEF Council	Fully integrated into IFAD operations	Similar to GEF. GCF-funded components are approved separately from the rest of the project and subject to GCF approval processes.
Fiduciary requirements	According to PMUs, reporting requirements were heavy and required dedicated capacities and considerable time investment.	Integrated into IFAD's monitoring and reporting	Inadequate evidence-base to assess as but early reports suggest that the fiduciary requirements are more strenuous than GEF
Financing for design	Provides accesst to project preparation grants to all projects	Resources could not be used for design in ASAP; ASAP II provided the flexibility to use funds for design; ASAP+ envisages technical assistance funds to support design	Normally, project preparation grants are not standard. IFAD received 1 project preparation grant for an exceptionally complex project

Source: IOE Elaboration.

136. ***The relevance of the <u>use</u> of the climate finance instruments were positive with few exceptions.*** Grant instruments were instrumental in giving the flexibility for IFAD to undertake activities for mainstreaming CCA. They demonstrated additionality in terms of financing climate response activities for which governments hesitated to use loan funds.[108] For instance, ASAP grant was used for development of a spatial vision of land use planning at the landscape level, to promote climate resilient agriculture; in LMRP and SNRLP in Sudan, ASAP and GEF financing supported participatory approaches to strengthen community resilience and natural resource management plans; in LMDP I and II in Kyrgyzstan, SAIL in Egypt, and PARSAT in Chad, ASAP grants were used for developing Early Warning Systems and climate information services to target groups; in PRODEFI II in Burundi, ASAP resources enabled the project to take a landscape view of the project area and enabled inclusion of marginalized populations living in the hills in the watershed area; in the follow-on PAPARV-B project, this landscape approach was replicated

[108] Strengthen individual and institutional capacities, knowledge management, policy dialogue for climate adaptation, conserve or rehabilitate environment and natural resources, increase availability of water and efficiency of water use, diversify sources of livelihoods, climate resilient rural infrastructure, disaster risk management, and provision of financial services.

through DSF grants; and in ASHA Nepal, ASAP and DSF grants enabled IFAD to directly operationalize the NAP for Action.

137. **However, climate finance instruments also carry the risk of weak integration of climate activities and results into project(s),** particularly when CCA is not the primary objective, as these activities are tied to governance systems external to IFAD.[109] Case studies noted instances where financing instruments were retrofitted into an ongoing project, such as the PAPAM project in Mali and POSER in Cape Verde. This is partly because of the lag between project approval by IFAD and approval of climate component financing from one of the financial instruments. Five out of 14 projects with GEF financing had a lag of more than one year between approval of IFAD and approval of GEF financing.

138. **Other case studies demonstrated examples of projects where the climate finance funds went towards components and activities, which were largely standalone in nature**, lacking integration with rest of the project. In IRECR in Moldova, the CCA financing by GEF largely functioned in isolation from rest of the components of the project with no integration with other activities. This was sought to be better addressed in the follow-on RRP project with financing from Adaptation Fund. Similarly, in ACCESOS Bolivia, ASAP component was initially implemented in a standalone manner before being successfully integrated with rest of the ACCESOS programme.

139. **In some cases such as the SAIL in Egypt, part of GEF and ASAP funding was used for activities without clearly establishing their contribution to CCA**. For instance, vocational training to women funded by ASAP contributes to livelihood diversification but it was not clear if and how the new vocation(s) would help women mitigate their exposure to the specific climate threats they faced (water scarcity and rising temperature).

140. Case studies did not find clear articulation of these risks and risk management strategies presented in project design reports and project implementation manuals.

H. Relevance of IFAD's Results and Conceptual Framework to Measure Climate Resilience

141. IFAD11 included four more project indicators related to CCA in its Results Management Framework with indicators 2.3.11, 2.3.13, 2.3.14 and 2.3.16.[110] The Impact Assessments and RIDE 2020 reported that IFAD is on track to achieving these targets. The case studies which had completed projects confirmed that in the majority of cases (84 per cent) the country level CCA targets were met (see Figure 12).

142. **These results constitute important steps towards strengthening smallholder adaptation to climate change but did not show to what extent their resilience was improved**. Analysis showed that all four corporate indicators mentioned above were at the output level and did not provide a measure of changes to smallholder resilience. Climate resilience takes time to build and IFAD11 came into effect just a project cycle since ASAP began implementation. It may be too soon to identify full fledged climate resilience outcomes, intermediate steps towards outcomes should be identified and measured.

143. **Corporate and project documents make frequent reference to the term 'climate resilience' without explicitly defining how to interpret and**

[109] ASAP is an exception as it is fully integrated into IFAD mechanisms of approval.
[110] IFAD, 2018b. These indicators are:
2.3.11. Number of groups supported to sustainably manage natural resources and climate-related risks
2.3.13. Number of persons/households reporting adoption of environmentally sustainable and climate resilient technologies and practices
2.3.14. Number of hectares of land brought under climate resilient management
2.3.16. Number persons whose ownership or user rights over natural resources have been registered in national cadasters and/or geographic information management systems

measure it at the project level. Strategic Objective 3 of IFAD's Strategic Framework 2016-2025 was to "Strengthen the environmental sustainability and climate resilience of poor rural people's economic activities". However, a corporate guidance to conceptualize and measure resilience is yet to be implemented. Climate responses and resilience are highly context dependent, for example depend on agro-ecological conditions (coastal zones, semi-arid regions, flood prone areas), agricultural production systems (livestock, cropping) and other socio-economic and environmental factors. At present, differing approaches are being pursued at regional and country levels to quantify resilience outcomes. Identifying relevant indicators would be a challenge without a shared understanding and a framework to measure resilience. Chapter 1 presented a framework for conceptualizing and measuring resilience that is widely accepted by other IFIs, UN agencies including FAO and WFP and used by IFAD when collaborating with Rome-Based Agencies and the World Bank.[111] Despite this experience, in many case studies, particularly those that had the earlier projects, there was little real consideration of resilience in terms of the robustness of the agricultural system (absorptive capacity), how the interventions would contribute to the preparedness for, or recovery from a climate shock or disturbance (adaptive capacity), and whether a shift or reorientation would then be beneficial (transformative capacity) [See Table 8 for illustrative examples of IFAD's actions that strengthen these resilience measures]. Nor was there a clear interpretation of resilience 'of what', 'to what' and 'to whom'. Consequently, the designs of the projects assessed in this evaluation lacked an adequate lens for integrating climate resilience in their Theories of Change and their results frameworks.

[111] FAO, IFAD and WFP (2015). RBA Collaboration for Strengthening Resilience, Niger Case Study, p.4: https://documents.wfp.org/stellent/groups/public/documents/newsroom/wfp278361.pdf
Lowlands Livelihood Resilient Project Design Report, World Bank and IFAD, 2019

Table 8

Examples of Climate Responses Addressing Resilience

Absorptive capacity ***(the capacity to moderate or buffer the impact of shocks in order to persist) [applies during crisis]***	*Adaptive capacity* ***(the capacity to learn, adjust and adapt in response to a disruption) [applies before or after crisis]***	*Transformative Capacity* ***(the capacity to fundamentally alter the social, ecological and economic processes that make a system untenable] [applies after crisis]***
Example 1: Strengthen community organizations to provide support during crisis [Niger, PPI- RUWANMU (2012-2018) & PASADEM (2011-2018)]	Example 1: Raising rural incomes through pro-poor value chains development (Moldova, IRECRP and RRP; Rwanda, RDDP; Sudan, LMRP)	Example 1: Transitioning from solely rain-fed agriculture to include irrigated agriculture [Niger, all projects; Ethiopia, PASIDP II (2016-2024) and LLRP; Madagascar, AD2M.
Example 2: Improving size and quality of asset base [Niger, PASADEM & PRODAF-MTZ (2015-2024)]	Example 2: Raising road infrastructures to manage flood water (Bangladesh, CCRIP, 2013-2019)	Example 2: Investments in watershed management to address the nexus of rural poverty, environmental degradation and climate change (Honduras, PRO-LENCA).
Example 3: Weather indexed or Hazard insurance [Ethiopia, PASIDP II (2016-2024); RUFIP II (2011-2021)]; Niger, PRECIS.	Example 3: Early warning systems and climate risk management; Egypt, SAIL, (2014-2023); Ethiopia, PASIDP II (2016-2024), PCDP III (2013-2019)]	Example 3: Transformation of resource governance from a State-managed centralized approach to a community-based local self-governance model (Kyrgyzstan, LMDP).
Example 4: Communities integrating DRR in their development activities to address climate change risks [Bolivia, ACCESOS-ASAP (2013-2019))	Example 4: Nutritional diversification; Madagascar AD2M; Niger PRODAF and PRECIS; Ethiopia PASIDP II.	Example 4: Maintenance/restoration of environment and ecosystem integrity (Ethiopia, LLRP)
An exemplar of all three resilience capacity attributes: LLRP in Ethiopia (2019-2026) **was a joint project with the World Bank. Its design aimed to build climate resilience by strengthening: (i) absorptive capacity through strategic investments and improved basic social service delivery, which will help communities and PAP systems to absorb drought shocks and reduce asset losses; (ii) adaptive capacity, through helping beneficiaries adopt climate-smart agriculture as well as rangeland and natural resource management, and by investing in research systems that help identify adaptation solutions; and (iii) transformative capacity through small-scale irrigation, livelihood diversification, and enhancing market links. These provided a basis for socio-economic advancement and enabled beneficiaries to shift away from rain fed agricultural systems.**		

Source: IOE elaboration.

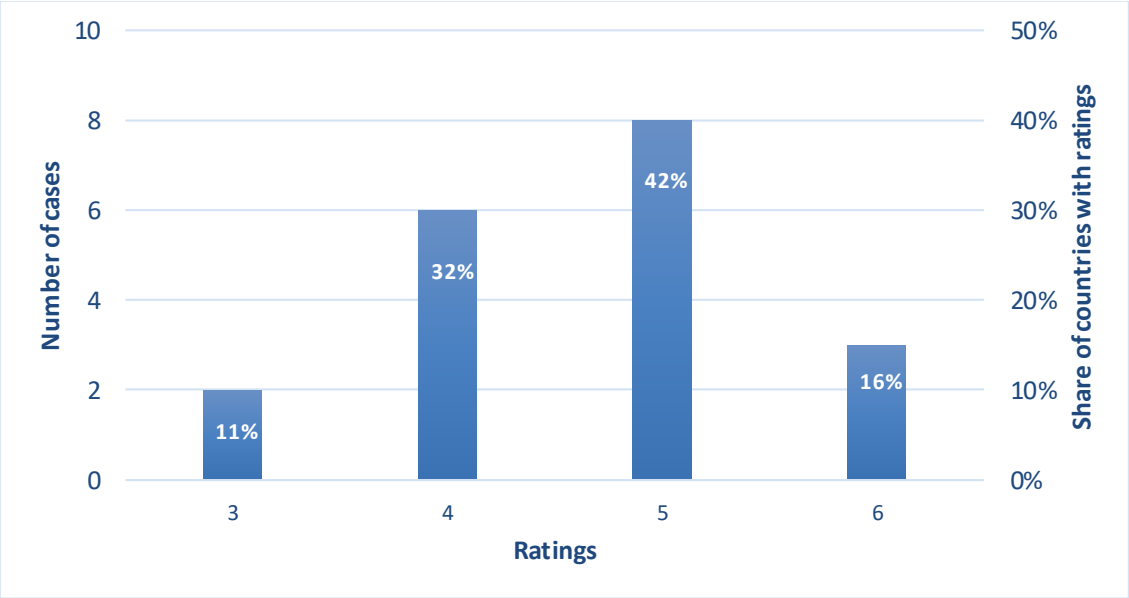
144. Conceptualizing and measuring CCA resilience is challenging because resilience and the approaches used by projects vary widely depending on smallholder vulnerability contexts as well as the nature and intensity of climate threats. For instance, recurrent droughts and other weather-related extreme events affect the capacity of rural households to accrue assets and sustain their livelihoods. Firstly, CCA is highly context specific and interventions or responses are largely influenced by the 'type' of climate risk (for instance, floods or droughts), the agricultural production system (cropping or livestock), agro-ecological zones (windy and dry plains, or hill slopes prone to flooding), the extent of community networks for support, the quality of the initial asset base of the smallholders, and the extent of access to resources (social marginalization). Secondly, the initial vulnerability undermines their ability to cope with the hardship of the "période de soudure," i.e., the lean hunger season, and to face drought shock the following year, resulting in increased vulnerability and a higher level of food and nutritional insecurity. Thirdly, the structural vulnerabilities would be further exacerbated if smallholders adopted negative coping strategies, such as unsustainable tree cutting on communal land for firewood or charcoal making, selling their livestock assets, reducing their food consumption, or borrowing money at excessive interest rates, thereby further undermining their wellbeing and long-term resilience capacity. **These inter-related contextual factors shaping their specific climate resilience therefore require more complex analysis of project level experiences to identify suitable performance indicators to reflect improvements in overall climate resilience**.

145. A few recent IFAD project designs began taking steps to measure climate resilience at the country and local level - for instance, the Lowlands Livelihood Resilience Project in Ethiopia (2019-2025).[112] That design laid out the resilience framework as outlined in Chapter 1 and identified indicators to track resilience outcomes. In this context, it would be appropriate and timely for IFAD to introduce corporate guidance to ensure all IFAD CCA responses measure and track progress towards resilience outcomes even if the full extent of outcomes may not materialize immediately upon completion of a project.

Based on the discussion above, the evaluation team assessed the overall relevance of each country case study to the CCA priorities of programme country, target groups and IFAD and presented below in Figure 11.

Figure 11

Relevance of IFAD Interventions in the 20 Case Studies



Source: IOE Elaboration based on the assessment of the evaluation team.

[112] See discussion in Chapter I for regional efforts underway to pilot conceptual framework and monitoring systems (resilience scorecard) that is based on a vulnerability assessment to arrive at resilience.

Key Points:

- COSOPS and operations are **well aligned with national climate priorities** including the NDCs
- Due to their long duration and extensions, COSOPs were likely to lose their relevance to fast evolving and emerging IFAD climate approaches. However, **projects designed well into the COSOP cycle were aligned with IFAD approaches and priorities** despite this longevity of COSOPs
- Grant instruments were well aligned with IFAD priority to mainstream CCA, particularly in countries where rules prevented them from investing in CCA or climate change responses are yet to become a priority. However, case studies show instances where the modalities of financial instruments affect the coherence/synergies among CCA and other project components and cause delays.
- While most climate responses address community and geographic targeting, IFAD was **less consistent in addressing the needs of the most climate vulnerable smallholders** (a third of case studies attempted to include climate vulnerability targeting and one succeeded). Formal guidance on this became available in IFAD's 2019 revised operational guidelines on targeting
- CCA responses **prioritized establishing targets and quotas for women's participation** in benefits but are beginning to address root causes of gender inequality such as gender norms and beliefs, income and asset ownership and access to credit
- IFAD guidance and operations did not pay sufficient attention to assessing the potential competing interests among marginalized smallholders, particularly in **different production systems** (for instance, a third of the case studies facing conflicts between sedentary crop-livestock system and nomadic pastoralism, addressed the issue satisfactorily).
- IFAD's conceptual and results framework provide little guidance to track progress in strengthening climate resilience. Country offices are making efforts to address this gap without waiting for relevant corporate guidance to be put in place.
- Overall, the case studies show strong relevance of CCA projects to the climate threats, country priorities and needs of target groups, with 89 per cent of case studies showing moderately satisfactory or better ratings (Figure 11).

IV. Performance of IFAD response to CCA

146. This section presents the findings of analysis related to performance of IFAD's response to CCA, based on the theory of change presented in Annex II, which identifies four key milestones of results chain - fitness of corporate resources and instruments for promoting CCA (column 1 of the ToC) and quality of design and implementation (column 2) contribute to the climate resilience outputs (column 3) and outcomes (column 4 when key assumptions are met, such as the collaboration and commitment from key partners, national and local government commitment to CCA, strong institutional governance and regulatory framework to support CCA. The immediate effects of lending and non-lending activities are discussed. This is followed by an analysis of the long- term effects of IFAD operations in terms of scaling up CCA results beyond farm level and the long-term effect of CCA response on ecosystems. The chapter also presents an analysis of the effectiveness of IFAD's climate response reaching the most marginalized climate vulnerable smallholders. The evidence base for this chapter comes from a review of related IFAD corporate documents, analysis of a portfolio of 256 projects and 93 COSOPs/CSNs with CCA response, two online surveys conducted among IFAD staff and project staff, lessons from the three learning notes (on knowledge management, scaling up and human-ecosystem nexus interactions) and case studies in 20 countries. The analysis focuses on interventions approved between 2010-2019. An overall summary of the assessment of effectiveness of the 20 case studies is presented in Annex V-Table 1.

A. Effectiveness of IFAD Interventions

147. **At the corporate level, CCA related commitments and development results of IFAD11 (2019-2021) were achieved or are on track to being achieved** (Table 9). Portfolio analysis in Chapter 2 showed that the earlier commitment under IFAD10 (2016-2018) to mainstream CCA in all new Country Strategies and operations was also met. All COSOPS in 2019 analysed their respective NDCs to align their climate interventions with NDC priorities.

Table 9
Achieving IFAD 11 CCA Commitments

CCA attribute	*IFAD11 commitment*	*2020 progress towards commitment*
Country strategies	100 per cent of country strategies analyse NDCs.	100 per cent of country strategies approved in 2019 analysed NDC of their respective country
Climate finance	25 per cent of IFAD11 PoLG is "climate-focused".	As of 30 September 2020, IFAD11 reported committing US$736 million in climate finance across 47 approved projects. 36 per cent of the IFAD11 PoLG approved between 1 January 2019 and 30 September 2020 was reported as climate finance. Of this, US$665 million was identified as adaptation finance and US$71 million as mitigation finance[113] [114]
Performance of projects in relation to CCA and ENRM[115]	90 per cent of projects completing in IFAD11 rated 4+ on Environment and National Resources Management (ENRM) at completion.	100 per cent of projects completed during IFAD11 were rated by IOE for Environment and National Resources Management (ENRM) as Moderately Satisfactory or better.
	90 per cent of projects completing in IFAD11 rated 4+ on Adaptation to Climate Change (ACC) at completion.	92 per cent of projects completed during IFAD11 were rated by IOE for CCA (CCA) as Moderately Satisfactory or better.

Source: IOE Elaboration and Operations, Policy and Results Division (OPR).

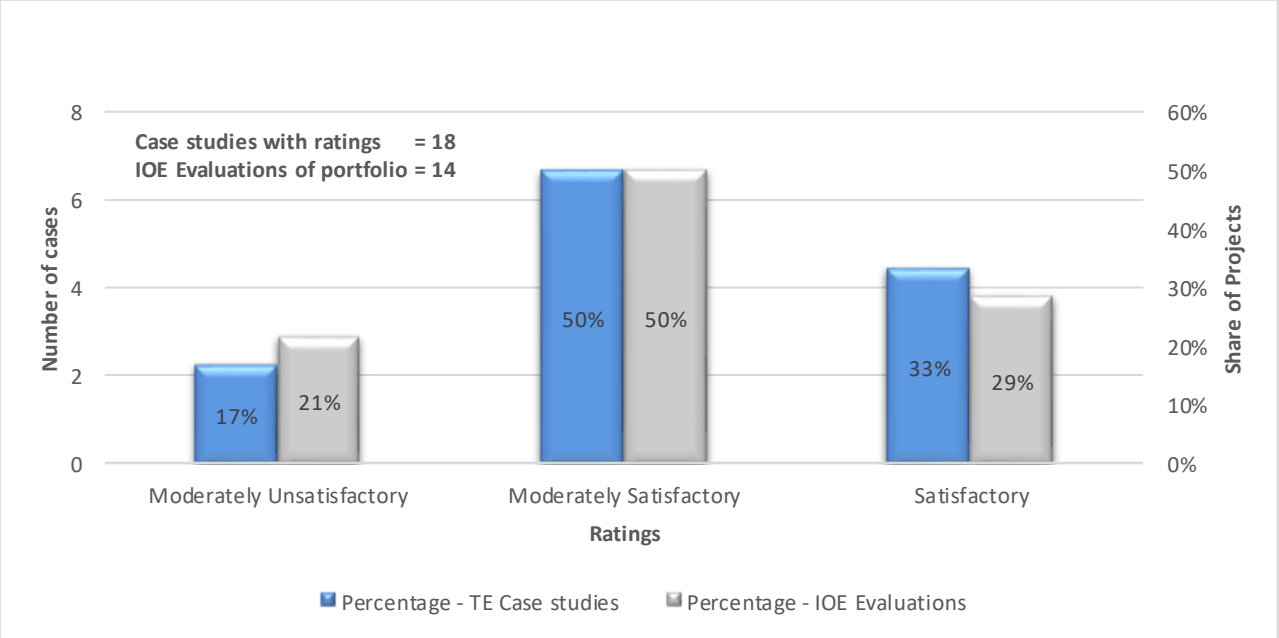
[113] Progress Report on Applying the Multilateral Development Banks' Methodologies for Climate Finance Tracking, p.1
[114] More recent data show that cumulative climate finance for 2019-2020 (up to the end of the year) amounted to USD 873 million, or 35% of the PoLG relative to the same period (source: MDB Climate Finance Tracking page, OPR).
[115] Based on ratings from ARRI Database.

148. **As noted earlier, IFAD lacks a conceptual and results-orientated framework to measure the impact of its interventions in building climate resilience**. Not having results that demonstrate changes in resilience poses a challenge to assessing IFAD's actual effectiveness in strengthening climate resilience of smallholders. Case studies in this evaluation pursued the conceptual approach to measure resilience outlined in Chapter 1. This approach, as discussed, is aligned with the one pursued by IFAD's joint regional interventions with Rome-based agencies to assess changes to resilience (2014/2015). This conceptual framework to measure climate resilience was adopted by case studies.

149. The assessments of effectiveness of CCA responses in all case studies is summarized in Table 1 in Annex V. This assessment considered the following: the effectiveness of targeting the most climate vulnerable, progress towards resilience outcomes from lending activities and performance in terms of contributions to scaling up, KM, partnerships, capacity development and policy engagement. The assessment focused on projects that were close to completion or those that were already completed; considered progress towards and likelihood of achieving resilience related results; and in doing so, the assessment considered the results presented in the project results frameworks as well as additional information on resilience outcomes.

150. **There was tangible progress towards resilience outcomes in 15 of the 20 case study countries with the likelihood of CCA responses and results scaling up evident in nine countries. These were rated 'moderately satisfactory' or better in terms of effectiveness in building climate resilience**. The ratings were summarized below.

Figure 12
Effectiveness of IFAD CCA Response - Case Study Assessments and IOE Evaluation Ratings



Source: IOE Elaboration

151. The evaluation also analysed evidence from the project level evaluations (PPE and PCRV) conducted by IOE of all projects in the climate portfolio that were completed. All IOE project level evaluations rate project contribution to CCA. From IOE database 14 such evaluations were identified. The CCA performance ratings are summarized in Figure 12 above. As can be seen, these two distinct sources provide remarkably similar assessment of effectiveness of climate responses.

Factors contributing to effectiveness

152. The evaluation conducted a Rapid Evidence Assessment of peer-reviewed and grey literature to analyse approaches to building adaptive capacity of smallholders to climate change. It sought to provide additional and complementary learnings to inform the evaluation by assessing interventions that were successful in strengthening building smallholder climate resilience. Specifically, in trying to understand the factors contributing to smallholders switching to climate friendly practices, to scale up approaches, to strengthen knowledge management and to better understand the human-eco system nexus. The key findings of this study related to adoption of climate change responses are summarized in Box 1.

Box 1
Key factors contributing to smallholders switching to climate adaptation-friendly practices

A number of factors determine smallholders' choice to uptake adaptation. Awareness of the risks and available options to address them is important. This awareness draws on their own local knowledge and expertise, on access to sound scientific and technical advice, and on the availability of timely, easy-to-use weather information.

Access to knowledge alone may not be sufficient for farmers to uptake adaptation actions that require investment of time and resources. In fact, quality and extent of asset base, access to land and ownership of other productive assets significantly influence smallholders' decision to pursue adaptive measures. Experimentation and peer learning from demonstrations greatly facilitate farmers' uptake of new approaches and technologies necessary for adaptation. Their level of education (fundamental to use and trust the information they receive), their technical skills and farming experience are other important factors.

Another important factor is their social capital – the degree of participation in community networks and membership into groups and organisations. This functions as a safety net as well as an enabling agent - enhancing and validating the knowledge base while sharing experiences. It also supports the farmers face multiple threats (economic, health, food security, to name a few)

Behavioural changes at individual and community levels should ultimately address the necessary trade-offs and barriers to longer-term, sustainable results. External institutions such as government and development actors can act across three scales – household, community and landscape levels – and also, importantly, provide the right economic incentives to compensate smallholders for investments that don't have immediate returns (such as in agroforestry).

Adaptation support. At the household level: i) capacity building through training, knowledge exchange and peer-peer learning though participatory action research (PAR) and learning platforms; ii) efficient extension and advisory service; iii) access to usable weather information; and iv) financial support through targeted subsides, economic incentives and payments for ecosystem services. The latter is especially important to encourage farmers to invest in ecosystem-based adaptation (EBA).

At the community level: Form Informal and semi-formal groups are critical to strengthen community-based adaptation (CBA). Stimulate social learning by supporting local groups and institutions such as Farm Field Schools. Sustain local governance and collective action; Promote knowledge management and collective action.

At the landscape level: Planned adaptation should consider the landscape as its scope. External actors can act to preserve the actions implemented at individual and community levels against risks and vulnerability, for example though watershed development, forest and landscape restoration or by building irrigation and other infrastructures. Investments towards restoration can take longer and it is important that the short-term needs of smallholders are addressed while the longer term investments mature. They can also provide institutional and financial support to EBA and CBA practices, and bring the two combined approaches to scale. Finally, adaptation interventions promoted at community and landscape levels should also consider creating / enhancing off-farm economic opportunities.

For adaptation pathways to be transformative and inclusive, the current policy making process must become holistic along with the research to provide the necessary evidence - breaking silos between different disciplines (and especially advocating for stronger integration of agricultural and ecological studies) and developing and testing appropriate analytical tools for monitoring and evaluating adaptation in agriculture. A key role for international development organisations is to support institutional mainstreaming of knowledge and innovation, ensuring that project outcomes and best practices reach out to policies and underpin new, integrated policy targets.

Source: Rapid Evidence Assessment conducted by IOE – Building Smallholder Climate Resilience (Review of peer-reviewed and grey literature on CCA).

153. These findings complement the findings from case studies. The theory of change (Figure 3 of Chapter 1 and Annex II) and the conceptual framework for climate resilience (Figure 2 of Chapter 1 and Table 8 of Chapter III), provide a systematic basis to identify the pathways to strengthen climate resilience. These pathways were distilled from IFAD's CCA activities in case studies and contribute to the adaptive, absorptive or transformative aspects of climate resilience. The following section presents these pathways and IFAD's effectiveness in enhancing smallholder climate resilience through these pathways drawing from the experience with the 20 case studies.

154. **Strengthened community networks and organizations (social capital).**[116] A number of case studies successfully strengthened smallholder community organizations. Here, social capital was key to support smallholders to face lean periods, helping them gain awareness of climate issues and providing the essential support base to enable switching to more climate resilient agricultural practices. In short, social capital helps reduce smallholder vulnerabilities. Moreover, addressing eco-system restoration and environmental sustainability happens at the community or trans community or above. In Niger, PASADEM and PRODAF addressed the structural problems of food security caused by recurring droughts and lean hunger seasons by forming smallholder cooperatives for the production and distribution of improved (climate resilient) seeds, and water user's associations and advisory support groups were introduced as social engineering practices including the village women's granaries to build gender responsive social capital. In Bolivia, the ACCESOS-ASAP built community capacity to map climate vulnerabilities, identify priority issues, and engage with policy makers on managing climate risks. In Madagascar (AD2M II) and in Rwanda (PASP) formed smallholder organizations such as Farmer Field Schools and Water Users' Associations to strengthen community networks at the project level to promote CCA technologies. In Rwanda, PASP also demonstrated empowerment of smallholder organizations through creation and support for farmer organizations linked to business hubs.

155. Community networks often go beyond project boundaries and when coalesced become a key instrument in influencing national development agenda, policies while strengthening the bargaining positions of communities in negotiating prices for their products. For example, PASIDP in Ethiopia, organized farmer cooperatives and through bulking and joint marketing helped them achieve greater efficiencies in product collection and delivery, improved market access as well as predictable and better prices. In the example mentioned earlier, PASADEM in Niger strengthened the technical, organizational and logistical capacities of farmer umbrella organizations, partner NGOs and the Regional Chamber of Agriculture, linking farmer organizations to decision-makers and service providers.

156. **Enhanced quality and size of asset base and financial services**. One of the intervention areas of PASADEM and PRODAF in Niger was the distribution of the small ruminant stock for vulnerable households. Small ruminants are well adapted to the Sahelian environment, as they can provide sustenance from diverse feed sources. The provision of small ruminants to poor households served to strengthen their absorptive resilience capacity as these animals can easily be raised and sold when money was needed. For the poor, these animals were comparable to a living savings bank account. The projects distributed goats in revolving funds to reconstruct vulnerable households' stocks. Unfortunately, the action suffered from shortcomings in the implementation procedures and lacked follow-up by administrative and animal

[116] More often, the community level engagement focused on strengthening the human systems and tend to overlook ecosystem based approaches to community building.

health services. In addition, some of the projects' shortcomings were due to a lack of preparatory studies on developing value chains for small ruminants. The support to vulnerable households through the distribution of "poultry kits" was ineffective due to high mortality rates. The main reason for this was insufficient attention to animal health measures in areas where animal diseases were prevalent.

157. An area where these projects succeeded in Niger was in supporting women's granaries to enhance food and nutrition security for the poor and vulnerable households. They enabled women to access food during difficult times and contributed to food security. The project constructed 53 women's granaries, for a supply of 530 tons in project areas. However, this activity lacked synergies with other project interventions.

158. Supporting land tenure enhances the asset level necessary to face challenging times. Lack of land tenure could also lead to land degradation, as was the case in Lake Tana watershed targeted by CBINReMP in Ethiopia. Lack of land tenure discouraged investments in land improvements and in the absence of societal arrangements to manage communal land and natural resources, encouraged their over-exploitation[117]. The project supported Amhara National Regional State Land Service to issue land certificates[118] that included husband and wife's names or women's names in the case of women-headed households and linked land certification to natural resources management interventions. This significantly strengthened gender equality within household and community as well as reversed the land degradation. In addition, small landowners were able to use the title deed as collateral to access credit. In Madagascar, land certification to the landless led to significant economic gains for the poor.

159. **Climate resilient technologies adopted.** Nearly all case studies involved one or more of technology-based solutions. These involved introducing climate smart cropping (Belize, Burundi, Chad, Ethiopia, Honduras, Kenya, Moldova, Nicaragua, Niger), climate resilient livestock (Ethiopia, Kenya, Kyrgyzstan, Madagascar, Niger, Rwanda, Sudan), value chain development (Nicaragua, Rwanda), and infrastructure (Bangladesh, Burundi, Cape Verde, Chad, Ethiopia, Mali).

160. IFAD support to climate resilient cropping systems at the farm and community levels involved supporting farmers adopt CCA practices such as short-season and drought-tolerant crop varieties, crop diversification, soil and water conservation methods and natural resource regeneration. In many cases, such efforts were coupled with strengthening farmer organizations along with mechanisms to create awareness of the need for climate adaptive technology and disseminate it broadly among beneficiaries.

161. In addition to strengthening extension services, IFAD effectively used Farmer Field Schools (FFS) in a number of climate responses in case studies. The FFS provided a tested platform to bridge farmers' own local experiential knowledge with sound scientific and technical advice and helped IFAD expand its outreach. For example, projects in Ethiopia, Madagascar and Niger were effective in supporting the increase in agro-pastoral production and the restoration of degraded lands using FFS.

162. Unlike extension services, FFS offered sustained support and through demonstrations, allowed farmers to visually experience and justify how different CCA options worked. IRECR in Moldova promoted conservation

[117] Deininger et al. 2006

[118] At completion, the project had issued first-level certifications to 287,704 landholdings (64 per cent of the appraisal target), and 9,577 second-level certifications. In addition, 25,370 cadastral surveys were completed. (Source: PCR)

agriculture (CA) as an agro-technology suited for the steppe agro-ecology that faced frequent droughts and wind erosion. The project supported 11 FFS that performed controlled experiments involving different crops (wheat, sunflower and maize) with select plots using conservation agriculture and others with regular tilling (control group). Farmers were able to see the comparative performance between CA and regular agricultural practices and also learn the techniques and required steps associated with CA. The extent of community ownership and inclusiveness varied across different case studies. For instance, women constituted 16 per cent of the beneficiaries of the FFS in Moldova. This low number mostly reflected the low demand for the technology among women. This was because the project promoted a mechanized no-till approach, which required more powerful machinery that was also significantly more expensive.

163. IFAD support to livestock focuses on pastureland management, livestock health and production, and value chain development. IFADs strategy and activities to promote climate resilience ranged from strengthening communities and community organizations such as cooperatives, supporting climate resilient fodder production, to mixing in resilient breeds of high-yielding livestock and strengthening value chain links, such as milk cooling centers.

164. In Kyrgyzstan, IFAD was successful in supporting the efforts of government to decentralize the governance of pasturelands. In 2009, the country decided to shift from centralized management and administration of pastureland to a locally managed system with community participation. The project promoted ecosystem restoration of pastureland with the overall goal to reduce pressure on pasture resources by improving access to remote pastures and rehabilitation of grazing land close to villages. This resulted in increased herd size with inadequate consideration of the consequences for landscape resilience.

165. Livestock depend on secure access to suitable pasture land and water. Throughout the Sahelian region conflicts existed between the agro-pastoralists and nomadic pastoralists due to competition for these competing natural resources. Case studies in Chad, Mali and Niger showed that inadequate attention was paid to this issue in IFAD's earlier designs. In some of the older projects and most recent projects in the region, inclusive community-based approaches were used to resolve or mitigate the conflicts between these groups. LMRP in Sudan integrated addressing this conflict, within the broader issue of managing natural resources sustainably. Community Adaptive Plans were developed that included the priorities of all groups and investments in a community based natural resource management addressed stock route restoration which minimized the conflicts between settled and nomadic pastoralist communities. This provides a good example of using community-based approaches to integrate managing natural resources with addressing tensions among different agricultural systems. This community-based stock route restoration was also being scaled up across the country. Most recent projects in the region addressed this issue well in their designs (for example, the recent LLRP in Ethiopia).

166. In addition to supporting pasture land management, IFAD introduced climate resilient fodder varieties and upgraded the gene pool of livestock to boost productivity in nearly all its livestock related interventions (and thereby contributing to reducing the number of livestock and hence greenhouse gas emissions).

167. *Value chain development* support was effective only when IFAD follows a comprehensive strategy that includes end-user focus, empowers farmer

organizations, makes production systems more climate resilient and strengthens value chain links, as the positive experience identified in Rwanda. Absence of such strategy limited the value chain effectiveness of IFAD in Kyrgyzstan.

168. **Climate resilient infrastructure in place to ensure sustained functioning and market access.** IFAD's infrastructure support included repairing or constructing access roads to markets, rangeland roads, storage facilities, market facilities, and irrigation infrastructure such as canals. New irrigation infrastructure helped to reduce water losses, climate resilient storage helped minimize postharvest losses, whilst roads and market buildings minimized disruption to business functioning and enabled continued access to services.

169. As discussed in Box 2, the CCRIP was a joint infrastructure project involving Government of Bangladesh (GoB) along with IFAD, the Asian Development Bank (ADB), and German Credit Institution for Reconstruction (KFW). The project was among the first to address climate threats in the design of infrastructure the south-western coastal belt of Bangladesh (project area) which was prone to recurrent cyclones and floods that were increasing in frequency and intensity causing significant damage and disruption to livelihoods. CCRIP constructed 462.3 km of roads and 184 markets. According to the PPE, after the project was completed in 2019 the area experienced Cyclone Amphan and subsequent flooding in May 2020. It found that the CCRIP roads and markets faced minimal damage and continued functioning after Amphan and the floods that resulted in minimal disruption to the flow of goods and services to the rural markets and localities.

170. **Diversified livelihoods and agricultural systems** (Ethiopia, Madagascar, Sudan) LLRP in Ethiopia targeted the dry lowlands Regions of Afar, Somali, Oromia, SNNP, Gambella, and Benishangul-Gumuz that faced more frequent and intense droughts. The project supported livelihood diversification and small-scale irrigation to shift the rural poor away from rain-fed agricultural systems. In Madagascar, effective development of complimentary systems of rain-fed agriculture on the Tanety and flood and recession agriculture in the floodplains (only when seasonal flooding allows). Effectively diversified household activities in targeted areas ensured that each user adopts two cropping systems to promote climate resilience. Positive resilience results were observed at household and community levels. In Sudan, LMRP diversified livelihoods to improve climate resilience by contributing to a range of income generating activities (fattening process, saving and lending, agriculture, forestry, rangeland, alternative energy and water service provision) by strengthening capacities in these areas.

171. **Improved capacities to manage climate risks (Disaster Risk Reduction and Management[119]).** One of the common situations related to slow onset of climate threats was increasing water scarcity. This is a significant issue in the LAC region and Sahel. The most successful DRM practices and technologies supported by the IFAD were the interventions that related to water mobilization and management. Small-scale irrigation intervention and water harvesting in Ethiopia, Madagascar and Niger were most effective in building adaptive capacities. For instance, the irrigation schemes of PASIDP II in Ethiopia,[120] were effective in providing sustainable irrigation water management and increased crop yields.

[119] Disaster risk management involves identifying, reducing and transferring out risks. Disaster risk reduction is about minimizing the exposure and sensitivity to hazards, which involves actions such as early warning systems, contingency planning, and training responsible people.

[120] PASIDP II supported 61,625 households to increase incomes by constructing 116 irrigation schemes in 82 woredas and 120 kebeles in drought-prone areas, covering a total irrigable land area of 13,808 hectares. To

172. DRM practices are community based and demand from communities and the local government are key to success. ACCESOS-ASAP project addressed the issue of water scarcity in Bolivia. The Government of Bolivia enacted several laws and regulations that tied budget allocation to municipal level interventions to identify and propose solutions to manage various risks, including climate. IFADs response included supporting 16 municipalities with tools and methods to map climate vulnerabilities and strengthened their capacities to use these tools. These maps were used to identify and prioritize mitigating actions to address climate threats. Once it overcame the initial issues in fully integrating the ASAP component into all project components, the project became responsive to community demands and took into account the local agro-ecological conditions due to the participatory, community-based approach that was inclusive of indigenous peoples and integrated local knowledge with scientific information on climate change.

173. This approach was used to develop vulnerability maps called 'talking' maps.[121] Based on these maps, the communities and municipalities were able to successfully submit to the Government funding proposals for projects that addressed their climate priorities.[122] The project was successful in expanding the climate knowledge base of communities to gain new experiences, learn about new technologies to build climate resilience.

174. This experience and tools were replicated within the project municipalities and adopted by other municipalities. The climate expertise needed was acquired through partnerships with HELVETAS, an international NGO. The project achieved the level of youth participation it had targeted, however, women participation and their representation within communities remained weak. Notwithstanding this limitation, DRR capacity building for community adaptation achieved 123 per cent of the targeted outreach.

175. The community-based DRM efforts in PCDP-III project in Ethiopia were less successful due to the ad hoc manner in which community-based disaster risk management was introduced.

176. IFAD is investing in hazard insurance to help vulnerable smallholder farmers to cope with climate-related shocks and stresses when their assets and livelihoods are threatened. Even though this was tried in a few case studies (for example, PASSIP II in Ethiopia collaborated with Micro Insurance Center to pilot the agricultural insurance, PRECIS in Niger), evidence on their effectiveness is yet to materialize.

177. **Degraded environment restored, Integrated Watershed Management and Sustainable Land Management**. Restoration of degraded land in integrated watershed management remains a critically important pathway to achieve climate-resilient food security. Restoration of degraded land is a measure of soil and water conservation and a pathway to replenish the land's potential to provide a wider range of ecosystem goods. A focus on sustainable land management (SLM) and restoration of the land base is the central tenet of a better and sustainable future, where poverty is reduced, food and water are secured, biodiversity is safeguarded, and sustainable livelihoods are promoted (UNCCD123 2017).

178. Case studies showed examples where climate responses addressed environmental fragility through relevant actions, such as the development of

ensure the schemes' sustainable operation, 175 Water Users' Associations (WUAs) were established and supported by the project.

[121] Taking Maps is a participatory mapping methodology that depicts layers of information documenting past, present and future scenarios that reflect the most important aspects of the local territory.

[122] ACCESOS-ASAP produced 55 Talking Maps, and resulted in 4231 families increasing their natural and physical assets to manage climate risks.

[123] Global Mechanism of the UNCCD and CBD, 2019

micro-watersheds, assisted natural regeneration, and rehabilitation of rangelands. Each micro-watershed interfaced with wider landscapes. However, these interventions were not included in the master plans for integrated watershed management. In Ethiopia, CBINReMP focused on rehabilitation of degraded land and natural resources in Lake Tana Watershed based on the assumption that this would address the challenges of food insecurity, declining soil fertility due to soil erosion and loss of vegetation cover, and vulnerability to the impacts of climate change and climate variability.[124]

179. Kenya's UTaNRMP project constitutes another successful example of an integrated approach which managed the Upper Tana catchment area of the country. The project rehabilitated 28 river basins with support from community forest associations (CFAs) to sustainably manage forest resources, and supported the elaboration of 61 sub-catchment management plans; rehabilitated 77 water resources to provide clean water for 94, 550 households and 75,000 school children, and brought 1576 ha under irrigation benefitting 39,400 farmers; introduced energy saving cook stoves and biogas allowing a 50 to 60 per cent reduction in fuelwood costs; solar-powered wildlife control fence reduced human-wildlife conflicts by 97 per cent and deaths and injuries by 99 per cent.

Key Points

- IFAD is achieving or showing demonstrable progress towards resilience outcomes in its operations but corporate level indicators are not yet equipped to capture and quantify this progress.
- Disseminating climate resilient agro-technology is important but success depends on a host of other factors, including strengthening social, economic socio-technical and human capital, managing climate risks (DRR) and diversifying agricultural systems and livelihood options.
- The integrated approaches offer an effective means to not only address environmental sustainability, but also CCA and the economic needs of smallholders.

[124] CBINReMP in Ethiopia supported community-driven participatory planning and implementation of 650 micro-watershed plans, treating 227,500 ha of land as per the target. A total of 104 million fruit and forest seedlings were produced and 17,600 ha of tree plantations on degraded communal lands were established.

B. Performance of Scaling Up and Non-lending Activities

180. As noted by ARRI 2016, non-lending activities are mutually reinforcing actions to complement IFAD's investment projects (lending activities). They are increasingly recognized as essential instruments in promoting transformation at the country level and in scaling up the impact of IFAD operations for deeper results in rural poverty reduction. Non-lending activities such as establishing and strengthening partnerships for results knowledge management, capacity development and policy dialogue also contribute to scaling up of IFAD supported results and interventions. The main purpose of non-lending activities is to leverage project results to influence subnational and national level decision-making to the benefit of smallholder agriculture. In this report, we focus on mutually reinforcing activities to scale-up and knowledge management [125]

Scaling-Up Climate Responses

181. IFAD recognized that scaling-up the results of successful development is at the heart of what it does and defines it as "expanding, adapting and supporting successful policies, programmes and knowledge so that they can leverage resources and partners to deliver larger results for a greater number of rural poor in a sustainable way".[126] IFAD guidance also explicitly states that scaling-up does not simply mean replicating or transforming small projects into larger projects, but rather how its interventions should focus on how successful local initiatives could leverage changes in policy, and secure additional resources to bring results to scale.[127]

182. **The degree of success in scaling up climate responses from the individual project level to deliver tangible national impact was generally low**. Whilst there are exemplars of success from the case studies on how scaling up can be effectively incorporated into design and implementation as discussed below (and in Annex V Table 2), for the majority of cases the ambition or potential for scaling up has not been realized. As noted in Chapter 2, nearly half of the climate response designs did not include the intent or pathways to scale up.

183. **The country case studies highlighted that there was no one approach to scaling up that works for all climate threat and project contexts**. Annex V-Table A2 shows the different ways in which scaling up is likely to occur. Of the 35 projects in the 20 case studies, nine were scaled up or showed strong likelihood of scaling up (23 per cent). This could be interpreted as promising or problematic, depending on the standards that the organization sets itself. In either case, the evidence points to room for major improvement. Possible factors contributing to successful scaling up are described below.

184. **Success in scaling up depended to a large extent on the ownership of the government, strength of strategic and high-profile partnerships, and engagement from the outset (design).** Two examples illustrate this – ACCESOS- ASAP in Bolivia and CCRIP in Bangladesh, local government ownership and partnerships were key to scaling up.

185. Bolivia's ACCESOS-ASAP showed that success can be achieved at a different level when scaling up nationally was not politically or operationally viewed as a priority by the government. ACCESOS found success at the municipal level when faced with limited traction with the national government. Working with 16 Municipal Councils, the project pursued a community-based approach to strengthen their capacities to manage climate risks. The tools and methods

[125] IOE-IFAD, 2016
[126] https://www.ifad.org/en/scaling-up-results
[127] Ibid.

for assessing vulnerabilities such as the Talking Maps, were taken up by other municipalities and communities (see Annex V - Table 2 for details).

186. The case of CCRIP is summarized below in Box 2.

Box 2
Example of Climate Response with Strong Potential for Scaling-up – Climate Resilient Coastal Infrastructure Project (CCRIP) in Bangladesh

The Government of Bangladesh (GoB) along with IFAD, Asian Development Bank (ADB), German Credit Institution for Reconstruction (KFW) and Strategic Climate Fund (SCF) invested $150 million to build climate resilient infrastructure along the southwest coast of the country. IFAD component was $60 million and the GoB contributed US$31.2 million. The Local Government Engineering Department (LGED), the government agency in charge of rural engineering and infrastructure, was the implementing partner for the project.

The project was among the first to address climate threats in the design of infrastructure and was located in the south-western coastal belt of Bangladesh prone increasingly frequent and severe cyclones and floods causing significant damage and disruption to livelihoods. CCRIP constructed 462.3 km of roads and 184 markets. After project was completed the area experienced Cyclone Amphan and subsequent flooding in May 2020. The CCRIP-supported infrastructure faced minimal damage and continued functioning after Cyclone Amphan with minimal disruption to the flow of goods and services to the rural markets and localities.

The Performance Evaluation of the project noted that the first climate resilient infrastructure constructed by LGED was for CCRIP that also demonstrated resilience to extreme weather events as such, the project was expected to provide the basis for the national technical standards for coastal rural roads and markets infrastructure that is being developed by LEGD.

A number of factors contributed to the scaling of this climate resilient design being scaled to inform national standards for infrastructure construction:

- Strong government ownership and institutional strength of local government
- A long standing partnership with an influential government unit, LGED.
- High visibility and scale through co-financing partnership with major players (ADB and KFW)- enabling better uptake and mainstreaming of lessons from the project

Source: Project Performance Evaluation of Coastal Climate Resilient Infrastructure Project in Bangladesh and IOE.

187. **Level of coordination and shared ownership of adaptation priorities by all ministries were important for successful scaling up**. IFAD traditionally works with ministries of Agriculture and Finance while adaptation measures may involve other ministries such as Environment or Transportation. In some cases, theMinistries of Agriculture and Environment worked well together. In fact, in Moldova the ministries were combined into one ministry after the recent reforms. However, this was not always the norm.

188. **Both knowledge management (KM) and scaling up were inadequately mainstreamed in project conceptualization, design and implementation phases.** Labelling these as 'non-lending' also implies their importance or relevance is not mission critical to project success. IFAD was more focused and driven by project level activities and missed opportunities to weigh-in scaling up opportunities to benefit the smallholders and to establish new partnerships needed to support effective scaling up activities outside their project boundaries. In this regard, mapping knowledge gaps and identifying partnerships for knowledge transfer necessary for scaling up were found to be real gaps in many of its operations.

189. Analysis and considerations of the institutional options to support scaling up were also not adequately considered in the project designs, according to the Brooking study (2013).[128] These factors continue to be relevant.

190. **At the project level, weak capacities, lack of incentives and scarce resources further contribute to limited attention to scaling up**. It was apparent that staff within country projects did not fully understand the concept of scaling up and the different modes or dimensions it could take. They also lacked the resources and support to ensure scaling up became an essential output of their projects. Many projects still tend to focus too much on project management and delivery, and it was difficult to see where innovation, KM and scaling up were being given sufficient attention. In fact, monitoring and evaluation of operations as well as other implementation arrangements lack attention to scaling-up efforts and knowledge generation to support scaling-up activities. Case studies pointed to the need for stronger incentives and support to country teams to maintain a focus and priority developing on scaling up pathways and the importance of institutional links to enable effective scaling up in the long-term, especially post-project.

191. **Good progress was usually accompanied by IFAD supporting scaling up via engagement with national and local stakeholders and external partners (e.g. Bangladesh, Nepal) and proactively engaging in policy dialogue**. For example, in addition to the examples of Bangladesh and Bolivia provided above:

    a. Mali (Fostering Agricultural Productivity Project PAPAM (2010-2018): Following a political crisis at the very beginning of the project and weak coordination between government and partners, the well designed upscaling potential was largely reduced. The ASAP component, that was added later facilitated a partnership with the Agence de l'Environnement et du Developpement Durable (AEDD) and directly contributed to the formulation of the National Strategy of Sustainable Development. The project also successfully advocated for the integration of the Communal Climate Change Adaptation Planning (PCA), a community-based large landscape approach, in the design an implementation of agricultural projects in the Sikasso Region.
    b. Nepal (Adaptation for Smallholders in Hilly Areas Project ASHAP (2014-2022) promoted important new practices through stakeholder consultations, in donor forums and engaging with different ministries through existing platforms and committees contributing to the practices being mainstreamed into Nepal's Local Adaptation Plans for Action Guidelines 2019.
    c. In Nicaragua, NICADAPTA enhanced the government's technical and political commitment to environmental and climate issues through strengthening the national system for production, consumption and trade of coffee and cocoa, which are key elements of national development strategy.
    d. Rwanda (Climate Resilient Post-Harvest and Agribusiness Support Project PASP 2014-2020) promotion of Local Famer School approaches in livestock is now being extrapolated from the livestock sector into the crop sector and into other livestock related activities by the Government of Rwanda. IFAD involvement was effective at the country level but missed opportunities in driving international scaling up initiatives such as Participatory Integrated Climate Services for Agriculture (PICSA).

[128] Brooking assessment in 2013 was a two-phase study that assessed the extent to which IFAD identified relevant scaling-up pathways as the drivers and spaces in 8 countries and how it developed an operational approach to assure integration of scaling-up into its project implementation processes. Case studies show that scaling-up approaches were not explicitly incorporated into the COSOP strategies of some countries. Hence, there was not a systematic application of the principles and practice of scaling up.

However, IFAD is not viewed as a key player for scaling up but more on the delivery of 'on the ground' projects.

Knowledge Management and CCA Response

192. IFAD defines KM as a set of processes, tools and behaviours that connect and motivate people to generate, use and share good practice, learning and expertise to improve IFAD's efficiency, credibility and development effectiveness.[129] This evaluation conducted a learning theme study on Knowledge Management related to CCA response in IFAD. This study used the case studies and the rapid evidence assessment study (REA) conducted by this evaluation to generate lessons learned. These are discussed below and further elaboration of key findings from all case studies is presented in Annex V-Table 6.

193. **The case studies noted that considerable CCA knowledge was generated by projects.** Knowledge generated by projects enables smallholders to include more sustainable and forward-looking considerations instead of short-term solutions when it is linked to local knowledge. This was supported by findings from the REA (2021) conducted by this evaluation. Its findings showed that learning platforms based on social inclusion and participatory action research that brought together different actors were likely to be effective in supporting adaptation strategies.[130] The Farmers Field Schools (e.g. Moldova, Madagascar) was such a learning platform that integrated adaptation at different levels and scales. Its effectiveness and relevance was linked to the degree of participation of farmers in assessing the needs of the community and designing training modules.

194. **Most case study examples of good KM practices were found at the local level, often associated with community-based approaches** (e.g. Bolivia)**.** Only a few good examples of knowledge exchange at national (e.g. Bangladesh) or international (South-South exchanges and through informal exchanges often due to Project Coordinators/Consultants being involved in projects within more than one country) level were identified. KM was often pursued through ad-hoc interventions at the project level (13 of the 20 case studies), which reduced its strategic relevance to the overall country level interventions and to IFAD's corporate level. KM products were primarily targeted towards front-line beneficiaries and working-level counterparts and did not feed into the non-lending activities to target decision-makers. As noted, examples of partnerships for KM exist. The examples in Brazil (SSTC/KM center), Burundi and Kyrgyzstan were discussed in earlier paragraphs. However, these were mostly limited to project level KM activities. However, in most cases KM partnerships were limited to project-specific purposes and did not extend beyond project level.

195. **Some projects with strong *partnerships* with universities saw their practices being embedded in scientific research and curricula**. In Kyrgyzstan, IFAD worked with National Agrarian University (KNAU) to develop a pasture manual and curriculum for teaching future pasture managers. The LMDP II project also worked with the Mountain Societies Research Institute (MSRI) the University of Central Asia (UCA) for developing curriculum component on community-based pasture management. The curriculum

[129] IFAD, 2019c
[130] IOE-IFAD, 2021, Building adaptive capacity of smallholders to climate variability and change: key findings from a Rapid Evidence Assessment (REA) Final Technical Report 06 April 2021

offered the potential for educating future resources managers with the findings of project experience.[131]

196. The case study of Burundi flagged the issue that such partnerships with academic institutions would also entail considerable time investment and continuity to allow knowledge products to be developed. There were few good examples of emerging KM partnerships with regional institutions (e.g. ICA) as well as on cross-country collaborations (e.g. Brazil-Mexico). In Mali, there was collaboration with Rwanda and Burkina Faso to promote household bio-digesters.

197. The SSTC/KM centre in Brazil pushed for a broader KM agenda within LAC and notable cross-country opportunities were identified (e.g. support to an IFAD project in Rwanda with financial support from ABC). These new examples showed that KM could be driven by demand when the right frameworks and incentive structures were provided.

198. **The launch of IFAD's Knowledge Management Strategy (2019-2025) increased the attention to KM in recent projects** (e.g. Belize and, in particular, Brazil) where KM aimed to serve more strategically as an input for scaling-up strategies and policy engagement and included closer collaboration or partnerships with universities or research institutes.

199. **Yet, the supporting structure and functions offered by IFAD headquarters for KM and scaling up were found to be insufficient. Incentives, guidance and support to country teams fell short to ensure a focus on prioritizing KM** in COSOPs as well as in the design and implementation of projects. KM continued to be considered mainly as a measure to comply with, and often activated only after recommendations from MTR's and supervision missions. ARRI 2020 also observed a declining KM performance rating post-2015 (after being at a stable level in the period 2010-2015).[132] Even though recent COSOPs made more explicit reference to KM and STDC, focus continued to be mainly on the investment portfolio with less strategic attention to the role of non-lending activities. The linkages between lending and non-lending activities needed to be further strengthened for KM to play the important role envisaged in IFAD's Knowledge Management Strategy for the period 2019-2025.[133]

Partnerships for CCA results

200. The case studies show examples of effective partnerships for scaling up, managing knowledge and achieving results. However, in general, partnerships for results were not identified and pursued based on a clear strategy.

201. **Partnerships for scaling up were not systematically forged.** As noted earlier, partnerships were key to succeeding in scaling up. Bangladesh (see Box 2) provided a good example of a longstanding partnership with LGED that was one of the key factors of success. The case study also pointed to the important role played by the co-financing partnership with ADB and KFW in providing scale and visibility for the project. Most of the case studies did not see such good examples of systematic engagement by IFAD with key national stakeholders and international development partners to promote higher level impacts and scaling up. Instead, partnerships were established for one-off activities and for implementation, consultation or coordination roles.

[131] According to the Kyrgyzstan case study, the curriculum was completed in 2019. Due to COVID, KNAU was closed during the period when evaluation was collecting evidence. Hence, no information was available on the quality or use of this curriculum.
[132] IFAD, 2020c
[133] IFAD, 2019c

202. **Following three case studies noted that IFAD had weak engagement with the Ministry of Environment and other public entities relevant to scaling CCA at national level**. The AD2M project in Madagascar generated experiences that could inform development strategies to scale up CCA practices. The findings were relevant to the Ministries of Agriculture, Livestock and Fisheries (French acronym MAEP) as well as, Environment, Ecology and Forests (MEEF). Yet, IFAD's engagement with the MEEF was relatively weak and IFAD missed an opportunity to scale up. Similarly, case study noted the weak linkages of PASP to the Rwanda Environmental Management Authority (REMA) with which IFAD was expected to partner with to address climate risks. In Chad, PARSAT appeared to have minimal interaction with the Ministry of Environment, resulting in PARSAT inadvertently setting up activities in internationally recognized protected areas (for example, the Ramsar site of Lake Fitri, and the National Park of Zakouma).

203. Where IFAD had to work at local level government, the effectiveness of partnerships was varied. As noted, ACCESOS in Bolivia developed effective partnerships with Municipalities and communities. Similarly, ASHA project in Nepal forged partnerships with local governments to develop local adaptation plans and integrated them in local development planning. However, AD2M in Madagascar did not have strong partnership with the decentralized authorities in Menabe and Melaky to co-manage CCA response.

204. **Partnerships for CCA technical support**. **Partnerships with national and international organizations helped IFAD mobilize scientific knowledge for IFAD projects and acquire necessary technical capacities**. Such mobilization depended on the availability of long standing partnerships and presence of technically capable partners in the country. Key examples and experience of such partnerships are presented below.

205. In Nepal, the International Center for Integrated Mountain Development (ICIMOD) provided technical support to ASHA to undertake GIS analysis and sub-watershed assessments. The sub-watershed assessment became the main fulcrum of preparation of local adaptation plans for action. In Ethiopia, PASIDP II was particularly effective in mobilizing partnerships for technical support, such as the collaboration with World Agroforestry Center (ICRAF) to promote tree and fruit crops, with International Crop Research Institute for Semi-Arid Tropics (ICRISAT) to develop the germplasm for climate resilient varieties of crops, and with the International Water Management Institute (IWMI) to use germplasm in water harvesting schemes. In Niger, the collaboration with ICRISAT made it possible to demonstrate the effects and impacts of 55 new plant varieties during 2014 - 2016. In Belize, regional centres of expertise were important knowledge sources (e.g. CMO - Caribbean Meteorological Office and CATIE - Centro Agronómico Tropical de Investigación y Enseñanza). In Nicaragua, NICADAPTA facilitated collaboration among different actors, including the government institutions, in providing public services to coffee and cocoa producer organizations that resulted in new and sustained working relationships.

206. However, IFAD in Niger missed the opportunity to capitalize the partnership with this institution to introduce innovations. PRODEFI II in Burundi partnered with the Institute of Agricultural Sciences of Burundi (ISABU) but misjudged the time taken to conduct scientific analysis of climate change and response and failed to gain from the partnership of seven months.

207. Partnerships were established with private sector to facilitate market access and/or acquire technical capacities in some countries. An example is NICADAPTA in Nicaragua, which linked coffee and cocoa cooperatives with private sector actors and provided them with access to the coffee and cocoa

markets through certification of farms and products they were marketing (for instance, only 10 per cent of the dry cocoa produced went to the local market while 90 per cent went to Ritter Sport, for export).

208. As with, scaling up and KM, partnerships were not treated as part of a strategy that mapped the needs, identified the possible partnerships and developed a plan to establish partnerships with clear idea of the results sought. To do so, as in the case of other non-lending activities, financial resources and capacities would be needed to implement partnership strategies along with incentives and mechanisms to hold staff accountable for results.

Overview of Non-Lending Performance

209. Typical IFAD interventions serve a fraction of the total rural poor in a country. As such, while adding value, its impact at project level is not at scale to exert system-wide influence - a necessary characteristic of transformative change as elaborated in Chapter 1. **As such, IFAD's aspirations of a transformative country programme is highly unlikely if impact remains only at the project level**.

210. Besides, as noted by IFAD12 and Rural Resilience Programme (2RP), there is urgent need to act to prevent irreversible and cataclysmic climate consequences before the window of opportunity closes. This calls for climate interventions that are more than effective and contribute significantly to addressing the climate challenges.

211. Case study examples (see Annex V, Table 2) point to interventions that could be potentially scaled up to have influence at national or sub-national scale. These successes are linked to the ability to generate a robust knowledge base and establish strategic partnerships, among other things. In short, non-lending activities are the primary vehicle for IFAD to reach beyond project level and contribute to significant system wide changes to address the climate challenges. **Yet, the case studies point to the fact that non-lending activities lacked the guidance, capacities, resources and prioritization needed to be become effective.**

212. **Interviews with Headquarter staff showed that there was clear recognition of the deficits in performance related to non-lending activities**. These were highlighted in several evaluations and the ARRIs produced by IOE. At the same time, mechanisms to fund these activities were very much limited for systematic action to be taken to address this gap. IFAD regular grants were potential sources for some projects. However, the short duration of the grants (maximum three years, while the project life is typically 6 years) and the limited supply of grants, which is reduced and capped under the forthcoming grant policy (2022), leaves few options for Project Management Units and IFAD Management.

213. **IFAD12 and 2RP offer a programmatic approach to address this challenge**. 2RP includes a Technical Assistance Fund, sourced from the Trust Fund set up for the programme (up to 10 per cent of the pooled funds). This assistance could be used to strengthen KM and other non-lending activities. This is clearly a step in the right direction. However, challenges remain. First, funds are yet to be mobilized for the 2RP and as such, the future remains unclear. Second, 2RP components (The Great Green Wall Project, 3S project, and ASAP+) are geographically focused in Africa. Though ASAP+ is global, it is restricted to Low Income Countries. Consequently, not all climate responses in other regions are in a position to benefit from this programming approach and funds to support non-lending activities.

214. **Integrating non-lending activities into project components**. Recent projects have begun to recognize the importance of KM and scaling up for

achieving impact and have included KM and scaling up as one of the project components. LLRP in Ethiopia and PCRP in Brazil (See Annex V Box 1) are two such examples where KM and scaling up are included as one of the project components, with dedicated resources.

Key Points

- Case studies showed successful examples of non-lending activities enabling CCA outcomes and impact through scaling up, Knowledge Management and Partnerships.
- However, the supporting structure and functions offered by IFAD headquarters to support non-lending activities were insufficient. Incentives, guidance and support to country teams fell short to ensure a focus on prioritizing these activities.
- Non-lending activities were pursued in an ad hoc manner without the benefit of clear strategy, results-orientation, oversight or monitoring systems to track progress.
- The limitations of Non-lending performance were widely recognized within IFAD, yet significant challenges persist in identifying suitable mechanisms to systematically address the resource gaps.

C. Impact of CCA operations in Case Studies

215. According to international evaluation criteria, "impact addresses the ultimate significance and potentially transformative effects of the intervention."[134] As such, the impact effects were analysed along the dimensions of changes characterizing transformational change identified in Chapter 1 in addition to the effects on the incomes of smallholder households. Hence, impact will be analysed in terms of the ability of the CCA results to: i) achieve long term sustainability – ability to restore degraded natural systems/environment (nexus), ii) be paradigm-shifting, iii) lead to systemic (multi-sectoral) changes, iv) be scaled to system/sectoral level, v) have enduring benefits, and vi) improve the economic security of smallholder farmers.

216. As such, the impact analysis included the effects of lending and non-lending activities of IFAD. Given that the first batch of IFAD's climate response interventions were completed in 2019, it may not be realistic to expect impact effects. Hence, the analysis assesses the progress of changes and thereby, the potential to achieve impact.

Impact on Environment: Environmental Sustainability of CCA Responses - Nexus of Human Systems and Natural Systems Interactions[135]

217. **The nexus approach provides a comprehensive eco-system wide analysis of sustainability of CCA responses.** It recognizes that the overall impact of CCA responses can be sustainable in the long term provided they strengthen the resilience of both human and natural systems. The subsequent discussion recognizes that it may be not feasible to identify sustainable solutions in all contexts, and even when such solution is identified, government buy-in may not follow automatically. The evaluation is premised on the assumption that IFAD will pursue to the fullest extent possible to

[134] OECD-DAC Evaluation Criteria. Accordingly, the term impact is not used in the sense of results that are attributable to IFAD. It refers to the extent to which the intervention has generated or expected to generate significant positive or negative, intended or unintended, higher level effects

[135] The age distribution of portfolio of case studies is pertinent here. The 20 country case studies analysed involved 35 projects with few country cases involving more than one project. Nearly half (17) involved ASAP funding; 15 (43 per cent) were approved after SECAP was introduced in 2015; 10 (29 per cent) were completed and the remaining 25 (71 per cent) are ongoing.

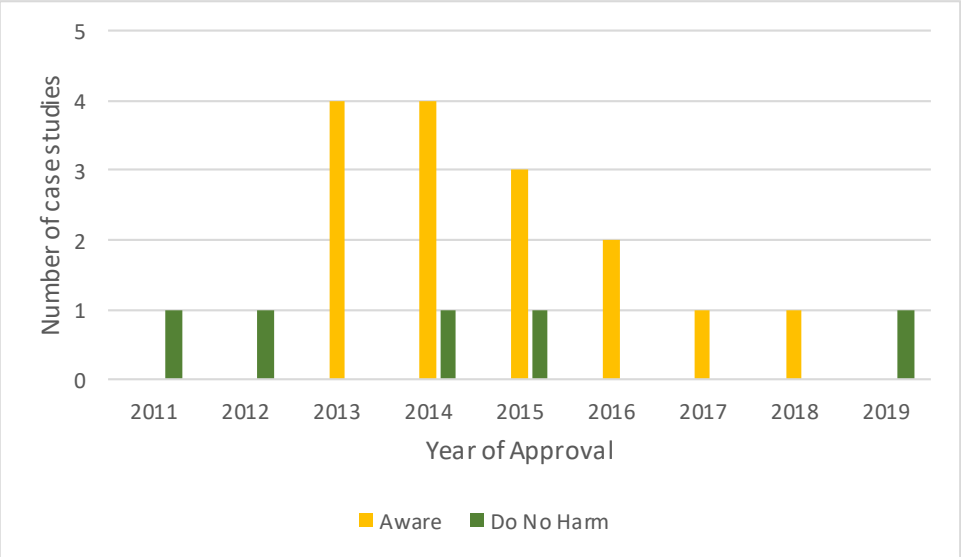
identify sustainable solutions and to endeavour to persuade the government, if necessary, on the need to include such climate response.

218. IFAD guidance on climate and environment provided by the 2015 SECAP and its updated version in 2017 called for looking beyond "do no harm" towards "doing good" to the environment (natural system). As such, the guidance requires that environmental conditions should be no worse from IFAD interventions and should seek to leave the environment better off by providing restorative contributions as feasible.

219. Assessment of interactions among human and natural systems involve ambiguity and uncertainty. This complexity is amplified given the likelihood that during implementation projects may deviate from the design. For completed projects, nexus analysis could be evidence-based subject to availability of relevant data. However, assessment of ongoing projects, particularly those recently implemented, will have to assume that project will be implemented as designed. The Kyrgyzstan case study discussed below illustrates how changes to the design during implementation reduced the assessment from likely 'do no harm' to being assessed as 'Aware'. In all other case studies, changes during implementation did not alter the nexus ratings based on design. **It is also important to recognise that projects dated prior to the SECAP guidance should not be held accountable to the SECAP guidance. However there is no systematic shift towards do no harm subsequent to SECAP, indeed most of the 'do no harm' projects predated SECAP in 2015** (see Figure 13 below).

Figure 13

Stance towards Environment 2011-2019



Source: IOE Elaboration

220. *Do No Harm* refers to the likelihood of not causing harm. Conversely, when *do no harm* measure fails, it does not always mean that harm has actually occurred - it has increased the likelihood of a harmful outcome. In a given context, activity is assessed to see if its likely to harm the environment in the longer term. For instance, if the climate response involves increased use of fossil fuels or chemical pesticides or drawing down water from a closed aquifer without any offsets[136] planned, the harm may not be immediate but very

[136] Activities that could compensate partially or fully the damage done to the natural systems, for instance, replacing the water drawn from the aquifer.

likely. Annex V Table 4 provides the type of net harm to natural systems that could result from a climate activity.

221. The nexus learning study applied a typology[137] to indicate the stance of interventions with respect to the natural system. Four stances represent the evolution of how interventions regard the natural system. The first where the natural system was *ignored* was described in evaluations by UNDP.[138] The second level in the typology is where interventions are *aware* of the connections to the natural system and their importance but prioritise development gains over environmental effects. IFAD SECAP guidance seeks interventions that achieve development gains without impairing the natural system – a *'do no harm'* stance and is the third level in the typology. The 2015 SECAP also recognises that restorative actions are required for environmental sustainability and to reach 2030 and 2050 goals which moves toward the fourth level in the typology – *restoration*. The case studies developed for this evaluation were reviewed by the nexus study author and case study authors to categorise the stance of projects with respect to the typology. Interventions taking the now-dated stances of ignoring or being aware of the nexus of human and natural systems cause harm to the environment. Table 10 illustrates the ratings and their rationale.

222. Agriculture is frequently harmful to the environment despite many important improvements over the past several decades. Offsetting efforts will often be necessary to counter the harmful environmental effects of agriculture, for example planting and maintaining buffers to limit nutrient migration into waterways or efforts to improve capture and retention of rainfall to offset draws and replenish aquifers even when drip irrigation is used. Recent developments emphasise the importance of scale differences between the farm and the local ecosystem on which it rests, and the mutually influencing connections and contingencies with landscapes and ecosystems. The importance of integrated approaches are also emphasised, for example agro-forestry and integrated pest and watershed management.[139] The assessments of the stance of the climate responses in case studies is a judgment made by the nexus study and case study authors, based on the detailed reviews of each case. The assessments are net, that is, overall what difference has the project(s) made to the environment? They were undertaken systematically using the professional expertise of the study team and applying all of the sources involved in the case studies to the question. Assessing the effects of human system interventions on the environment is relatively rare in evaluation.[140] The assessments were conducted without benefit of information about environmental effects of IFAD projects since these were not conducted for any of the projects in the 20 case studies. As well, some projects were relatively recent while others were well advanced or completed. Finally the case studies were not selected to provide an estimate of the overall stance of the IFAD projects relative to the environment. These are important considerations in reading the assessment but do not diminish the strength of the observations provided.

[137] See Rowe (forthcoming) *Evaluation at the Endgame: Evaluating sustainability and the SDGs by moving past dominion and institutional Capture* in J. Uitto (forthcoming) Transformational Change for People and the Planet: Evaluating Environment and Development, Springer.
[138] UNDP, 2010 GEF IEO, 2006
[139] Refer to the *Rapid Evidence Assessment Report* (REA).
[140] Refer to UNEG assessment.

Table 10
Illustration of Nexus Typology Assessment

Nexus typology	*Country*	*Project(s)*	*Description*
Aware (Project acted to reduce the negative impact on Natural systems, but ended up doing net harm)	Chad	Project to Improve the Resilience of Agricultural Systems in Chad (PARSAT)	The Project design was to improve access to and sustainable management of water resources and access to input and produce markets in value chains where rural poor people have a comparative advantage. Water capture and agricultural water management improved, for example by building relevant structures on the level of rainfed cropping areas (e.g. stone bunds, zai, herbal ridges), vegetable gardens (wells or boreholes), and periodically flooded areas used for recession crops ("seuils d'épandage"). Some actions were classed as "respecting ecosystem integrity and restoration", "respecting integrity" or "enhanced NRM". However, actual ecosystem actions such as water capture and intensified cropping were not restorative. Some implementation challenges do not favour the natural system. For instance, opening remote production areas is potentially harmful; project was operating on globally valued hotspots of biodiversity such as the Ramsar site of Lake Fitri and the National Park of Zakouma (Lake Fitri starting to be addressed in 2019). Improved agricultural management, tree planting (especially planting five community forests) and environmental education will be beneficial. Overall the project seems to move, albeit slowly, in the right direction on environmental concerns.
Do no harm	Kenya	(UTaNRMP) 2012-2020, Cereal Enhancement Program – Climate Resilient Agricultural Livelihoods Program	Project address the nexus between rural poverty and ecosystem health in a densely populated and environmentally fragile water catchment area of critical national and global significance. It emphasizes biodiversity conservation and ecosystem services and building absorptive, adaptive, and transformative capacities. It used participatory natural resource management and biodiversity conservation strategies by mainstreaming ecosystem services in farming and land management practices, in particular water security and nature conservation. Project employed integrated participatory natural resources management to enhance smallholder farmers' CCA while proactively contributing to nature conservation objectives. To mainstream ecosystem services, the project design included mobilizing a wide range of technologies and land management practices to ensure that farming and land management practices contribute to ecosystems resilience. The aim is to address local communities' water needs through water harvesting and storage ("blue" water), crop production requirements ("green" water) through soil and water conservation activities and agroforestry, and to recharge the aquifers. UTaNRMP was effective in enhancing the capacity of CBOs to integrate CCA options and ecosystem services in human dominated areas and conservation landscapes of the River Tana Basin.

Source: IOE Elaboration.

223. **This review shows an important subset of IFAD CCA responses in the case studies were not likely to do net harm to the environment and do good for smallholders and ecosystems at landscape scales.** The six projects (30 per cent) reaching or exceeding 'do not harm' stances provide solid evidence that development goals can be achieved without harming the environment, and since most are pursuing long term sustainability through restorative actions they also show that sustainable development can contribute to achieving of the 2030 and 2050 goals. An additional five projects approach but are unlikely to quite achieve 'do no harm' levels. It is also interesting to note that of the five case study countries with climate

responsesthat 'did no harm', four were designed before the introduction of SECAP in 2015.[141] That an important portion of the case studies part of this evaluation are reaching or exceeding 'do no harm' levels and others are close to doing so is an impressive level of achievement given the social, cultural, economic and technical challenges of changing production processes and practices in a sector so directly connected to livelihoods, especially of poor smallholders. The definitions and nexus typology are provided and discussed in Annex V Tables 3 and 4.

224. Nine projects were assessed as taking an 'aware' stance, short of do not harm, but judged as being reasonably close to 'do no harm'. Kyrgyzstan is one which if it had been implemented with greater fidelity to design would have been assessed as taking a 'do no harm' stance. The focus was on pasture infrastructure improvement – IFAD's pasture infrastructure rehabilitation activities definitely improved the accessibility of remote mountain pastures, which in some cases had not been used since the Soviet era. As a result, more livestock is being sent to high pasture areas, which is supposed to reduce the grazing pressure on pastures closer to the villages. However, what has been observed instead is that livestock owners are not actually reducing their herd size – but rather enlarging it and sending additional livestock to the high pastures. This appears to be a risk management effort to reduce the impact of losing even a small number of animals in a small herd. It is also said to be prone to incursions from urban investors with roots in the remote mountain areas investing in the livestock sector and hiring local herders to take their livestock to these remote areas. Ground water pumping is also occurring without controls to ensure the sustainability of draws especially as climatic effects reduce replenishment from glacier-fed mountain rivers and shifting seasons of glacial runoff.

225. The six projects achieving or exceeding do no harm levels together with the additional six projects judged as "closer" but falling short represent over half of the interventions in the country case studies. This cannot have been easy to achieve given the many barriers and limited institutional incentives and capacity issues. While climate responses in 9 of the 20 (almost half of the) case studies were judged as not even coming close to the SECAP requirement of doing no harm, it is important that half are achieving or close to achieving this goal. This clearly demonstrates that the guidance can be achieved even to the more ambitious "do good" level or what the evaluation refers to a restorative stance[142]. At the same time, nearly halfof the IFAD projects reviewed as part of this evaluation were falling short on the "do no harm" standard and posed net harm to the environment. Thus while achieving the ambition of the SECAP guidance is clearly attainable, too many IFAD projects reviewed fall short of the SECAP standard..

[141] The six case study countries with climate responses that did no harm or better were Burundi, Kenya, Mali, Nicaragua, Niger, Sudan. Only Burundi case study had all projects designed during or after 2015.
[142] The nexus study describes a recently approved project in North East Brazil that is thoroughly restorative in design and in early stages of implementation.

226. **The projects reaching or exceeding SECAP direction generally involved significant engagement of key stakeholders in design and focused on landscape scale integrated interventions targeting natural solutions to the underlying climate threats such as drought**. Case studies in Burundi, Kenya, Mali, Nicaragua, Niger, and Sudan provide examples of projects meeting or going beyond 'do-no-harm' to natural systems and towards restoring them. Box IV-3 provides details on the UTaNRMP project (2012-2020) in Kenya. Project employed integrated participatory natural resources management to enhance smallholder farmers' CCA and income while proactively contributing to nature conservation objectives. All these projects achieved significant development goals without impairing the natural system.

Box 3

Going beyond Do No Harm – Restoring Degraded Ecosystems

The Upper Tana Catchment Natural Resource Management Project (UTaNRMP) in Kenya is a good example of an IFAD project that exceeds the *Do No Harm* standard for environment, improving CCA and achieving significant development gains for poor rural households.

The project began in 2012 and completed 2020 with a total investment of 87.37 million USD. An IFAD loan of 46.6 million USD was the largest contribution with additional contributions of 17 million USD from the Spanish Fund, 11.34 from the Government of Kenya and 2.56 from beneficiaries. Earlier IFAD investments focused on agricultural production, business development and rural financial innovations. By contrast the Upper Tana Catchment NRM project used integrated participatory natural resources management to enhance smallholder farmers' CCA while proactively contributing to nature conservation objectives and environmental governance.

The goal of UTaNRMP was reduction of rural poverty in the Upper Tana Catchment with development objectives to increased sustainable food production and incomes for poor rural households living in the project area and achieve sustainable management of natural resources for the provision of environmental services. The distinguishing characteristic of the UTaNRMP project was a strong emphasis on biodiversity conservation and ecosystem services and building absorptive, adaptive, and transformative capacities. It addressed the nexus between rural poverty and ecosystem health in a densely populated and environmentally fragile water catchment area of critical national and global significance. It employed participatory natural resource management and biodiversity conservation strategies based on environmental governance that facilitated dialogue and agreement among stakeholders. Thus, it was effective in achieving environmental outcomes and producing ecosystem services in addition to smallholder farmers' CCA outcomes.

By mainstreaming ecosystem services into agricultural production UTaNRMP enhanced smallholder farmers CCA, and addressed conflict between agricultural production and nature conservation, in particular water security and nature conservation, farming and land management practices contribute to ecosystems resilience. The project targeted around 205,000 poor rural households whose livelihoods revolve around the use of the natural resources. Integrated participatory natural resources management actions with smallholders and CBOs enhance CCA while proactively contributing to nature conservation objectives and environmental governance, water harvesting and storage, soil and water conservation activities and agroforestry address local water needs and recharge aquifers.

To mainstream ecosystem services, the project design mobilized a wide range of technologies and land management practices to ensure that farming and land management practices contribute to ecosystems resilience. The aim was to address local communities' water needs through water harvesting and storage ("blue" water), crop production requirements ("green" water) through soil and water conservation activities and agroforestry, and to recharge the aquifers.

Source: Elaboration by IOE based on Kenya case study and Learning thematic study on Human-Ecosystem Nexus conducted as part of this evaluation.

227. ***Another important distinguishing characteristic of these successful projects is that they address the adaptive needs of smallholder farmers via natural system interventions using nature-based solutions.*** For example, providing community water needs while also restoring aquifers. Sustainable natural resource management is a critical element in all five projects and in each a participatory approach was employed. These projects reflect important elements of good practice using holistic approaches treating agriculture as an integrated system alongside natural resource management and climate, operating at ecosystem and landscape scales and using social networks and collective actions to address smallholder and environmental outcomes.

Impact at farm and national scale Climate Responses

228. **As already discussed, impact at subnational and national scales are likely when CCA approaches are scaled up.** As discussed earlier, nine of the 20 cases showed strong likelihood of climate responses being scaled up – (Examples of Bangladesh, Bolivia, Ethiopia, Kyrgyzstan, Mali, Nepal, Nicaragua, Niger, Rwanda and Sudan offer wide range of contexts and approaches to scaling up and summarized in Annex V Table 2) and some of the key factors contributed to these successes were also presented (see Box 3).

229. Other pathways to achieving impact of significance were considered. Contributing to paradigm shift is present at different levels since CCA paradigms exist at the farm, community and sub-national/national levels. IFAD's general objective to shift smallholders from subsistence-based livelihood to market-oriented one constitute paradigm shift at the farm level and plausibly contribute to their climate resilience. An example of this is NICADAPTA in Nicaragua. This brought together institutions in key sectors to work towards the common goal of combining CCA considerations with promoting production for markets as well as access to markets Similarly, transitioning from relying solely on rain-fed agriculture to adding access to irrigated water could be considered as paradigm shift at the community level (Niger, PASIDP II and LLRP in Ethiopia, AD2M in Madagascar). Shifting to no-till (Conservation) agriculture from regular agriculture was a paradigm shift at subnational or national level (Moldova, Ethiopia, and Madagascar).

230. At the national level, IFAD supported the introduction of Conservation Agriculture (CA) in Moldova (IRECR (2013-2020) and RRP (2016-2024)). As discussed under Effectiveness (paragraph 18), the approach addressed the specific threats faced by the dry regions, namely, frequent droughts and soil degradation due to wind erosion. As noted under effectiveness discussion, FFS demonstrations showed that CA offered much higher (130 per cent) income per hectare compared to regular agriculture when faced with acute climate stresses such as missed rain fall and rising temperature. The evaluation noted that this required precise administration of prescribed steps and also the mechanized CA pursued in Moldova did not address the needs of smallholders or women.

231. Another example of IFAD support to paradigm shift was in Kyrgyzstan (see earlier discussion, paragraph 20). The government decided in 2009 to decentralize the governance of pasturelands from the central government to local authorities and communities. IFAD provided effective support to this paradigm-shift by strengthening the capacities of local authorities and communities and implement the new regulations. In doing so, it promoted community-based ecosystem restoration of pastureland. The evaluation also noted that the project did not take into consideration the long term sustainability of pastureland but was focused on increasing the herd size that could be supported by the restored pasturelands.

232. Contributing to system-wide changes is another pathway towards significant impact. No examples of system wide changes were noted in case studies. Though, integrated approaches to manage land, water and environment at landscape level offer the best opportunities to arrive multi-sectoral system wide effects when scaled.

233. These were pilot exercises and there is no evidence to show that these are likely to be scaled or pursued by other partners. As such, the impact of these cannot be regarded as sustained or system-wide. This lack, among other things, is a testament to the important role of government ownership in achieving impact.

Key Points

- Ensuring environmental sustainability of IFAD interventions do not harm ecosystems was recognized as an important priority in IFAD's CCA mainstreaming guidance (SECAP 2015, 2017 and 2020).
- Extent to which IFAD interventions address this concern in their design and implementation varies. Six of the 20 country case studies of this evaluation found successful CCA responses that are likely to do no net harm to the ecosystems or go some distance towards restoring degraded environment; five additional country case studies were close to achieving this goal but not quite there, and nine were a distance from achieving this goal.
- The subset of successful IFAD climate projects were landscape-scale, integrated interventions targeting nature-based solutions to the underlying climate threats and involved strong engagement with beneficiaries and stakeholders during design and implementation.
- Five of these six successful CCA case studies were designed prior to the introduction of the SECAP guidance for mainstreaming in 2015. This study also shows that IFAD already has the capacities and vision needed to design and implement interventions that achieved economic and environmental prirorities together, and concerted action is still needed to achieve these outcomes in all IFAD's interventions.
- Environmental sustainability (effects on ecosystem) are better addressed at the landscape level. Interventions focused at the farm level without addressing the inter-connected effects at the landscape level are unlikely to address the adverse effects.
- Considering that the land areas covered by vast majority of IFAD projects are at sub-ecosystem level, it would be essential to consider their linkages to ecosystems and scale up CCA responses to achieve environmental sustainability.

D. Effectiveness of Targeting the Climate Vulnerable

234. In general, several earlier evaluations and ARRI have adequately covered the effectiveness of IFAD interventions, including many in the climate portfolio. These assessments covered the effectiveness of direct, geographic and community targeting approaches. Therefore this study focuses on the effectiveness of IFAD climate interventions reaching the most climate vulnerable.

235. In most cases, projects pursued geographic targeting based on poverty or deprivation maps issued by the programme country. Within these areas, marginalized communities were effectively targeted in a number of case studies. In Ethiopia, PCDP III's design focused on pastoral and agro-pastoral systems in arid and semi-arid areas. The design effectively targeted the underserved and deprived pastoral and agro-pastoral communities to provide social and economic services. LLRP in Ethiopia pursued a landscape orientation and effectively targeted agro-pastoralist communities. Projects in South and South East Asia and Latin America targeted indigenous peoples (for example, Bolivia and Honduras)

236. As discussed in Chapter 3, **earlier designs did not target based on climate vulnerability but more recent ones were addressing this issue**. In the Be-Resilient project in Belize, design used climate vulnerability maps to target. These maps are planned to be updated periodically during implementation. In in many cases, climate-vulnerability assessments were not

conducted to inform the project/program design process, which limits the climate benefits that could be achieved by the intervention.

237. **In some of the recent projects, targeting effectively incorporated multiple concurrent considerations**. In Kenya, the overall development goal of KCEP-CRAL was to reduce rural poverty and food insecurity of smallholders in the Arid and Semi-Arid Lands (ASALs). The project sought to achieve this in an increasingly fragile ecosystem by developing their economic potential, improving their natural resources management capacity, and resilience to climate change. Context specific targeting criteria included poverty incidence, gender responsiveness, and climate vulnerability. However, the effectiveness of targeting agro-pastoralist and pastoralist communities in CCA response was limited.

Summary of Chapter IV:

- Overall, IFAD interventions were on track to achieve targeted results, which are mostly defined at the output level.
- Climate response targeted geographic areas where the poor and the marginalized were concentrated. Data were not available to assess if interventions reached the most climate vulnerable within these areas or the socio-economic status of beneficiaries. Women and youth were targeted well in some projects. However, a systematic strategy and capacity to implement these strategies were lacking at the project level.
- IFAD guidance, monitoring systems, results frameworks were not geared to assess the extent to which the Fund's interventions strengthened climate resilience of smallholders.
- Non-lending activities, critical to ensure impact beyond project boundaries and lead to transformative changes, were found to bear weak results. Yet, systematic prioritization of these and providing necessary guidance and resources continues to remain weak. Mechanisms for addressing this challenge are evolving at the project level. Due to lack of resources, these remain elusive at the organizational level despite management efforts.
- Majority of IFAD climate projects were not likely to have significant longer term impact on climate resilience of smallholders. Yet, a strong subset of interventions clearly demonstrate results in improving economic, climate and environmental resilience in the long term. This shows that IFAD has the capacities and vision at its disposal, should it wish to institutionalize its successes.

V. Assessment of IFAD's Readiness to Deliver on Climate Change Adaptation Commitments

238. This chapter assesses IFAD's readiness (fit-for-purpose) to deliver on its commitments to support smallholder farmers to adapt to climate change. The institutional readiness analysis assessed the adequacy of proposed corporate strategies, current mainstreaming approaches as well as programming arrangements and guidance to meet the CCA demand and related targets of the 2030 Agenda. In particular, it reviewed the underlying reasons behind the gaps identified in the earlier chapters between the Fund's aspirations and achievements between 2010-2019 and assesses if the proposed changes were sufficient to close those gaps.

239. Evidence shows that whilst many corporate aspirations were achieved significant gaps persisted between IFADs aspirations and the performance of its CCA interventions. For instance, all new interventions did address CCA and SECAP provided a framework for integrating CCA responses in IFAD interventions. At the same time, nearly half of the interventions in the country case studies fell well short of adhering to the SECAP principles of 'do no harm'. Similarly, the ASAP concept note (2011) expressed the need for restoring degraded natural systems. However, the case study analyses confirmed that none of the ASAP projects that were part of these case studies actually promoted restoration.[143]

240. Therefore, it is necessary to identify the underlying causes for such gaps to ensure that ongoing and future IFAD supported interventions address these issues. The Theory of Change (Chapter 1 and Annex II) identified bottlenecks to performance that needed attention based on the lessons and evidence emerging from IFAD's CCA responses over the last decade and provides the necessary framework for this chapter.

241. The analysis for this Chapter was based on evidence drawn from the 20 country case studies, four learning theme studies, online surveys of IFAD staff and project staff, document review, analysis of IFAD's business model, and interviews with key informants in IFAD headquarters. As noted in Chapter 2, nearly 76 per cent of the projects in the 20 case studies were ongoing and nearly half (44 per cent) were approved during IFAD10 or IFAD11. The four studies covered the following thematic areas: scaling up, knowledge management (KM), nexus of human-natural ecosystems, and the Rapid Evidence Assessment (REA) of existing scientific and grey literature.[144]

A. Assessment of IFAD Climate Priorities and Resources

242. **Priorities of IFAD12 (2022-2024) recognizes the importance of contributing to the 2030 Agenda** for Sustainable Development as well as drawing on synergies among the three treaties emerging from the Rio Convention. Namely, the UN Framework Convention on Climate Change

[143] As noted in Chapter 1, case studies covered 35 projects or 14 per cent of the portfolio. Half of the case study projects were ASAP-funded.

[144] The analysis of business model includes covered the following: Fund's emerging climate priority under IFAD12; resources mobilization strategies and partnerships; revisions to strategies, action plans, guidance, and related policies; analysis of necessary human and financial resources. . Related documents were: IFAD12 replenishment documents submitted to the Executive Board, updates to the SECAP in 2020, submissions to EB related to 2RP, revised IFAD's regular grant policy (to become effective in 2022 January), Revised operational guidance to targeting (2019), Knowledge management strategy (2019), the three phases of McKinsey Analytical HR study on IFAD's current and future workforce composition, People, Products and Technology paper(2020), Decentralization 2.0 (2021-2023), Procedures and Guidance to Country Strategies – President's Bulletin (April 2019), and climate related "How-to-do-notes" (HDTN) published by technical units.

(UNFCCC, 1992)[145], the Convention on Biological Diversity (CBD)[146] and the Convention to Combat Desertification (CDD). The UNFCCC seeks to stabilize greenhouse gas concentrations in the atmosphere to a safe level that would allow ecosystems to recover and adapt naturally to a changing climate, to ensure that food production and natural systems are not threatened. Members agreed to voluntarily establish nationally determined contributions (NDCs), which constituted an important implementation measure of the UNFCCC Treaty agreed at the Conference of Parties (COP) 21 held in Paris in 2015. These involved plans to mitigate and adapt to climate change and reporting progress annually. The Convention on Biological Diversity (CBD) signed in 1992 is a multilateral treaty "that seeks to conserve the diversity of life on Earth at all levels - genetic, population, species, habitat, and ecosystem. It recognizes that setting social and economic goals for the use of biological resources and the benefits derived from genetic resources is central to the process of sustainable development, and that this in turn will support conservation."[147] The Convention to Combat Desertification came into force in 1996 as a product of Rio conference with the aim to mitigate the effects of drought through national action programs that incorporated long-term strategies supported by international cooperation and partnership arrangements.

243. **IFAD priorities towards national climate adaptation agenda continue to expand.** IFAD12 (2022-2024) recognizes the urgent need to step up its action to achieve the 2030 targets by increasing the PoLG climate finances to 40 per cent from the 25 per cent under IFAD 11 (2019-2021) as well as committing to strive for transformative country programmes. Equally importantly, it recognizes the short time frame available to act to prevent natural systems being degraded beyond critical thresholds. One of the three pillars of IFAD12, operational results, prioritizes transformational country programmes[148] and one of the Fund's new programming arrangements for providing climate response, the Rural Resilience Programme (2RP) states that the "focus of the programme will be on shifting from unsustainable extractive livelihoods to regenerative ones".[149]

244. **The Fund continues to expand its partnerships and aspires to mobilize over US$500 million during 2019-2025**. It should be noted that it took IFAD over ten years to mobilise this amount in the past (2010-2019). In addition to existing partnerships with GEF and the Adaptation Fund (AF), expanded partnerships with GCF and the private sector are all planned. To achieve this, IFAD is also proposing significant shifts to existing practices, including adopting a programming approach and focusing more on restoring degraded environments (discussed further in para 262). In addition, ASAP+ was set up in 2020 with the goal of mobilizing further US$500 million, considerably higher than the US$360 million pledged for ASAP1 and US$17 million for ASAP2.

245. Chapter 4 highlighted two key factors that facilitated CCA responses with significant impact. Firstly, improved design quality which depends on a

[145] The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty addressing climate change, with 197 signatories. It originated at the United Nations Conference on Environment and Development (UNCED) [Rio de Janeiro, June 1992] The UNFCCC seeks to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous human-induced interference with the earth's climate system.

[146] The objectives of the Convention on Biological Diversity (CBD) are the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources (Article 1).

[147] https://www.cbd.int/gbo1/chap-02.shtml

[148] Report of the Consultation on the Twelfth Replenishment of IFAD's Resources, IFAD12/4//R.2/Rev1, 10 -11 December 2020.

[149] Rural Resilience Programme, EB 2020/131(R)/INF.4, Executive Board -131st Session, Rome 7-9 December 2020

number of factors including responsiveness to the local and national context, cognizance of the climate vulnerabilities of target groups and local agricultural systems and identifying and analysing critical pathways to strengthen smallholder resilience in the country. Similarly, Chapter 4 highlighted the importance of non-lending activities to facilitate the impact of CCA responses and noted weak prioritization and investments in operational non-lending activities. Despite recurring evaluation recommendations, and management recognition of this issue, systematic improvements to non-lending activities prove to be elusive. Financial resources are key to improving designs and non-lending activities. However, climate resources mobilized by IFAD may restrict the use of resources for such purposes hindering necessary improvements to both.

B. Assessment of IFAD CCA Strategy and Action Plan 2019-2025 to achieve priorities

246. **IFAD Strategy and Action Plan on Environment and Climate Adaptation (2019-2025) was a step in the right direction to update the climate strategy of 2010** to reflect the priorities of Strategic Framework (2016-2025) and IFAD11 (2019-2021). The Strategy correctly identified the need to enhance learning among IFAD staff, and to improve KM. More importantly, it also recognized the need for IFAD operations to better reflect national contexts and go beyond mitigating risks and generate adaptation and environment related benefits to smallholders.

247. **Yet, the Strategy missed an opportunity to identify and address bottlenecks to performance from CCA response experiences, including resource constraints and to identify pathways to address them**. For instance, while it presented the need to promote learning and knowledge management, it did not provide strategies or mechanisms to promote learning and ensuring necessary capacities and resources were available. It provided no mechanisms or incentives that translated into identifying and learning systematically from successful CCA responses to replicate their success across the Fund (for example, those that were able to scale up CCA results). It identified the need for SECAP to go beyond mitigating risks and identifying CCA solutions to generate related benefits but did not analyse the bottlenecks to implementing the SECAP. Particularly, in light of the fact that 75 per cent of case study operations reviewed in this evaluation were not consistent with the SECAP principles of 'do no harm'. Without adequate, evidence-based understanding of the underlying causes of the strengths and weaknesses of CCA responses, the new Climate Adaptation Strategy remained aspirational rather than action-oriented to improve IFAD's climate adaptation effectiveness.

248. ***Partnerships* of IFAD helped successfully mobilize significant resources (US$518 million between 2010-2020) to address climate priorities** due to key partnerships with ASAP donors, GEF, GCF and AF, supplemented by its own resources in the form of Debt Sustainability Loans. Going forward, it is expanding its partnerships with GCF and others and envisages partnerships with the private sector. However, given the downturn in many donor countries due to the Covid pandemic, IFAD is likely to face challenging circumstances in meeting its resource mobilization targets by 2025.

249. At the country level, the case studies noted instances where partnerships with farmer organizations (Bolivia, ACCESOS), UN agencies (FAO, Moldova, IRECR & RRP), multilateral development banks (World Bank (Ethiopia, LLRP), bilateral agencies (KFW in Bangladesh, CCRIP) as well as research or academic institutions (Kyrgyzstan, LMDP; Nepal, ASHA) allowed IFAD to

acquire technical capacities, achieve better results or leverage its results to scale up. Partnerships with major actors in country gave IFAD greater visibility and opportunities to scale up (for example, Bangladesh). However, as noted in Chapter 4, partnerships for results were not systematically forged but were established as one-off activities for implementation, consultation or coordination roles.

C. Assessment of IFAD Guidance for Country Strategies and Operations

250. **IFAD was successful in integrating CCA responses in country strategies and operations**. IFAD took the first and important step of creating an enabling environment to address climate threats in all its interventions (country strategies and operations). It was able to deliver on its commitment to mainstream CCA in all its new COSOPs and operations. Most recent COSOPs analyse NDCs to determine IFAD strategy, as per IFAD11 commitments. Moreover, IFAD surpassed the goal of focusing 25 per cent of the PoLG on climate responses.

251. SECAP is the primary instrument to mainstream CCA in IFAD's country strategies (COSOPs/CSNs) and operations, and it primarily serves two functions: First, it required climate risks to be assessed, and thereby, enabling country strategies and operations to identify appropriate responses; second, it provided safeguards to limit the social, environmental and CCA risks posed by IFAD operations. To this end, it required projects facing higher risks to conduct (social, environmental, climate) impact assessments and to identify the risk mitigation strategies to prevent damage posed by IFAD interventions.

252. Interviews with headquarter key informants identified three concerns. Firstly, SECAP 2015 and 2017 had minimal ownership by technical and project management units outside ECG. Secondly, project management units in countries expressed the need for the right kind of capacities to support, interpret and use SECAP during implementation. Often, general environmental experts without SECAP experience or relevant climate and conservation smallholder agriculture were involved, which added little value. Thirdly, SECAP served as a risk identification and mitigation tool, rather than a tool to identify pathways to achieve and strengthen smallholder climate resilience. These constraints further reinforced the perception among many users that SECAP was an instrument for compliance rather than one that advanced sustainable development. Indeed, an e-survey of IFAD staff showed that only half its staff considered that they had received adequate guidance from IFAD in integrating CCA into their work. Moreover, case study analysis showed that only 25 per cent of the projects analysed were consistent with the SECAP principles of 'do no harm.' **While SECAP served the important function of providing an enabling environment for operations to pursue integrating climate considerations, it faced limited ownership and capacities to operationalize and to point to pathways to strengthen climate resilience of smallholders**.

253. SECAP2020 tried to address these limitations. It endeavored to go beyond risk management standards to optimize positive (social, environmental and climate adaptation) benefits. It was accompanied by new tools such as Adaptation Framework (see Chapter 2 for details) to assist new designs by providing a database of successful adaptation options and a framework to prioritize among available, appropriate adaptation options. In addition, it was developed with involvement from units such as PMI and PMD (through the interdivisional SECAP review group) that is likely to facilitate broader ownership and uptake.

254. Nevertheless, some key challenges remain. Although it envisaged going beyond 'do no harm', as with its predecessors, the primary focus of technical guidance remains focused on ensuring no harm was done to the social and natural systems. It does not offer substantive guidance in shaping CCA responses that restore degraded natural systems. No evidence to show that other forms of guidance, such as 'How To Do Notes (HDTN)' were available to identify and design 'win-win' solutions and to develop more integrated approaches. **SECAP and other IFAD guidance are yet to learn from 'win-win' successes[150] and have not provided effective guidance to interventions. Such guidance is essential to fully understand the multidimensional environmental consequences (such as on biodiversity, land and water quality) of climate responses and identify pathways that promote climate, environment and economic resilience**.

255. This integration also needs to be linked to results in the form of anticipated improvements in climate resilience for target communities. Corporate guidance to conceptualize and measure climate resilience, monitoring systems to track resilience results, and functioning adaptive management practices that use the monitored evidence to make course corrections are all key steps needed to ensure effective climate responses.

256. **IFAD and SECAP are yet to provide guidance to conceptualize and track climate resilience to manage for climate effectiveness.** As noted earlier, some regions are addressing this issue by developing their own framework to monitor improvements in climate resilience. Drawing from the How-to-do-Note of September 2015 on *Measuring Climate Resilience* produced by the Environment and Climate Division (ECD), the Latin America and the Caribbean (LAC) Region has piloted a method to monitor and track climate resilience. This was also piloted in the Asia Pacific Division (APR) with support from ECG. Recent projects in Ethiopia such as the LLRP were following the resilience framework adopted by the World Bank and other IFIs. This framework is similar to that adopted by IFAD in its joint projects with Rome Based Agencies in 2014 (see Chapter 1 for details). However, these diverging approaches would render aggregation or comparison of performance of operations very difficult and are the direct result of an absence of IFAD-wide guidance to assess resilience.

257. IFAD 12 commits to working towards 'Transformative country programmes'. Transformative changes stand on the following four inter-dependent pre-requisites. The first is the 'Construct' of the intervention logic and the quality of project design. Its ability to address root causes and critical pathways to climate resilience in an innovative manner provides the platform for its uptake; IFAD plays the lead role along with the nationally assigned counterparts and has substantial control of the desired quality. The second pre-requisite is the responsiveness and constraints faced by groups that are to benefit from the project such as smallholder farmers, community groups, and vulnerable target groups (such as women, youth, indigenous peoples and the most marginalized), and the local government functionaries; Building and sustaining capacity, developing processes to coordinate response and resolve differences among communities, as well as resourcing and supporting these groups are also necessary to facilitate transformative behavior. The third pre-requisite is the capacities and shared commitment of service delivery institutions, technical agencies, and policy makers at national and sub-national levels. Their commitment to support transformative dimensions with policies, resources and services play a crucial role in scaling and sustaining

[150] Some examples of IFAD projects contributing to climate adaptation for smallholders and to restoration of the environment are presented in Annex V, Box 1 and Table 3. There is also a growing literature in this area, for example Heather M Tallis et al (2018).

transformation. Finally, all transformative changes ultimately require autonomous behavioral change in supporting markets. Hence the role of the private sector in powering transformation is key. Their engagement and partnership from the outset has to be planned and supported by the members of other three pillars.

258. IFAD shapes the design of the intervention but not the other three pre-requisites. However, transformation synergy needs to permeate through all four groups. IFAD can play a resourcing and catalytic role in planning inclusivity, processes, capacity building, ensuring coherence and cross-synergy among the various components. But it needs to marshal evidence and partnerships to advocate scaling up and ensuing transformation. The following analysis recognizes the scope and limits of IFAD's role in effecting transformative changes.

259. **To date, IFAD has not yet articulated a definition or set of characteristics of transformative CCA responses** in the rural agricultural sector. This limits the evaluability of 'transformative country programmes' aspired in IFAD12. Providing a working definition of transformative climate response is neither the remit of this evaluation nor desirable. The evaluation agrees with the premise that to be a relevant concept, transformative solutions should be distinguished from a good or very good solution - every solution that is scaled up does not automatically become transformative. To identify key features that distinguish transformative solutions from effective solutions, the evaluation analyzed the treatment of transformational change related to CCA by other IFIs and Funding Mechanisms such as the Climate Investment Funds (CIF), Global Environmental Facility (GEF) and Green Climate Fund (GCF). The key characteristics of the transformative solutions were: lead to a paradigm shift (qualitative rather than quantitative improvements); systemic influence (influence multiple sectors / system-wide), and therefore, likely to involve scaling up (landscape, regional or national level); succeed in addressing climate, environmental and economic vulnerabilities together (win-win solutions); and offer enduring benefits even when there are social, climate, economical or political shifts). As discussed in Chapter 4, the longer-term effects of climate response along these areas will be explored to assess impact.

260. **It is not feasible for every intervention to change the CCA paradigm or be scaled up or have system-wide impact – in short, to be transformative**. Nor would it be feasible for such a change to be within the control of a single agency or actor. Other IFIs and Funding Mechanisms such as GCF have explored operationalizing this concept of transformative change with their available resources. IFAD is yet to undertake such a feasibility assessment.

D. Assessment of IFAD capacities

261. As discussed in Chapter 2, IFAD commissioned two studies to assess the adequacy of its human resources, their capabilities and the business processes to deliver on its mandate and maximize its contribution to the 2030 Agenda.[151] That study determined that IFAD had a combined capacity gap in programme management and technical specialists equivalent to 33 existing full-time equivalent (FTE) workers as of December 2019[152] – a gap that was estimated to increase by 2024. The study also identified a high capability (skills) gap amongst staff engaged in the cross-cutting theme of environment

[151] An analytical study to assess its current and future workforce composition was carried out by McKinsey & Company, (2019); Another study assessing IFAD's business processes was carried out by Alvarez & Marsal, (2019)
[152] McKinsey Phase II PPT Slide #23

and CCA (current average proficiency level was 2.51 while the required proficiency level was 3.65, on a scale of 1 to 5 where 1 represented the lowest level of capacity and 5 the highest). In summary, it could be inferred from that study that **there was a major deficit in staff capacity and necessary skill sets associated with climate mainstreaming interventions in IFAD.**

262. To address these gaps, the Fund put in place the Targeted Capacity Investment (TCI) Implementation Plan (December 2019). This sought to identify skills gaps in each division, to train staff for upskilling/reskilling, and to provide performance management training and support. It also developed the 'People, Processes and Technology Plan' (April 2020) to bridge the gaps in workforce and corporate processes. The results of these efforts are yet to be assessed. Moreover, the McKinsey (2019) study did not analyze the capacity gaps in the specific area of CCA response. This is particularly important because while the overall PoLG may not be increasing significantly, climate financing will increase by 15 per cent (model considered different increases to replenishment but these were well below 15 per cent). **A targeted study to determine capacity and capabilities (skills) gap estimates for CCA and other mainstreaming activities is therefore needed.**

263. In addition to having the right capacities, the case studies and interviews showed that innovative climate responses require integration of sustainable CCA considerations at the concept note stage and must then continue right through the design and implementation phases. In short, the right capacities are needed at the right time and in the right place. **Appropriate and adequate CCA technical capacities are not fully in place within IFAD and project management units to achieve this in the design and implementation.**

264. **Adequacy of capacities in a decentralizing IFAD**. The IFAD Strategic Framework 2016-2025 views decentralization and closer proximity to clients, beneficiaries and partners as being essential to maximize IFAD's operational impact. Under IFAD10, IFAD11 replenishments, the Fund will continue to deepen its corporate decentralization and moving staff closer to their programme countries. The proportion of staff based in IFAD Country Offices (ICO) has doubled from 18 per cent in 2016 to 33 per cent in 2020. The target is to have 45 per cent of staff in ICOs by 2024.[153] Under this process, ICOs are envisaged to manage about 70 per cent of the projects and 80 per cent of the total financing. The proximity is expected to improve the relevance of projects to the country context and target groups and thereby, the design quality. The proximity is also expected to strengthen the implementation oversight and support and consequently, is expected to lead to improvements in portfolio performance. Finally, the proximity is envisaged to strengthen non-lending activities through enhanced partnerships, client contact and policy engagement.

265. Decentralization 2.0 (2021-2023) aims to accelerate decentralization and introduces additional key measures. For instance, Regional Offices will be established during 2021-2023 and Regional Divisions at headquarters will be moved to these new offices, including the Directors and staff. Such extensive changes will require a considerable transition period. Uncertainties associated with transition poses a threat to providing timely CCA response. Moreover, challenges could be anticipated in recruiting and retaining the right capacities capable of designing and supporting the implementation of innovative CCA responses with transformative potential, pursuing partnerships for upscaling,

[153] IFAD Report of the Consultation on the Twelfth Replenishment of IFAD's Resources, 18 February 2021 (page 39).

advocacy and policy engagement and contributing to building a knowledge base of adaptive solutions that promote climate and natural systems resilience (win-win solutions). Given the short timeframe to 2030, the gains of regionalization are urgent and guarding against delays and under-fulfillment is critical. As such, all risks arising from decentralization 2.0 need to be identified, and risk mitigation plans prepared and implemented.

266. **Ongoing decentralization is perhaps a necessary step and offers potential longer-term benefits to all IFAD operations including climate response. However, in the short and intermediate term it is highly likely to involve risks that need to be identified and managed**.

E. Assessment of Programming Arrangements and Results Focus

267. Earlier discussions noted that design of COSOPs and operation needed more attention to identify critical pathways to strengthen smallholder climate resilience. IFAD and other actors' experience with projects facing similar situations as well as local/traditional knowledge along with scientific information have not always identified best practices and CCA options. A key issue to achieving this was found to be the lack of available financial resources.

268. Achieving enduring smallholder climate resilience requires leveraging project level results to benefit a broader spectrum of rural poor through scaling up results and pursuing Non-lending activities. The non-lending activities help strengthen the knowledge base of innovative experiences for advocacy and use, help build the institutional capacity of farmer organizations and state service delivery mechanisms and help develop policy engagement and the necessary partnerships while contributing to scaling up of CCA results and responses. Yet, IFAD was unable to use administrative budgets or supplementary funds (reserved for lending activities only) to pursue non-lending activities. Over the last decade, most supplementary funds did not allow sufficient resources to be devoted to analysing critical CCA resilience pathways and/or strengthening project designs.[154] Moreover, supplementary funds were restricted from investing in non-lending activities important for policy engagement, scaling up and knowledge management – critical elements for project successes to become transformative. But these were not covered under the administrative budget. IFAD regular grants could support non-lending activities. However, the available grant resources are only a small fraction of those that are actually needed.[155] Therefore, a lack of sufficient, predictable and sustained financial resources has severely limited IFAD's ability to pursue non-lending activities to achieve tangible impact.

269. **Addressing resource challenges and strengthening impact level results.** IFAD proposes to shift from a project-oriented approach to a programme approach, under IFAD12 (2022-2024). As described in Chapter 2, an illustration of this approach for climate responses is the new umbrella programme 2RP that aims to bring together the enhanced Adaptation of Smallholder Agriculture Programme (ASAP +), the Sustainability, Stability and Security (3S) initiative in Africa and the Green Climate Fund umbrella programme for the Great Green Wall for the Sahara and Sahel Initiative (GCF-GGWI). It has a dedicated trust fund and seeks supplementary funds from its partners.

[154] ASAP II did dedicate resources to improve tools for climate adaptation (total disbursed was US$14.47 million) and GCF did allow resources for improving the quality of design. However, at the time of writing the report these resources were not significant part of IFAD's climate funding.
[155] For the period 2015-21, only US$80.5 million was approved as grants for the country level. Of this amount, only US$17.6 million was approved for standalone grants that could have been used to strengthen non-lending activities. IFAD grants cannot be used for activities that are usually undertaken using administrative budget.

270. The 2RP Trust Fund envisages 5-10 per cent of the programme resources for technical assistance that among other things, will support improving the design and selection of appropriate non-lending activities. This arrangement would also provide the flexibility to seek non-sovereign implementing partners such as farmer organizations and NGOs and enhance the pool of qualified candidates to be included in the PMUs. This added flexibility does indeed address some of the critical challenges faced by the climate responses over the last decade in finding financial resources, capacities and partnerships to leverage the project results to impact on others beyond the project boundary.

271. Resources are a critically important consideration but not the only constraint. The IFAD portfolio of 256 climate projects analysed in this evaluation showed that only 50 per cent considered measures for scaling up. Discussion in Chapter 4 pointed out to the importance of **ensuring that project design reports explicitly set out the strategies, expected results, and monitoring system for non-lending activities critical to scale up innovative climate response**.

272. Recent designs have begun to address issues of resources and prioritization of non-lending activities by directly integrating Knowledge Management or scaling up as part of the project components. For instance, the Lowlands Livelihood Resilience Project (2019-2025) in Ethiopia and Planting Climate Resilience in Rural Communities (PCRP) of Northeast Brazil. This allowed these projects to recruit dedicated capacities, allocate resources for such activities, and provide systematic attention from the very early stages of project implementation.

273. **IFAD's ability to demonstrate improvements to climate resilience is constrained by the limitations of its indicator framework.** At the corporate level, IFAD11 provided core indicators to track capacities for CCA, such as the number of smallholder households adopting CCA technologies, or number of hectares brought under climate resilient practices. However, as discussed in Chapter 4, these measures are helpful in ensuring that necessary steps to strengthen climate resilience are in place, but do not convey the extent to which resilience has been changed. Indeed, corporate level resilience outcome indicators do not exist - such as, reduced variability in crop yield per hectare, or change in income per hectare. Achieving the targets of these core indicators does not necessarily confirm that smallholders have acquired the absorptive, adaptive or transformative capacities to deal with climate risks**.**

274. **Lack of effective monitoring of results is another major challenge**. All projects in the case studies had results frameworks, but the majority did not have indicators relating to resilience outcomes to monitor actual results or project progress. IFAD relies on surveys to collect outcome level data. An analysis of surveys in case study countries (eight of the 20 case study countries had such outcome surveys)[156] found them to be of weak to moderate level quality. Main issues were related to the quality of data, methods, analysis and interpretation of surveys. For instance, seven of the eight surveys analysed had small samples (n<1000) and did not use inferential statistics. Many involved a high margin of error (up to 31 per cent) due to weak cross-tabulations. In most cases, disaggregated data to identify progress achieved by different target groups (such as women and youth) were not available. As such, existing monitoring system is not adequately equipped to provide the inputs needed for results-based adapative management and decision-making. In 2020, IFAD launched a Core Outcome Indicator Measurement Guidelines (IFAD 2020f) to assist project staff to design robust

[157] Bolivia, Burundi, Ethiopia, Honduras, Nepal, Nicaragua and Sudan

questionaires to measure outcome indicators. However, while improving the questions to collect relevant data, these guidelines offer little to address the prevailing weaknesses in survey methodology outlined above.

275. **Technical advances, including the increasing availability of satellite imagery and geospatial information holds considerable potential for monitoring CCA responses manipulated through GIS and applied remote sensing**. IFAD recently invested in collecting and using GIS information in collaboration with partners such as WFP. The evaluation conducted an evaluability study of the monitored data using GIS. Of the 20 case study countries, GIS information was available in nine cases. Of these, four were assessed to be of moderately satisfactory or better quality, which were then used in this analysis. The data available was mainly limited to locations of beneficiaries and project sites. Consequently, the analysis used GIS data mainly to validate geographic targeting (Moldova) and ensuring that projects were not located within protected areas (Chad) (see figures in Annex VIII). Challenges to quality and the limited scope of GIS data stems from low technical capacities at the project level, low awareness of the potential of GIS, and weak understanding of the activities that need to be monitored (See Annex VI, Table 1).

276. **Coherence** for results. Successful climate responses require projects to align with country climate needs to facilitate their ownership by local and national authorities. In addition, success also depends on the different IFAD units working together to support design and implementation of IFAD interventions and IFAD *working constructively with countries.*

277. Key informants were clear in noting that coherence among IFAD units is essential to produce climate response that addresses the central climate needs of smallholders. Climate considerations, particularly in high climate risk countries need to be central to the rural development challenges addressed. They also noted that if the project concept is not properly formulated to reflect this, it cannot be corrected later in the design or during implementation. While it is clear that the ECG is involved in the design of projects with climate response, it was not evident that climate and environmental experts were involved along with PMI and PMD staff during the concept note stage.

278. To address this gap, 2RP initiative proposes important changes to the programming arrangements. Its governance structure to manage the day to day affairs of the programme involves an Inter-divisional Coordinating Unit comprising of experts from all key IFAD divisions. Though it is not clear how the new arrangement will ensure the right capacities are available at the right time and place for programme activities, this is a step in the right direction to ensure coherence within IFAD. The other governing mechanism of having an external panel of advisors comprising donor and programme countries could facilitate coherence within programme countries.

279. Staff commitment to achieving organizational priorities essential to attain corporate climate targets. The importance of CCA to IFAD's mission to reduce rural poverty and food insecurity is a corporate priority. Yet, an e-survey of IFAD staff showed that only 24 per cent of the staff shared this conviction.[157]

280. **Government commitment to CCA is mediated by political and economic realities, including other immediate priorities**. For instance, there was strong leadership and ownership in Bangladesh for CCA which is a national priority given its high exposure to climate hazards that are

[157] 17% strongly agreed, 39% somewhat agreed and 18% neither agreed nor disagreed with the statement "CCA is the current flavor of the month of IFAD and will fade in time as with many other previous priorities". Only 24% disagreed with the statement.

intensifying and recurring more frequently. Coherence of other actors in climate resilient infrastructure (GCF, KfW), government institutions (LEGD) and IFAD operations facilitated an enabling environment for scaling up the CCRIP approach to climate resilient design of infrastructure (see Box 2 in Chapter 4). In Moldova, Agriculture, Environment, Forestry and Livestock were grouped within a single ministry which made it easier to manage the different project components such as shelter belts (under Forestry), and conservation agriculture (under Agriculture). The case studies encountered situations where the communication lines among ministries were weak. As noted earlier, weak links between IFAD, the Ministry of Environment and Ministry of Agriculture often leads to the project locations being set in protected areas during early stages of project implementation. Such challenges are likely to persist during the remaining period of IFAD11 and forthcoming IFAD12.

F. Learning and adaptive management

281. Despite the limitations identified above, the climate responses from IFAD over the last decade include some notable successes. The case studies showed that nearly one third of the countries are at or beyond the 'do no harm' standard and nearly a quarter of the projects (8 of 35) were likely to be scaled up. **This confirms that parts of IFAD have the right capacity and vision to achieve impactful results even though the majority of its projects are not likely to achieve long term impact**.

282. **IFAD has plenty of scope to learn from the experiences of these successful projects.** Unfortunately, the knowledge base of successful experiences that captured the underlying factors that led to these projects to develop climate responses that significantly improved the resilience of beneficiary groups and ecosystems is not available. Of particular interest would be how they achieved this success when they had the same corporate guidance, tools and resources available to others. Lessons from successful experiences acquired over a range of contexts offer sound material for IFAD's future updates of CCA guidance.

283. **Creating platforms of repositories for climate solutions for disseminating successful solutions are important but not sufficient to replicate these successes**. Little evidence exists to show that to replicate these successes across IFAD there are effective, systematic learning processes and initiatives, over and above the existing ad hoc efforts and one-off events. There are currently no mechanisms in place to systematically promote intra and inter group discussions among Regional divisions of the Project Management Division (PMD) and technical experts in ECG and PMI to improve new designs and pursue course corrections for the existing ones.

284. Similarly, attempts to identify and validate factors contributing successes through discussion with country agencies, project participants and others vital to the success of the project were absent. Good examples of such mechanisms exist at the regional level. For instance, the Administrators Forum that is regularly convened in West Africa by IFAD has over 50 administrative officials from the governments in the region. The forum meets to address CCA issues of concern facing their country and also to get feedback on project performance in their respective countries. Keeping in mind that 2030 is just a project cycle and a half away, there is need for shorter cycle adaptive management. Such cross-fertilization of evidence is needed from the very beginning of the project cycle (concept note), in designing and throughout implementation. **Thematic studies such as this evaluation have highlighted that IFAD provides insufficient support for KM**

efforts and more dedicated capacities and resources are much needed.

Summary:

- Overall, IFAD met its commitments to integrate climate response in all its new country strategies and operations. It also succeeded in ensuring that country strategies analyse NDCs and climate risks to guide their operations in the country. Most importantly, it provided an enabling environment through priority setting, mainstreaming guidance, tools and dedicated institutional set up. IFAD made significant advances over the last decade since it declared CCA as corporate priority.
- Despite this progress, IFAD does not have adequate framework to demonstrate results even though its projects are making significant contributions to smallholder climate resilience. A clear conceptual framework and measures of climate resilience and a monitoring system to track progress towards resilience outcomes is yet to be put in place. In this regard, work of significance is happening at country level.
- IFAD does not have the relevant capacities yet – to have the right capacities at the right place at the right time, as demonstrated by the performance of project studies. Additional relevant capacities are needed to deliver 40 per cent of PoLG, under IFAD12 particularly at the project level.
- IFAD is trying to step up its support and guidance to non-lending activities, which are critical for achieving wider impact. However, weaknesses in prioritization, an over emphasis on results-orientation, and a lack of a strategic and systematic approach to these activities has undermined performance. Programme arrangements may address resource issues in Africa. Recent projects have incorporated key actions to enhance impact such as scaling up and KM as part of project components, to address the resource gaps.
- IFAD has demonstrated its ability to establish and expand partnerships for mobilizing climate finance. Successful case studies provide examples of partnerships that strengthened results achieved with farmer organizations, academic institutions and regional think tanks providing exemplars of collaborative partnership. Yet these successes are very country specific and limited in number.
- Ongoing decentralization efforts will help in the long term to strengthen effectiveness of climate responses. However, the short and intermediate term risks to delivering IFAD 11 and IFAD12 commitments are yet to be identified with mitigation plan.
- IFAD has demonstrated the capacity and vision to develop select CCA responses with significant potential impact, despite challenges. Yet, there is very limited institutional learning from these successes to improve the performance of CCA responses IFAD-wide.

VI. Conclusions and Recommendations

285. This evaluation focused on the extent to which IFAD-supported initiatives have helped smallholders adapt to the impacts of climate change. The salient conclusions are summarised below, aligned to the three over-arching questions (Q1-Q3) that guided the evaluation. In identifying the conclusions, this evaluation summarizes the bottlenecks to past and future performance identified in Chapters III, IV and V. This is followed by concrete, actionable recommendations.

A. Conclusions

Q1: What difference have IFAD interventions made in the ability of smallholders and their communities to adapt to climate change, particularly in the case of those most vulnerable to climate change, such as women, youth and indigenous peoples? What has worked and why and what opportunities have been missed?

286. IFAD used its comparative advantage to make constructive and important strides in integrating climate adaptation considerations in all its interventions in a manner relevant to client country needs. It continues to evolve its business model to provide CCA response in terms of prioritizing CCA, mobilizing climate finances, providing dedicated institutional support, programming arrangements (design and implementation support), technical and managerial capacities, as well as safeguards and tools to mainstream CCA. It is ready to move to the next level of CCA mainstreaming (2.0), to meet the urgent need to address food insecurity and climate change through concurrently promoting climate, environment and socio-economic resilience. This is elaborated below.

287. **IFAD's experience in working with marginalized communities in the rural agricultural sector, often facing adverse climatic and environmental conditions, has positioned it well to address the accelerating risks from climate change and to place climate change and adaptation as a strategic institutional priority.** Over the past decade, the Fund has achieved important progress in supporting smallholder CCA. It explicitly made climate response a corporate priority, mobilized climate finances and focused an increasing share of its PoLG on climate support. It also set up a dedicated unit with technical capacities to mainstream climate responses across all interventions and developed relevant guidance and tools to support implementation.

288. **IFAD assessed climate risks in all its country strategies and operations and integrated climate response in interventions facing 'moderate' or 'high' climate risk**. In addition, all COSOPs and operations approved after 2015 were relevant to country NDCs. Most interventions targeted communities and areas where the poor were concentrated. The recent revised operational guidelines on targeting (IFAD 2019) emphasized the importance of including climate vulnerability as a consideration and the recent projects are beginning to integrate this critical aspect into their targeting.

289. **IFAD's Targeting approaches continue to improve.** In addressing gender inequality and women's empowerment in climate responses, the majority of earlier designs showed strong emphasis on establishing targets and quotas for women participation in benefits. Recent designs are increasingly addressing the root causes of gender inequality such as gender norms and beliefs, income and asset ownership and access to credit. One in three projects approved in 2019 were designed to be gender transformative, exceeding the 25 per cent IFAD11 target.

290. **Projects are paying increasing attention to addressing existing tensions arising from competition over use of land and water resources** among different stakeholders and production systems. Deep social tensions exist between sedentary crop-livestock systems and (semi-) nomadic pastoralists in most of Sahel region of Africa. In four of the six case studies in Sub-Saharan Africa project designs and implementation approaches lacked differentiated analyses and engagement strategies pertaining to these groups. Strong IFAD guidance on community based approaches to address social conflicts and tensions in project designs would have helped.

291. **IFAD's mainstreaming efforts lack a clear conceptual framework and operational guidance on how to strengthen climate resilience together with environmental and socio-economic resilience.** Corporate guidance to objectively assess climate resilience and track resilience outcomes are not yet in place. This has limited the ability of country strategies to analyse critical pathways to achieve climate resilience. It has also limited IFAD's ability to make resilience an evaluable concept in all project designs, design quality assurance processes and implementation oversight functions (such as project supervision missions). In the absence of corporate guidance, there is a risk of proliferation of ad hoc conceptual frameworks that pose challenges to comparisons of performance across projects or aggregation of resilience results. Clear guidance is also lacking to identify CCA responses that go beyond 'do no harm' and 'restore' degraded ecosystems while ensuring their nutritional and economic security.

292. **The evaluation finds that in 15 of the 20 case studies, IFAD is achieving or showing progress towards climate resilience outcomes.** However, IFAD's results frameworks and monitoring systems are not geared to demonstrate the extent to which its interventions have actually strengthened climate resilience of smallholders. This gap is linked to the absence of a clear conceptual framework to measure climate resilience stated above.

293. **Insufficient capacity constitutes a major bottleneck to improving CCA performance.** IFAD's analysis highlights important gaps in technical capacity to mainstream and monitor CCA responses at headquarters and project levels; this is likely to continue until 2024 and beyond. Efforts are underway to address these skills gaps. The Targeted Capacity Investment (TCI) Implementation Plan and the 'People, Processes and Technology Plan' are in their early stages of implementation. CCA capacity will need to expand further when the climate focus of PoLG increases from 25 per cent under IFAD11 to 40 per cent under IFAD12. There is currently no evidence to show that an assessment of the anticipated increase in CCA capacity is being planned.

294. Addressing the capacity needs of IFAD is critically important. However, as noted earlier, CCA outputs and impacts, including those related to the environment (nexus effects) also depends on the capacities of project implementation units to understand and implement SECAP guidance, the underlying premises of CCA response and monitoring the impact of IFAD's CCA response on smallholder climate resilience. The feasibility of acquiring additional project level capacities commensurate with the expanded CCA commitments is yet to be formally recognised and assessed.

Q2: To what extent has IFAD been able to leverage its operations to strengthen smallholder farmers' CCA capacity at the local, sub-national and national levels through partnerships and by scaling up successful interventions, promoting enabling policies, strengthening institutional capacities and improving the financial architecture for adaptation? What has worked and why and what opportunities have been missed?

295. **IFAD is trying to step up corporate support to strengthen non-lending activities such as fostering knowledge management or partnerships for scaling up results. The future of IFADs ability to successfully strengthen smallholder climate resilience at scale depends on additional funding to promote non-lending activities.** Resources remain a challenge and performance of non-lending activities a recurring weakness identified by several independent evaluations. Given the close interlinkages between climate change and ecosystems, long term climate resilience cannot be achieved by focusing only at the farm or community levels. At the same time, in the absence of resources, systematic pursuit of scaling up and non-lending activities or providing the necessary guidance and human resources for their implementation remain weak. Programme arrangements such as the Rural Resilience Programme may provide the flexibility to dedicate a proportion of programme resources to strengthen non-lending activities. However, this mechanism is yet to be implemented and will mainly be available only for interventions in Africa and selected LICs.
296. **Faced with the persistent lack of prospects for securing the necessary financial and human resources to pursue non-lending activities, IFAD lacks operational experience to pursue non-lending activities in a systematic manner**. Project designs do not systematically prioritize them, identify results expected from non-lending activities or develop strategies to implement them. Monitoring to track progress was also largely absent. This limits the depth and reach of IFAD's climate resilient outcomes. Recent projects have incorporated key actions to enhance project impact such as scaling up and KM as part of project components, as a way to address the gaps identified above.
Q3: To what extent is IFAD equipped to address the existing and projected adaptation challenges facing smallholder farmers and to meet its commitments under IFAD11 and beyond?
297. **As it learns from experience, IFAD's approach to CCA is evolving and progressing in the right direction**. Over the past decade, IFAD developed and updated its climate strategy; continues to improve the institutional environment for CCA responses - it established a dedicated unit with technical capacities to integrate CCA in its interventions, and continues to revise policies, strategies, and guidelines (grants policy, operational guidelines for targeting, KM strategy and guidance to country strategies and operations); developed mainstreaming guidance (SECAP 2015) and introduced new tools to guide CCA; updated mainstreaming guidance twice (SECAP 2017, 2020) and the introduced new tools such as the Adaptation Framework with a data base of adaptation options that would help to bring into sharp focus the need to move beyond risk management and to ensure the benefits of appropriate climate responses for smallholders are materialised. These actions have helped IFAD progress in the right direction to address the bottlenecks that hindered performance.
298. **IFAD has demonstrated capacities and vision at its disposal to improve economic, climate and environmental resilience of smallholders though a strong suite of appropriate interventions.** Climate responses in 6 of the 20 case studies are performing at or beyond 'doing no harm' through their restorative actions at landscape scales. These were landscape-scale integrated interventions targeting natural solutions to the underlying climate threats and involved strong engagement with beneficiaries and stakeholders during design and implementation. These offer important lessons to improve other interventions, such as the climate response in the five case studies that were getting closer to doing no harm, and to the responses in the remaining nine case studies that were being 'aware' but a distance from doing no harm to ecosystems.

299. **At the same time, challenges remain in ensuring no harm is done to the environment.** In fact, climate responses in 9 of the 20 case studies were found to be a distance from doing no harm and in six cases studies they were close to doing no harm to the system but fell short of this goal. CCA and resilience interventions for smallholder farmers in the long term. The limitations of CCA capacities in Project Management Units, coupled with a commitment to CCA issues, design issues and corporate guidance have contributed to this negative outcome.

300. **This evaluation found significant gaps need to be addressed first for IFAD to be able to deliver on its CCA commitments under IFAD12**:

    a. Putting in place mechanisms to ensure systematic organizational learning from operational experience – to reproduce the success achieved by climate responses of the five case studies in doing no harm to ecosystems and ensure that interventions that are closer to doing no harm as well as those that are distant from this goal learn lessons to build environmentally sustainable climate resilience of smallholders. A monitoring system to identify successes and capture knowledge to replicate these 'islands of success' more broadly is one critical element to achieve this;

    b. Shifting to a results-orientated mainstreaming of CCA with adequate support and guidance from headquarters;

    c. Investing adequate time and resources to strengthen the design quality of CCA responses and to facilitate government buy-in;

    d. Designing and achieving 'do-no-harm' and 'win-win' CCA responses, to the extent feasible;

    e. Having systematic approaches to leverage project results to generate impact at landscape scales and above through effective non-lending activities;

    f. Having a robust results framework and monitoring system to track IFAD's progress in strengthening climate resilience and identify best practices,

    g. Addressing the skills gaps in appropriate and adequate CCA technical capacities within IFAD and project management units, and;

    h. A shared vision and commitment of management and staff to deliver much needed CCA action.

301. **Ongoing decentralization efforts are necessary to bring IFAD capacities in closer proximity to clients, beneficiaries and partners to enhance the impact of its operations**, including those linked to CCA response. At the same time, transitioning to the new arrangements during 2021-2023 are likely to have consequences to addressing the above bottlenecks and thereby, to deliver IFAD11 and IFAD 12 CCA commitments. Hence, these risks need to be identified and managed to ensure timely delivery of CCA results.

B. Recommendations

302. As noted earlier, the IPCC has warned that life on earth faces catastrophic consequences unless drastic and immediate action is taken to address climate change. Therefore, IFAD needs to address the bottlenecks identified in the Conclusions a set of actionable recommendations are presented below. These recognize the interlinkages among these bottlenecks. Furthermore, these also reflect the fact that mainstreamed CCA responses are not only

affected by the challenges to achieving CCA resilience outcomes but intertwined with the bottlenecks to overall operational performance.

303. **Recommendation 1**: **Update IFAD Strategy and Action Plan on Environment and Climate Change 2019-2025 to comprehensively address bottlenecks to CCA performance**, including but not limited to the following:

As part of the update to the Strategy, present a Resources and Results Framework with estimated (financial and human) resources needed for each output of Action Areas.

a. Drawing from the recent operational experience and other development actors, establish and disseminate a corporate conceptual framework for climate resilience to guide designs, develop results frameworks and monitor project level results. Capacities must be in place within project implementation units to understand and track the resilience results. To the extent feasible, such a framework should be consistent with the practices of other international actors to facilitate joint work and coherence among country wide efforts to track CCA resilience outcomes.
b. Update the CCA related corporate key performance indicators to capture actual changes to climate resilience, in line with this conceptual framework. Taking stock of its experience in implementing and tracking CCA responses, IFAD should periodically refine the corporate level indicators to measure outcome level changes to climate resilience.
c. IFAD's results-based Monitoring and Evaluation framework of operations should dedicate adequate financial and human resources to integrate the use of relevant spatial information (derived from increasingly available satellite imagery or spatial databases) to systematically track resilience outcomes and to validate these observations with site visits.
d. 'Getting the CCA design right' requires in-depth knowledge of climate change challenges and practices at the project and national levels. To ensure availability of such expertise in IFAD's quality assurance processes based in Rome, and in line with the practices of other IFIs, establish an external peer review panel. For a given intervention, the panel will constitute context-specific experts with knowledge of local conditions, and thereby, enhance and ensure the relevance of CCA response. The panel review will be seamlessly integrated into the existing quality assurance process and take place concurrently with inputs sought from all other reviewers. IFAD should ensure necessary time is allocated for this external review. The panel is expected to reduce the frequency and need for having to make substantial modifications to designs during mid-course thereby enhancing the effectiveness and efficiency of CCA responses.

304. **Recommendation 2**: **Expand CCA guidance to include restorative solutions**, to fulfill IFAD commitment to surpass 'do no harm' and to 'restore the environment'. Select IFAD CCA responses have exceeded the 'do not harm' stances to provide solid evidence that development goals can be achieved without harming the environment. Since they were pursuing long term sustainability through restorative actions, they also show that sustainable development can contribute to achieving of the 2030 and 2050 goals. Where feasible, the guidance will include win-win solutions - CCA responses that achieve economic, climate and environmental resilience concurrently.

a. The guidance should draw from the successful examples of IFAD (including those identified in the case studies). To ensure relevance and effectiveness of such guidance, include representation from Project

Delivery Teams responsible for successful projects in drafting the guidance.

b. In addition, IFAD should take concrete steps to promote government buy-in of win-win solutions when necessary. To this end, IFAD should build a knowledge base of viable restorative CCA solutions based on its CCA experience and ensure it allocates sufficient capacities, financial resources and time to advocate at all levels – from local to national level.

305. **Recommendation 3**: **IFAD should undertake an analysis of staff capacity and skill sets needed to design, implement and monitor the ability to deliver climate finance of 40 per cent of PoLG under IFAD12**. This could be built on the recent HR study and focus on the HR needs for CCA responses. The needs assessment should cover not only IFAD staff but also project staff. The study should fully assess the interim risks posed by the ongoing decentralization process to delivering IFAD11 and IFAD12 CCA commitments and to manage these risks, determine the requisite capacities and skills at all levels of decentralized IFAD. Based on the findings of this study, IFAD should move to address the identified capacity deficits.

306. **Recommendation 4**: **IFAD should systematically prioritize with dedicated resources scaling up and other non-lending activities.** The future of IFADs ability to successfully strengthen smallholder climate resilience at scale depends on additional funding to promote these activities at the country level, and when feasible, at regional and global levels. To this end, IFAD should:

a. Learn from its successful experiences and facilitate government ownership and partnerships;

b. Dedicate sufficient resources, capacities and time to pursue these activities;

c. Include these activities in project designs with goals and targets and delineate strategy to pursue these targets. Related activities should continue throughout project implementation, and not just towards the end of project cycle;

d. Ensure adequate support and guidance to facilitate non-lending activities, as agreed under Decentralization 2.0, and;

e. Establish incentives and accountability mechanisms to achieve (or progress towards) results through these activiites.

307. **Recommendation 5**: **Develop and implement a framework and strategy for partnership necessary to achieve results** identified in COSOPs and related operations. The framework should: i) identify specific partnerships needed to scale up, expand outreach, manage knowledge and strengthen CCA technical capacities of IFAD and the PMU; ii) propose approaches to establish these partnerships; iii) present expected outputs and outcomes of the partnerships; and iv) and estimate costs involved (if any).

308. **Recommendation 6**: **IFAD should ensure sustained organizational learning from operational experience to improve current and future CCA performance**.

a. Learning from success requires identifying successful CCA responses; putting in place mechanisms to have discussions to understand factors that contributed to success; based on this discussion, identify design opportunities where this experience will be relevant and ongoing operations that could benefit from this experience; and finally, using the

discussion to take steps to improve relevant designs and strengthen ongoing interventions.

b. At the minimum, discussions should include relevant Project Delivery Teams, supervision mission members, as well as relevant staff in SKD and PMD. As needed, other partners and implementing partners, and external subject experts could be included.

c. Establish corporate as well as Unit goals and targets and accountability for achieving learning results. To this end, IFAD should review progress periodically and update its approaches. The learning outcomes should be included as part of the Results Management Framework and reported annually.

d. At the corporate level, learning framework should be linked to the Climate Strategy and Action Plan (under Action Area 2).

List of projects selected for case studies

Table 1

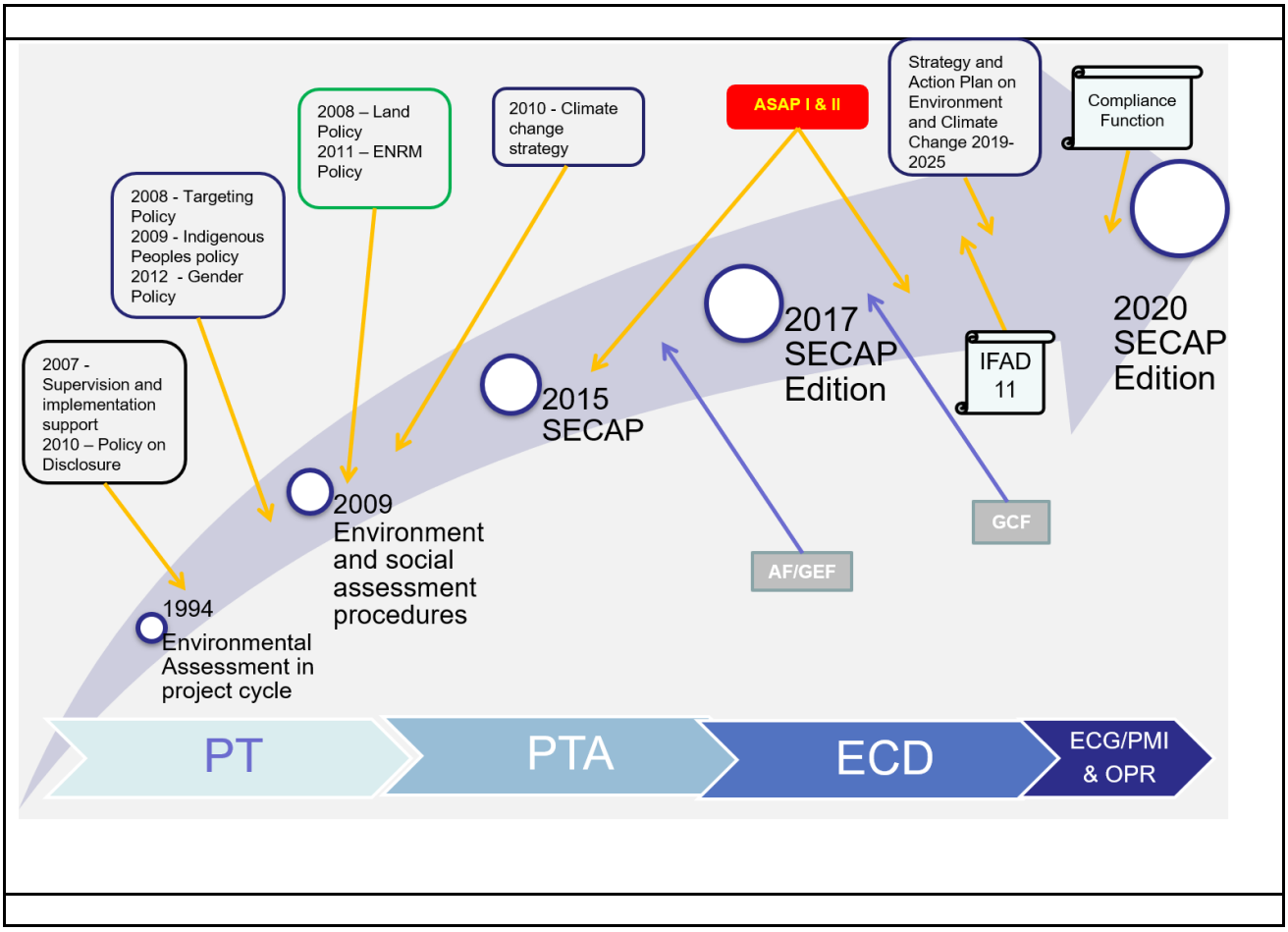
Country	*Project ID*	*Project abbreviation*	*Approval Date*	*Closing Date*	*Supplementary funds for CCA*	*Project Name*	*Field visits*
Bangladesh	1100001647	CCRIP	10/04/2013	31/03/2020	None	Coastal Climate Resilient Infrastructure Project	No
Belize	2000001247	Be-Resilient	15/04/2018	30/06/2025	GCF	Resilient Rural Belize	No
Bolivia	1100001598	(ACCESOS-ASAP Program	13/12/2011	31/03/2020	ASAP	Economic Inclusion Programme for Families and Rural Communities in the Territory of Plurinational State of Bolivia (	No
Burundi	2000001009	PRODEFI-II	15/09/2015	30/06/2022	ASAP	Value Chain Development Programme Phase II	Yes
	2000001146	PIPARV-B	14/12/2018	31/12/2025	None	Agricultural Production Intensification and Vulnerability Reduction Project	
Cape Verde	1100001604	POSER-C	21/09/2012	30/09/2022	ASAP	Rural Socio-Economic Opportunities Programme	Yes
Chad	1100001691	PARSAT	01/12/2014	30/09/2022	GEF, ASAP	Project to Improve the Resilience of Agricultural Systems in Chad	Yes
Egypt	1100001745	SAIL	16/12/2014	31/12/2023	GEF, ASAP	Sustainable Agriculture Investments and Livelihoods	Yes
Ethiopia	2000001134	PASIDP-II	22/09/2016	30/09/2024	ASAP	Participatory Small-Scale Irrigation Development Programme II	No
	2000001598	LLRP	12/09/2019	10/04/2026	None	Lowlands Livelihood Resilience Project	
	1100001522	PCDP III	11/12/2013	08/11/2019	None	Pastoralist Community Development Programme III	
	100001521	RUFIP II	15/09/2011	30/06/2021	None	Rural Finance Intermediation Programme II	
		CBINReMP	17/03/2010	31/03/2019	GEF	Community-Based Integrated Natural Resources Management Project	
Honduras	1100001682	PRO-LENCA	17/08/2013	30/09/2022	GEF	Competitiveness & Sustainable Rural Dev Project in South Western border Corridor (	Yes
Kenya	1100001651	KCEP-CRAL	22/04/2015	31/03/2023	ASAP	Cereal Enhancement Programme - Climate Resilient Agriculture Livelihoods Programme	Yes
	1100001544	UTaNRMP	03/04/2012	30/06/2023	None	Upper Tana Catchment Natural Resource Management Project	

	2000001132	ABDP	11/12/2017	31/12/2026	None	Aquaculture Business Development Programme	
	1100001378	PROFIT	16/09/2010	31/12/2019	None	Programme for Rural Outreach of Financial Innovations & Technologies	
Kyrgyzstan	1100001626	LMDP	17/12/2012	31/03/2020	None	Livestock and Market Development Programme I	Yes
	1100001709	LMDP II	11/12/2013	30/09/2021	ASAP	Livestock and Market Development Programme II	
Madagascar	2000000850	AD2M Phase II	15/09/2015	30/06/2024	ASAP	Project to Support Development in Menabe & Melaky Regions- Phase II	Yes
Mali	1100001444	PAPAM	16/09/2010	31/01/2019	ASAP	Fostering Agricultural Productivity Project	Yes
Moldova	1100001669	IRECR	09/12/2013	30/09/2021	GEF	Inclusive Rural Economic and Climate Resilience	Yes
	2000001156	RRP	26/11/2016	31/03/2024	ASAP	Rural Resilience Project	
Nepal	1100001723	ASHA	13/09/2014	31/01/2023	ASAP	Adaptation for Smallholders in Hilly Areas Project	No
Nicaragua	1100001683	NICADAPTA	25/11/2013	30/06/2021	ASAP	Adapting to Markets and Climate Change Project	No
Niger	2000001810	ProDAF-Diffa	29/09/2018	30/09/2025	None	Family Farming Development Programme in the Diffa Region	Yes
	1100001688	ProDAF	22/04/2015	31/03/2024	GEF, ASAP	Family Farming Development Programme in Maradi, Tahoua and Zinder Regions	
	1100001646	RUWANMU	21/09/2012	31/12/2018	None	Ruwanmu Small-Scale Irrigation Project	
	1100001625	PASADEM	13/12/2011	30/09/2018	None	Food Security and Development Support Project in the Maradi Region	
	2000002678	PRECIS	12/09/2019	31/03/2027	GCF	Project to Strengthen Resilience of Rural Communities to Food and Nutrition Insecurity	
Rwanda	1100001497	PASP	11/12/2013	31/03/2021	ASAP	Climate Resilient Post-Harvest and Agribusiness Support Project (PASP)	No
	2000001195	RDDP	22/09/2016	30/06/2023	None	Rwanda Dairy Development Project	
Sudan	1100001732	LMRP	16/12/2014	30/09/2022	GEF, ASAP	Livestock Marketing and Resilience Programme	Yes
	2000001517	IAMDP	11/12/2017	30/09/2024	None	Integrated Agricultural and Marketing Development Project	
	2000002105	SNRLP	12/09/2019	30/06/2026	None	Sustainable Natural Resources and Livelihoods Programme	

Uganda	1100001681	PRELNOR	16/12/2014	31/03/2023		ASAP	Restoration of Livelihoods in the Northern Region	Undertaken as part of CSPE Uganda

Figure 1

Environment, social and climate standards IFAD 1994 to 2020



Source: SECAP2020 Highlights and key aspects

Theory of Change: Strengthening smallholder farmers' CCA

1. Corporate resources and instruments
IFAD is fit-for-purpose (enhanced climate change adaptation focus, knowledge, capacities and resources)

Strategy and guidance

- Declares smallholder climate adaptation as a corporate priority with targeted goals
- Mainstream/integrate climate responses into "institutional mindset, expertise, tools and processes" to design and implement country programmes and projects to contribute to National Determined Contributions (NDCs), National Actions Plans (NAPs) and other related priorities aligned with global and national commitments
- Empowers smallholders, inclusive the most vulnerable
- Supports environmentally sustainable approaches
- Seeks innovation and up-scaling
- Consolidates climate financing to rural smallholders

Human resources, technical inputs and financial tools

Makes use and provides the relevant technical knowledge-base, guidance, decision-support systems and tools
Makes use of a variety of relevant financial instruments (e.g. loans and grants)

Partnerships

- Engages effectively in international and national partnerships to strengthen and advocate enabling complementarities (governmental, research, civil and private sector entities)

Efficient operational processes

- Systems and processes streamlined to gain efficiencies

Monitoring and evaluation, learning and feedback loops

- Sustains and communicates reflection on the level of (i) corporate functioning, (ii), programs and projects design and implementation effectiveness and (iii) global level accomplishments achieved in collaboration with relevant partners

2. Design and implementation quality
Relevant support for smallholders to address climate risks is provided by IFAD and its partners

Programme and project design

Explicitly defines and identifies the concepts of smallholders and their communities – inclusive the most vulnerable and the climate trends and risks targeted
Assesses through relevant resources and participatory approaches the existing responses of smallholders, gaps in knowledge and needs
Addresses smallholder needs through socially and environmentally sound approaches relating to (i) adaptive smallholder farm and non-farm household practices to counter climate risks, (ii) capacity building issues related to climate adaptation, (iii) access to public goods and services relevant to climate adaptation, (iv) enabling policies and rural financial architecture to support climate adaptation, and (v) financial instruments supporting climate adaptation
Comprises robust monitoring and evaluation system
Comprises a relevant learning and knowledge management component

Programme and project Implementation

Adequate staffing, management and partnerships arrangements in the field exist
Appropriate review and adjustment of activities are under taken when necessary
Activities implemented are (i) effective in addressing climate risks (ii) environmentally sustainable, (iii) socially inclusive of the most vulnerable smallholders, (iv) incorporate local knowledge and context-appropriate, (v) efficient in time and use of resources, (vi) seeks to scale-up and innovate solutions; vii) continues to learn from experience and contributes to knowledge base

3. Programme and projects effects
Strengthened climate change adaptation responses for smallholders

Targeted smallholders

Empowered and more inclusive organisations of smallholders established
Smallholder communities have access to relevant public goods and services (e.g. credit, markets, farm support)
Smallholder communities have their capacities strengthened to address climate risks
Smallholder practice environmentally friendly climate adaptive farm and non-farm household practices
Livelihoods and income sources (farm and non-farm activities) for smallholders improved and diversified

Targeted ecosystems

- Sustainable land and water management
- Land degradation, deforestation and biodiversity loss controlled
- Carbon sequestration benefits achieved and carbon emissions avoided

Upscaling tools

Financial instruments and mechanism are in place to ensure required resources for climate adaption are mobilised, allocated and disbursed to smallholders
Government and relevant institutions' capacity to integrate climate adaptive approaches to rural development efforts strengthened and advocate for providing support to smallholders and rural poor
Dialogue and learning to strengthen the enabling policy/regulatory environment at sub-national and national levels and their communities ongoing
Dialogue and learning to strengthen the enabling global commitments ongoing

4. Pro-poor outcomes
Enhanced resilience for smallholders to climate risks

National level

Successful climate adaptation innovations and interventions up-scaled and replicated with partnerships
Enabling environment - improved institutional governance at local/national levels
Enabling policy and regulatory frameworks to support climate adaptation established and further strengthened
Sustainable ecosystem management appliedCommunities have improved collective robustness and resilience to climate stressors and environmental shocks

Upscaling tools

Growing knowledge base, learning and advocacy platforms at national and international level to facilitate climate adaptation for smallholders including the most vulnerable

5. Longer term results
Sustainable agricultural development

Poverty reduction social equality

- Well-being and livelihoods improved
- Incomes increased
- Food security and requisite nutrition level secured

Smallholders including the most vulnerable empowered and participate in decision making at the local level and beyond.

Sustainable ecosystems management

- Ecosystem functions and services protected

Contributions to society, knowledge and policy

- Inform debate on sustainable and healthy diets, improved health and education of smallholders and vulnerable communities
- Increased national coping capacity and global attention to climate justice
- Improved and more sustainable local, regional and national food systems
- Global commitments reflect climate adaptation priorities for smallholders

Credibility and respect for IFAD interventions built across all key political actors and decision-makers
Greater fiscal justice at national and trans-national levels
Increased levels of work on advocacy globally

EB 2021/134/R.12./Rev.1
EC 2021/115/W.P.3/Rev.1

Key assumptions and key risks for Theory of Change

1. Corporate resources and instruments
IFAD is fit-for-purpose (enhanced climate change adaptation focus, knowledge, capacities and resources)

Key assumptions

Collaboration and commitment from key partners
IFAD Knowledge Management System supports and encourages an iterative learning process
Sufficient resources available and a willingness for countries to borrow

Key risks

Knowledge insufficient for incorporating climate risks into decision making
IFAD is unable to mobilise necessary capacities and resources
Pandemics, Geopolitical and/or civil unrest hamper IFAD engagement

2. Design and implementation quality
Relevant support for smallholders to address climate risks is provided by IFAD and its partners

Key assumptions

- International, national and local commitment for promoting socially and environmentally inclusive climate adaptations for smallholders
- Relevant climate and environmental information available
- Relevant inclusive smallholder information available
- Relevant agricultural research and technical expertise available
- Adequate implementation support and requisite technical capacity (public and private sector) in place at sub-national and local levels
- Typology of climate risks understood for key geographical regions

Key risks

- Weak identification of gender, social, environmental and climate adaptation concerns
- Risk assessments insufficiently address the pace and geographical extent of climate change and associated 'development risks'
- Public health risks limit IFAD and partners in – country interventions

3. Programme and projects effects
Strengthened climate change adaptation responses for smallholders

Key assumptions

Ongoing national and local commitment for promoting social and environmentally inclusive climate change adaptation for smallholders
Adequate pace for up-scaling successful adaptation interventions and systems to address the existing and evolving climate risks.

Key risks

- Maladaptation - complexity of smallholder/landscape/ecosystem interactions insufficiently understood and addressed
- Policies, infrastructure, institutions and interventions insufficient to enable and support smallholder adaptation to achieve a tipping point
- Climate adaptive knowledge for local agricultural systems (e.g. seed varietals) not fully utilised
- Implications of international and in-country migration on smallholder adaptation not fully understood

4. Pro-poor outcomes
Enhanced resilience for smallholders to climate risks

Key assumptions

Strong institutional governance and regulatory frameworks support climate change adaptation focus
Pathways for impact with partnerships exist and remain effective

Key risks

- Poor community engagement or local level buy in limit IFAD project impact ('project malaise')
- Changing government priorities towards rural smallholder development

5. Longer term results
Sustainable agricultural development

Key assumptions

IFAD and their partners vision and capacities are sufficient and aligned on rural smallholder and community adaptation
Adequate material and intellectual resources available and political capital and willingness to pursue climate adaptation priorities
Ongoing international commitment to addressing climate change impacts
Credibility and respect for IFAD interventions maintained

Key risks

Global agricultural transformation excludes smallholders
Rate of climate change renders adaptation responses ineffective

EB 2021/134/R.12./Rev.1
EC 2021/115/W.P.3/Rev.1

Additional Guidance for Climate Adaptation Response

1. How to do note: Crop selection for diet quality and resilience. March 2021 https://www.ifad.org/en/web/knowledge/publication/asset/42498563
2. Adaptation Framework Tool. January 2021 https://www.ifad.org/en/web/knowledge/publication/asset/42259302
3. Climate Adaptation in Rural Development (CARD) Assessment Tool. March 2019 https://www.ifad.org/en/web/knowledge/publication/asset/41085709
4. Toolkit: Supporting smallholder seed systems. March 2018 https://www.ifad.org/en/web/knowledge/publication/asset/40250887 (this is mostly related to the management of seeds systems, but it approaches in a way that it is well adapted to the 'local agroecologies and adapted to climate change'.
5. How to do note: Design of gender transformative smallholder agriculture adaptation programmes. January 2018 https://www.ifad.org/en/web/knowledge/publication/asset/40215442
6. Toolkit: Designing and implementing conservation agriculture of IFAD investments in sub-Saharan Africa. December 2016 https://www.ifad.org/en/web/knowledge/publication/asset/40196422
7. Gender in climate smart agriculture, Module 18 for the Gender in Agriculture Sourcebook https://www.ifad.org/en/web/knowledge/publication/asset/39192471
8. How to do note: Fisheries, Aquaculture and Climate Change. November 2015 https://www.ifad.org/en/web/knowledge/publication/asset/39182309
9. How to do note: Climate change risk assessments in value chain projects. September 2015 https://www.ifad.org/en/web/knowledge/publication/asset/39181457
10. How To Do Note: Measuring Climate Resilience. September 2015 https://www.ifad.org/en/web/knowledge/publication/asset/39181417
11. Scaling up note: Climate-resilient agricultural development https://www.ifad.org/en/web/knowledge/publication/asset/39181197
12. The potential for scale and sustainability in weather index insurance for agriculture and rural livelihoods. March 2010 https://www.ifad.org/en/web/knowledge/publication/asset/40239774 (this document focusses mostly on developing weather risk insurance, but is related to the issue. Might be relevant for countries prone to disasters)

Relevance of CCA Response - Summary of Evidence from Case studies

Table 1
Relevance of IFAD Interventions in Case Studies

Country	*Relevance to NDCs*	*Overall Assessment of Relevance*	*Ratings by Evaluation Team*
Bangladesh	The project directly contributes to the priority area of Climate resilient infrastructure of the National Adaption Plan for Action 2009 due to activities aimed to develop infrastructure resilient to floods, cyclones and tidal surges.	In addition to alignment with NDCs, this infrastructure project was highly relevant to the needs of beneficiaries and IFAD priorities. Project relied largely on geographic targeting and participation and impact on women could not be sufficiently ensured.	Satisfactory
Belize	The Programme responds directly to the country's needs to increase food security and rural livelihoods by improving agricultural production for selected value chains, enhancing smallholders' resilience to climate adversities, and improving their ability to access markets.	Highly relevant. Project focused on assisting targeted population in highly vulnerable areas, prone to the negative effects of CCA. Project is directly relevant to the national priorities. The finance instruments supported enhancing the CCA knowledge base.	Satisfactory
Bolivia	ACCESOS-ASAP investments aimed at reducing vulnerability in the access to and efficient use of water for irrigation, reducing water losses and supplementing the need for water in periods of scarcity. This contributes to Bolivia's NDCs, which focus on Structural solutions to the climate crisis highlight the need to tackle climate change from a change of means of living, connected with nature and developed from a community perspective.	Highly relevant. The project considered the country's climate threats and priorities as well as agro-ecological characteristics. The integration of ASAP in ACCESOS led to mainstreaming climate response into all project components. Its community based approach resulted in a project responsive to community demands with good targeting.	Highly Satisfactory
Burundi	PRODEFI II contributed to the NDC via its activities of integrated water resources management, protection of aquatic and land-based ecosystems and enhance research and extension of drought-resistant forest species. PIPARV-B contributed with integrated water resources management, protection of aquatic and land-based ecosystems. CCA was one of the strategic objectives of COSOP 2016-2021 and was well aligned with NDCs and NAP.	Political tensions renewed since 2015, just before PRODEFI-II was approved. Yet, IFAD remained among the few agencies still active and the project continues. PRODEF-II did not adequately target the most marginalized. However, this issue was addressed in the follow-on PIPARV-B project. sex-disaggregated data was available.	Satisfactory
Chad	PARSAT project contributed to agricultural sectorial priorities but also to crosscutting priorities such as reinforcing the capacities of the stakeholders towards CCA and fostering resilience. The project financially participated in the National Strategy against CC (2017) and covers regions (Batha, Guéra, and Hadjer-Lamis) prioritized on the NDC (2015).	In addition to the NDCs, PARSAT contributed to policy dialogue, and needs of smallholders.	Satisfactory
Cape Verde	The projects contributed to the 2015 NDC on integrated management of water resources, adaptation of agro-sylvo-pastoral systems, development of water-efficient small-scale irrigation and soil protection against erosion.	The ASAP Project was in line with the national CCA priorities and NDCs. However, the recent enduring droughts during the rainy seasons point to the risk of relying too much on "water" related CCA activities.	Moderately unsatisfactory
Egypt	The project interventions such as farmer field schools, trainings and EWS, were in line with the national list of adaptation activities. The list included capacity building and human capital building and collection of additional data on effects of	The project interventions were relevant to the climate risks in the short term and the project contributed to the NDC priorities. However, the financial instruments could have better laid out the adaptation rationale.	Moderately Satisfactory

	climate adaptation, as well with the third national communication. In addition, land reclamation remains one of the priority interventions of Government of Egypt.	While the project was potentially harmful to the environment and a threat to sustainability in the very long term, it addressed the pressing present needs of the most vulnerable human systems	
Ethiopia	PASIDP's objectives in the agricultural sector: market-based agricultural development, specialized support services for differentiated agro ecological zones, and special efforts for pastoral development, are aligned with the Federal Government's frameworks of ensuring food security and combatting poverty reduction. CBINReMP, with its focus on rehabilitation of degraded land, was in line with the strategies to develop sustainable forestry and reduce fuelwood demand. LLRP stands out as project that was designed to build resilience of livelihood systems by strengthening three specific capacities: adaptive, absorptive, Transformative capacity, which also are aligned with the Federal Government's frameworks.	All four projects considered were highly relevant. Designs systematically considered national policies and priorities related to CCA, trends in climate threats and conflict sensitive. The "Lowlands Livelihood Resilience Project" approved in 2019 stands out as a project designed to address CCA and foster climate resilience among competing systems (mixed system of sedentary crop-livestock and nomadic pastoralism).	Highly Satisfactory
Honduras	PRO-LENCA responded to a strong interest expressed by the Government of Honduras to address the developmental needs of the poor rural population in the Southwestern border corridor of the country, by focusing on agricultural production in the context of climate change. As part of its Nationally Determined Contributions (NDCs), Honduras has committed to adopting sustainable agricultural and livestock practices.	Highly relevant. PRO-LENCA responded to country's climate threats, priorities and modified its conceptualization of CCA response to reflect the country's needs. GEF funds provided an opportunity to create wider impact on resilience. However, coordination and implementation delays associated with GEF-funding mechanisms posed challenges	Satisfactory
Kenya	The assessed programs and UTaNRMP are aligned to the Kenya Vision 2030 and to Kenya's climate change and environmental priorities; however, PROFIT design did not explicitly include CCA strategies that are aimed at climate-resilience outcomes. It did not clearly show how the proposed activities would contribute to climate proofing the value chains to be developed.	All projects were highly relevant to the country context and CCA needs. UTaNMRP is particularly relevant to Kenya's climate-related policies, especially on the nexus between social-ecological systems, livelihoods, and climate resilience. Meanwhile, the KCEP-CRAL made use of ASAP funding to adjust and mainstream its CCA activities in line with the priorities of the new government.	Satisfactory
Kyrgyzstan	The components of the LMDP, which are community pasture management, livestock health and production services, market value chain development and project management, are aligned with the priority of land use on the Intended Nationally Determined Contributions (INDCs), as well as with the priority of natural resource management mechanisms in the National Sustainable Development Strategy of the Kyrgyz Republic.	Overall, LMDP I and II interventions were relevant to the climate risks in the country. However, the activities should have focussed more on systemic long-term climate change trends and the considerable impacts these will have on target groups.	Moderately Satisfactory
Madagascar	The project contributes to the following objectives of the NDC (2015): 1) intensive awareness raising campaigns concerning the adverse effects of climate change and environmental degradation; 2) development of Resilient Agriculture 3) "climate-smart agriculture"; 4) promotion of intensive/improved rice farming system	Political ecology issues that lead to marginalization of the poor and women were addressed at the local level but not at the landscape level. The project did not adequately serve the needs of internal migrants of poor people from the south of the country fleeing the severe impact of climate change. Also not addressed is the issue of cow theft, a constraint to integrating livestock development in CCA responses.	Moderately Satisfactory
Mali	PAPAM contributes to the following priorities of the NDC (2016): 1) forest management for the restoration of degraded ecosystems; assisted natural regeneration and the fight against silting up and the reinforcement of the protection of protected areas; 2) the development of intelligent agriculture that is	CCA components of PAPAM-ASAP responded to the threats of erratic climatic conditions involving higher temperatures, prolonged dry seasons and frequent flooding in Mali. The project continued even after the major political turmoil and armed conflict that began in Mali. The Project	Satisfactory

	resilient to climate change; 3) development of renewable energy and energy efficiency.	adapted well by restricting activities to the Southern region not affected by conflict (Kayes and Sikasso). ASAP activities accelerated the overall Project disbursement.	
Moldova	The projects in case studies covered the whole country and pursued the goals of improving the climate resilience-focused agro technology, water management, value chains, infrastructure, and financing; which are include on Moldova's NDCs and First National Adaptation Plan 2014-2017. Conservation Agriculture, promoted by IFAD-funded projects, was a timely intervention to help Moldova meet its NDCs and advance its National Adaptation Action Plan.	The project was highly relevant to the climate threats and the government priorities. However, the project was not successful in targeting smallholders ("many beneficiaries had land holdings over 200 HA") due to focus on heavy-machinery based conservation agriculture. This focus restricted women participation.	Moderately Unsatisfactory
Nepal	The project works in operationalizing NAPAs at local level; therefore, it is directly aligned with national priorities. The project worked towards preparation and implementation of Local Adaptation Plans for Action (LAPAs). LAPAs are local level iterations of NAPAs based on local level analysis of risks, vulnerabilities and interventions required.	Overall, the project is highly relevant and it operationalizes the National Adaptation Plan for Action at local levels as such, relevant to the country CCA priorities and those of the smallholders.	Satisfactory
Nicaragua	NICADAPTA contributed to the consolidation of results achieved by the national coffee and cocoa policy and to the NDCs through: i) strengthening the position of smallholders in the relevant value chains; ii) promoting collective action by smallholders (cooperatives and associations)	The project is highly relevant. In particular, it provided an integrated platform for implementing social policies, agro ecology, food sovereignty and CCA responses. The project is also highly relevant to national policy and institutional guidelines. The targeting of rural poor smallholders and women was good, However, more could have been done to ensure inclusion of the indigenous peoples	Satisfactory
Niger	PASADEM contributed to 2015 NDC by "dealing with aspects of resilience in the rural" environment. Despite the close alignment to the I3N initiative "Niger people nourish Niger people", the project's designs did not establish approaches to other Governments' plans that are relevant CCA or related targeting. The projects' designs are not aligned to respective national frameworks and do not consider the integration of appropriate climate-proofing measures.	Interventions were quite well aligned with the national flagship food security initiative, I3N. ProDAF Diffa innovatively payed special attention to local conflicts around pastoral resources and populations displaced by Boko Haram violent conflict. Risks of insects and diseases infestation were addressed. In addition to food security, the new project PRECIS addresses the issue of nutrition security.	Satisfactory
Rwanda	PASP goals were to align directly with MINAGRI's policy framework and investment programme. The RDDP had directly contributed to improved policy and dialogue, informing discussions linked to the National Strategy for Transformation (NFI) and providing evidence into discussions with UNFCCC regarding livestock impacts on climate change adaptation and mitigation.	Overall, PASP and RDDP's interventions are relevant to climate risks. However, such risks are not the primary driver of project interventions.	Moderately Satisfactory
Sudan	The Livestock Marketing and Resilience Programme (LMRP) and Integrated Agricultural and Marketing Development Project (IAMDP) do not have clear contributions to the NDCs is unclear from case study. However, the Sustainable Natural Resources and Livelihoods Programme (SNRLP) is in line with national priorities for supporting the agricultural sector and local governance systems for NR management avoiding conflicts. SNRLP will contribute to the objectives of the Sudan National Adaptation Programme of Action (NAPA). It is also aligned with the Sudan's National Agriculture Investment Plan (SUDNAIP).	Highly relevant to the country context and CCA needs. Some improvements were needed in conceptualizing resilience of competing priorities of different agricultural systems benefiting from past project experience. For instance, project did not sufficiently address the risk of exacerbating the tensions between nomadic pastoralists and sedentary livestock-crop farmers when assigning land rights.	Moderately Satisfactory
Uganda	Climate resilient roads and crop technology were in line with Uganda's NDCs	Overall project worked with highly marginalized communities in a climate risk prone area.	Satisfactory

Source: IOE Elaboration based on case studies.

Effectiveness of CCA Response – Summary of Evidence from Case Studies

Table 1

Effectiveness – Overall Assessment and Rating

Country Case Study	*Effectiveness of targeting & OUTREACH - benefits reaching communities, women, youth, indigenous peoples, and other marginalized*	*Progress towards Resilience Outcomes of CCA response*	*Performance of Non-lending Activities*	*Overall Assessment*
Bangladesh CCRIP (2013-2019)	The projects geographic targeting precluded the project from tailoring solutions for women and poorer sections of the population. In addition, the project focus on infrastructure did not lend to meeting inclusion needs beyond participation of women and poor.	Project is very likely to be up scaled. The project infrastructure proved to be climate resilient to regular monsoons and cyclones. Disruption of traffic in monsoon season was substantially reduced. Similarly, market infrastructure and roads were able to withstand Cyclone Amphan.	Good co-financing partnerships between international development partners. Scaling up of results through mainstreaming of practices into national infrastructure building codes and into LGED's practices. Knowledge sharing within IFAD (between CCRIP and newer project PROVATI) and with partners (LGED)	Satisfactory Project focused mainly on providing climate resilient infrastructure. Overall project was highly effective in reaching its output targets. Constructed structures proved to be climate resilient. IFAD had long term partnerships with relevant government authorities and entered into this project with strong partnerships with ADB and KFW, which proved to be useful in making the project more visible. It is very likely that CCRIP design will inform the national standards for climate resilient infrastructure that is being developed. Gender considerations were included in design but women participation in the markets was lower than anticipated when they opened.

Burundi PRODEFI-II (2015-2021) PIPARV-B (2018-2025) *	Projects target overlapping provinces in the Central Plateau of the country. The earlier PRODEFI-II focused primarily on developing marshlands through value chains for rice and dairy. MTR recognized that the project was overlooking more vulnerable groups inhabiting the adjoining hillsides. As a result, PRODEFI-II and the more recent PIPARV-B started to focus on a more landscape based (integrated watershed management) and community-driven approach targeting the all production systems involved. Also, projects and guidance expressed the awareness of the need to assess the specific CCA needs of the different vulnerable groups and cross-cutting beneficiaries involving women, youth and the Batwa minority. Project beneficiaries were 39% women (targeted 40%), according to the latest supervision report.	The project focus shifted from a value chain-centric approach focussed on marshlands under the earlier years of PRODEFI-II towards a more climate change adaptive and social and environmentally inclusive and community driven "integrated watershed management" approach, covering a more diverse portfolio of value chains development catered to the needs of different beneficiaries' groups.	PRODEF-II contributed to the national policy against soil erosion and establishing the national technical standards for climate resilient rural engineering of hydro-agricultural infrastructures. Knowledge management and communication were handled at national level but inadequately. Key partnerships with national agencies (IGEBU, ISABU) and national NGOs exist but need strengthening to build institutional capacity and also to produce solid knowledge products.	Moderately Satisfactory IFAD's country strategies and the evaluated Projects reflect a clear CCA mainstreaming awareness and approach. Both projects were environmentally and socially inclusive and involved integrated watershed/ landscape management. More attention could still be given to CCA vulnerability of target groups, the role of wildlands, overall spatial planning, monitoring and evaluation (GIS, remote sensing) and coordination with other international development partners.
Belize Be-Resilient (2018-2025)	No available information on the effectiveness of targeting and outreach. Design and implementation used climate vulnerability maps to target. These maps were to be updated periodically	Project has a strong potential to achieve its CCA objectives and strengthen resilience of targeted communities and populations	KM: The project design included KM and partnerships as one of the core activities for sustainability and impact. However, there is no available data on the projects effectiveness of KM. Scaling up: Scaling up is seen as a potential, from the design of the programme and its activities. The project has the potential to expand and replicate the interventions in other communities that have similar characteristics and challenges of the beneficiary groups.	N/A - Project became effective recently The project is in its very early implementation stages. Its design and overall approach shows potential for transformative effects, particularly for building resilience among the most vulnerable population. Climate response systematically analysed related vulnerabilities and used climate vulnerability maps to identify target groups

Bolivia ACCESOS-ASAP (2013-2019)	The ASAP MTR (2018) noted that the project responded well to community demands and its design took into account project level agro-ecological characteristics. The project reduced the workload of women beneficiaries (mainly in relation to accessing water) and increased their assets. Youth related outcomes were observed, related to entrepreneurship as well as natural resource management (60% women, 40% men and 50% youth).	All 16 municipalities involved in the ACCESOS-ASAP integrated CCA risk management plans into their Territorial Development Plans. 4,231 families increased their natural and physical assets to manage climatic risks. 4,321 households received targeted information on climate change. The project enhanced the capacity of community groups, providing them with skills to reflect on priority issues and engage/interact with policy makers and other interested parties on DRR and CCA. However, the strong focus on climate resilience elements to some extent, came at the cost of bio-diversity.	The KM approach was successful in allowing target groups and communities to gain new experiences, learn about new technologies to build resilience building and a manage climate. Learning was mainly at local level, and not at national-level. Concepts/specific experiences from Bolivia were being used in the work of other countries in the region. A good potential for scaling and replication was demonstrated at municipality and community level (horizontal scaling). Partnerships were established with HELVETAS and UN Women. The cooperation with HELVETAS contributed importantly to strengthen climate change/risk capacities within the IFAD Implementation Team. It allowed the team to adapt these tools and apply them in the assessment of interventions within other ACCESOS municipalities (non-ASAP municipalities).	Satisfactory The implementation pursued a community based approach. Youth inclusion was successfully achieved. Challenges remain, including weak women participation and their representation within communities. The project played a significant role in supporting community-based land mapping that effectively tapped available local, indigenous knowledge and experience within the communities. Overall, the response to climate change/risks was effective. Vulnerability was reduced through investments in risk reduction and adaptation measures implemented within the target areas.
Chad PARSAT (2015-2022)	The targeted regions in the Sahel zone represent the most food insecure, poorest and climate change vulnerable areas. Targeting of women and youth was satisfactory. Project was on track or ahead of design expectations- Beneficiaries included 47% women and 30% youth. Awareness of the need to assess CCA vulnerability in targeting was in its very early stages. The design respects the needs of transhumant pastoralists however no guidance was given to operationalize this during implementation. At the beginning, the Project established activities within ecologically sensitive/ protected areas. Only recently the Project developed a CGES document.	PARSAT carried out education activities (literacy, environment and nutrition) and engaged also with youth and women to raise awareness of climate adaptation needs. It improved agricultural water management practices but lacked an inclusive approach. It did not pursue a community-based larger landscape CCA planning process involving anti-erosive, ecosystem restorative and protective activities. The Project built climate resilient infrastructures for water management, roads and storage. It also supported climate resilient "income generating activities". It established a GIS system and in collaboration with ICRAF, initiated an impact study of agricultural practices it introduced.	Project did not have a systematic approach to policy dialogue on CCA. It planned to support NAPA via validation of policy and strategic documents and integration of CC in local development plans. It established partnership with EU on the AMCC+ project to support the National Strategy Against Climate Change. The geoportal developed by ICRAF was found useful by other Ministries as planning/monitoring tools. Communication tools were at work while work on knowledge products started recently.	Moderately Satisfactory Mainstreaming CCA was carried out well and project was effective, efficient and sustainable. Areas of Improvements include: Assessing the CCA needs of diverse vulnerable groups, improving guidance to respect competing needs of transhumant pastoralists, adhering to Environmental and Social Values and respecting and mapping environmentally protected areas. It is recommended that the project work towards a more community-based and wider landscape approach, and respect the role of wildlands.

Cape Verde POSER (2013-2022) mid 2017 onwards added ASAP funds, and became “POSER-Climate”.	Overall, targeting was satisfactory. The POSER parent project targeted rural areas of 7 of the 10 islands, based on poverty and agricultural potential. Of these, POSER-C targeted 4 islands to support "integrated water basin management". 50% of the project beneficiaries were women (MTR). However, only 27% was in management bodies. The Project was aware of the need to better assess the specific CCA vulnerabilities of the targeted beneficiaries.	In its end phase, the Project was working on monitoring approaches to integrate CCA concerns into rural poverty plans and activities. The "integrated watershed management" activities were fragmented and yielded limited results. These focused on solar powered drip-irrigation infrastructure development rather than anti-erosive and ecosystem restorative activities. Renewable energy through solar panels for water pumps would have led to significant savings in energy cost (50 to 90 %). A major drawback was the absence of rains during the last three years. Project design did not include CCA activities which were less “water/rain" dependent.	Project worked reasonably well with the Government, NGOs and private sector. Partnerships were established with relevant national agencies (example University of Cape Verde, INMG and ANAS) to contribute to the policy dialogue on agricultural water management/pricing. More involvement and coordination with other international partners were needed (For example, with Luxembourg). Some advances were made in monitoring (a GIS system was established), communication and knowledge product development.	Moderately Unsatisfactory Performance of POSER and POSER-Climate was weak in terms of effectiveness, efficiency and sustainability. Limited potential for mobilising water availability for agricultural use during the drought in the last three seasons was the main constraint. The project would have benefited from diversifying rural livelihoods (e.g. agro/eco-tourism and or off-farm activities, household water or energy use) to manage CC risks better.
Egypt SAIL (2014-2023)	Limited M&E data was available to assess targeting. Project documents do not spell out the targets for outreach to different sections, including women.	The project was highly relevant to the needs of the country. However, no progress towards outcomes was noted. Project faced long delays and its output delivery was expected to come to speed only in 2021. SAIL's climate solutions such as hydroponics and aquaponics lack clarity on the sustainability of the intervention.	Limited progress in non-lending activities thus far.	Moderately Unsatisfactory Overall, the project was very relevant to the country priorities. However, implementation was affected by delays. Bottlenecks to progress were beginning to be addressed. SAIL's climate solutions such as hydroponics and aquaponics lack clarity on the sustainability of the intervention. Limited progress in non-lending activities thus far

Ethiopia RUFIP II (2012-2019) CBINReMP (2013-2019) PASIDP-II (2017-2024) PCDP III (2015-2019) LLRP (2019-2025)	RUFIP II: The project served 8.6 million rural households (46% females). CBINReMP: No information available PASIDP-II: No information available PCDP III: 1) Cumulatively, 617,104 enrolled in project schools (Baseline: 73,784); 2,526,632 had access to improved water sources (Baseline: 800,000); 1,457,714 with access to a basic package of health, nutrition, or reproductive health services (Baseline: 510,000); Public services address the priority needs of 83% of male-headed and 77% female-headed households in project kebeles (Baseline: 43% M & 28% F); 15.3% of households in target project kebeles were members of SACCOs (Baseline: 5.4%). LLRP: No data on beneficiaries reached, project started in 2019.	PASIDP II was effective in providing sustainable irrigation water and increased yields. RUFIP II was effective in supporting poor rural households access financial services. CBINReMP was effective improving farming systems on degraded hillsides in kebeles. But in the other kebeles, Project investment per household was insufficient to help target groups improve their livelihood gains. CBINReMP accorded land certificates that included husband and wife's names or women's names in women-headed households. This contributed significantly to strengthening gender equality in decision-making within the household and the community PDCP III was effective in implementing absorptive, adaptive, and transformative strategies that support the maintenance of properties of pastoral and agro pastoral systems such as mobility and land use flexibility in time and space, in a landscape approach. However, woreda implementing structures exhibit weaknesses about culturally appropriate technical support to beneficiary communities.	KM: CBINReMP and RUFIP II had important design and implementation gaps in knowledge management. This was corrected in the later projects, PASIDP II, PCDP III and LLRP. PCDP III was designed to support policy studies and applied research, knowledge management and networking to enhance relevant stakeholders' capacities to engage in policy dialogue on pastoral issues. Similarly, LLRP design included a sub-component "Knowledge Management, Research, and Policy Support". Scaling up: the designs of PCDP III and LLRP include activities on policy engagement. However, evidence not available on scaling up performance. Partnerships: PASIDP II was particularly effective in mobilizing partnerships which proved useful in integrating CCA in its different interventions. In addition to Government partners, the CGIARs played a key role in implementing innovative CCA related activities. LLRP planned to establish partnerships with research institutions, universities, the private sector, etc., for strategic support where they possess a comparative advantage and high capacity.	Moderately Satisfactory The projects were effective in improving smallholders access to water and other natural resources. Women were well targeted and CBINReMP adopted gender transformative approach (transformative approach mainly focused on land tenure). PCDPIII was effective in building pastoral and agro-pastoral climate resilience as well as capacities and knowledge of smallholders to engage in policy dialogue. PASIDIP II was effective in building partnerships with government units and research organizations. LLRP provided a rigorous framework for tracking climate resilience of smallholders, and included KM as a project sub-component while aiming establish partnerships with research institutions and private sector. The recent projects effectively addressed the gaps in KM of the earlier projects. However, landscape approaches to enhance CCA showed mixed results. The results were not mainstreamed across the COSOP nor in national strategies and plans. The approach lacked pathways to influence national level CCA practices and frameworks.

Honduras PRO-LENCA (2013-2022)	PRO-LENCA did not include any direct activity to support women did not adequately consider gender concerns. However, the supported organizations were highly gender responsive[158] and that contributed to almost half the beneficiaries being women (compared to the target of 30%). This increased women's active participation in production activities. Likewise, the vast majority of project beneficiaries were indigenous peoples. Youth were attracted by the new technologies introduced by the project (the 25% target was reached for youth participation). By the end of 2020, PRO-LENCA strengthened the capacities of more than 7,000 families from 258 Organizations (55% men and 45% women) on issues of climate change and identification of vulnerable areas and adaptation measures	PRO-LENCA was an important and major project in the Honduran development context. It contributed to developing technologies, to local mobilization and engagement and to strengthening capacities. However, it did not have sufficient scope and depth to drive wider transformative change processes in the country. New, simple and innovative climate resilient technologies and practices were developed and introduced by the project, making use of traditional and indigenous knowledge. Field observation showed that these technologies made the production more resilient. The production system successfully survived the recent tropical storms faced by Honduras.	KM: No specific Knowledge Management (KM) strategy or plan for systematizing and recording of KM activities was in place. The project team did not include specific skills and competencies on KM. However, the project developed partnerships to strengthen KM. This resulted in useful and important knowledge platforms to be installed for sustaining and upscaling the supported interventions. Partnerships: Partnership with the Inter-American Institute for Cooperation on Agriculture (IICA) was very promising. Cooperation and coordination agreements were made with Alianza para el Corredor Seco (ACSUSAID) and Global Communities and Cooperation of Taiwan to develop some of its activities. The project had limited interaction and coordination with other UN agencies in Honduras. There is scope for stronger partnership with FAO and the WFP in Honduras. The project was not very successful in establishing alliances with the private sector for future activities related market access. Scaling up: PRO-LENCA showed potential for scaling up, particularly within the project areas, through increased efforts to inform and link up to other development actors within the departments. An improved interaction with municipalities and Mayors was generating a useful platform for expansion of project interventions.	Moderately Satisfactory PRO-LENCA was an important and major project in the Honduran development context. It contributed to developing technologies, to local mobilization and engagement and to strengthening capacities The technologies used traditional and indigenous knowledge and made agricultural production more resilient as evidenced by its performance during the recent tropical storms. The project design was not adequately gender responsive; women constituted half of the beneficiaries. The project developed strong partnership agreements with institutions and other development organizations in the country. Yet, challenges remain for achieving results in relation to natural resource and ecosystem management, mainly due to late start-up of the implementation of the activities contained in the micro-watershed management plans. The project did not present sufficient scope and depth to drive wider transformative change processes in the country, related to CCA and resilience.

[158] IFAD defines gender sensitivity as the ability to acknowledge and highlight existing gender differences, issues and inequalities and incorporate these into strategies and actions (IFAD 2017b)

Kenya PROFIT (2010-2019) UTaNRMP (2012-2023) KCEP-CRAL (2015-2023) ABDP (2017-2026)	PROFIT: Reached 441,091 households of smallholder farmers, fishers, pastoralists, women, landless labourers and youth with access to financial services (baseline: 180,000). UTaCNRM: Reached 188,235 households representing 941,175 people, against the target of 1,025,000 beneficiaries (205, 000 households). KCEP-CRAL: KCEP-CRAL reached 102,051 smallholders (44% women, 21% youth and 35% men) 55% of overall target ABDP: No information	Projects achieved successful dissemination of CCA technologies that saved energy, boosted agricultural production, or prevented crop losses. They included innovative practices such introducing biogas to boost returns to dairy farmers, and e-vouchers to enable cash-constrained cereal farmers. Projects fostered financial empowerment and strengthened the resilience of target groups. Projects also strengthened community networks of smallholder farmers. However, there was no significant investment in broadening social networks that went outside project boundaries. While UTaNRMP was effective in supporting processes with a potential for much improved climate-resilience governance, for the other three program initiatives the segmented vision of the natural and human systems led to a sporadic focus on ecosystem-based approaches.	KM: The four initiatives did not sufficiently contribute to climate change adaptation-related knowledge base. PROFIT lacked knowledge-sharing mechanisms. UTaNRMP made efforts to work with county and sub-county teams to collect success stories, document them, disseminate and transfer the captured knowledge to all stakeholders. KCEP-CRAL is yet to have a KM strategy. ABDP: Efforts to improve KM strategy were put in place, following recommendations of supervision reports. Scaling up: UTaNRMP developed a functional scaling up strategy. In the context of devolved governance, PROFIT, KCEP-CRAL, and ABDP fostered political scaling up. UTaNRMP developed horizontal and vertical scaling up. PROFIT implemented organizational scaling up. Partnerships: All projects sought to establish partnerships for Climate Resilience capacity building and NRM. KCEP-CRAL signed MoUs with Kenya Meteorological Department, the Centre for Training and Integrated Research in ASAL Development, the International Centre for Research in Agroforestry (ICRAF) and the National Drought Management Authority (NDMA). The project also brought together several ASAL related initiatives such as FAO's research, WFP's activities, EU funding, SIDA's work with NDMA, and Equity Bank's experience on input vouchers. UTaNRMP built effective working relationships with KWS, KFS, Rhino Ark Foundation and Mount Kenya Trust.	Satisfactory Projects showed substantial results in building resilience among its targeted population. They successfully disseminated appropriate CCA technologies that saved energy, boosted agricultural production, and prevented crop losses. UTaNRMP was effective in supporting processes with a potential for transformative climate-resilience governance. In the other three initiatives, lack of holistic approach to engage with the natural and human systems led to weak focus on long term environmental sustainability. Partnerships were a strong feature among all projects. KM was weak, while upscaling was likely at different levels.

Kyrgyzstan LMDP (2012-2019) LMDP II (2013-2021)	LMDP was mostly targeting vulnerable households primarily among small livestock producers. Women and youth were also considered in the project activities. Social mobilization activities ensured the participation of smallholders and poor households to engage in pasture management and access project benefits.	Pastoral systems were strengthened by the competitive micro projects (MP) of LMDP. Ecosystem restoration of pasture lands was addressed, however mostly with the goal of gaining more pasture resources to increase the herd size and not in order to increase landscape resilience. The new focus on the promotion of climate services was yet to yield results. This is in part due to technical shortcomings and partly due to weak institutional embedding and 'value chain' deficiencies (diffuse end-user focus).	The KM system was poorly developed hampered by; the technical software problems that affected its development. KM was perceived as a technical issue. There were noteworthy KM activities, such as the videos to disseminate good practices. However, dissemination was weak. The Project planned climate-related knowledge management through partnerships with institutions, donors, and practitioners at the national level, and by informing key policy processes. However, there is no evidence that these partnerships materialized. The project formed partnerships with local NGOs and government agencies (DPLF, KSRLPI) to develop methodologies and tools for pasture management.	Moderately unsatisfactory Overall, the projects contributed to strengthening climate resilience in the short term by focusing on weather variability and extreme climate events. However, the activities showed limited understanding of climate change risks that have long term systemic effects. LMDP activities focused on strengthening the resilience of pastoral production systems. IFAD's approach with locally implemented competitive micro projects (MP) was key to strengthening pastoral systems. Substantive partnerships were established with implementing agencies and relevant actors to strengthen methods and tools to improve pasture management. The new focus on the promotion of climate services was yet to yield the expected results- partly due to technical shortcomings and partly due to weak institutional embedding and 'value chain' deficiencies (diffuse end-user focus). KM produced limited results, and KM strategy must be strengthened. The current dissemination of weather information was inefficient.

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Madagascar AD2M Phase II (2015-2024)	AD2M's support to developing hydro-agricultural systems and promoting climate-smart agricultural production was effective in targeting the poor smallholder farmers, who were supported to improve crop production, food security, and income (85% of beneficiaries owned plots between 0.5 and 1 ha).	Effective development of complimentary systems of rain-fed agriculture on the Tanety and flood and recession agriculture in the floodplains within the same agro-ecological zones (traditional agriculture practiced at flooding recession continues to be practiced only when seasonal flooding allows). Rice cultivation became increasingly important in the valleys, made possible by forming smallholder organizations (such as Farmers Field Schools) and water users' associations. Effectively diversified household activities in targeted areas & ensured each user to adopt two cropping systems to promote CC resilience. Positive resilience results at household and community levels.	Insufficient capitalization to influence other stakeholders or policy processes. Not sufficiently capitalized its experience with CCA issues of smallholder farmers and disseminated lessons to potential users across the country and to inform national policy processes. Partnership with FAO on locust control effort. Relatively weak interactions with MEEF, no national-level partnerships with key stakeholders to inform CCA policy processes. Good collaboration with WWF on environmental education, CC awareness, improved stoves and meteorological data.	Moderately Satisfactory IFAD was a significant presence in the country. It effectively targeted the most marginalized, diversified their means of incomes to successfully promote resilience at household and community level. It did not sufficiently capitalize on these successes to share knowledge or influence policies. Project should adopt more effective strategic planning of climate resilience responses. It would benefit from enhancing its focus on developing capacities of target groups to achieve CCA rather than merely conforming with SECAP. Need for rescaling CCA from local to landscape level and consider the internal migrations processes. Room to enhance Government leadership. Missed opportunity of piloting and demonstrating transformative approaches.

Mali PAPAM (2011-2018)	The original nationwide targeting of areas with potential for irrigation was reduced to only southern regions after the start of civil conflict in the Northern region in March 2012. As a result, the project targeted the regions of Kayes and Sikasso. Project outreach was 120% of the target. 57% were women and 76% youth. However, the beneficiaries of the bio digesters were required to own 10-15 heads of cattle, and this would not be classified as "smallholders" in this Mali.	Low-lands development and related activities improved access to water for agriculture reached 85.4% of the objective. Access to climate information was increased and actions to open up roads allowed people to move around even during periods of heavy rain. Bio digesters would have saved trees, eased women's workload and aided the use of natural fertilizers. Improved overall awareness of communes, multisectoral government agencies and services provides on the issues related to CCA and linkages with sound environmental management involving a broader landscape. However, the sustainability of most of the activities was compromised by the limited time available to accompany the activities with appropriate training, due to the delay in added ASAP funds.	PAPAM/ASAP collaborated well with the Ministry of Agricultural as well as with the Ministry of Environment and contributed to the formulation of the National Strategy of Sustainable Development, the National Investment Plan of the Agricultural Sector (PNISA), advocated for the integration of the Communal Climate Change Adaptation Planning (PCA) approach into rural development projects in the region of Sikasso. KM: Communal CCA plans and annual forest monitoring reports produced (national forest service monitoring department SIFOR), several flyers. Organization of an exchange workshop with 8 ASAP projects in Francophone Africa and South-South exchange with Rwanda and Burkina Faso on biodigestors.	Moderately Satisfactory CCA mainstreaming in the country strategy was well developed. The PAPAM case study illustrated the challenges that come with an ambitious national sector wide program involving several funding partners and operating in a fragile political context. PAPAM contributed to the promotion of community-based and large landscape planning approach involving anti-erosive and ecosystem restorative activities. Such activities would be further improved if the interests of transhumant pastoralists and the role of wild lands were respected and systematically integrated in activities. The overall effectiveness, efficiency and sustainability of the Project were compromised because of the delays in adding ASAP component. These delays led to time constraints and inadequate training of beneficiaries and relevant officials.

Moldova IRECR (2014-2021) RRP (2017-2023)	Both projects deviated significantly from design-specified direct targeting. The government preferred to promote Conservation Agriculture among farmers with landholdings of 200 or more hectares while IFAD design limits the holding size to 25ha. The project experienced delays in recruiting a qualified Climate Specialist and also experienced delays in disbursement. The study found that target groups were not aware of the project services	Limited evidence was available to assess the overall effectiveness of the project and it's impacts. The monitoring system was strong and had annual outcome surveys to assess changes to resilience. However, the quality of these surveys were found to be unacceptable. Impact data were available in seven Farm Field Schools. The yield data for plots under Conservation Agriculture (CA) and adjacent plots without CA were analysed by an external agency. Performance under climate stresses in 2019 (higher temperatures and no rainfall) showed that CA plots provided significantly (129%) more yield than control group as long as CA was implemented correctly, while yields were marginally better (5%-10% when normal conditions prevailed. The soil health (nitrogen content, humus level) under CA showed significant improvements compared to the control groups.	Absence of initiating policy dialogue or promoting scaling up and noted (efforts left in the hands of RRP). Partnerships were strategic and would benefit of establishing closer links with smallholders associations. Number of useful KM products produced and an international conference on "sustainable and resilient agriculture" was organized.	Moderately Satisfactory Considering only the climate component, IRECR (completed) achieved its targets and was successful in introducing CA, FFS as well as in sharing CA knowledge nationally and internationally. The resilience was demonstrated when the project faced a severe climate stress. However, effectiveness of targeting was very weak. Though design limited the benefits to smallholders (smallholders were not defined but can be taken as those with less than 10 ha) project ended up benefitting those with 200 ha or more - The mechanized CA required heavy machinery, and its high cost was an entry barrier to smallholders. More participatory design was recommended to get the demand right and promote CA in smaller land owning (viticulture, orchards). The CCA was a standalone component without synergies with other components of the project (e.g. rural finance component as well as infrastructure).
Nepal ASHA (2014-2022)	As of 2019, 46% of the beneficiaries were women. More than 95% of beneficiaries belonged to Very vulnerable - Moderately vulnerable (V4-V2) categories. Of the beneficiaries, 52% of women occupy key positions to implement sub-projects prioritized in respective LAPAs.	ASHA (derived from ICIMOD's work) used GIS to map climate disasters in watersheds, known as sub-watershed assessments. These sub-assessments became recommended practice in Nepal's national LAPA framework of 2019. Similarly, ASHA also introduced participatory scenario development (PSD) which involved collective reflection on possible impacts of climate change on future livelihoods.	Scaling up - The sub watershed assessment and participatory scenario development of this project was mainstreamed into national LAPA framework.	Moderately Satisfactory The project is still under implementation. It faced delays that were beyond its control - ongoing decentralization in the country and the earthquake of 2015. Despite this, the project approach was being mainstreamed into national LAPA guidelines. Project effectively targeted the most vulnerable and women.

Nicaragua NICADAPTA (2013-2020)	The project reached 45,155 households of which 12,173 were women headed (27% of the total, 22% more than the target). The project reached 44,914 families involved in NRM and climate risk activities (25% above the target). Altogether 113,281 members of poor households of smallholder farmers were supported with CCA (13% above the target). Unclear to what extent the most poor and vulnerable were reached. Less effective targeting of indigenous peoples.	The project effectively addressed CCA, production issues and market access through convening key sector institutions in a comprehensive manner and was very likely to achieve outcomes.	The project established good partnerships with private sector (e.g., with Ritter Sport). High likelihood of scaling up as government institutions were prioritizing and allocating resources for learning and applying CCA and market access approaches of NICADAPTA. KM was systematically implemented only after the MTR. By the end of the project, a series of useful CCA experiences issues related to coffee and cocoa production were documented.	Satisfactory Overall, the project was effective. It displayed sound strategic climate focus and mainstreaming. Established strategic inter-institutional cooperation with key government as well as local institutions. High potential for scaling-up. Close partnerships with private sector allowed for direct market access.
Niger ProDAF-Diffa (2018-2025) ProDAF (2015-2024) RUWANMU (2012-2018) PASADEM (2011-2018) PRECIS (2019-2027)	107 FFS were launched (target 144 or 74%), benefiting 3,196 households (74% of target); 2,675 households (67% of target) were reached through the farmer-to-farmer dissemination mechanism (ACAP).	Agricultural production and productivity were increased by the project by mobilizing water for irrigation, promoting high-value crops as well as crop varieties tolerant to droughts and short-seasons, strengthening market access and managing upland natural resources which were essential for drought prone areas. Effective in working with producer organizations, social engineering activities, strengthening local rural actor's capacities. Supported forming smallholder cooperatives for production and distribution of improved seeds. Small ruminants' distribution in revolving funds but suffered shortcomings. Nutrition activities were limited by the absence of programming approach or linkages with other sectors. Conflict management with focus on rangeland management and local conflicts, inclusion of displaced populations by Boko Haram.	Innovative use of projects for advocacy, reflecting its indirect engagement in the dialogue on rural development policies in Niger. Assisted Natural Regeneration: Government recently adopted a Decree to accelerate its scaling up across the country. Room for improving KM. Collaborated with Rome-based agencies to strengthen resilience - with WFP, effective implementation of cash-for-work on supporting sustainable land management.	Satisfactory Agricultural production and productivity were increased; Innovative advocacy related to rural development policies. Assisted Natural Regeneration was scaled up by the GoN. Strengthened producer organizations was useful for enhancing adaptive capacities of smallholders. Effective focus on rangeland management and local conflicts. Record of effective collaboration with Rome-based agencies to support sustainable land management. Need for CCA's strategies to build upon country's climate resilience strategy. Room for improving KM.
Rwanda PASP (2013-2021) RDDP (2016-2022)	RDDP: By December 2018, the project had reached 75,990 households (76% of target) and delivered some activities in its strategy. Targeting mechanisms were erratic during implementation and targeting performance was only partially monitored. The project had no specific targeting strategy for youth. PASP: The project target to reach 40% women and 20% was not achieved as there was not a clear strategy to ensure enabling measures and activities reached these	The projects demonstrated empowerment of smallholder organisations through creation and support for farmer organizations and POs linked to HUBs in PASP; capacities were also strengthened through the creation of MCCs and value chains linked to dairy processing. There were some indirect benefits for ecosystem services in PAPS and RDDP but generally this area was given low attention; the focus was more on directed project activities. However, there was clear evidence of poverty reduction, increased incomes and positive	Scaling up PASP: MINAGRI intends to scale up the FFS to other crops and livestock activities. RDDP: has taken on board the 4P model developed by PASP and a new project (Kayonza Irrigation and Integrated Watershed Management Project) will adopt this approach. RDDP initiated several pilots to provide national scaling up potential. The Livestock FFS concept was new in	Moderately Satisfactory The projects demonstrated empowerment of smallholder organisations and capacities were also strengthened through the creation of MCCs and value chains linked to dairy processing. There were some indirect benefits for ecosystem services in PASPS and RDDP.

	sectors effectively. Total outreach to beneficiaries was 238,980. No disaggregated data were available to confirm if PASP reached 40% women through its activities. Focus on youth was limited (10%) and below the design target (20%).	contributions to enhanced food security and nutrition (through improved crop productivity and more effective milk processing, storage and distribution of milk to children and schools.	Rwanda and provides provided an opportunity to scale-up to other districts once adopted by national livestock extension services in MINAGRI and RAB. In RDDP, KM and communication activities were implemented as per design plan. These included a national event in agriculture, dissemination of activities and good practices through different communication outputs and events. Partnerships: The Rwanda Development Board through their UNFCCC focal point linked the SPIU into IFAD partnered with Rwanda Development Board (RAB), the national climate forum and other climate risk initiatives within the GoR Ministry of Environment. PASP was expected to partner with the Rwanda Environmental Management Authority (REMA) to address climate risks, but their linkage was weak. However, PASP did establish a strong collaboration with other institutions including RAM and RAB to enhance climate and environmental activities as well as linkages with cooperatives, unions and federations, and district governments.	Both projects suffered from a lack of clarity on differentiating between addressing short term climate risks (variability) and the strategic planning needed to adapt to the longer-term time-scales associated with climate change. The focus was too much on addressing climate 'variability' risks, rather than climate change per se. Both projects demonstrated success in scaling-up with the Livestock FFS showing strong likelihood of being adopted by Ministry of Agriculture and Rwanda Agricultural Board. Evidence of innovative approaches to knowledge management (KM) and impact beyond both projects were rather limited.

Sudan LMRP (2014-2022) IAMDP (2017-2024)	LMRP: Following the geographical targeting criteria 351 villages were mobilized in 2018 (100% annual target) with a cumulative of 700 villages (70% end of Programme target). In those villages, around 1,100 women's SCGs were formed (1,162 in 2017) with 42,000 members (46% of target). The total number of households reached as of now 91,480 (64% of target). IAMDP: Too soon to get data on effectiveness of targeting and outreach.	LMRP: the project diversified livelihoods, and contributed to a range of income generating activities (fattening process, saving and lending, agriculture, forestry, range, alternative energy and water service provision). It strengthened capacities to ensure livelihood resilience as well as adaptive capacity to climate change. IAMDP: No substantial evidence of progress towards results for this project. A number of specific activities, aimed at contributing to adaptation/resilience to climate change were undertaken. Adaptation measures were implemented adequately but could benefit from improvements.	(LMRP): Knowledge Management (KM) annual plan of the project was in line with the IFAD's Country Programme Knowledge Management Strategy in Sudan. Most of the activities in the plan were implemented. The Programme produced six SIU/LMRP documentary films and two success stories. KM strategy must be further enhanced. LMRP contributed to updating the national climate change adaptation strategy for the livestock sector. Establishing the public-private partnerships as a core of its activities, the project achieved did not achieve substantial results. IAMDP: the project considers several activities and strategies for KM, scaling up and partnerships. However, evidence on its performance is yet to become available.	Satisfactory (based on Performance of LMRP only) The project enhanced climate resilience by diversifying livelihoods, promoting income generating activities and building capacities. The project contributed to update the national climate change adaptation strategy for the livestock sector The Stock Route experience that contributed to conflict minimization and peace building was being scaled up. Public-private partnerships were not successful.
Uganda PRELNOR (2014-2022)	The targeting strategy was responsive to inequalities providing tailored support to the different needs of smallholder groups. The selection of parishes and communities combined social mapping with agro-ecological mapping. Current and planned community access roads (CAR) were used to identify potential areas where production could be increased to meet market demands. There was limited sex-disaggregated output data. No M&E data available on outcomes and impact to assess the final impact of the project. There is no evidence to assess the extent to which the project reached the different sub-target groups - food insecure, food secure and market-oriented households.	M&E data were not available on CCA outcomes and impact. The study found that an early warning system was developed, production practices were improved and asset transfer took place. Vulnerable households were empowered to improve their decision-making capabilities through household mentoring. 606 km (40 per cent) of community access roads was under construction, another 40 per cent in procurement and 20 per cent at the design stage.	Information not available	Progress towards CCA outcomes and impact were not tracked to assess the final impact of the project. Outputs necessary for resilience improvements were achieved. These include an early warning system was developed and in place, improved production practices and household mentoring and asset transfer, and community access roads were constructed to facilitate market access. There were concerns that the project did not adequately adhere to the social and environmental procedures of IFAD and the National Environment Management Authority (NEMA).

Source: IOE Elaboration based on case studies.

Table 2

Case study examples of scaling up of CCA Responses

IFAD project/s	*Evidence of success in scaling up adaptation activities*
Bangladesh	
Coastal Climate Resilient Infrastructure Project CCRIP (2013-2019)	The project was among the first to address climate threats in the design of infrastructure. Bangladesh faced cyclones and floods with increasing frequency and intensity. According to the PPE of the project, the area experienced the Amphan cyclone and subsequent flooding in May 2020 after the project was completed and the CCRIP roads and markets experienced minimal damage and continued functioning after the cyclone and flooding. The national guidelines for constructing climate resilience infrastructure are being developed by CReLIC and the PPE noted that it was very likely to draw from the CCRIP design approach including climate resilience.
Bolivia	
Economic Inclusion Programme for Families and Rural Communities in the Territory of Plurinational State of Bolivia ACCESOS-ASAP (2013-2019)	Bolivia has enacted several regulations to address risk management in general and climate risk management as a condition of budget allocations to municipalities. IFAD supported 15 municipalities and the constituent communities to qualify for state resources by introducing approaches and tools such as *Talking Maps* to integrate climate risk management, adaptation and modelling in their investments and territorial planning. ACCESOS also strengthened their capacities to use these tools. The approach empowered municipality and community institutions to plan and prioritize resources and investments and succeeded in leveraging additional resources from the State. Consequently, the *talking maps* developed by the community members resulted in wider uptake in other municipalities as a tool for preparation of development plans with climate risk management. In addition, the inter-communal competition model introduced by the project to seek additional resources from communities was replicated in other municipalities to compensate for budget limitations of municipalities. Limited ownership and strategic orientation of the Government of Bolivia limited the potential for vertical scaling up, but overall, the programme represents a very good example of community-driven and horizontal up-scaling.
Kyrgyzstan Livestock and Market Development Programme I LMDP (2013-2021)	The project worked with Kyrgyz National Agrarian University (KNAU) and World Organisation for Animal Health (OIE) to update the curriculum in pasture management reflecting the project experience. The collaboration with OIE was fruitful in assessing the quality of the curriculum and introduce new courses on animal welfare, bioethics, veterinary public health and food hygiene, and epidemiology.
Mali Fostering Agricultural Productivity Project PAPAM (2010-2018)	The design of PAPAM project (completed) showed a significant scaling up potential. It was a sector-wide project covering the entire country with its coordination unit embedded in the Ministry of Agriculture. PAPAM entailed partnerships with the World Bank, GEF and EU with the World Bank and EU supporting large-scale irrigation schemes and IFAD smaller scale irrigation systems targeting smallholders. Following a political crisis at the very beginning of the project and weak coordination between government and partners, the upscaling potential was largely reduced. The ASAP component, that was added later facilitated a partnership with the Agence de l'Environnement et du Developpement Durable (AEDD), directly contributed to the formulation of the National Strategy of Sustainable Development. The project also successfully advocated for the integration of the Communal Climate Change Adaptation Planning (PCA), a community-based large landscape approach, in the design and implementation of agricultural projects in the Sikasso Region.
Nepal Adaptation for Smallholders in Hilly Areas Project ASHAP (2014-2022)	IFAD piloted two innovation processes through ASHAP - it adopted a land scape approach and prepared sub-watershed assessment for mapping risks using GIS; and used community consultations to validate risks thus identified. Both practices were mainstreamed in to Nepal's Local Adaptation Plans for Action Guidelines 2019. IFAD actively promoted these in stakeholders' consultations and donor fora involving DFID, WFP, and UNEP among others. The project also engaged with different ministries through existing platforms and committees. These efforts raised the visibility of these innovations and contributed to the scaling up.

Nicaragua	
Adapting to Markets and Climate Change Project NICADAPTA (2013-2020)	Good potential for scaling up. Government institutions are prioritizing and allocating resources to interventions learning from NICADAPTA approach of pursuing CCA and market access. The project vision and strategy linked CCA, production issues and market access through bringing together institutions in key sectors and facilitating a coordinated action towards a common goal (linking production to market access)
Niger	
PRODAF-DIFFA (2018-2025) PRODAF-MTR (2015-2024) RUWANMU (2012-2018) PASADEM (2011-2018) PRECIS (2019-2027)	One of the scaled innovations is the "Economic Development Poles (EDPs)" approach, which combines the watershed/production basins approach and the territorial approach. The EDP approach was characterized by production basins whose surpluses were marketed with links to urban centres and hence, allowed economic development at the level of family farms, satellite collection centres and semi-wholesale markets and promoted demand for agricultural production. This approach was taken up in various regions of Niger for Regional Development Planning and by also by other partners of Niger such as the French Development Agency, World Bank, and Danish Cooperation. The new project PRECIS continues to advance the EDP approach within international trade corridors between Niger and Nigeria. The visibility of IFAD and its strategic partnerships as a result of its long-term engagement in Niger were important contributing factors to this scaling up
Rwanda	
Climate Resilient Post-Harvest and Agribusiness Support Project PASP (2014-2020) Rwanda Dairy Development Project RDDP (2016-2022)	The most successful national scale initiative was the Livestock Farmer Field Schools (L-FFS). FFS were a new concept in Rwanda but proved high successful through their roll out in the RDDP project. The approach is now being extrapolated from the livestock sector to crop sector and into other livestock related activities by the Government of Rwanda. IFAD involvement was effective at the country level but missed opportunities in driving international scaling up initiatives such as Participatory Integrated Climate Services for Agriculture (PICSA). IFAD is not viewed as a key player for scaling up but more on the delivery of 'on the ground' projects.
Sudan	
Livestock Marketing and Resilience Programme LMRP (2014-2022)	The LMRP made important contributions to scaling-up of the co-management of Stock Routes (SR) experience. The project contributed to minimize conflict and build peace among groups competing for water and rangeland. It worked with the groups of users of natural resources and proactively engaged and partnered with government institutions and other actors to facilitate an enabling environment. Actions included effective utilization of available studies and knowledge products to inform policy agenda, especially in institutionalizing the improved management and natural resource governance of the Stock Routes

Source: IOE Elaboration based on case studies.

Box 1

Win-Win Solution – Achieving economic, climate and environmental resilience

Planting Climate Resilience in Rural Communities of the Northeast Brazil (PCRP)

An important recently approved project adopted a restorative approach. PCRP is a USD 202.5 million investment led by IFAD, approved in 2020 and with strong contributions from the Government of Brazil, the GCF and beneficiaries. It addresses the entire semiarid area of Northeast Brazil (NEB) which forms a distinct biome and is home to 2 million family farms employing 6.5 million people.

The PCRP project is notable in its highly integrated approach over a very large scale and it's aim to restore functioning in an already degraded biome facing further degradation through climate change and by doing so bring significant gains to a larger number of smallholder farmers.

Drought in the region has been worsening since 1980's. Existing smallholder agricultural practices are increasingly becoming infeasible without increased irrigation capacities. One of the attendant effects of long term drought has been to increase the amount of brackish and salty groundwater now affecting about 75% of household use wells in the region. However water resources are already low and improvements in water capture, storage and distribution while offering temporary benefits to smallholders will accelerate depletion of the regions water resources. The PCRP project takes a distinguishing stance, the avenue to sustainable smallholder agriculture is through protecting and increasing water reserves achieved through a landscape scale approach emphasising natural solutions and engages farmers in transforming their production systems to protect and grow that resource.

The project comprised of three components: Climate resilient productive systems, providing water access and knowledge management and scaling. These components were integrated into a science-based approach to restore water resources of NEB to enable a sustainable future for smallholders. Climate resilient productive system is the core of the approach to climate resilient agriculture to increase availability, flow and retention of water in the system using a range of techniques such as 100% soil cover with resilient plant varieties, enhancing water retaining features of the landscape, extensive planting, active pruning and thinning, setting up cradles and natural fertilization. Restoration of the landscape takes time. Smallholder water needs in the interim were addressed by Component 2 while Component 3 will contribute to shifting current practices to more productive and sustainable practices, and scaling these.

A number of factors contributed to the restorative stance of the PCRP in project concept and design.

1. **Longstanding experience in the region**. The PCRP project is the most recent in a long series of IFAD interventions in Brazil starting in 1978 and totalling $450M up to the PCRP. This long experience has established a positive relationship which focused well beyond issues such as "getting the funding" from Brazil's perspective and "addressing immediate problems experienced by smallholders made worse by CC" on the part of IFAD. It seems from interviews that there was a high level of confidence that there would be a project and a shared interest and enthusiasm to go beyond shorter term approaches and reach to the systematic long term and worsening issue of drought as the underlying problem for ecosystems, smallholders and the economy.
2. As such, PCRP is a scaled up product of sustained knowledge management by partners. This is the stance taken by the four projects achieving 'do no harm' or better.
3. Co-financing from the GCF provided the resources for a thorough project development effort employing participatory methods and which incentivised addressing climate and sustainability issues directly.
4. Brazil is a middle income country with a substantial intellectual infrastructure in sustainability, agronomy, agro-ecology / agro-forestry and hydrology as well as all of the supporting technical capacities such as GIS, soil chemistry, botany, etc.

Table 3

Case study examples of 'Do No Harm' or Better

	Kenya	*Nicaragua*	*Niger*	*Burundi*	*Sudan*	*Mali*
Project	Upper Tana Catchment Natural Resource Management Project (UTaNRMP) 2012-2020;	Adapting to Market and Climate Change Project (NICADAPTA) 2013-2021;	Four IFAD-funded projects: Ruwanmu (Small-scale irrigation project) implemented in Maradi, Tahoua, Zinder, and Diffa regions; PASADEM (Food security and development support project) implemented in Maradi Region; ProDAF (Family farming development program) implemented in Maradi, Tahoua, and Zinder regions; ProDAF-Diffa in Diffa region; and PRECIS in Maradi, Tahoua, Zinder et Dosso Regions.	Agricultural Intensification and Vulnerability Reduction Project; PIPARV-B (2018-2025)	Livestock Marketing and Resilience Programme (LMRP), 2015-2022	Fostering Agricultural Productivity Project (PAPAM), 2011-2018)
Year approved, budget	2012 US$87.37 million	2013 US$37.0 million	Several Projects	2018 US$111.0 million	2014 US$119.2 million	2010 US$174 million
Typology rating	Do no harm +	Do No Harm	Do no harm +	Do no harm	Do no harm +	Do no harm
Scale (farm/community, local ecosystem, local and connected ecosystems, landscape)	The Tana River Basin is the largest and most important basin in Kenya. Its catchment covers some 95,950 km2 (approximately 17% of Kenya's land mass), and the flow of the Tana River basin is 27% of the total mean discharge along rivers in Kenya's major drainage basins.	Emphasises farm/community and local ecosystems, in North, Central and South of Nicaragua	Part of Great Green Wall initiative, projects together address the three climatic regions in southern Niger with significant portion of cropping, mixed livestock and market gardens	Connected ecosystems to landscape	Ecological zones and areas where environmental degradation and issues of climate change are adversely affecting the livelihoods of poor rural households	Emphasises smaller scale landscape/ecosystem-adapted approach referred to as "territory" or sometimes "water basin-approach'. The latter go beyond just irrigated parcels of individual or communal farmers and take the larger ecosystems functions and uses into account. Such 'water basin management" activities in the Project sometimes relate to irrigation activities adjacent to rivers

						and other times irrigation as related to lower located areas capturing rainwater referred to in French as "bas-fonds".
Main mechanisms	UTaNRMP - emphasis on biodiversity conservation and ecosystem services and building absorptive, adaptive, and transformative capacities. Mainstreaming ecosystem services into agricultural production enhances smallholder farmers CCA, and addresses conflict between agricultural production and nature conservation, in particular water security and nature conservation, farming and land management practices contribute to ecosystems resilience. Targets around 205,000 poor rural households whose livelihoods revolve around the use of the natural resources. Integrated participatory natural resources management with smallholders and CBOs to enhance CCA while proactively contributing to nature conservation objectives and environmental governance, water harvesting and storage, soil and water conservation activities and agroforestry address local water needs and recharge aquifers.	The project had a strong focus on adopting appropriate practices and technologies, caring for the ecosystem and managing natural resources as a holistic and non-separable issue. To manage natural resource, the project implemented a series of practices to conserve scarce natural resources and mitigate any negative impacts of CCA. This included wastewater treatment, organic agricultural practices, soil and water conservation meassures, and agroecological practices.	Assisted Natural Regeneration for recovery of degraded lanes through natural solutions including re-greening and increasing tree cover; natural solutions (construct spreading sills in valleys and anti-erosion structures upstream, water table monitoring and adaptive management, drip irrigation and similar water use management approaches, more suitable seeds, more natural and better managed fertiliser use, living hedges and windbreaks and mulching, large scale natural regeneration including planting and management of local woody species. Semi-pastoralism, zai agriculture, bridging social capital approaches to transcend community boundaries including establishing regional organisations.	Shift from engineered to natural solutions, strong attention to soil erosion and flooding, broadening scope to landscape scale including hills not solely marshlands, some protection of forested areas and restorative actions such as creating water surpluses for aquafers, more forest cover or agroforestry for mitigation, shade, nutrient and water retention or ensuring soil cove	LMRP has adopted sustainable natural resource management as a platform for change (cross cutting issue in COSOP) The project has adopted a clear and strong stance in support of natural resource management linking agriculture and livestock interventions to natural resource management and empowering communities to advocate for sustainable practices have been critical.	In brief on Project level, efforts were made to respect and restore ecosystem by i) using larger landscape-based community participatory-planning approach; ii) reducing soil erosion and increase water infiltration through installment of anti-erosive measures; iii) restoring land through plant and tree planting and use of improved agricultural practices; and iv) limiting deforestation by the promotion of biodigesters replacing wood fuels. Climate Adaptation Plans developed for 30 communes, supported besides water management type of developments also anti-erosive, restorative and tree plantation activities, apparently going beyond "do no harm" on ecosystem management. However, it was reported that communities prioritized the more "productive" over the environmental activities, and the recent field visit reported mixed results on the maintenance of both the productive and more environmental focused activities.

Leading action(s)	Integrated participatory natural resources management to enhance smallholder farmers' CCA while proactively contributing to nature conservation objectives and environmental governance	The project applies a targeting strategy with geographical criteria related to agro-ecological vocation for coffee and cocoa production The project worked with farmers and their organizations to understand recovery of the ecosystem and natural resource management as "goods" that, on the one hand, allow to comply with international standards for marketing and export while, on the other hand, contribute to wellbeing and reduced vulnerability within the communities. However, the project mostly focused on farm-level activities, and did not recognize the need to address their links to landscape-level ecosystem effects	Restoration of degraded land in a framework of integrated watershed management and connecting communities through Assisted Natural Regenerative approaches as a pathway to climate-resilient food security for rural vulnerable communities. Government decree to accelerate Assisted Natural Regeneration county-wide.	Conserve and rehabilitate environment and natural resources (integrated watershed management, anti-erosive measures and ecosystem restoration), Livelihood diversification (including non-farm activities), Climate resilient crop technologies, Support to livestock management, Value chain support, Climate resilient rural infrastructure, Strengthen individual and institutional capacities, Knowledge management, Policy dialogue	The Programme supports farmer-managed natural regeneration (FMNR), which involves favouring the regeneration of trees and their sustainable management to turn crop fields into tree/crop/livestock systems	The activities have focused on the development and rehabilitation of lowlands ("bas-fonds"), micro-dams, village irrigation schemes, and small market gardening schemes. ASAP funding allowed the formulation of Communal Climate Change Adaptation Plans, and which facilitated the development of some of the above-mentioned sub-projects. 99 Supporting Communal Climate Change Adaptation Plans. The Communal Climate Change Adaptation Plan (PCA) is a planning of adaptation measures resulting from a participatory diagnostic exercise involving several sectors

Source: IOE Elaboration of Learning Theme Study – Nexus.

Table 4
Assessment of Nexus Performance of Case studies

Country	*Consensus typology rating*	*Project(s)*	*Date project initiated*	*Comments (from aggregation reports)*	*Relative importance of environment to overall project concept*
Bangladesh	Aware		2013-2020	IFAD project addressed Climate resilient rural infrastructure, strengthen individual and institutional capacities, Knowledge management, Policy dialogue and contributes to eco-system restoration. CCRIP infrastructure consisted in many cases of some upgrades to existing structures, with no major negative environmental impact expected from programme activities (e.g. road/culvert drainage congestion, excess soil erosion etc). Market infrastructure causes higher level of waste creation. The PPE of CCRIP which was undertaken in parallel with the case study did not find evidence of any sustainable solid waste management system in the sampled markets. Market solid waste and wastewater is instead	Minor

				dumped or disposed into nearby lowlands or water bodies which harms the ecosystems in the target areas.	
Belize	Aware	Resilient Rural Belize	2018	Project on existing farmed land will not expand ag footprint to forested or other areas, avoids extensive protected and reserved areas. Focus is on adapting farm and PO capacity in production using CSA and selling limited number of vegetable crops and pineapple for local markets including drainage and irrigation using existing largely unassessed aquifers, water management groups to be established.	Considered
Bolivia	Aware	Economic Inclusion Program for Families and Rural Communities in the Territory of Plurinational State of Bolivia (the "ACCESOS Program" which was added an ASAP component – becoming the ACCESOS-ASAP Program)	2013	While there has been a strong focus on resilience elements in the program, this has to some extent been at the cost of the key biological elements for adaptation (soils, crops, seeds, water and reforestation). These elements have not been fully considered and - mainly for budgetary reasons - only to some extent been taken into account in the community competitions and investments. Focus group discussions also revealed that human-induced impacts on ecosystems were not understood in their cause-effect relations, for example that an increase in climate-related risks could be associated with bad land management practices.	Minor
Burundi	DNH	PRODEFI-II (2015-2021)-Value Chain Development Programme Phase II-nearing completion, and PIPARV-B (2018-2025) -Agricultural Intensification and Vulnerability Reduction Project in Burundi - recently started.	2015 & 2018	Ecosystem, landscape scale and focused actions are adopted in the second project with a shift from engineered to natural solutions, strong attention to soil erosion and flooding, broadening scope to landscape scale including hills not solely marshlands, some protection of forested areas - but limited restorative actions such as creating water surpluses for aquafers, more forest cover or agroforestry for mitigation, shade, nutrient and water retention or ensuring soil cover. These actions might start to appear given the progress from prior project, likely needing some knowledge management capacity gains. Both projects involve explicit activities to restore ecosystem restoration activities that have advanced satisfactorily, the effectiveness however is not being monitored. Overall, the landscape approach designed under PIPARV-B would benefit from a spatial assessment of the various ecosystem services and functions to different type of users, including the role of wildlands.	Central
Cape Verde	Aware	Rural Socio-economic Opportunities Program (POSER,2013-2022) , with emphasis on the time from mid 2017 onwards when POSER-Climate, a complementary ASAP funding initiative was added	2017 (when enhanced)	Implementation of agricultural practices that reduce water requirements and have a positive impact on water management. This situation has devastating effects in terms of the fragility of ecosystems. Natural resources are mobilized and managed in a sustainable and climate-resilient manner. In 2016, the integrating climate smart and watershed management approaches were introduced in PRLPs; ii) Establishing a Geographic Information Systems (GIS) and digital watershed mapping; iii) Supporting investments to enhance capture, access and efficient use of agricultural water while promoting renewable energy use within watersheds; iv) Supporting investments to improving water infiltration (water and soil conservation) and afforestation in watersheds; v) Strengthening institutional and farmers monitoring and use of agro-meteorological information; and vi) Engaging in policy dialogue on agricultural water management policy and pricing. As mentioned earlier, the new course taken by POSER after the MTR entailed a focus toward mostly larger "structural" investments which would subsequently drive development of additional relevant micro-projects of either collective or individual interests. The nature of such structural investment would mostly address water scarcity for agricultural	Minor - is relatively central to the plan but almost missing in implementation

				use accelerated by climate change trends enhanced water availability. The design of POSER as complemented with POSER-C could potentially have some positive impact on ecosystem restoration through is watershed management related intervention against erosive risk and with improvement of water infiltration, soil conservation and reforestation, as well as the promotion of renewable energy. However, these activities have experienced delays attributed to procurement problems and/or underestimation of allocated budgets.	
Chad	Aware	Project to Improve the Resilience of Agricultural Systems in Chad (PARSAT)	2014	The Project design aligns more precisely with the strategic objectives of the COSOP 2010-2015 being: i) "To improve access to and sustainable management of water resources and ii) "To improve access to input and produce markets in value chains where rural poor people have a comparative advantage. Some of project activities seek better agricultural management and involve the planting of trees, such as along roads and buildings, as well as related to nutrition and environmental education and the development of five community forests. Overall, the project seems to move, albeit slowly in the right direction on environmental concerns.	Minor
Egypt	Aware	Sustainable Agriculture Investments and Livelihoods Project (SAIL)	2014	The project works in a highly water scarce context, characterized by high temperatures. In that context, the project encourages agricultural and non-agricultural livelihoods in new lands. It envisages farming in lands which are characterized by scarcity of water and foresees usage of water from Nile and groundwater, for the same. To mitigate this, project also planned drip irrigation schemes on farms. However, neither the drip irrigation systems nor solar pumps were installed due slow disbursement rates (7% as of 2019). Little backstopping from the Egypt sub-regional hub (now a multi-country office) on thematic issues of NRM and Climate Change. The sub-regional hub has only recently (June 09, 2019) added an environment and climate officer and the project was deprived of critical thematic assistance from the critical initial phase to the middle of the project life cycle	Minor
Ethiopia	Aware	5 IFAD-funded projects: Community-Based Integrated Natural Resources Management Project (CBINReMP) (2013-2019); Participatory Small-scale Irrigation Development Programme Phase II (PASIDP-II) (2017-2024); Rural Financial Intermediation Programme II (RUFIP II) (2012-2019); Pastoral Community Development Project III (PCDP III) (2015-2019); and Lowlands	2013	Strongest contributions to nexus were the CBINReMP (Community-driven participatory planning and implementation of 650 micro-watershed plans, and 227,500 ha land were treated; 17,600 ha of tree plantations on degraded communal lands, gullies, farmland). PASIDP-III provides sustainable irrigation schemes and development of 85 watershed management plans but these did not follow landscape ridge to valley approach, while small scale showing protection and improved ecosystem services for land and water and LLRP projects (just starting - design of LLRP which has an explicit model which treats climate resilience as a continuum in which absorptive, adaptive, and transformative capacities.	CBINRepMP important PASIDP-II important, RUFIP II minor, PCDP III minor, LLRP important

		Livelihood Resilience Project (LLRP) (2019-2025).			
Honduras	Aware	The Competitiveness and Sustainable Rural Development Project in the South Western border corridor (PRO-LENCA),	2016-2022	While the project has received a significant technical support both from IFAD HQ and the Regional Office, this has not been sufficient to compensate for a critical shortage of climate change knowledge and expertise in the project team. The expected results related to natural resource and ecosystem management have not yet materialized. This is mainly due to delay in the planned environmental investments for improving of the natural resource management and the resilience of agro-ecological and forest systems, fundamentally in micro-watershed management and protection/regeneration of forested areas in the project.	Minor
Kenya	DNH	Rural Outreach of Financial Innovations and Technologies Program (PROFIT) 2010-2019, Upper Tana Catchment Natural Resource Management Project (UTaNRMP) 2012-2020, Cereal Enhancement Program – Climate Resilient Agricultural Livelihoods Program (KCEP-CRAL) 2014-2022; Aquaculture Business Development Programme (ABDP) 2018-2026.		As far as building climate-resilience capacity is concerned, one of the initiatives – UTaNRMP - has a strong shift in emphasis on biodiversity conservation and ecosystem services and building absorptive, adaptive, and transformative capacities. Its objectives outstandingly address the nexus between rural poverty and ecosystem health in a densely populated and environmentally fragile water catchment area of critical national and global significance. It has used participatory natural resource management and biodiversity conservation strategies. UTaNRMP has remarkably supported the mainstreaming of ecosystem services in farming and land management practices, in particular for ensuring water security (i.e., water availability in quantity, quality and accessibility) and nature conservation. The recognition of this nexus is singular in the Country Program in its wide embrace and support for integrated participatory natural resources management to enhance smallholder farmers' CCA while proactively contributing to nature conservation objectives focused on environmental governance that facilitates dialogue and agreement among stakeholders. Thus, it was effective in achieving environmental outcomes and producing ecosystem services in addition to smallholder farmers' CCA outcomes. To mainstream ecosystem services, the project design included mobilizing a wide range of technologies and land management practices to ensure that farming and land management practices contribute to ecosystems resilience. The aim is to address local communities' water needs through water harvesting and storage ("blue" water), crop production requirements ("green" water) through soil and water conservation activities and agroforestry, and to recharge the aquifers…However, UTaNRMP was effective in enhancing the capacity of CBOs to integrate CCA options and ecosystem services in human dominated areas and conservation landscapes of the River Tana Basin.	Central

Kyrgyzstan	Aware	Livestock and Market Development Programme II, LMDP-II	2014	Strong focus on pasture infrastructure improvement – IFAD's pasture infrastructure rehabilitation activities have definitely improved the accessibility of remote mountain pastures, which in some cases had not been used since the soviet era. As a result, more livestock is being sent to high pasture areas these days, which is supposed to reduce the grazing pressure on pastures closer to the villages. However, what has been observed instead is that livestock owners are not actually reducing their flock size – but rather enlarging it, and sending additional livestock to the high pastures. So without effective measures to control livestock numbers, such interventions may develop into perverse incentives. Since the introduction of the livestock head – related pasture user tax, livestock numbers appear to be heavily under-reported. Therefore, IFAD (and others) have invested in livestock health improvement programs, encouraging livestock owners to report true livestock figures in order to receive treatments such as vaccines. In the context of CC, access to water is becoming an issue. In some places, IFAD was involved in the development of ground water pumping. However, in many places the aquifer is known to have lowered considerably, and no controls has been put in place to ensure sustainable use of ground water. While in the short term this may work thanks to the partial replenishment from glacier-fed mountain rivers, in the longer run water access is expected to become a major challenge since the heavily melting glaciers lose their role as regulating element in the hydrological cycle e.g., by shifting run off into the dry summer & autumn season. In general, IFAD's engagement in Kyrgyzstan is perceived very well also by donors, mostly based on IFAD's role in the success story of the new Law on Pastures enacted in 2009, which is devolving fundamental resource governance power from the central government to the local communities. This 'success story' is probably part of the reason why IFAD keeps developing their interventions in this direction – although there were some recent backlashes, where the national government is trying to take back at least the financial control and striped the communities from their financial autonomy (income from pasture use taxes is nowadays flowing back to the central budget, and only 70% is being dent back to the communities for pasture improvement activities).	Minor
Madagascar	Aware	Menabe and Melaky Development Support Project, Phase II (AD2M-II)	2015-2022	COSOP 2015-2019 addressed this recommendation and elevated climate resilience to a central focus in the formulation of its Strategic objectives (SOs). The Overall objective of the Country programme is to sustainably improve the incomes and food security of rural poor people, particularly young people and women. The two Strategic objectives are formulated as follows: (i) SO1 - Effective and climate change resilient production systems are widely adopted by farms and rural enterprises; and (ii) SO2 – Access by rural smallholders and rural enterprises to remunerative markets and economic opportunities in priority value chains is improved. While the Project has an adequate focus on CCA, its does not envisage using Ecosystem-Based Adaptation as the approach for to implement climate-resilience interventions. While the Project addressed the issue of optimal use of floodable areas, it would have been useful to provide due consideration to distinguishing between normal flooding with which smallholder farmers are already familiar and are using traditional cropping practices and abnormal flood events that can damage crops and the productive capital. This distinction is important as it would lead to designing climate-proof measures through the integrated wider ecosystem management allowing to further mitigate the abnormal climate risks. The design and implementation of AD2M-II do not explicitly focus on actions to reduce threats to ecosystems, the diversification of nature-based livelihoods and ecosystem services, and the improvement of disaster risk management (DRM) capacities needed to enhance the resilience of the populations in the target regions. From the interviews conducted, the Evaluation deduced that the Project was not effective in bringing together the necessary stakeholders and interests to work together in order to address unsustainable practices in the wider landscapes as	Minor

				key step toward systemic change. The implicit underlying TOC does not recognize that there is differential vulnerability to climate change, ecosystems functioning in the watersheds, and agency across space and time. Agricultural production in the plains not only maximizes production but also minimizes ecoclimatic risks. However, as the effects of climate change are likely to worsen in the future, the question is whether it is possible to maintain the sustainable balance between production and the "anti-risk" function of the areas concerned without taking landscape-level measures to ensure sustainable management of the watersheds.	
Mali	DNH	Fostering Agricultural Productivity Project (PAPAM)	2011	From the start, the PAPAM project funds included a more specific environment funding mechanism through GEF funding (WF managed), which would focus on support to "sustainable land and water management" in particular of crop parcels. IFAD-funded interventions focused on small irrigation aiming at increasing agricultural production by expanding the area under irrigation in the targeted production basins. The ASAP financing was specifically directed to small-scale irrigation systems enabling the development of climate change adaptation activities and providing related capacity building. The activities have focused on the development and rehabilitation of lowlands ("bas-fonds"), micro-dams, village irrigation schemes, and small market gardening schemes. The support given went through the development of "sub-projects (SPs). This activity was reported to have advanced in particular after the additional ASAP funding allowed the formulation of Communal Climate Change Adaptation Plans and which facilitated the development of some of the above-mentioned sub-projects. The Communal Climate Change Adaptation Plan (PCA) is a planning of adaptation measures resulting from a participatory diagnostic exercise involving several sectors. Typical activities would be: repair of roads and establishment of brides to allow year-round access, distribution of improved crop seeds; promote the use of meteorological information; improve water management in support of an existing or to develop hydro-agricultural infrastructure, establish anti-erosion measures, plant trees, stabilize river banks, support apiculture and build storage buildings. In contrast, on direct Project level, IFAD's PCR reports that no Environmental and Social Management Plan (PGES) has been produced to guide the mitigation and compensation measures to be implemented for each of the project's interventions. In brief on Project level, efforts were made to respect and restore ecosystem by: i) using larger landscape-based community participatory-planning approach; ii) reducing soil erosion and increase water infiltration through installment of anti-erosive measures; iii) restoring land through plant and tree planting and use of improved agricultural practices; and iv) limiting deforestation by the promotion of biodigestors replacing wood fuels. However, in absence of monitoring and/or mechanisms to secure sustainability at the Project closure, the overall impact on the ecosystem of all activities is hard to judge. However, for sure an effort has been made to improve ecosystem management beyond "no harm". The design document (IFAD-ASAP), however, does emphasize its intended smaller scale landscape/ecosystem-adapted approach referred to as "territory" or sometimes "water basin-approach'. The latter would go beyond just irrigated parcels of individual or communal farmers and take the larger ecosystems functions and uses into account. Such 'water basin management" activities in the Project sometimes relate to irrigation activities adjacent to rivers and other times irrigation as related to lower located areas capturing rain water referred to in French as "bas-fonds". The effectiveness of this approach on social and environmental level is being discussed under other sections below (effectiveness, environment, and sustainability).	Important

Moldova	Aware	Inclusive Rural Economic and Climate Resilience Programmme (IRECRP) Rural Resilience Project (RRP)	2013 2016	The two IFAD projects promoted an uptake of conservation agriculture (CA) for field crops. This approach is appropriate for the climate risks identified in project areas, such as soil erosion and increasing frequency of droughts. In general, CA can reduce soil erosion, decrease water evaporation and increase soil moisture retention, improve soil health, and sequester GHG. Reliable evidence to verify if these benefits were realized across IFAD projects was not available. Limited evidence from Farm Field Schools shows that CA could improve soil health and build climate resilience of farmers if administered according to specifications. While climate resilience could be improved in the short term, the approach does not appear to have taken a conservation or ecosystem protective perspective. The design envisaged promoting organic fertilizers, yet use of chemical fertilisers and herbicides continues. The projects have not taken integrated approaches to water management or for agricultural production. Nor have they prioritised ecosystem protection or improvement. For example, water investments prioritised irrigation and rainwater capture infrastructure for farming, without addressing the identified problems of nitrates and salinity and the forecasted serious decline in water resources by 2050.	Minor
Nepal	Aware	The Adaptation for Smallholders in Hilly Areas (ASHA) Programme	2015	High level of emphasis on goats and cattle. Stall feeding proposed as a mitigating measure to protect hill vegetation from overgrazing. Stall feeding was not practiced uniformly. The project also took a sub-watershed level view of planning for LAPAs (Local Adaptation Plan for Action) which is an innovation in the Nepali context	Considered
Nicaragua	DNH+	Adapting to Market and Climate Change Project (NICADAPTA) 2013-2021	2013	The project focused on appropriate CCA practices and technologies that integrated ecosystem (environmental) and natural resources management considerations as part of a holistic approach. It implemented a series of offsets and measures to conserve the CCA response. This included wastewater treatment, organic agricultural production, soil and water conservation, and climate-friendly agriculture. These measures build further on the already widely applied agroecological practices in the country, in which ecological and social concepts and principles were integrated at the farm-level. One achievement of the project was to raise/reinforce the awareness among beneficiary organizations that to achieve sustainable economic benefit, it is necessary to treat ecosystem recovery and natural resource management as "goods" that not only allow compliance with international standards for marketing and exports but also contribute to the wellbeing and reduced vulnerability of beneficiary communities. In total, the project managed to reinforce the awareness of 44,914 poor farm-households in ecosystem recovery, climate risk and natural resource management (125% more than the design target). However, as noted in Table 3 of this Annex, the project mostly focused on farm-level activities, and did not recognize the need to address their links to landscape-level ecosystem effects.	Important

Niger	DNH	1. Ruwanmu (Small-scale irrigation project) which was implemented in Maradi, Tahoua, Zinder, and Diffa regions; PASADEM (Food security and development support project – hatched area on Map) implemented in Maradi Region; ProDAF (Family farming development program – orange area on the Map) implemented in Maradi, Tahoua, and Zinder regions; ProDAF-Diffa in Diffa region (green area on the Map); and PRECIS in Maradi, Tahoua, Zinder et Dosso Regions.		Treatments include natural and engineered actions to promote water capture, drip and more efficient irrigation, anti-erosion, ground cover, hedges and windbreaks, mulching - generally actions against strong winds, drought, flooding, as well as sequestration and efficient irrigation; small ruminants suited to landscape. The fourth recommendation is to implement an ecosystem-based (EBA) and integrated watershed management approach. In each targeted region, select a watershed to manage as a regional learning site for CCA, with an integrated packed of habilitating tools (master watershed management plan, ecosystem-based approach, EDP, social adaptation engineering).	Important
Rwanda	Aware	IFAD-funded programme addressing climate resilient post-harvest and agribusiness support (PASP) between 2014 and 2020, and (ii) Rwanda Dairy Development Project (RDDP) which commenced in 2016 and will complete in 2022	2014 & 2016	Some CSA technologies recommended were not feasible to implement due to local conditions. There was also a lack of appropriate energy sources available in some areas to support implementation. Positive environmental impacts reported in PASP linked to waste and waste-water management, milk processing and crop production. RDDP also recommended promoting water efficiency and best management practices for all levels in the dairy value chain. A climate smart livestock approach was proposed to acknowledge the environmental impacts of the livestock sector and encourage adaptation and mitigation. For example, applying manure in the root zone below the ground surface reduced evaporation, thus allowing a steady release of during crop growth.	Considered
Sudan	DNH	Livestock Marketing and Resilience Programme (LMRP)	2014 - 2022	One of three components addressed natural resources - community-led natural resource management and enhanced adaptive capacities and efforts IFAD supported included Conserve and rehabilitate environment and natural resources, increase availability of water and efficiency of water use. The LMRP is concentrated on the heartland of the semi-arid livestock producing areas in five States within Sudan. By focusing on traditional rainfed production systems, the LMRP is targeting poor rural communities largely dependent on natural resources, natural resource teams have been deployed to the project localities. This has led to improved climate mainstreaming in the project and in this process, 12 networks around natural resources involving 85 communities have been established. The project has	Central

				adopted a clear and strong stance in support of natural resource management within ecological zones and areas where environmental degradation and issues of climate change are adversely affecting the livelihoods of poor rural households. Linking agriculture and livestock interventions to natural resource management and empowering communities to advocate for sustainable practices have been critical in this context. However, in terms of implementation, this still remains a significant challenge until there is more clarity and direction on natural resource management at the policy level. The Community Action Plans (CAPs) will also support the eradication of invasive species. Within the last twenty years, invasive plant species have started to encroach on the natural rangelands of Sudan. The Programme will support farmer-managed natural regeneration (FMNR), which involves favouring the regeneration of trees and their sustainable management to turn crop fields into tree/crop/livestock systems. Woody perennial plants and shrubs interact with the soils and crops to create an agro-ecological system that reinforces multiple ecosystem services to increase overall crop productivity, and they also provide significant soil moisture in the crop root zone and mulch cover that can suppress weed growth. However, within a given ecosystem, other actors who are using or influencing the use of natural resource, such as NA authorities, larger farmers or enterprises, will be included in institutions and networks for improved governance and conflict management	
Uganda	Aware	restoration of livelihoods in the northern region *(PRELNOR)*	2015-2022	As mentioned under Effectiveness, PRELNOR is supporting various activities through technical and financial support to empower communities to sustainably manage their natural resources. These activities include the CBNRM plans, the distribution of RETs, testing of SLM practices, the promotion of pit latrines and community access roads with reforestation and water harvesting incorporated into their designs. The preparation of CBNRM plans has enabled over 400 communities to gain skills in village level appraisals for better natural resource and sustainable land management practices and to understand environment related issues that affect farming. A total of 217 CBNRM plans had been funded by MTR and a data monitoring system has been set up to record the outcomes and assess their sustainability – although training is still required of extension staff on data collection methodologies. Beneficiaries of the RETs reported that they have led to a reduction of fuelwood use by 50 to 60 per cent thus reducing pressure on woodlots and communal tree cover. Environment affecting interventions include more resilient crop selection, agroforestry, soil and water conservation, community access roads...The comprehensive approach to the project - tackling poverty and vulnerability (of farmer groups and vulnerable households), empowering target groups in agricultural production and marketing and communities in sustainable natural resources management, and promoting climate change adaptation – is noteworthy. (note no restoration)	Minor

Source: IOE Elaboration of the learning thematic study of Nexus between Human and Ecosystems.

Table 5

Effectiveness of Targeting – Case Studies

Type of Targeting	*Examples of Effective Targeting*	*Observations*
Community targeting	Bolivia (ACCESOS),	The program was highly participatory and had a community-based design and implementation process.
	Ethiopia (PCDP III)	Project effectively targeted the underserved and deprived pastoral and agro-pastoral communities
	Uganda (PRELNOR)	
Geographic targeting	Uganda (PRELNOR)	Generally, projects identify the most economically vulnerable areas from the 'deprivation' maps produced by the government;
		PRELNOR selected the poorest districts and sub-counties that had production and market potential. The number of project villages in each district was determined on the basis of each district's share of the total rural poor.
Direct Targeting	Madagascar (AD2M);	85% of beneficiary farm holdings was 0.50 - 1.00 ha;
	Uganda (PRELNOR)	Vulnerable households, mainly headed by women and predominantly in subsistence production and poorly integrated in social groups, were identified through participatory wealth ranking.
Climate Vulnerability	Belize (Be-Resilience),	As a small island located in the Caribbean hurricane belt, Belize is highly vulnerable to the impacts of climate change and climate extremes. A vulnerability Index map was used to target.
Targeting women	Cape Verde (POSER-C);	50% women (but only 27% in management bodies)
	Chad (PARSAT)	47% women
	Ethiopia (RUFFIP)	46% women, All projects in the country targeted women well.
	Honduras (PRO-LENCA)	Nearly half the beneficiaries were women
	Kenya (ABDP)	44% women
	Mali (PAPAM)	57% women
	Nepal (ASHA)	46% women
	Nicaragua (NICADAPTA)	27% of the households supported were women-headed
	Sudan (LRMP)	1,100 women's Savings and Credit Groups were formed
Youth targeting	Bolivia (ACCESOS-ASAP)	Youth related outcomes were observed in relation to entrepreneurship and NRM
	Chad (PARSAT)	30% youth
	Kenya (ABDP)	21% youth
	Mali (PAPAM)	76% Youth
	Uganda (PRELNOR)	15% youth (design target 15%)
Direct Targeting	Moldova (IRECR)	Design farm size less than 5 ha; actual sizes were well over 100 ha- mechanized CA required economies of scale and larger land size; the larger land size also reflected the government preferences.
Climate Vulnerability	Ethiopia (CBIReMP)	No poverty-mapping exercise nor vulnerability assessment was carried out
Targeting women	Bangladesh (CCRIP)	Allotted 30% of market slots to women but far less numbers actually utilized them. The project had no analysis of barriers
	Rwanda (PASP)	

		to women participation nor strategy in place to address the barriers.
		Less than 20% beneficiaries were women (target 40%). No clear strategy to ensure enabling measures and activities reached women or youth
Youth targeting	Rwanda (RDDP)	No targeting strategy for youth;
	Rwanda (PASP)	Less than 10% of beneficiaries were youth (design target 20%)
	Kenya (UTaCRNMP)	No significant youth activities were implemented

Source: IOE Elaboration based on case studies.

Table 6

Summary – Learning Note on CCA Knowledge Management in IFAD

Issue	*Examples*	*Exceptions*
KM is happening mainly at the project level (locally) and no strong links are established to the national level	Bolivia: The project took the needs of poor and climate vulnerable smallholder communities seriously and applied well-conceptualised tools, instruments and approaches for stimulating learning and knowledge management at local level. However, no strong links established to facilitate wider national-level learning. Burundi: Developed CCA related knowledge products and for better information sharing. Chad: The project started KM activities towards the end of its cycle. Produced and disseminated best practices and lessons learned. Delayed development of products such as lessons learned, training and handbook to accompany and promote the many project activities. This reduced the effectiveness, replicability and sustainability of project achievements. Honduras: PRO-LENCA project did not develop a KM strategy or plan for systematizing and recording of KM activities. The Project Management Unit did not have KM specific skills and competencies. In addition, the M&E system was not supportive for an effective and efficient KM (no KM module included). Thus, KM was not a visible element in the project design. Ethiopia: There wasn't a framework at the Country Programme level to guide pathways and processes to inform policy processes at regional and national government levels. Kenya: Weak knowledge-to-action and action-to-knowledge process. PROFIT lacked knowledge-sharing mechanisms. The PCR noted that this lack directly impacted the effectiveness and efficiency of the results achieved to meet development objectives. UTaNRMP made efforts to work with county and sub-county teams to collect success stories, document them, disseminate and transfer the knowledge captured Mali: A structured archiving and dissemination of project was missing. Niger: Rich experience at the project level was dispersed. Hence, building useful KM products to	Moldova: Farmer Field Schools were organized in project areas- this was a useful knowledge platform to exchange experiences related to conservation agriculture. There were international conferences organized, and television programmes conducted to promote CCA at the national and global level Nepal: DFID funded projects held exchanges with ASHAP and replicated practices in ASHAP to enhance individual livelihoods. There was a high level of informal exchange with donors, such as DFID and WFP.

	build future climate-resilience oriented programmes and projects was challenging. The project lacked effective KM systems to capture and share experiences with decision makers for scaling up and informing policy processes. Kyrgyzstan: Case study noted strong reluctance among development actors to share knowledge and information. The APIU under the government was mostly interested in reporting success stories, not failures from which the organization could learn much more. Implementing partners on the ground were functioning in silos and not positioned to respond to requests from IFAD KM experts to share information and 'best practices' or learnings. Madagascar: The AD2M-II project effectively implemented knowledge-to-action activities through Farmer Field Schools (FFS) to train smallholder farmers. Yet, the project lacked a framework for making this knowledge accessible to potential users at local, regional, and national levels. Sudan: Few bilateral, ad hoc or informal exchanges between different project staff did take place. However, structured knowledge- sharing and learning from this shared knowledge were deemed insufficient.	
Some of the best KM cases relate to those projects where strategic partnerships have been developed with universities or regional institutions and/or there has been spill-over to academia and an embedding in science	LAC (Region): Offers good examples of partnership with regional institutions (e.g. ICA) as well as collaboration among countries (e.g. Brazil-Mexico). The SSTC/KM centre in Brazil actively pushes for a broader KM agenda within LAC. As a result, interesting South-South partnerships were identified (e.g. among countries in Amazonia, and the use of Brazilian experts in an IFAD project in Rwanda (through ABC financing)). Belize: The recently-launched project envisages sustained dissemination and promotion of best practices and lessons learnt to beneficiaries and to the wider community. To do so, it has established partnership with the Faculty of Agriculture of University of Belize. KM products such as videos and literature will be supplied to the University Library so that information continues to be available for students and other interested parties to use as resources for their training as well	Bangladesh: IFAD has a long-standing partnership with its implementing partner, LGED. IFAD collaborated with ADB and KfW to finance the Coastal Climate Resilience Infrastructure Project (CCRIP) with LGED as an implementing partner. In addition to bringing in financial resources and longstanding partnership with LGED as well as experience in working in rural areas, IFAD facilitated consolidation of knowledge related to designing infrastructure to withstand cyclones and floods. LGED used these inputs among others to mainstream knowledge of climate resilient infrastructure design across Bangladesh.

	as to improve their farming practices. Burundi: The case study found that effective partnerships with academic institutions would entail considerable time investment and continuity to allow knowledge products to be developed. Cape Verde: An ongoing contract with the University of Cape Verde is expected to improve monitoring, facilitate an impact evaluation and facilitate development of improved knowledge products. Honduras: PRO-LENCA entered into several strategic partnerships and alliances, including with IICA and DICTA that resulted in useful and important knowledge management platforms for sustaining and further upscaling interventions. Kyrgyzstan: IFAD worked with National Agrarian University (KNAU) to develop a pasture manual and curriculum for teaching future pasture managers. The LMDP II project also worked with the Mountain Societies Research Institute (MSRI) the University of Central Asia (UCA) for curriculum development. The curriculum offered the potential for educating future resources managers with the findings of project experience. Nepal: IFAD used the knowledge generated by scientific partners such as ICIMOD and operationalized the knowledge in a project context and, after establishing its viability, transmitted and mainstreamed it into national guidelines. Nicaragua: Partnership with CATIE was established to strengthen dissemination and further uptake of practices.	
KM activities were mostly pursued in an ad hoc manner and lacked a clear and operational strategy. They were often activated only after recommendations from MTR and Supervision Missions, instead of pursuing a strategy from the very early stages of implementation.	Country case study examples: Bolivia, Burundi, Cape Verde, Chad, Ethiopia, Honduras, Kenya, Kyrgyzstan, Mali, Moldova, Nicaragua, Niger, Sudan. Annual Report on Results and Impact of IFAD Operations (ARRI) 2020 observed a declining KM performance ratings observed in IOE evaluations post-2015	Exceptions: Nepal, Rwanda. In addition: The launch of IFAD's Knowledge Management Strategy (2019-2025) resulted in increased attention to KM in recent projects (e.g. Belize and, in particular, Brazil) where KM aimed to serve more strategically as an input for scaling-up strategies and policy engagement and included closer collaboration or partnerships with universities or research institutes. participatory wealth ranking.

Source: IOE Elaboration based on learning theme study on Knowledge Management

Evaluability Assessment of GIS/RS Data for CCA

Table 1

Effectiveness of Monitoring using GIS and Remote Sensing (Geospatial Technology)

Countries	*GT Data Collected and Analysed by this TE*	*TE Findings (related to GT Use)*	*Recommended Uses for GT*	*Overall Assessment of GT Use and Awareness*
Bangladesh CCRIP (2013-2019)	TE benefitted from the analysis of the Climate Action Report 2019 and the PPE 2020 - both made good use of GIS data.	Good example of various uses of GIS – for identifying target communities, effective intervention locations, and project management and monitoring. Project identified densely populated areas and investigated the distance of households to markets to locate the marketplaces to construct. It mapped beneficiaries and used GT to support M&E.	Very important tool for planning and modelling coastal risks associated with climate change (sea level rise, coastal erosion features, tidal surge modelling). Potential use for flood modelling.	Overall rating - Satisfactory Project should consider additional use of GT for planning, managing and modelling climate risks and improve resilience of coastal communities and areas.
Belize Be-Resilient (2018-2024)	Project provided spatial data in a simple spreadsheet. TE analysed the compliance of IFAD's intervention locations with national regulations using data from an online spatial database.	Project seems mostly unaware of the potential GT may hold to support the project in terms of planning, implementation and particularly monitoring and assessment of activities. GT use involved simple project intervention mapping of target communities. None of IFAD's interventions in Belize seems to be violating the boundaries of protected areas.	Satellite derived information can be used to develop risk maps (monitoring storm tracks, mapping land cover features, assess infrastructure vulnerabilities), indicating potential storm tracks and landfalls, as well as projected impacts in terms of infrastructure hit by storms. Partnership opportunity with conservation agencies to generate national references of spatial information relevant for scenario modelling and development planning via an open national spatial data infrastructure (NSDI).	Overall Rating - Unsatisfactory GIS not used much by the project, though the potential for uses of GIS is very high. For instance, in developing an integrated climate risk management approach which is a high priority for Belize.
Burundi PRODEFI-II (2015 - 2021) PIPARV-B (2019-2025)	Sparse information received on GIS tools used in the project intervention.	Project was launched recently, hence no information is available on how the project may be using GT. However, GT was not used in the design of the project. Outsourcing a GIS component may remediate the weak capacity in GT, and address the issue at least temporarily.	Considerable potential to support integrated watershed management through modelling of processes such as surface water runoff, landslides or soil and debris flows. Monitoring of the slope stability of lands used for agriculture or livestock production is of high importance. For example, satellite-based (RADAR) sensors allow monitoring slope stability at fine scales at slow-onset behaviour (e.g., water infiltration phase).	Overall Rating - Unsatisfactory Considerable potential of GT for integrated water management but a low level of awareness for the power and potential use of spatial data such as land cover and use maps, modelled surface flow paths and runoff trajectories.

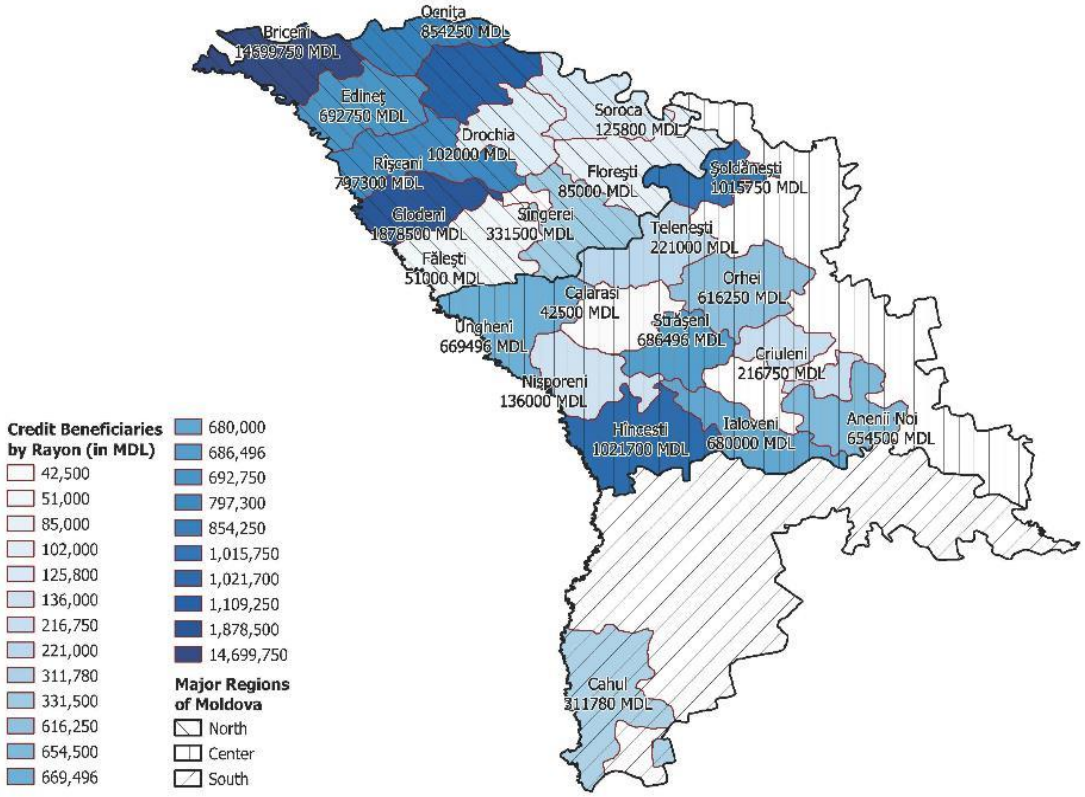
Cabo Verde POSER-C (2013 - 2022)	Received spatial data to localize and analyse the interventions. Received metadata was insufficient to verify data quality. TE assessed protected areas boundaries.	Project developed a website displaying GIS data. POSER-C developed reservoirs collecting surface runoff, but it remained unclear whether GT was used (quality and accuracy of available data seemed hardly enough). Some of POSER-C interventions were implemented inside the limits of protected areas.	When water is scarce, integrated watershed management is of high importance: Using digital terrain models, the potential surface runoff can be assessed sufficiently and the optimal location of reservoirs can be defined. Locations of dams and reservoirs close to the sea could be identified and pumping intensity reduced in order to reduce the danger of seawater infiltration into the ground water body.	Overall Rating - Moderately Satisfactory Level of expertise and knowledge in the project related to GT is encouraging. Considerable efforts were made to develop spatial database. GT is highly relevant to the project in the context of water scarcity.
Chad PARSAT (2015 - 2022)	Data shared by the project covered intervention sites as well as road construction locations. TE assessment of protected areas boundaries, of location of storages in flood prone areas. .	ICRAF was commissioned to develop online geoportal for data sharing featuring several thematic data layers. Results from analysis showed: 1) Road construction or rehabilitation interventions were completed in sensitive areas (protected areas under IUCN) in the south of the project area, 2) Very few storage locations (4 %) were prone to flooding. However, site visits to confirm are needed; moreover, only the location was determined, and not the structural integrity of the facilities (based on Sentinel RADAR images), 3) Undetectable low-tech structures for sustainable land management.	1) Sustainable Land Management (SLM) measures to reducing the speed of surface water runoff and increasing the infiltration into the soils are being assessed using high resolution satellite imagery, by detecting structural surface measures ('demi-lunes') or soil trenches before- and after heavy rain events.	Overall Rating: Moderately Satisfactory IFAD collaborated with ICRAF for the geoportal development and agro-ecological monitoring. ICRAFs approach aims at developing a network of African observatories features a strong spatial component – an expertise from which IFAD activities may benefit.

Ethiopia RUFIP II (2012-2019) CBINReM (2013-2019) PASIDP-II (2017-2024) PCDP III (2015-2019) LLRP (2019-2025)	Received basic spatial data on location and type of the interventions. Projects provided capacity building and hard/software of GT.	Data used for M&E purposes. A management information system (MIS) supporting the project M&E was setup with a GIS component. Unclear if and to what extend GT was used for designing for surface drainage and flood risk models.	1) GIS technology to support the facilitation of integrated watershed management planning, by providing training to federal, regional, district, and community level experts (training-of-trainers). 2) Soil erosion can be estimated with models, predicting average erosion rates on field slopes based on rainfall, soil type, topography, crop system and management practices. 3) Organic carbon in soils can be assessed using infrared spectroscopy, using a spectral library approach consisting of spectral signatures of soil samples representing the soils in the target area.	Overall Rating – Moderately Satisfactory Projects are aware of and realize the potential GT.
Kyrgyzstan LMDP II (2014 - 2021)"	Spatial database shared with the evaluation team was of poor quality and lacking metadata	Project developed a web-based map of interventions. However, well-defined intervention areas (treated pasture sites) are required to apply time series analysis of vegetation indices (NDVI, EVI) of the rehabilitated pastures. Therefore, GT did not produce any conclusive results.	1) Predictions of irrigation requirement for specific crops can be approximated once calibrated (area, crop types). 2) Detections of crop growth anomalies hinting to potential crop underperformance ('early warning') through crop monitoring based on spectral reflectance patterns of phonological crop stages 3) Yield predictions models are still speculative and complex to implement, 4) Pasture vegetation composition or productivity can be efficiently monitored using remotes sensing measurements (using vegetation indices, vegetation time series, spectral signatures). 5) Tracking of animal movements with GPS collars to better understand the roaming and grazing behaviour and grazing pressure , 6) Possible monitoring and mapping of subsurface water bodies.	Overall Rating - Moderately Unsatisfactory Project staff aware of the potential of spatial information and applications. Data collected was not useful to arrive at reliable conclusions.

Mali PAPAM (2011 - 2019)	No spatial data was provided.	None of GT applications were considered and used in the projects assessed in the Sahel zone. No spatial data was provided to analyse locations of project interventions (e.g., respect of RAMSAR sites boundaries, dominant land cover types, compliance of IFAD's interventions on protected areas).	1) High potential of early warning systems for floods: monitoring the extension of areas affected by floods using RADAR sensors to assess the extent of flooded areas at a sufficiently precise level). 2) Prevention of conflicts between pastoralists and sedentary farmers, GT combined with climate projections may indicate variability and scarcity of water or vegetation, powerful tool to analyse and support decision-making processes in the transhumance corridors.	Overall Rating - Unsatisfactory Overall capacity and awareness of the project staff was encouraging. GIS and remoted sensed analysis would have significant interest for floods early warning systems, prevention of land uses related conflicts.
Moldova IRECR (2014 - 2021) RRP (2017 - 2023)	Relevant and up-to-date data of location of beneficiaries shared by the project (quality of metadata was unsatisfactory)	Project developed a web GIS platform showing evidence of technical capacities. Need reliable ground truth documentation before testing GT technologies (timely and precise tracking of locations, crops planted, soils samples, and library of spectral signatures). Available data was helpful in tracking the beneficiaries and assess geographic targeting.	1) Crop monitoring is relevant for Conservation Agriculture (rotations, fertilizations, pests and weeds controls) based on spectral signatures of different crops. 2) For agroforestry systems (e.g., shelterbelts, linear hedgerows), monitoring is feasible with high-resolution imagery. 3) Detection of soil dilatation and evapotranspiration is possible on larger scales and based on existing models. 4) Monitoring of soil content in organic carbon using near-infrared spectroscopy (with representative soil samples).	Overall Rating - Moderately Unsatisfactory Project showed technical capacities in deploying GT and GT was useful for this TE in assessing the effectiveness of geographic targeting. However, it did not use GT to track resilience changes resulting from Conservation Agriculture - as such, it missed the opportunity to support a results-oriented M&E system and ecosystem restoration interventions.

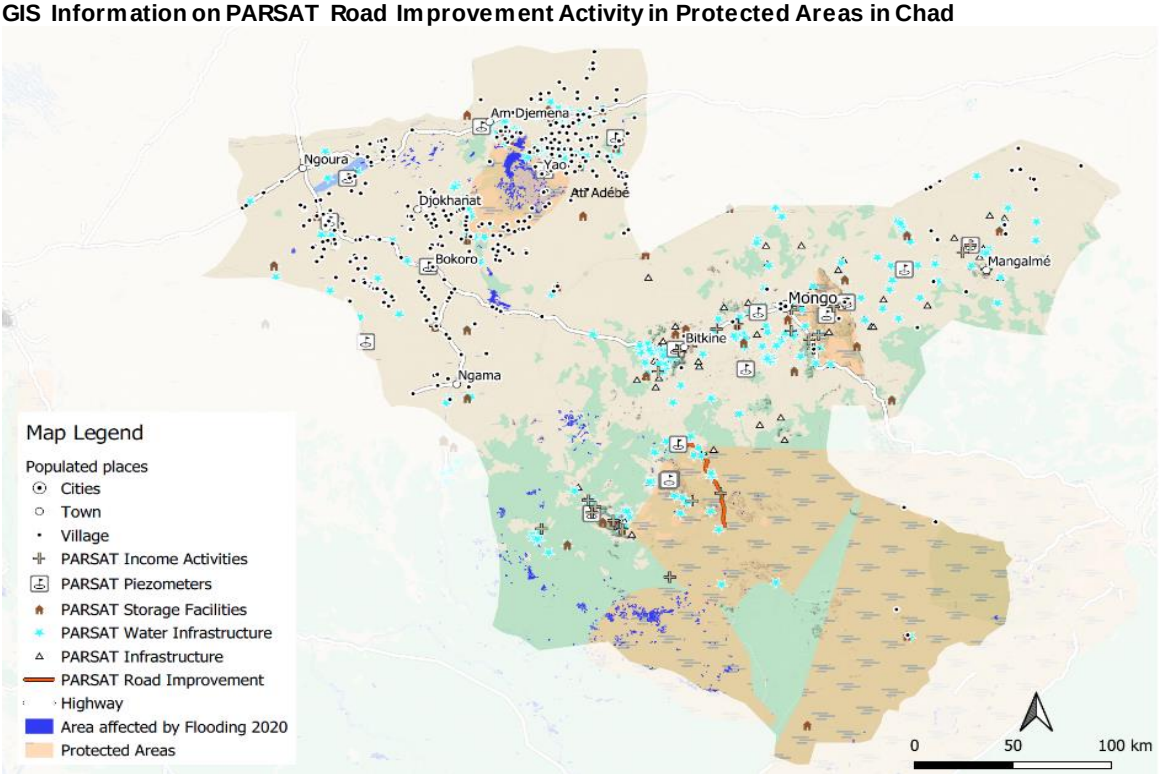
Source: IOE Elaboration based on case studies.

Figure 1
Locating Project Beneficiaries through GIS Information – Moldova (Rural Resilience Project)



Source: IOE Elaboration of GIS Information from RRP Project Management Unit

Figure 2
GIS Information on PARSAT Road Improvement Activity in Protected Areas in Chad



Sources: IOE Elaboration of GIS Information obtained from PARSAT, IUCN/WDPA, Google Earth Engine

List of key persons met

Name	*Function / organization*
IFAD	
Corporate Services Department (CSD)	
Saadia Imad	HR Special Advisor, HRD
Robert Swinkels	HR Specialist, Business Partner, HRD
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Max Von Bonsdorff	Chief Partnership Office, GPR
Federica Cerulli	Senior Partnership Officer, GPR
Oana Denisa Butnaru	Partnership Officer, Supplementary Funds, GPR
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Vittorio Buonanno	Finance Specialist, FCD
Virginia Cameron	Senior Finance Officer, FMD
Alessandro Lembo	Former Finance Officer, FMD
Janeth Gamboa	Finance consultant
Office of the President and Vice President (OPV)	
Constanza Di Nucci	Adviser to the President
Programme Management Department (PMD)	
Donal Brown	Associate Vice-President
Edward Heinemann	Lead Advisor to Associate Vice President
Asia and the Pacific Division (APR)	
Nigel Brett	Regional Director, APR
Liam Chicca	Lead Portfolio Advisor, APR
Fabrizio Bresciani	Former Lead Regional Economist, APR
Ilaria Firmian	Log-frame Analyst/Regional Specialist, APR
IFAD Bangladesh	
Omer Zafar	Former Country Programme Manager (Bangladesh),
Rasha Omar	Former Country Director / Hub Head (Bangladesh, India, Maldives) - *(at the time of the interviews)*
Sherina Tabassum	Country Programme Officer (Bangladesh, Maldives, Sri Lanka)
Christa Ketting	CCRIP Ex-Program officer (Bangladesh)
IFAD Nepal	
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Bashu Babu Aryal	Country Programme Officer (Nepal)
Nirajan Khadka	Country Climate Consultant
Other CDs met	
Matteo Marchisio	Country Director / Hub Head (China, Democratic People's Republic of Korea, Republic of Korea)
Thomas Rath	Former Country Director (Thailand, Viet Nam) *(at the time of the interviews)*

Ivan Cossio Cortez	Country Director (Indonesia, Malaysia, Papua New Guinea, Timor-Leste)
East and Southern Africa Division (ESA)	
Sara Mbago-Bhunu	Regional Director, ESA
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Luisa Migliaccio	Lead Portfolio Advisor, ESA
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IFAD Kenya	
Aissa Toure	Country Programme Manager (Kenya) *(at the time of the interviews)*
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IFAD Rwanda	
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IFAD Uganda	
Lakshmi Moola	Country Director (Uganda) [As part of CSPE]
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Margarita Astralaga	Former Director, ECG
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Ndaya Beltchika	Lead Technical Specialist - Gender and Social Inclusion, ECG
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Joyce Njoro	Lead Technical Specialist – Nutrition, ECG

Mfalila Kisa	Regional Climate and Environment Specialist (ECG/APR)
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	Alexandra Ricard-Guay. Senior Program Officer, Permanent Mission of Canada
	Gloria Wiseman. Counsellor, Deputy Permanent Representative, Canada
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Sudan	Sadia Daak. Agricultural counsellor, Sudan Embassy
Sweden	Lucas Lindfors. Programme and Policy Officer, Embassy of Sweden Petter Nilsson. Counsellor Deputy Permanent Representative of Sweden
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Aida Mohammed Adam	SIU Group Enterprise Dev. Officer
Mohammed Esheg Eltahir	SIU Group Enterprise Dev. Officer
Amir Mohammed Ahmed	SIU State Dev. Adaptation Team
Ali Abdelgalil Mohammed	SIU State Dev. Adaptation Team
Seham Abdelrahim	SIU Office Secretary
Anonymous (female)	Global supply-chain governance (SCG) Member, Al Adara Village
Anonymous (female)	Global supply-chain governance (SCG) Member, Al Adara Village
Anonymous (female)	Global supply-chain governance (SCG) Member, Al Adara Village
Anonymous (female)	Global supply-chain governance (SCG) Member, Al Adara Village

Amani Hamid	Global supply-chain governance (SCG) Facilitator, Al Adara Village
Anonymous	Village Development Committee (VDC) Members, Mogama Al Safa Village
Abdelmagid Hamid	Head of Village Development Committee (VDC), Naifer Village
Mohammed Osman	Head of Haffir committee, Naifer Village
Zeinab Elbagir	Global supply-chain governance (SCG) Facilitator, Naifer Village
International and donor institutions	
Adaptation Fund	
Dennis Bours	AF-TERG Secretariat Coordinator, Evaluation Officer
Asian Development Bank	
Andrew Brubaker	Senior Evaluation Specialist, Independent Evaluation Department
Garrett Kilroy	Senior Evaluation Specialist, Independent Evaluation Department
Global Environment Facility	
Juha Uitto	Director, Independent Evaluation Office
Green Climate Fund	
Martin Prowse	Evaluation Specialist
Andreas Reumann	Head ad interim, Independent Evaluation Unit (IEU)
Inter-American Development Bank	
Verónica Gonzalez Diez	Lead Economist
World Bank Group	
Stephen Hutton	Senior Evaluation Officer, Sustainable Development Evaluations, Independent Evaluation Group
Lauren Kelly	Lead Evaluation Officer, Sustainable Development Evaluations, Independent Evaluation Group
World Food Programme	
Rogerio Bonifacio	Vulnerability Analysis and Mapping Expert, remote sensing expert, Satellite Imagery Expert
Giancarlo Pini	GIS expert
Beneficiaries	
Burundi	
Aimable Ahitangiye	Karusi Province
Vella Baciboni	Karusi Province
Hermès Baranyedetse	Kayenza Province
Cyprien Barikurubu	Muyinga Province
Jérôme Bigirimana	Instructor, Gitega Province
Alexis Bizimana	Agronomy Instructor, Gitega Province
Antoine Ciza	Muyinga Province
Roger Hacimana	Ngozi Province
Thaddee Hakizimana	Karusi Province
Tharcisse Hakizimana	Karusi Province
Therance Hakizimana	Ngozi Province
Charles Hasabamutima	Ngozi Province

Benoit Karashiro	Ngozi Province
Canut Karenzo	Hill Leader, Kayenza Province
Eustache Katihabwa	Karusi Province
Baneste Manirakiza	Karusi Province
Ernest Manirakiza	Agricultural Technician, Muhanga, Kayenza Province
Marie Mbarushimana	Gitega Province
Christine Miburon	Ngozi Province
Habiyambere Michel	Ngozi Province
Felix Moburo	Ngozi Province
Rebecca Nahimana	Kayenza Province
Michel Ndarugirire	Agricultural Monitor, Ngozi Province
Simon Ndarugirire	Kayenza Province
Abel Ndaruzainiye	Karusi Province
Claudine Ndayikeza	Karusi Province
Francine Ndayisaba	Muyinga Province
Geneviève Ndayisenga	Kayenza Province
Colette Nduwayezu	Karusi Province
Jérémie Nduwimana	Kayenza Province
Corrette Nimpagaritse	Gitega Province
Christophe Nininahazwe	Communal Agricultural Technician, Kayenza Province
Apollinaire Niyibaruta	Agricultural Monitor, Ngozi Province
Elias Niyindemyi	Kayenza Province
Ferdinand Niyonkuru	Karusi Province
Sabine Niyonzima	Kayenza Province
Matron Nizigiyimana	Ngozi Province
Pascal Nkurunziza	President of the marshland management committee, Gitega Province
Charles Nikwigize	Ngozi Province
Denise Nshimirimana	Kayenza Province
Félicien Ntibatingeso	Kayenza Province
Ferdinand Ntirampeba	Agricultural Technician, Muhanga, Kayenza Province
Omer Ntirampeba	Karusi Province
Elaste Ntunzwenimana	Karusi Province
Remy Nyandwi	Hill Manager, Kayenza Province
Juvenal Nzigo	Ngozi Province
Berchimas Nziheba	Muyinga Province
Pierre Nzisabira	Agronomist Instructor, Gitega Province
Sylvain Nzohabona	Instructor, Gitega Province
Sylvestre Ruribikiye	Agricultural Monitor, Kayenza Province
Adrienne Sakubu	Agricultural Instructor, Ngozi Province
Bernard Sindakiba	Kayenza Province

Amissa Uwimana	Ngozi Province
Cabo Verde	
Adriano Andrade	Boa Entrada
Angelina da Graça	Ribeireta
Fernando Fernandes	Landowner, Ribeireta
José Filipe	Ribeireta
Claudino Furtado	Former President of the Water User Association, Boa Entrada
Filipe Furtado	Landowner, Ribeireta
Luís Moníz	Boa Entrada
Domingas Rodrigues	Ribeireta
Elsa Rodrigues	Resident, Ribeireta
Arlinda Semedo	Ribeireta
Chrislainy Semedo	President of the Water User Association and Beneficiary of Ribeireta, Fogo
Chad	
Oumar Dieudonné	Vegetables gardening beneficiary, Abourda, Dababa
Abba Hassan	Seed Producers of Bokoro, Dababa
Fatimé Hassane	Breeding Auxiliary, Amdjamena-Bilala, Fitri
Aché Issa	President of the Istifak union for fish processing and marketing in Yao, Fitri
Adoum Issa	President of the Tartafa Association, Ati-Adeb Spreading Threshold, Fitri
Moussa Abdoulaye Kaidallah	Facilitator Fikirna, Fitri
Hassan Mahamat	Adece Spreading Threshold Beneficiary, Dababa
Haoua Ousmane	Oil press activity beneficiary, Abourda, Dababa
Sadia Fougba Saleh	President Producer Organization of Baballah-Wassi (dried meat), Ndjamena Bilala
Mahamat Seif	President of the Ambasstna Environment Club, Fitri
Ahmat Malloum Zene	Chairman of the Dankala Store Management Committee, Fitri
Ethiopia	
Dagnew Dessalew	AMID small irrigation development association
Wubetu Nigussies	AMID small irrigation development association
Honduras	
María Ordelina Domínguez	Asociación de Productoras El Clavel
María Felix	Asociación de Productoras El Clavel
Ericka Marleny Gonzales	Asociación de Productoras El Clavel
Francisca Gonzales	Asociación de Productoras El Clavel
Presentación Nolasco	Asociación de Productoras El Clavel
María Santos Vasquez	Asociación de Productoras El Clavel
Maria Damiana Hernández	Cooperativa Alfarería CIALCOYL
Narcisa Hernández	Cooperativa Alfarería CIALCOYL
Yohana López	Cooperativa Alfarería CIALCOYL
Francisco Perez	Cooperativa Alfarería CIALCOYL
María Cristina Vasquez	Cooperativa Alfarería CIALCOYL

Miriam Cabrera	Cooperativa de Caficultores de Belén-COCABEL
Toñita Ponce	Cooperativa de Caficultores de Belén-COCABEL
Eladio Rivera	Cooperativa de Caficultores de Belén-COCABEL
Luis Tejada	Cooperativa de Caficultores de Belén-COCABEL
Andrés Guevara	CRAC Mejocote, Gracias
Juan José Hernández	CRAC Mejocote, Gracias
Antonio Orellana	CRAC Mejocote, Gracias
José Natividad García	CRAC Sta Teresa de Membrillo
María Reyna Lorenzo	CRAC Sta Teresa de Membrillo
Marvin Ovidio Lorenzo	CRAC Sta Teresa de Membrillo
Jacobo Lorenzo	CRAC Sta Teresa de Membrillo
José Ángel Lorenzo	CRAC Sta Teresa de Membrillo
Alejandrina Pérez	CRAC Sta Teresa de Membrillo
Jose Rolando Rodriguez	CRAC Sta Teresa de Membrillo
Catalina Sanchez	CRAC Sta Teresa de Membrillo
José Reyes Ránchez	CRAC Sta Teresa de Membrillo
Dorotea Reyes Martínez	EACP Nuevo Renacer
María Elena Orellana	EACP Nuevo Renacer
Billy Tejada	ESM CAFEEZA
Kyrgyzstan	
Abdimalik Abdykaarovich Egemberdiev	General Director, Kyrgyz Jayity, Kyrgyz National Pasture Users Association (APU)
Asanova Guljan	Head of Pasture User Unions (PUUs), Sary-Bulak, Issyk Kul Region
Urmat Omurbekov	Head of Pasture User Unions (PUUs), Cholpon, Kochgor, Naryn Region
Ruslan	Head of Pasture User Unions (PUUs), Jergetal, Naryn Region
Janybek Sultanov	Head of Pasture User Unions (PUUs), Dobolu PUU, Naryn Region
Kanibek Tylegenov	Head of Pasture User Unions (PUUs), Kara-Oi, Issyk-Kul Region
Madagascar	
Hoanjarako Avimiriko	*Farmer field schools*
Georgeus Beriaka	*Farmer field schools*
Lux Fagnampy	*Farmer field schools*
Maharesy Foetsy	*Farmer field schools*
Kavaly Germain	*Farmer field schools*
Victor Jorofely	*Farmer field schools*
Tsimagnavaky Magnmpy	*Farmer field schools*
Augustin Mahavita	*Farmer field schools*
Gustuse Navota	*Farmer field schools*
Fanjoa Moelsay Nimehako	*Farmer field schools*
Alfred Odette	*Farmer field schools*
François Pascal	*Farmer field schools*
Valentine Rajoma	*Farmer field schools*

Alfred Rakoto	*Farmer field schools*
Augustin Ranavalona	*Farmer field schools*
Edmond Rasolondrainy	*Farmer field schools*
Victor Raymond	*Farmer field schools*
Makatanty Robe	*Farmer field schools*
Firengea Robuste	*Farmer field schools*
Daniel Sinaotsy	*Farmer field schools*
Matiz Soanandrasana	*Farmer field schools*
Pierrette Sonie	*Farmer field schools*
Kavaly Tsaranandrasana	*Farmer field schools*
Marolaly Tsimatahotsm	*Farmer field schools*
Severin Vassa	*Farmer field schools*
Tismanoley Zafilahy	*Farmer field schools*
Charlotte Asoalaldo	Producers Organizations
Evaristle Brigitte	Producers Organizations
Francia Evah	Producers Organizations
Martin Fansmeza	Producers Organizations
Fanomezautsea Stanislas Harolahy	Producers Organizations
Seraphine Izovelo	Producers Organizations
Clarise Ketsa	Producers Organizations
Jean Francis Longony	Producers Organizations
Robert Mamoronga	Producers Organizations
Esther Nivosoa	Producers Organizations
Alphonse Philbert	Producers Organizations
Lucie Vigra Rafafindrafara	Producers Organizations
Jean Claude Randrianarivo	Producers Organizations
Animalala Rasoa	Producers Organizations
Bertiner Rasoanirina	Producers Organizations
Vololoniaina Razafindravelo	Producers Organizations
Laonirinaserafi Razafindravelola	Producers Organizations
Elisabeth Razaiarisoa	Producers Organizations
Fiarisoa Esther Roza	Producers Organizations
Zakatina Saratolotriniaina	Producers Organizations
Etienne Rajafimamandraibe	*Water associations*
Juluis Odilon Rakotonindrisna	*Water associations*
Adrianu Ravelonamamtsoa	*Water associations*
Biensimee Ravolszafy	*Water associations*
Alfred Razofindrasalama	*Water associations*
Mali	
Ourodje Bagayoko	Zantiebougou, Bougouni

Salimata Ballo	Bougoula village, Zantiebougou
Bintou Bouare	Tabacoro village, Koumantou, Bougouni
Bintou Coulibaly	Zantiebougou, Bougouni
Fatoumata Coulibaly	Zantiebougou, Bougouni
Sitan Coulibaly	Bougoula village, Zantiebougou
Kadiatou Coumare	Bougoula village, Zantiebougou
Koura Diallo	Tabacoro village, Koumantou, Bougouni
Fanta Diakite	Tabacoro village, Koumantou, Bougouni
Awa Doumbia	Farmer Organization Vice President, Zantiebougou, Bougouni
Djeneba Doumbia	Zantiebougou, Bougouni
Fanta Doumbia	Tabacoro village, Koumantou, Bougouni
Fatoumata Doumbia	Tabacoro village, Koumantou, Bougouni
Kadia Doumbia	Tabacoro village, Koumantou, Bougouni
Kamissa Doumbia	Tabacoro village, Koumantou, Bougouni
Korotoumou Doumbia	Tabacoro village, Koumantou, Bougouni
Maimouna Doumbia	Bougoula village, Zantiebougou
Ramatou Doumbia	Bougoula village, Zantiebougou
Satou Doumbia	Tabacoro village, Koumantou, Bougouni
Adama Kone	Bougoula village, Zantiebougou
Alima Kone	Zantiebougou, Bougouni
Astan Kone	Zantiebougou, Bougouni
Awa Kone	Tabacoro village, Koumantou, Bougouni
Chata Kone	Bougoula village, Zantiebougou
Djetene Kone	Bougoula village, Zantiebougou
Flateni Kone	Bougoula village, Zantiebougou
Kadia Kone	Bougoula village, Zantiebougou
Kadiatou Kone	Bougoula village, Zantiebougou
Karim Kone	Tonfa village, Zantiebougou, Bougouni
Konza Kone	Bougoula village, Zantiebougou
Malado Kone	Bougoula village, Zantiebougou
Mariam Kone	Bougoula village, Zantiebougou
Matou Kone	Bougoula village, Zantiebougou
Molobaly Kone	Tabacoro village, Koumantou, Bougouni
Moussa Kone	Tonfa village, Zantiebougou, Bougouni
Nana Kone	Zantiebougou, Bougouni
Ramatou Kone	Bougoula village, Zantiebougou
Sali Kone	Bougoula village, Zantiebougo
Salima Kone	Bougoula village, Zantiebougou
Sira Kone	Zantiebougou, Bougouni
Souleymane Kone	Bougoula village, Zantiebougou

Teneba Kone	Bougoula village, Zantiebougou
Wassa Kone	Tabacoro village, Koumantou, Bougouni
Yacouba Kone	Tonfa village, Zantiebougou, Bougouni
Adiara Mariko	Bougoula village, Zantiebougou
Awa Mariko	Zantiebougou, Bougouni
Batoma Mariko	Bougoula village, Zantiebougou
Bintou Mariko	Bougoula village, Zantiebougou
Chata Mariko	Bougoula village, Zantiebougou
Habi Mariko	Zantiebougou, Bougouni
Mariam Mariko	Bougoula village, Zantiebougou
Ramatou Mariko	Bougoula village, Zantiebougou
Sanata Mariko	Bougoula village, Zantiebougou
Minata Samake	Zantiebougou, Bougouni
Benta Sangare	Tabacoro village, Koumantou, Bougouni
Djeneba Sangare	Farmer Organization President, Zantiebougou, Bougouni
Amadou Togola	Tabacoro village, Koumantou, Bougouni
Awa Togola	Tabacoro village, Koumantou, Bougouni
Dansoba Togola	Tabacoro village, Koumantou, Bougouni
Dioba Togola	Tabacoro village, Koumantou, Bougouni
Harouna Togola	Zantiebougou, Bougouni
Koniba Togola	Tabacoro village, Koumantou, Bougouni
Kotou Togola	Tabacoro village, Koumantou, Bougouni
Madou Togola	Tabacoro village, Koumantou, Bougouni
Minata Togola	Tabacoro village, Koumantou, Bougouni
Orokia Togola	Tabacoro village, Koumantou, Bougouni
Saly Togola	Tabacoro village, Koumantou, Bougouni
Waraba Togola	Tabacoro village, Koumantou, Bougouni
NGolo Togoma	Tabacoro village, Koumantou, Bougouni
Sali Toure	Bougoula village, Zantiebougou
Moldova	
Eugen Adam	Lead Farmer of the FFS Roua Persicului
Vitalie Burlacu	Farmer, Natcuby Agro SRL
Mana Pancrat	President, Dairy Association
Pavel Prisacaru	President of the Sheep and Goats Association
Nicaragua	
Judith Mayerling Gomez Meza	Jóvenes Emprendedores De San Juan Del Rio Coco (JESR)
Zulema Asbel Moreno Olivas	Jóvenes Emprendedores De San Juan Del Rio Coco (JESR)
Rafaela Oporta Mendez	Cooperativa De Servicios Agropecuarios Boaco Viejo R.L
Harold Alfonso Membreño Tinoco	Cooperativa Multifuncional Cacaotera la Campesina R.L.
Maritza Centeno Gonzalez	Cooperativa Agropecuaria De Servicios Tonanzintlalli R.L.

Martin Antonio Gonzalez	Cooperativa Agropecuaria Multisectorial De Siuna R.L (Coopesiuna R.L)
Sudan	
Anonymous (male farmer)	Al Adara Village
Anonymous (female farmer)	Al Adara Village

Summary statistics of persons met

Category	*Number of persons met*
IFAD staff (HQ, Hubs)	127
Project Staff and Government	199
Country Partners	120
Beneficiaries	261
Executive Board Representatives	24
IFIs and donor institutions	11
Total	**742**

Electronic survey results

The survey's objective was to obtain quantitative and qualitative information from IFAD and project staff regarding aspects of CCA responses in IFAD-supported interventions (projects and country strategies).

The survey population was:

- IFAD professional staff based in Rome and out-posted
- Directors, coordinators , managers, climate specialists and M&E, communication and knowledge management officers of IFAD-funded projects

The electronic survey conducted in English, Spanish, French, Russian, Portuguese and Arabic.

The total sample size included 238 of which 102 were IFAD professional staff (34 per cent response rate) and 136 was project staff (response rate 30.1 per cent). The overall response rate was 31 per cent. For the purpose of the analysis of this report, the surveys were analysed separately to better understand the perspectives related to climate mainstreaming.

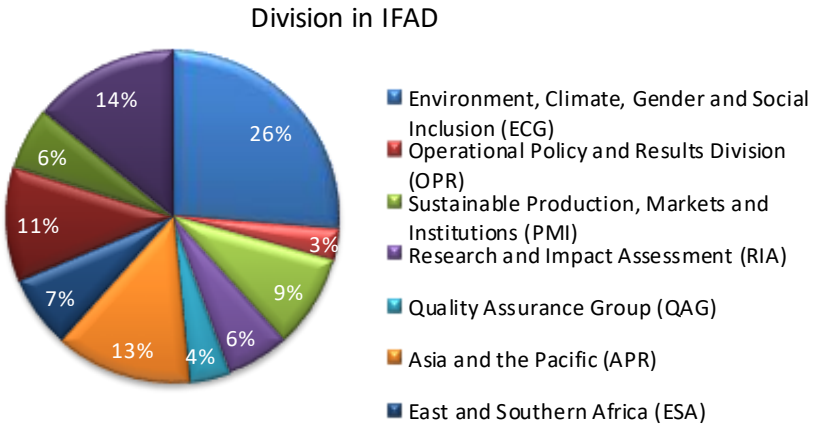
IFAD staff survey results

Descriptive information

Figure 1

The graph below shows the division who participated in the TE survey on CCA

**99 responses received*

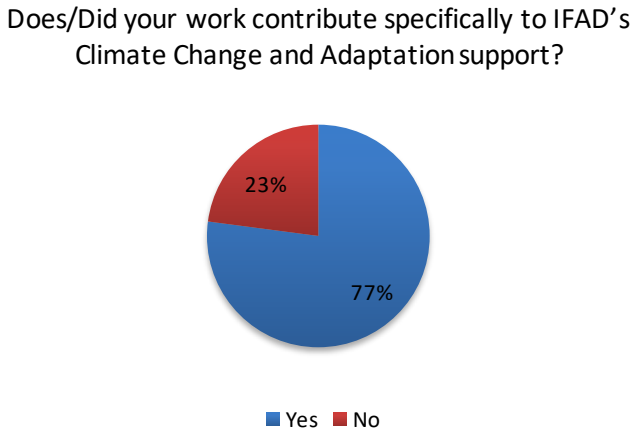


Source: IOE Elaboration of E-survey results

Figure A2

The graph below shows the involvement of participants' work in CCA activities

**96 responses received*



Source: Thematic self-evaluation results

Table A1

Do you agree with the following statements?

**90 responses received*

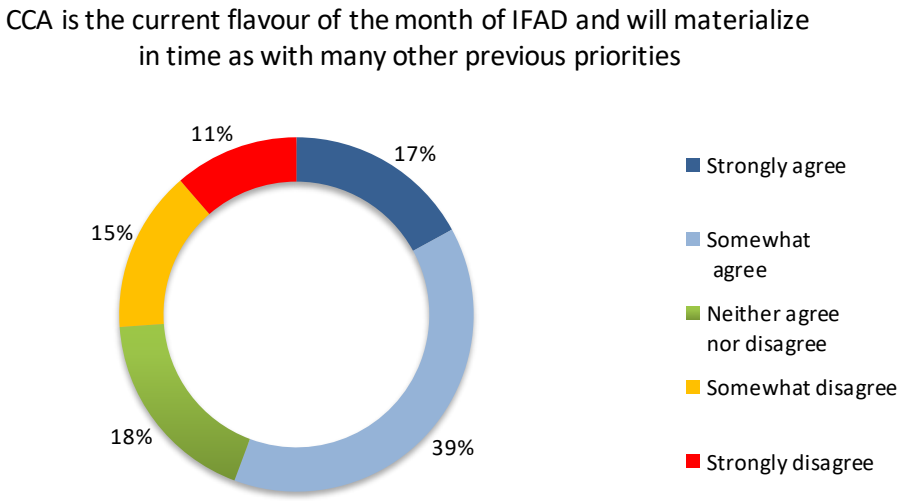
Statements	*Strongly agree*	*Somewhat agree*	*Neither agree nor disagree*	*Somewhat disagree*	*Strongly disagree*
I have received enough guidance from IFAD on CCA and how to integrate it into my work	16%	34%	26%	19%	6%
The focus on CCA has a strong influence on my own work	43%	38%	15%	2%	2%
IFAD is well positioned to contribute to the global CCA agenda	44%	40%	9%	3%	3%
IFAD needs to make fundamental internal changes in order to effectively address CCA	17%	38%	28%	14%	3%
CCA is an area to which IFAD contributes significantly	28%	49%	18%	4%	1%
While CCA may be an important issue, this is not of concern for IFAD's mandate	4%	3%	10%	17%	65%

Source: IOE Elaboration of E-survey results

Figure A3

Do you agree with the following statements?

**88 responses received*



Source: IOE Elaboration of E-survey results

Table A2

To what extent has IFAD made progress (since 2016 – IFAD10) in applying the following in support of Climate Change and Adaptation?

**88 responses received*

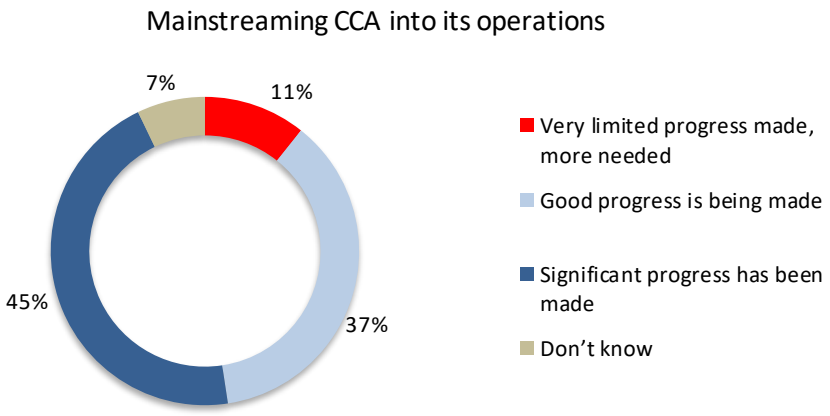
Statements	*Very limited progress made, more needed*	*Good progress is being made*	*Significant progress has been made*	*Don't know*
Paying attention to ecosystem management and environmental sustainability	14%	48%	23%	15%
Focusing on climate vulnerability and targeting	9%	41%	37%	13%
Knowledge management practices	28%	39%	17%	16%
Scaling up operations or results	27%	36%	19%	17%
Promoting innovation and transformative change	25%	44%	18%	13%
Mobilizing support and resources for CCA	13%	33%	45%	9%

Source: IOE Elaboration of E-sy results

Figure A4

To what extent has IFAD made progress (since 2016 – IFAD10) in applying the following in support of Climate Change and Adaptation?

**88 responses received*



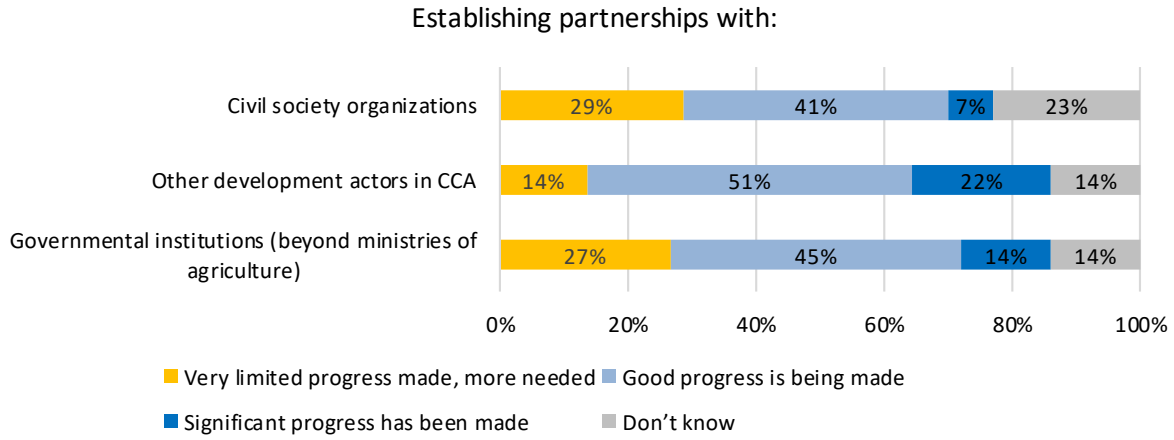
- 82% of IFAD respondents declared IFAD has achieved good or significant progress in mainstreaming CCA into its operations

Source: IOE Elaboration of E-survey results

Figure A5

To what extent has IFAD made progress (since 2016 – IFAD10) in applying the following in support of Climate Change and Adaptation?

**87 responses received*



Source: IOE Elaboration of E-survey results

Table A3

To what extent are the following factors adequate for enhancing IFAD's capacity to support countries towards Climate Change Adaptation?

**87 responses received*

Statement	*Significantly weak/ inadequate*	*Moderately weak/ inadequate*	*No influence*	*Moderately Strong*	*Significantly Strong*	*Don't know*
Coherence between IFAD's Strategic Framework and COSOPs on CCA needs of smallholders	6%	12%	5%	37%	33%	8%

IFAD's organizational structure and institutional mechanisms	8%	14%	18%	38%	20%	2%
IFAD's human resources	8%	22%	9%	37%	21%	3%
Collaboration between different teams and units of IFAD	5%	14%	9%	33%	34%	5%
Collaboration with other UN agencies	3%	18%	10%	38%	22%	8%
Readiness to engage with the current UN reform process	6%	17%	20%	30%	15%	12%
IFAD's technical capacities in CCA	5%	11%	6%	38%	36%	5%
IFAD's knowledge management capacities (e.g. learning and dissemination)	6%	22%	11%	31%	26%	3%
IFAD's relational capacities (e.g. in resource mobilization, partnerships, communication)	8%	9%	11%	33%	34%	3%

Source: IOE Elaboration of E-survey results

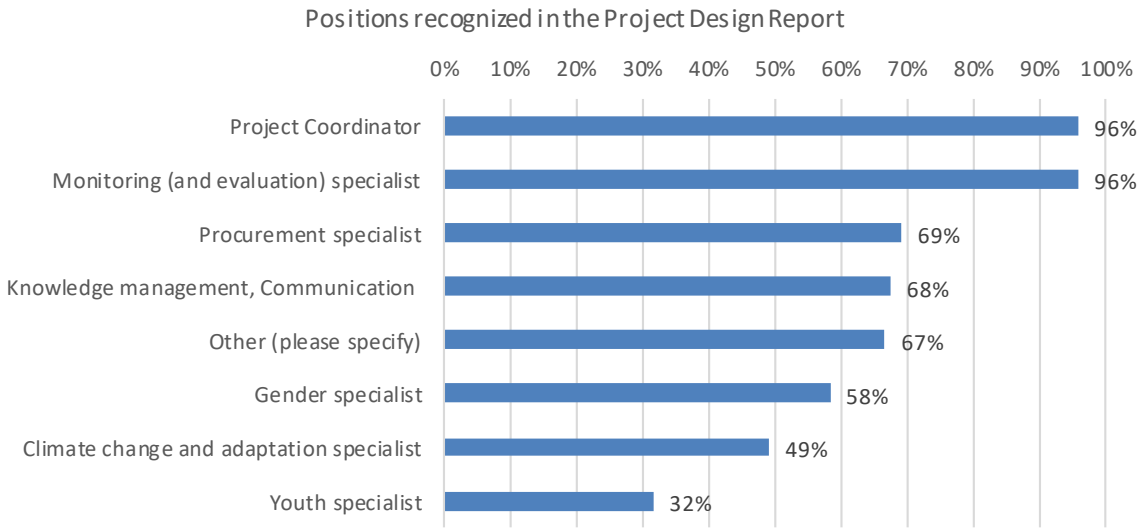
IFAD-funded Project Staff Survey Results

Descriptive information

Figure B1

The graph below shows the main roles played by PMU's participants

**124 responses received*

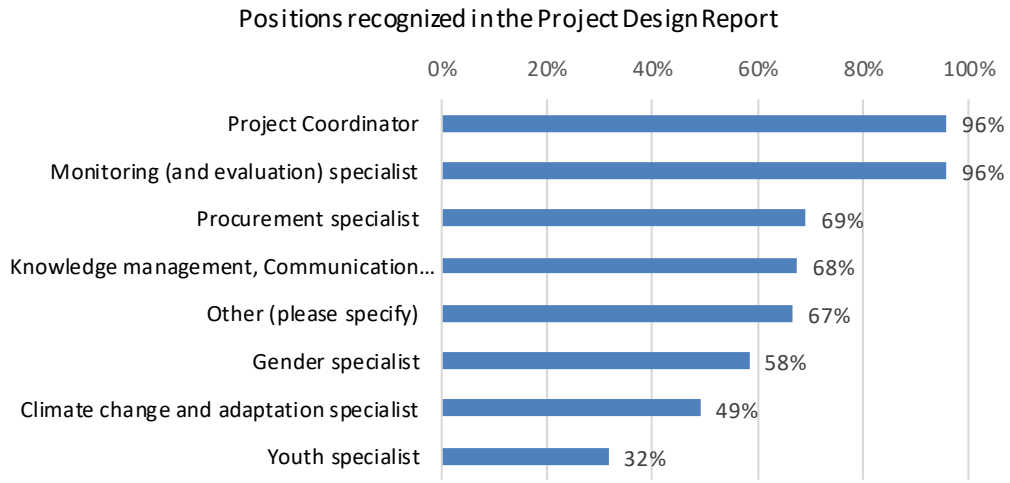


Source: IOE Elaboration of E-survey results

Figure B2

The graph below shows the positions recognized in the Project Design Report

** 120 responses received*



Source: IOE Elaboration of E-survey results

Table B1

To what extent do you agree with the following statements?

**112 responses received*

Statements	*Strongly disagree (%)*	*Somewhat disagree (%)*	*Somewhat agree (%)*	*Strongly agree (%)*	*Do not know/ too early to tell (%)*
I have received enough guidance from IFAD on CCA and how to integrate it into my work	11%	14%	36%	35%	4%
The CCA focus of the project has a strong influence on my own work	9%	12%	34%	42%	4%
CCA is an area where IFAD has worked significantly in the country	5%	10%	29%	45%	11%
Local knowledge and locally faced climate threats are adequately reflected in the project design	6%	6%	38%	45%	4%
Significant modifications have to be made to the design of CCA activities to implement them properly	8%	21%	27%	34%	10%
Project targets for CCA are being reached during implementation	4%	4%	35%	37%	21%
The project monitoring system is adequate to track results related to the CCA interventions	4%	12%	42%	34%	9%
The project monitoring system is adequate to track that benefits are reaching the intended target groups	16%	20%	33%	24%	7%

Source: IOE Elaboration of E-survey results

Table B2

How well is your project performing in the following areas to support Climate Change Adaptation?

**109 responses received*

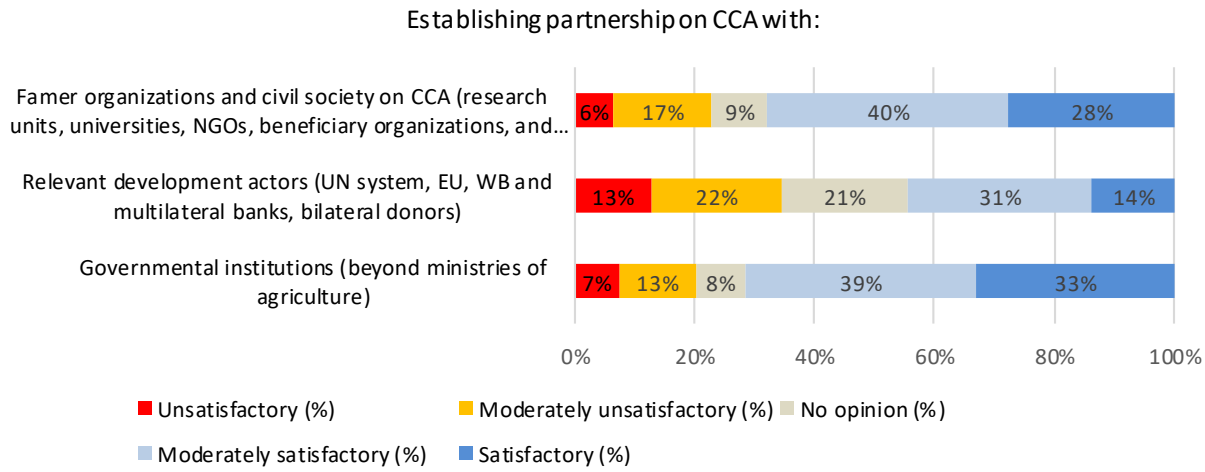
Statements	*Unsatisfactory (%)*	*Moderately unsatisfactory (%)*	*No opinion (%)*	*Moderately satisfactory (%)*	*Satisfactory (%)*
Ecosystem management and environmental sustainability	5%	7%	12%	50%	26%
Focusing on most climate vulnerable	7%	9%	9%	48%	27%
Knowledge management practices	1%	10%	11%	55%	22%
Scaling up operations or results	6%	7%	17%	48%	22%
Introducing innovative practices	3%	7%	11%	47%	31%
Multiple project components reflect CCA considerations	5%	9%	12%	38%	37%

Source: IOE Elaboration of E-survey results

Figure B3

To what extent has IFAD made progress (since 2016 – IFAD10) in applying the following in support of Climate Change and Adaptation?

**109 responses received*



- Contrary to the results coming from IFAD staff survey, the PMU survey shows that IFAD should strengthen partnerships with development actors

Source: IOE Elaboration of E-survey results

Table B3

To what extent were the following administrative factors prevalent in your Project Management Unit?

**109 responses received*

Statements	*Not an issue (%)*	*Minimal prevalence (%)*	*Moderate prevalence (%)*	*Significant prevalence (%)*	*Don't know (%)*
Vacancies for project staff (vacancy rate and duration of vacancy, high staff turnover)	30%	26%	22%	19%	3%
Procurement delays in the early phases of implementation	5%	15%	35%	40%	5%

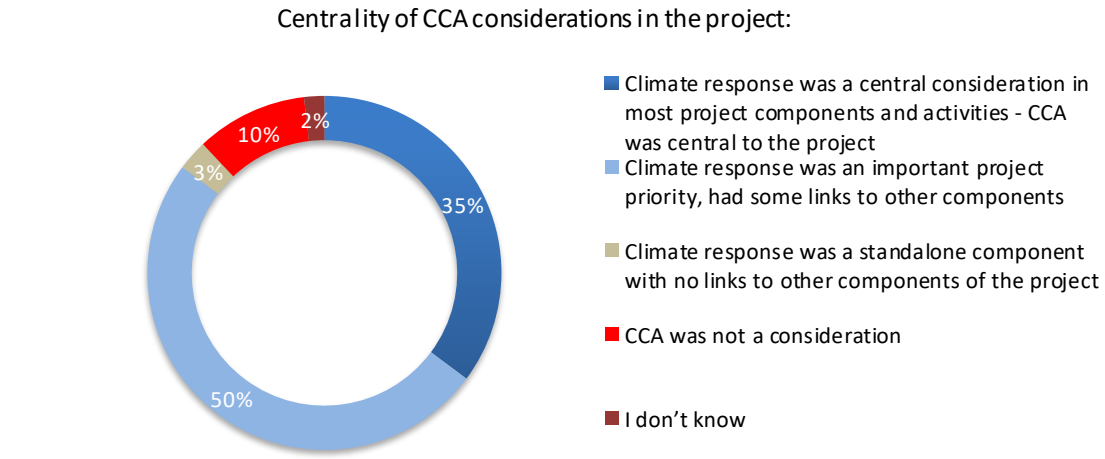
Insufficient technical capacities in the project team to implement CCA activities in line with the design	26%	26%	29%	11%	7%
Difficulties in making necessary modifications to the design of CCA activities during implementation, particularly, before MTR [use of the newly introduced restructuring policy (2019)]	28%	23%	22%	15%	12%
Insufficient coordination among PMU specialists to address the different mainstreaming needs (gender, youth, CCA and nutrition)	39%	29%	19%	7%	5%

Source: IOE Elaboration of E-survey results

Figure B4

The centrality of CCA in projects

**108 responses received*

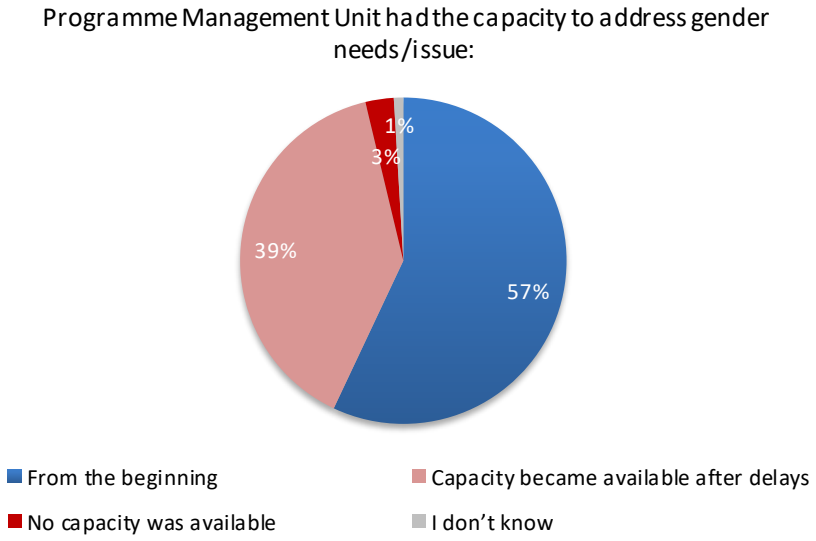


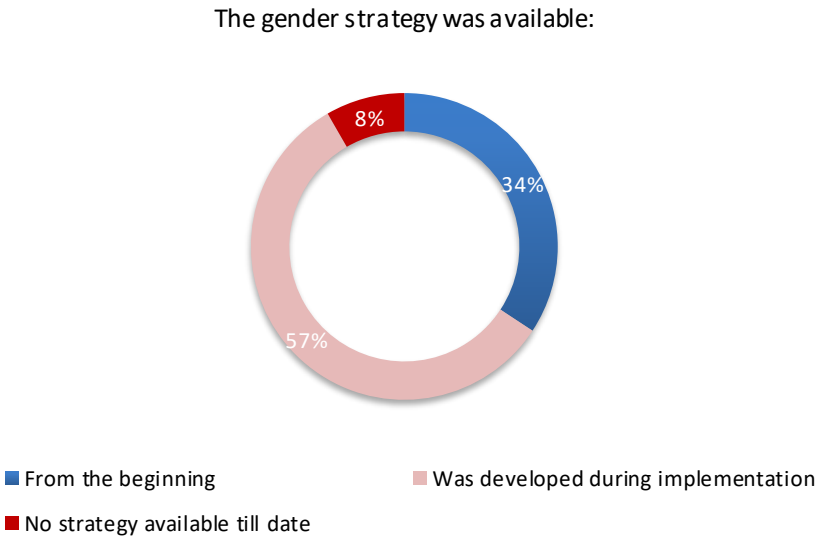
Source: IOE Elaboration of E-survey results

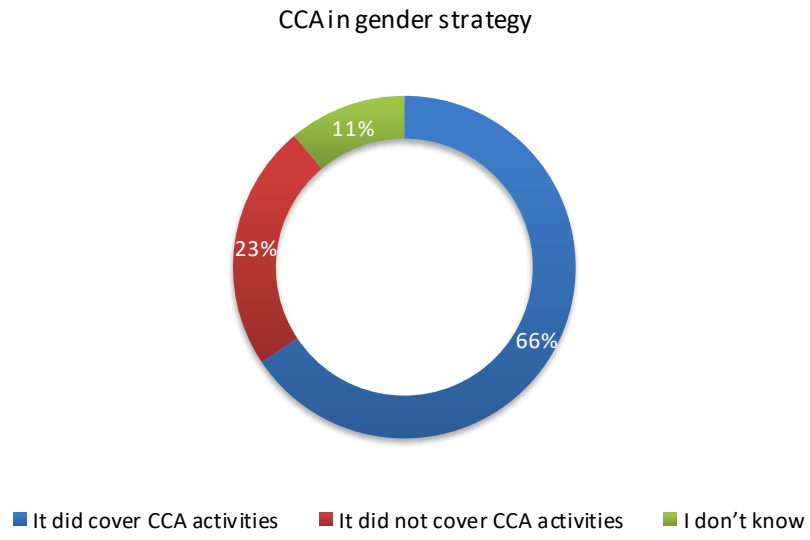
Figure B5

Capacity related to gender needs/issue

**107 responses received*





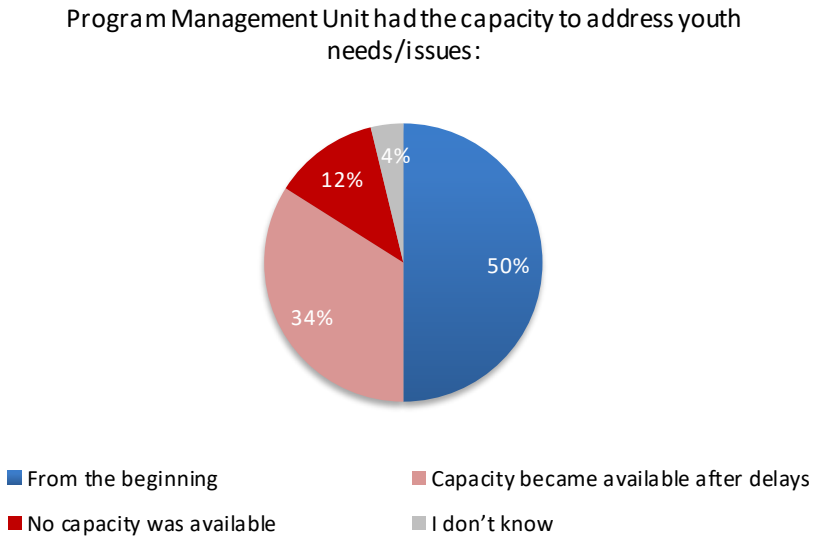


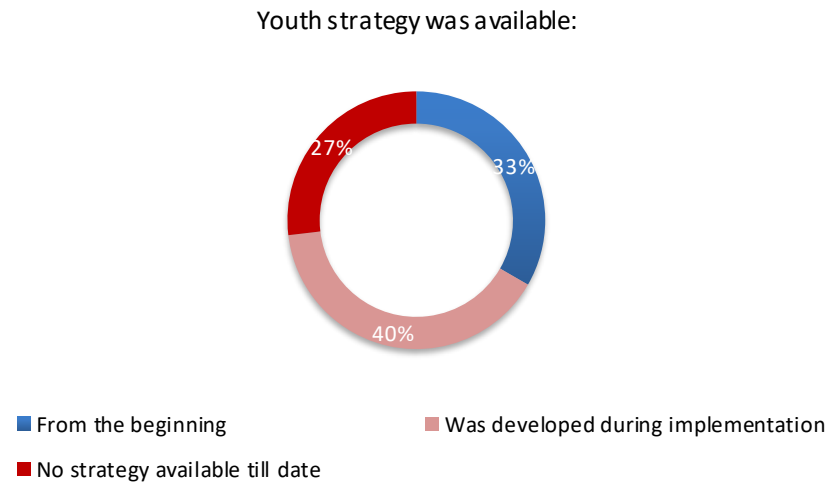
Source: IOE Elaboration of E-survey results

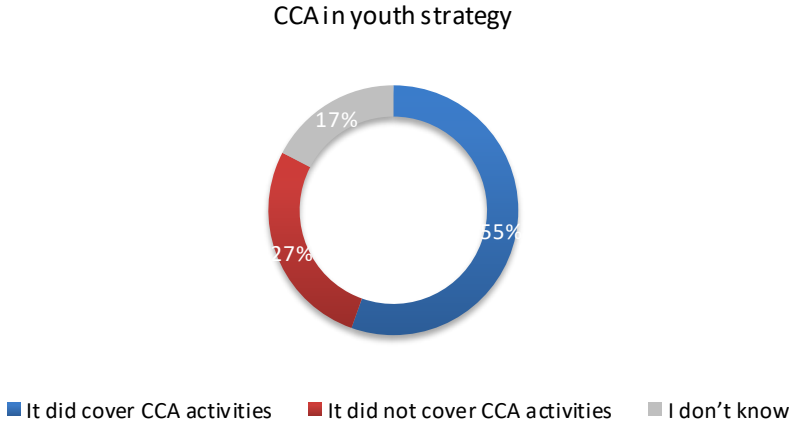
Figure B6

Capacity related to youth needs / issue

**106 responses received*





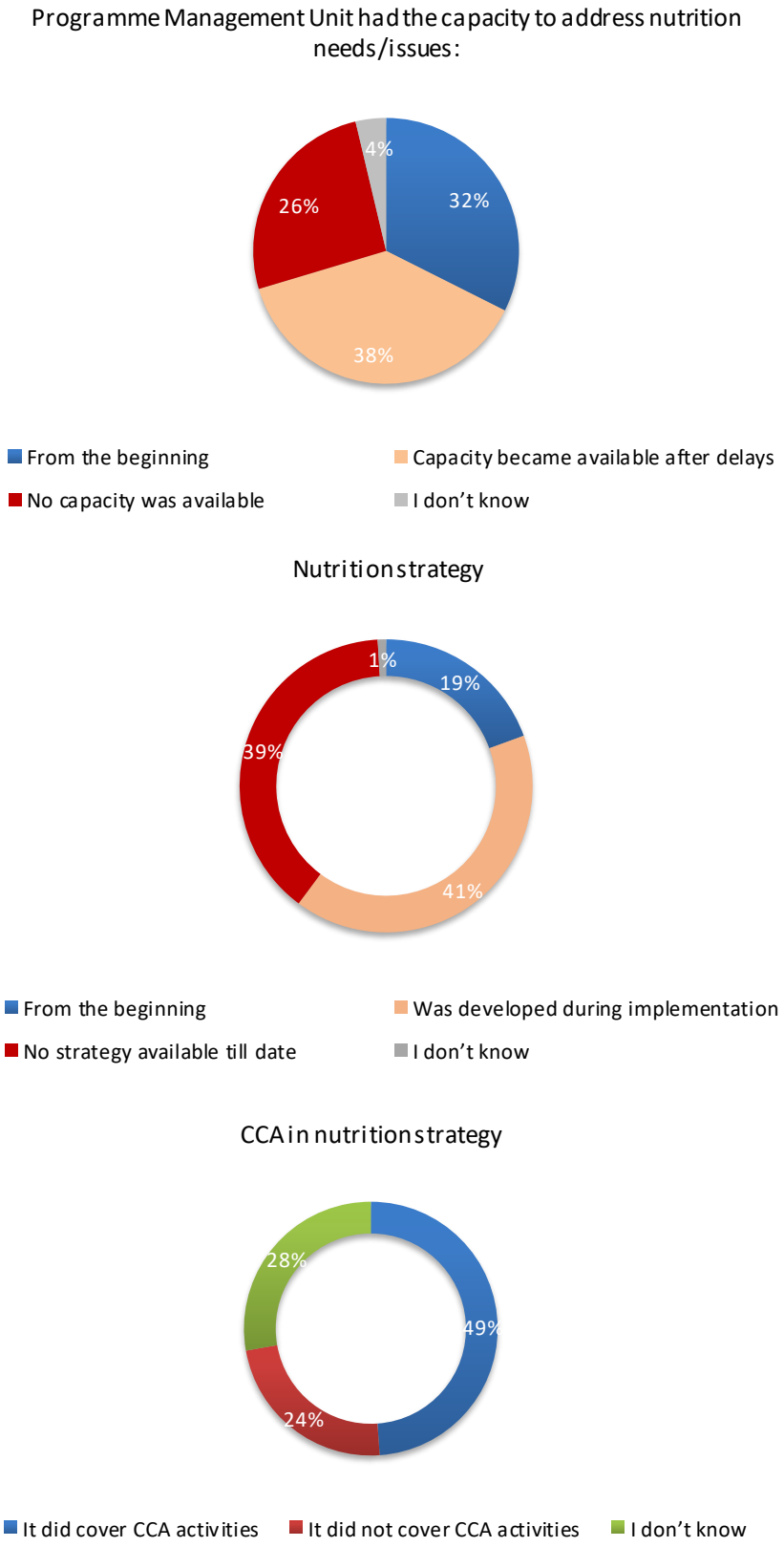


Source: IOE Elaboration of E-survey results

Figure B7

Capacity related to nutrition needs / issue

**108 responses received*

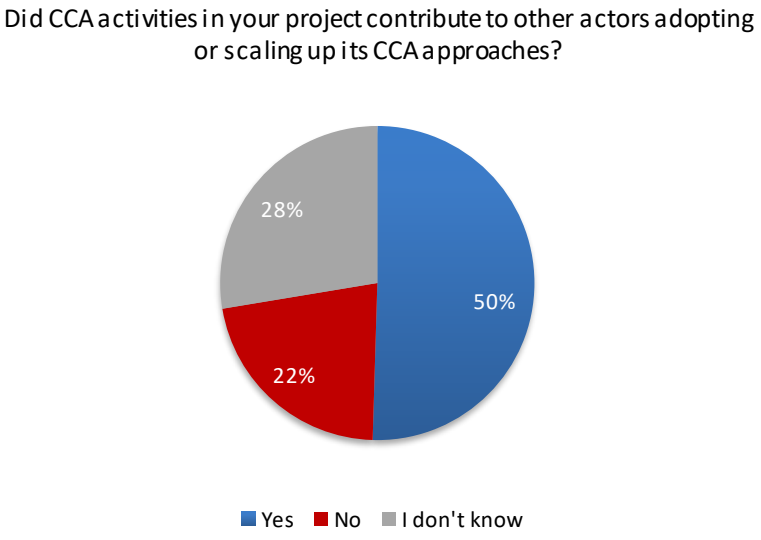


Source: IOE Elaboration of E-survey results

Figure B8

Adoption of CCA approaches

**105 responses received*

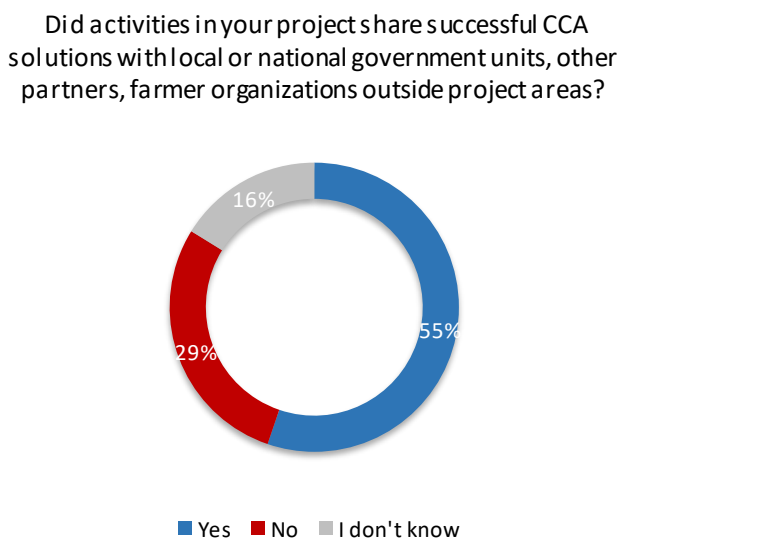


Source: IOE Elaboration of E-survey results

Figure B8

Knowledge Management – external

**105 responses received*



Source: IOE Elaboration of E-survey results

Figure B9

Knowledge Management

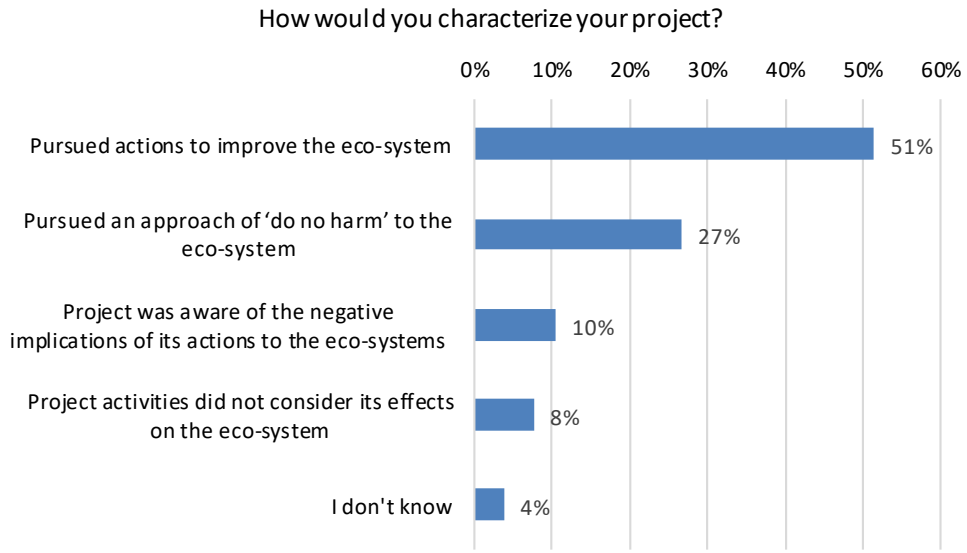
**105 responses received*

Source: IOE Elaboration of E-survey results

Figure B10

Ecosystem effects

**105 responses received*

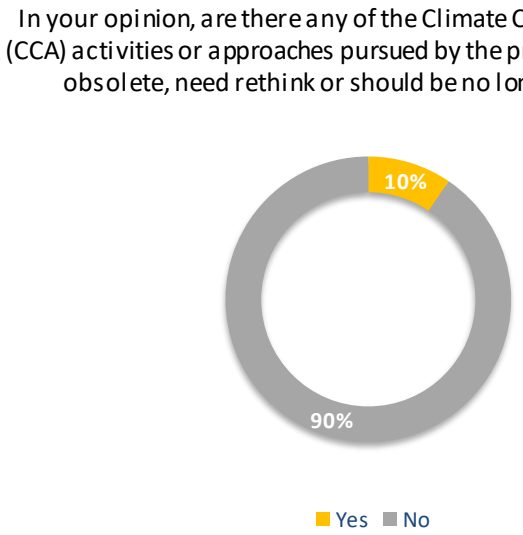


Source: IOE Elaboration of E-survey results

Figure B11

CCA approaches

**105 responses received*

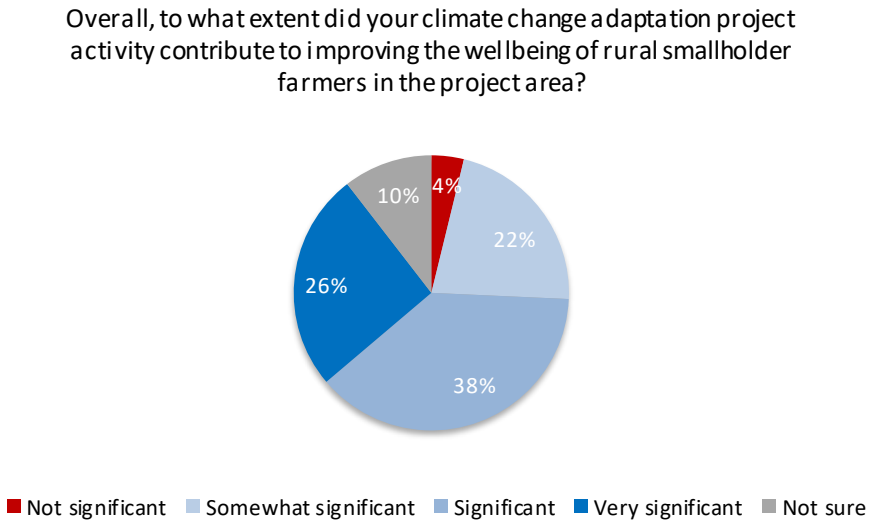


Source: IOE Elaboration of E-survey results

Figure B12

Wellbeing of beneficiaries

**105 responses received*



Source: IOE Elaboration of E-survey results

Executive Summaries of Learning Theme Studies

A. Executive Summary: Building adaptive capacity of smallholders to climate variability and change: key findings from a Rapid Evidence Assessment (REA)

1. This REA was undertaken within the context of a Thematic Evaluation of IFAD's Support for Smallholder Farmers' Adaptation to Climate Change, led by the Independent Office of Evaluation. It sought to provide additional and complementary learnings to inform the evaluation, by assessing what interventions have been successful in building smallholders' adaptive capacity and responses to climate change, and how these have been effectively transferred as learning outcomes in relation to the three key dimensions of scaling up, knowledge management and ecosystem-human interactions.

2. There is extensive empirical literature that investigates the underlying conditions and the enabling factors that determine the adoption of autonomous adaptation measures. This REA considers these determinants alongside the conditions and the features of 'transformational' or more persistent adaptation pathways, usually framed in broader planned adaptation policies or interventions. Planned adaptation should rely on complementarity and integration of strategies so that underlying determinants of adoption, such as access to knowledge and information, exist alongside enabling factors, such as endowment with productive assets, human capital (education and skills) and institutional support (e.g. groups and collective action). Profiling the existing socio-economic conditions is essential to adjust planning according to different adaptive capacities and to avoid inequalities stemming from wealth, gender as well as dynamics of power and decision-making that compromise equitable distribution of adaptation outcomes.

3. Whilst it is not possible to list standard solutions that are applicable across all contexts, scaling up processes are characterised by some recurrent features; in particular, interventions follow integrated, multi-sectoral and participatory approaches in planning, implementation and dissemination, fostering knowledge exchange and co-creation of knowledge. Access to knowledge is one of the most important determinants of smallholders' decisions to respond to risk as well as a critical element in building adaptive capacity. The way knowledge about climate change and variability is produced, transferred and exchanged is thus extremely relevant to securing scaling-up pathways.

4. The review of the literature on knowledge management focused on the respective importance of local or indigeneous knowledge and external, scientific knowledge in smallholders' adaptation and how potential tensions stemming from inequitable 'politics of knowledge' can be solved. Social learning (deep understanding and assimilation of concepts through social interaction) is an effective way to link science, policy and practice to tackle multiple and related challenges of agricultural development, food security and CCA. Learning platforms based on participatory action research (PAR), farmer field schools (FFS) and similar experiences have proven to be especially important. Local knowledge is fundamentally important for understanding and dealing with climate change empirically; however, autonomous adaptations may be limited in scope and may not be effective in the long run (potentially leading to mal-adaptation). Also, knowledge based on local practices may not be sufficient to prompt more transformative action. Bridging local and external knowledge is thus critical because it widens smallholders' knowledge base and encourages 'proactive' adaptation alongside more typical 'reactive' strategies. When knowledge and information are transferred along more 'structured', one-way channels (such as extension services or weather broadcasts), communication

solutions need to be both easily available (i.e. supplied) and accessible (i.e. farmers should be able to receive, understand and use it effectively).

5. Whilst the evidence on scaling up and knowledge management calls for a multi-sectoral approach to adaptation in agriculture, and stresses the importance of including environmental considerations to secure equitable and sustainable adaptation patterns, the literature that focuses on the interactions between the human and the ecological systems, or that uses an environmental lens to discuss adaptation in smallholder agriculture, is scarce. Few studies explicitly investigate the links between smallholder agriculture and the ecosystem within the context of CCA. This limited evidence reflects the fact that policies in agriculture, environment and climate change still work in silos with limited genuine cross-over and exchange between disciplines and practices.

6. A transdisciplinarity approach across the economic, social and environmental domains, which represents a step forward for interdisciplinarity, with full integration of complementary disciplines and interventions at multiple levels, is much needed. Ecosystem-based adaptation (EBA) approaches are proposed as an effective tool to achieve such an integrated vision. Other authors advocate for community-based adaptation (CBA) and EBA to be combined and mainstreamed into large-scale planning to pursue adaptation pathways that assimilate the multiple nexus between human and ecological systems; in this regard, social capital in the form of social networks and collective action are extremely relevant.

7. In order to be transformative, actions undertaken at individual and community levels should find space and consistency in a higher-level framework that ultimately solves trade-offs and barriers for longer-term, sustainable results. Beyond providing the enabling policy and legal environment (e.g. land tenure, rights to access natural resources), external institutions such as government and development actors should act across three intervention scales – household, community and landscape levels – and also, importantly, provide the right economic incentives to compensate smallholders for investments that don't have immediate returns (such as in agroforestry).

8. However, the review identified a number of pitfalls for policy making in systematically transferring these lessons into practice to support transformational adaptation in agriculture. Some barriers are financial, technical and/or of organisational nature, but others are more fundamental and require a marked shift in how decision-making processes are framed and implemented. For adaptation pathways to be transformative and inclusive, the current policy making process must undergo a number of changes, including taking on a more holistic approach to addresses vulnerability as stemming from a complex web of causes, amongst which climate change is one.

9. High-level policies should also build upon local experiential knowledge and priorities; however a general disconnection with insufficient coordination exists between policy, research and practice whereby smallholders' needs and preferences are shaped by external actors. The concluding section discusses the implications of the findings for policy makers and development practitioners. Mainstreaming successful local adaptation into large-scale planning requires participation, active stakeholder engagement, and an actual devolution of rights and responsibilities. Methodological improvements are needed to assess and evaluate adaptation outcomes as M&E is at the core of understanding and scaling up what works. Stakeholder platforms provide a powerful tool (alongside other analytical methods) to encourage mutual learning, communication and governance. Participatory research and experimentation are also needed to better understand and mange trade-offs amongst competing objectives, and to better evaluate social costs and benefits in the calculation of PES and other economic incentives for farmers. The discussion correctly highlights the relevance of stakeholder participation and

engagement for scaling up transformational adaptation pathways. However, to make these approaches work in practice, a more fundamental shift is required in governance and policy forum, to redesign the decision-making processes and the politics of knowledge that shape preferences and ultimately define whose priorities are addressed.

B. Executive Summary: Learning Thematic Study- Scaling Up of Climate change and smallholder adaptation responses

10. IFAD states that scaling-up the results of successful development is at the heart of what it does and defines it as "expanding, adapting and supporting successful policies, programmes and knowledge so that they can leverage resources and partners to deliver larger results for a greater number of rural poor in a sustainable way" (IFAD, 2021). IFAD also recognises that its operational practices need to shift from a project-centric approach to one that triggers change within the institutional, policy and economic environments in which rural poverty exists. IFAD interventions should therefore not only enable rural communities to work their way out of poverty within the limited time and resource constraints of a given project, but also to use the positive outcomes from its operations to inspire others and leverage policies, knowledge, social and political capital, and financial resources (from private, public and communities themselves) to up-scale those results in a sustainable manner (IFAD, 2015).

11. IFAD also explicitly recognises that scaling-up does not simply mean replicating or transforming small projects into larger projects, but rather how its interventions should focus on how successful local initiatives could leverage changes in policy, and secure additional resources to bring results to scale. Scaling up can also involve moving a project forward into a more developed, complex phase, possibly involving new components, configurations and stakeholders, and/or mainstreaming a certain approach into policy. A key element in successful scaling up is therefore in helping to build capacity of local stakeholders including those who represent the most vulnerable communities so they can access relevant resources, develop partnerships, and engage in a constructive and inclusive way in policy dialogue.

12. Within the terms of reference for the Independent Office of Evaluation's (IOE) thematic evaluation of IFAD Support for Smallholder Farmers' Adaptation to Climate Change, this study focused specifically on 'scaling up' as one of three learning outcomes or domains. The aim was to critically assess to what extent IFAD has been able to leverage its operations to strengthen smallholder farmers' climate adaptation capacity at the local, sub-national and national levels through partnerships and by scaling up successful interventions, promoting enabling policies, strengthening institutional capacities and improving the financial architecture for adaptation. The study also set out to scrutinise what has worked and why, and what opportunities might have been missed.

13. The approach was based on a detailed review and assessment of relevant IFAD evidence including project design and supervision reports, IOE evaluation reports, the operational framework on scaling up (IFAD, 2015), the latest Annual Report on Results and Impact of IFAD Operations (ARRI, 2020), and key insights and findings that have emerged from 20 country case studies. The assessment has also drawn on wider scientific and grey literature synthesised as part of a rapid evidence assessment (REA) to provide external critique and comparison of IFAD scaling up activities against international comparators.

IFADs operational framework for scaling up

14. In 2015, IFAD recognised as part of its broader mandate the pressing need to expand, adapt and support its most successful policies, programmes and knowledge to leverage additional resources, and in response published its first

operational framework for scaling up (IFAD, 2015). This was designed to provide structured guidance to IFAD country teams on how to systematically mainstream scaling up into their operations and how country staff should consider scaling up for their context. Since innovation is a key constituent of scaling up, the framework provided guidance on a range of operational approaches "that could be considered", rather than being prescriptive on "what should be done". It was designed to complement IFAD's existing operational policies and provide IFAD partners with information on how they might collectively increase development impact.

15. In operationalizing scaling-up, IFAD also adopted a conceptual framework developed by the Brookings Institution, complemented with elements from other approaches. This involved evaluating the lessons learned from past interventions to answer the question 'what works and what is to be scaled up? and then defining the pathways and drivers that allow results to be brought to scale beyond the project boundary.

What's the vision, what's the strategy, what's the process?

16. The key elements for success usually consider scaling-up as part of a continuous cycle of innovation → learning → scaling up. These have been highlighted in the IFAD operational framework together with some of the key attributes which have been previously identified as markers for success. These are briefly summarised in Table 1 and provide a reference against which scaling up activities reported in each of the country can then be compared. The attributes are broadly ordered to correspond to the timing of their relevance with respect to a typical design and implementation phases of an IFAD project.

Linking the analytical framework to country studies evidence

17. Table 1 summarised the essential attributes or 'markers for success' required to achieve effective scaling up, recognising that it is part of a continuous cycle of innovation and learning. Table 2 identified the extent to which various scaling up activities had been implemented in each case study country, including occasional exemplars but also where scaling up was deemed a low priority. Table 3 below combines the evidence from both these sources to try and identify which attributes were most prevalent in the IFAD projects and conversely those which were absent. This should help to inform future IFAD scaling up initiatives.

Table 1
Summary of attributes to successful scaling up (adapted from IFAD 2015) and evidence identified in the country case studies

Key attribute for success	*Country case study evidence*
Clear government commitment and ownership	*Government can be the main driver of scaling up by creating the space for scaling up to happen, particularly in the fiscal, political, policy, organizational and learning areas* Evidence: Only a minority of countries (Bangladesh, Bolivia, Burundi, Nepal) demonstrating proactive government engagement on the issue.
Space for scaling up	*Scaling up takes place within a broader environment that can either enable or thwart it. Unless there is space in this environment for ideas and pilots to grow, scaling up may not occur. Space can be institutional, social, political, environmental, policy, cultural or learning* No clear evidence that IFAD is actively promoting or supporting the broader environment to enable scaling up to be effectively implemented. Evidenced by only a handful of countries showing clear government commitment and ownership for scaling up agenda.

Building capacity of local stakeholders	*Notably in organizations of poor rural women and men to attain scale, enabling them to 'crowd in' additional partners and resources, and engage in policy dialogue. IFAD's role is largely its ability to scout for promising innovations and initiatives, identify target group institutions that can drive change around such innovations, strengthen their capacity and then help them go to scale* Evidence: Reasonably strong support for building capacity across a number of projects and countries including Bangladesh, Cape Verde, Kyrgyzstan, Mali, Nepal, Rwanda and Sudan.
Partnerships for scaling up	*A key challenge is identifying institutions that have the potential to pursue and sustain scaling up efforts, are socially cohesive and well-integrated into the national context, and can therefore operate at scale. Partnerships with bilateral and other multilateral development agencies can catalyse complementarities of interventions and provide additional co-financing* Evidence*:* Partnerships and building capacity seen as complementary activities to support scaling up with good evidence from Bangladesh, Honduras, Kyrgyzstan, Nepal, Niger and Sudan.
Community driven scaling up	*Effectiveness of community-driven approaches in promoting community-led planning and management of development activities and the "how to" of inclusive and sustainable development. A critical dimension in scaling-up has been the role of empowered and federated community institutions that reach sufficient scale to access loans and services from government, as well as to crowd in private-sector investments for enhanced sustainability* Evidence: Limited evidence on the role of empowered community institutions receiving financial and political support to attain scale and capacity to 'crowd in' external investments to enhance sustainability. Good examples in Bolivia, Nepal and Niger.
Public-private-producer partnerships (4Ps)	*Long agricultural value chains are a powerful tool to attract private-sector investments to the smallholder sector, as well as in market segments that would not be profitable to private companies without public support and/or donor financing. IFAD's role in 4Ps is to use a combination of its financial and non-financial instruments for different clients, leveraging innovative finance and "pull" mechanisms to scale up results* No clear evidence from the projects or countries where extended agricultural value chains have been used to leverage private-sector investments into smallholder agriculture. IFAD has been successful in leveraging additional finance to support CCA but scaling up priorities have been low priority, with emphasis more on project scale impacts.
Pathways for scaling up	*Needs to be defined with intermediate goals to assess whether activities moving in right direction. IFAD experience indicates pathways are long, stepwise and require multi stakeholder engagement. Pathways need to consider the "why, what, who, when and how" that links each element to the larger intervention. Pathways also need to clarify a country's context and priorities, what long-term changes are being sought, who benefits, and the sequence of actions that are required for changes to occur* *Evidence*: Good evidence on how pathways to scale up were developed in Honduras and Mali.
Clear evidence of phases of scaling up	***Innovation** (new idea, pilot project, testing) → **learning and programming** (M&E, learning, KM, country programme) → **leveraging** (government, development partners, private sector, community groups) → **scaling up** (sustainability, multiple impact, feedbacks to the innovation)* No clear examples of how specific CCA innovations have led to improved learning and leveraging of further government support or support from development partners, private sector or community groups to achieve international scaling up impact.

Dimensions are important	*Pathways may concentrate on expanding services to more clients in a given area or horizontal replication, from one geographical area to another. Other dimensions include functional expansion, by adding additional areas of engagement or roles for a project organization; and vertical scaling up, by moving from local or provincial engagement to nationwide engagement. Policy engagement may be necessary to achieve policy and institutional conditions needed for successful national level scaling up or to attract investment from the private sector or other partners* Recognition of the different modes and dimensions of scaling up evident in projects in Bolivia, Madagascar and Niger.
Sustainability and scaling up	*Principles of scaling up and sustainability are inextricably linked. Assessment of the key spaces and institutional actors needed that will give a local initiative continuity in the absence of donor funding* No clear evidence from the country projects on how scaling up has been explicitly linked to key sustainability agenda.

18. There were also several countries where there was a clear lack of tangible evidence on scaling up activity. For example, in Belize the focus has been on monitoring project outputs, rather than developing a scaling up strategy; in Cape Verde there has been little indication of scaling up activity; in Chad no explicit upscaling approach exists; in Egypt there appear to be no plans for scaling up and IFADs project is working in isolation; in Ethiopia national scale initiatives exist, but there lacks an institutional framework for implementation; in Kenya the COSOP emphasises scaling up, but there no model for effective scaling up, and in Madagascar and Moldova evidence of scaling up activity was marginal. These insights seem to reinforce many points and criticisms raised by the Brookings study in 2013.

Summary of key findings on scaling up

- The country case studies highlighted the different types, dimensions and scales of scaling up activities that have been implemented, and as expected, there was no one approach that fitted all geographical and project contexts. Most were 'horizontal' type activities with less emphasis on vertical or diagonal scaling up.
- The degree of success in scaling up from the individual project level to deliver tangible international impact was generally low. Whilst there are exemplars of success from the case studies on how scaling up can be effectively incorporated into design and implementation (for example, in Bangladesh, Niger, Kenya, and Nepal) for the majority of cases, the ambition or potential for scaling up has not been realised. So why is this and what have been the barriers to successful implementation?
- Success in scaling up from the country level depends to a large extent on coordination and engagement from the outset (design) with the different 'layers' of national government. However, whilst some governments have been committed and keen to support scaling up, others have mixed views on its relevance to projects, and others are simply not interested and/or willing to engage. IFAD has limited scope to change the mindsets of national government where scaling up is not politically or operationally viewed as a priority, even if their country COSOPS demonstrate that commitment.
- In some cases, IFAD is also not engaging with the right government partners when designing projects from a scaling-up perspective; there is a mismatch between what IFAD aspire to do and what governments are generally willing to support. IFAD needs to critically review their design approach to ensure the right partners are involved in designing appropriate scaling up activities and

that sufficient resources are then committed to achieve the COSOP ambition. For example, the target audiences for most projects at regional and country levels are simply linked to the stakeholders who work alongside the Ministries of Agriculture; but in many instances these are not the same target audiences that IFAD has in mind to meet its international scaling up agenda.

- However, not all projects or programmes need to be scaled up to international levels; it depends on government incentives and interest. In some cases, 'horizontal' expansion is most relevant, taking innovations or new technologies or management approaches to other parts of the country and/or sub-sectors within smallholder agriculture (e.g. farmer field schools in Rwanda). IFAD is therefore more focused and driven by 'supply' side activities linked to their projects rather than the 'demand' side where new partnerships are needed to support effective scaling up activities elsewhere. This implies IFAD are missing opportunities to look for partnerships for knowledge transfer (what has IFAD done to map its knowledge gaps?) and there appear to be real gaps in IFAD developing international partnerships to support knowledge exchange and transfer on topics such as building smallholder resilience to climate change. The situation is exacerbated by IFAD generally giving insufficient attention to mainstreaming both knowledge management (KM) and scaling up within its project conceptualization, design and implementation phases. Labelling these activities as 'non-lending' also implies their importance or relevance is not mission critical to project success.
- Sharing knowledge is contingent on choosing the right mode of delivery, but what is missing in IFAD is the framework to effectively do this. For example, one option would be to better utilise the Communities of Practice (CoPs) that have been set up in IFAD to the knowledge being generated at country level, so that project outputs can be coupled to IFADs strategic activities on scaling up. It is also apparent that staff within country projects do not fully understand the concept of scaling up and the different modes or dimensions it can take. But importantly they also lack the resources and support to ensure scaling up becomes an essential output from their projects. Many projects still tend to focus too much on project management and delivery outcomes, and it is difficult to see where innovation, KM and scaling up are being given sufficient attention. As noted by Brooking (2013) it is critical that IFAD provide clear guidance and incentives for institutional building in support of a long-term scaling-up pathway. A lack of effective institutional M&E is a result of a lack of incentives for staff, which then creates a lack of accountability, since no one ever asks whether sustainable scaling-up institutions are being created by IFAD interventions.
- Despite the high level of institutional commitment to the 'concept' of scaling up, it is not clear to what extent it is part of IFAD's vision at the outset of a project intervention. As identified by Brooking (2013) it is therefore not surprising how project managers perceive the institutional aspects, generally considering only those aspects that determine the successful completion of the project itself, rather than the institutional dimensions which would provide a foundation for scaling up and sustainability on a larger scale.
- In some countries, project designs lacked explanation on how the expected results would be scaled up. Whilst high potential was found to exist in many projects, what was lacking was IFAD engagement in policy dialogue to inform policy processes. Rather than scaling up experiences and outcomes via policy measures (vertical and diagonal scaling up), follow-on projects largely tend to be formulated and implemented in other regions and or agricultural sub-sectors (horizontal) thus limited the wider scaling up opportunity.

- Unfortunately, many scaling up issues highlighted in this TE seem to be recurrent from those previously identified by the Brooking assessment in 2013. That two phased study assessed the extent to which IFAD had identified relevant scaling-up pathways as the drivers and spaces in 8 countries and well how it had developed an operational approach to assure integration of scaling-up into its project implementation processes. From our assessment, for some countries, there is still an issue on how scaling-up approaches have been explicitly incorporated into their COSOP strategies and hence no surprise that there has not been a systematic application of the principles and practice of scaling up. However, where IFAD have supported scaling up via engagement with national and local stakeholders and external partners (e.g. Bangladesh, Nepal) and proactively engaged in policy dialogue, then there has been good progress. Most countries focused on scaling up in the horizontal (and to a much lesser extent, vertical) dimension. IFAD therefore needs to continue to provide strong incentives and support to its country teams to maintain a focus and priority developing on scaling up pathways and the importance of institutional links to enable effective scaling up in the long-term, especially post project.
- Finally, institutional capacity (and space) constraints appear to have been the main barrier to scaling up with sustainability of scaling up not assured due to lack of institutional support. The Brooking (2013) study also identified that institutional analysis and consideration of the institutional options to support scaling up were not principal attributes by IFAD in their project design phase or in the monitoring and evaluation of IFAD programs during project implementation and after completion. These factors still seem to be prevalent in the latest set of case study analyses.

C. Executive Summary: Learning Thematic study – Knowledge Management

19. **Definition:** The assessment of KM in interventions in this learning study takes IFADs definition of KM as presented in the most recent KM strategy (2019-2025): KM is defined as a set of processes, tools and behaviours that connect and motivate people to generate, use and share good practice, learning and expertise to improve IFAD's efficiency, credibility and development effectiveness.

20. **Rationale:** KM is critical to achieve lasting impact in CCA resilience. Vulnerable smallholders are often well aware of the climate and environmental threats they are facing. However, CCA solutions to the threats they face are meagre and continue to evolve. KM is an important element to address this gap. Successful context specific CCA solutions integrating scientific and local knowledge need to be identified, factors contributing to their success analysed and entered in to a knowledge base that should be accessed and used more broadly.

21. **KM in IFAD**. The importance of knowledge management (KM) and learning was highlighted in IFADs Strategic Framework 2016-2025 which stated that IFAD's ability to learn, to generate knowledge, to provide evidence of what works, and to leverage the knowledge of others are fundamental to its development impact and its ability to provide value for money.

22. IFAD analysis showed the following three areas of challenges: i) Knowledge generation- building knowledge base ; ii) Use of knowledge - access to, use and re-use of existing knowledge; and iii) Enabling environment – a culture of learning and knowledge-sharing, incentive framework, awareness, KM architecture, to name a few. Its analysis highlighted the need for IFAD to have a more focused, prioritized approach to knowledge development and mobilization, aligned with investment opportunities. Moreover, limited capacities, incentives and resources at country programme and project levels were found to be major obstacles to KM and learning.

Country case studies: Lessons, Exemplars of best practice, Barriers and Enablers to success

23. Drawing on evidence from the 20 country case studies, this study assesses how well KM was embedded in project design, the lessons learnt, types of successful KM activities at international, regional, national, local. It also illustrates examples on IFADs work to foster partnerships to support KM. This section presents the key lessons while a summary of KM findings from case countries is provided in the Table below.

Key Lessons - CCA Knowledge Management

24. **Knowledge Generation:** From the case studies, it is evident that while a lot of CCA knowledge was generated at the level of projects, in most cases it was unclear how this knowledge was being used to improve practices. In particular, bridging local/indigenous and scientific/external knowledge was critical for more sustainable and forward-looking approaches and move away from short-term solutions. The rapid evidence assessment (2021) (REA) noted that learning platforms based on social inclusion and participatory action research that brings together local and external actors was effective in supporting adaptation strategies. The Farmers Field Schools (e.g. in Moldova) are examples for such a learning platform. They also integrate adaptation at different levels and scales. Their effectiveness depends on the degree of farmer participation, particularly in needs assessment and design of training modules.

25. The best examples of knowledge generation in the case studies were found at local level, often with focus on community-based approaches (e.g. in Bolivia). Only a few good examples were identified at national level (e.g. in Bangladesh) and international levels (mainly in LAC, often due to Project Coordinators/Consultants being involved in projects in more than one country). In some case study countries (e.g. Kyrgyzstan) there was reluctance to share knowledge and information within and between institutions. Lack of common language also posed an additional challenge. Ad-hoc KM activities at the project level has reduced the strategic relevance of knowledge generation to country level interventions and to IFAD's corporate level decision-making. KM products target primarily front-line beneficiaries and working-level counterparts and, in most cases, do not feed into non-lending activities at a strategic level.

26. **Knowledge Use:** Some of the best examples of knowledge use relate to those projects where partnerships and/or strong links were developed with universities or academia. This resulted in embedding of lessons from operations in curricula (e.g. in Burundi) and fruitful partnerships for developing of knowledge products (mainly in LAC). Other good examples (also mainly from LAC) relates to KM partnerships with regional institutions and inter-country collaborations (e.g. Brazil-Mexico). The SSTC/KM centre in Brazil promoted a broader KM agenda within LAC where inter-country opportunities were identified (e.g. among Amazonian countries), including with countries in other continents (e.g. experts from Brazil supported an IFAD project in Rwanda through ABC financing). These examples show that KM has a value as a geo-political tool and sharing and using knowledge could be demand-driven when the right frameworks and incentive structures are provided. In short, a combination of knowledge generated at country level with thematic knowledge developed across countries (through thematic groups and networks) provide a powerful knowledge base for IFAD and its development partners.

27. **Enabling framework:** IFAD's Knowledge Management Strategy (2019-2025) increased attention to KM in recent projects (e.g. Belize and Brazil) where KM serves more strategically as input for scaling-up strategies and policy engagement while including closer collaboration with universities and research institutes. However, the supporting structure and functions offered by IFAD headquarters for KM and scaling up were deemed insufficient. Incentives, guidance and support to

country teams fell short to ensure a focus on prioritizing of KM in COSOPs as well as in the design and implementation of projects. Thus, KM is still considered mainly as a compliance measure, and often only activated after requests from MTR's and supervision missions. This finding was supported by the analysis of IFAD IOE's Annual Report on Results and Impact of IFAD Operations (ARRI) 2020, which observed a declining KM performance rating post-2015. The linkages between lending and non-lending activities need to be further strengthened if KM is to play the important role envisaged in its 2019-2025 KM Strategic Framework.

28. Even though recent COSOPs make more explicit reference to KM and STDC, focus continues to be mainly on the investment portfolio with less strategic attention to the role of non-lending activities. The items included under KM mainly relate to activities envisaged in the investment projects.

Summary of evidence from case studies

Table 2

Summary of identified evidence on knowledge management, by case study country.

Country	*Knowledge Management evidence*
Bangladesh	LGED-managed projects historically have tended to work in silos, especially at the start of CCRIP. But there are instances of KM and transfer of practices between different projects. For example, the Promoting Resilience of Vulnerable through Access to Infrastructure, Improved Skills and Information (PROVATI), an IFAD financed project implemented in Northern Bangladesh, incorporates practices such as vetiver grass and also building codes which are taken from CCRIP project's experience. CCRIP donors held separate supervision and support missions. Issues that at times occurred, for instance in terms of non-effective communication, were also reflected on the part of national LGED and ministries counterpart operating the activities. More on embedding good practice into the implementing partner (LGED) activities, rather than national scaling up. There has been a generation of IFAD projects in this country; 3 donors working together with lessons coming out being embedded into government policy and guidance.
Belize	KM aims to provide stakeholders with knowledge generated from programme implementation that can serve as inputs for scaling-up strategies and for policy discussion and development. It will be led by the M&E Specialist and will start with the development of a Knowledge Management Plan (KMP) during the first year of implementation. The KMP will encompass strategies and plans for the consolidation of knowledge information and its dissemination to programme participants and interested stakeholders. Dissemination will be done using a range of methods and platforms, such as capacity building sessions, learning and knowledge sharing events and workshops, as well as multiple media outlets (e.g. print publications such as the Agriculture Report, newspapers, media broadcasts and social media – Facebook, YouTube, Pinterest, Instagram). n addition, through the MOUs for establishing relationships with IPs such the UB's Faculty of Agriculture, the programme will be able to establish continuity in the dissemination and promotion of best practices and lessons learnt to beneficiaries and to the wider community. KM products such as videos and literature will be supplied to the University Library so that information continues to be available for students and other interested parties to use as resources in their training and the development of their farming practices.
Bolivia	KM has been a very important conceptual element in the program and has allowed the target group to gain new experiences, learn about new technologies and get new visions for resilience building and climate risk management within the communities. Learning processes have been focussed on community dynamics and opportunities at local levels, rather than on strategic national-level learning efforts. A very useful systematisation exercise was conducted for the integration of ACCESOS-ASAP with HELVETAS disaster risk program (the planned dissemination of this was unfortunately affected by the Covid-19 pandemic). Concepts/specific experiences from Bolivia are being used in the work in other countries in the region.
Burundi	Since around 2014, IFAD-Burundi is working towards a country wide programmatic approach. The two most recent COSOPs (2009-2015, 2016-2021) contain explicit sections on KM. In 2015, a KM strategy was formulated, while a KM expert was recruited late 2016. Since then communications have significantly advanced through different media (e.g. https://programmefidaburundi.org ,Facebook page, twitter, radio, print media, television, meetings and promotional material). However, no specific CCA information was found on the website, not even within the presented information concerning the evaluated Projects. A need for CCA related knowledge products and for better information sharing and archiving remains. Projects' staff and the PDT were not sure in how far spatial mapping and a GIS system regarding IFAD's interventions were in place. Such information was thought to be available albeit fragmented. Even though both evaluated Projects support establishment of community groups for diverse functions, such as the maintenance of anti-erosive and ecosystem restorative measures, no training materials or monitoring systems are in place or available. According a Project partner (ISABU), the limited contract

	duration (about 7 months a year), do not allow for a scientific analysis, for that contracts of at least two years would be needed.
Cape Verde	Of two available COSOPs (2016-2018; 2019-2024), the most recent one contains a section on KM. Knowledge management strategy would capitalize on the achievements of POSER and POSER-C. Since 2019, the Project employs a communication and a GIS specialist. The project has a website which presents: i) a GIS portal showing the geographic distribution of the project activities; ii) videos with stories by beneficiaries; and iii) technical documents related to project activities. Since mid 2019, a communication specialist has been recruited to capitalize on the project experiences. Several additional activities are planned such as increasing activities on social media; organize farmer exchange visits, produce flyers and organize markets with local products. A technical paper, "Microproject horticulture" on improved water management as a CCA, as supported by POSER-Climate has been published, and is available. Furthermore, an ongoing contract with the University of Cape Verde means to improve the Projects monitoring and impact evaluation, which would facilitate the development of knowledge products.
Chad	For Chad, of the last three COSOPs (2010-2015; 2017-2019; 2020-2025), only the first one contains a KM section. So far, no national scale KM plan exist. The Project evaluated, PARSAT, does perform satisfactory on communication, but only just started to work on knowledge management in terms of producing and disseminating best practices and lessons learned. Among the Project Staff, one -a women- is in charge of "communication and knowledge management". As for communication, the Project developed, among others: a website https://parsat.org/ , a journal " Le Resilient", regular radio emission, Facebook, Twiter, Instagram, short movies and more. The website does include explicit mention and information related to CCA. More recently in collaboration with ICRAF, a publicly accessible geo-portal has been developed. It contains somewhat inaccurate location of Project activities, and is being used to analyse impact of the improved water management and agricultural practices promoted through FFSs. The latter would more likely become available under the more recent follow up REPER project. PARSAT employs a GIS expert. The Project is presently working on putting together material regarding two best practices: one on the use of improved fire stoves during the smoking of fish by women, and the other on the added valued when project activities are being synergized within one location, as applied in Abourda, on the border of Fitri and Dabada.
Egypt	N/A
Ethiopia	Included in the project design, where two of the defined components or sub-components and activities for KM and policy engagement and their results can support CCA scaling up and mainstreaming in national practices and policies. However, there is a lack of framework at the Country Program level to guide on pathways and processes for informing policy processes at regional and national government levels.
Mali	None of Mali's last three "COSOPs" (CSO2007, CSN2016-2019, COSOP2020-2024) contains a KM section. The closed Project was initiated by the WB (inclusive GEF) and apart by IFAD also co-funded by EU. After initial implementation issues and changes - partly related to the start of an enduring political crises early on during implementation - ASAP funds were added and a IFAD supported KM specialist was recruited. According a flyer published in 2016, communications produced until then would include: i) a Technical note on "good practices of adaptation to climate change and information needs of farmers' organizations on climate change"; a note on how the PCA approach works; a documentary film for information and capitalization of PAPAM's achievements; several technical sheet on the Bio-digester technology. Most of these, apart from the film, were made available to the evaluation. In addition, the Project produced 30 Communal Climate Change Adaption Plans (PCAs) and 90 annual forest monitoring reports, involving a GIS system, produced by the national forest service monitoring department "SIFOR" (DNAE), a department within the Ministry of Environment and Sanitation. Unfortunately, none seems to be used for follow up. There has also been mention - in a gender related IFAD publication, of a report published by a national research agency (IER) which evaluated the PAPAM/ASAP investment related to the attempts to enhance access to climate information. (Not found). A structured archiving and dissemination of these products has been missing. The supervision in 2018, however, commended the search for constant improvements on biodigestors through South-South exchanges (Rwanda and Burkina Faso). The organization of an exchange workshop with eight ASAP projects in Francophone Africa in October 2017 would have allowed for the dissemination of good management practices adopted by ASAP and generated interest among participants in the PCA approach and biodigestors. Not only on Project level, but even on IFAD level the archiving of supervision mission reports of this Project fell somewhat short. The missing supervision reports of the early years were obtained through the WB. The communication and coordination between the funding partners has been poor.
Moldova	A number of useful knowledge products were produced and disseminated on topics such as shelter belts and grasslands. An international conference titled "Sustainable and resilient agriculture" was

	convened in collaboration with the State University in Balti to share experiences in climate smart agriculture. However, weak capitalization of knowledge acquired by the projects limited the dissemination of best practices and innovative experiences in CA and other domains of IFAD's climate interventions. There remains a need within the IFAD portfolio to raise efforts of KM in the following: i) improving exchange of experiences and lessons learned within Moldova and contributing to the knowledge base of IFAD - in Moldova and globally; and ii) coordinating and planning KM milestones, products and events. A clear outcome focused strategy and approach to KM was missing.
Honduras	No specific KM strategy or plan for systematizing and recording of KM activities was developed for the PRO-LENCA project. The project team does not include specific skills and competencies on KM. In addition, the M&E system has not been supportive to effective and efficient KM (no KM module included). Thus, KM was not a visible element in the project design. At a late stage in project implementation, and based on requests from the MTR and supervision reports, the project is making different attempts to establish partnerships for further dissemination and uptake of knowledge and technologies.
Kenya	Weak knowledge-to-action and action-to-knowledge process. The COSOP 2013 did not provide indications on what is to be achieved in knowledge management. KCSAS 2017-2026 acknowledges that there is inadequate information, knowledge generation, and management and limited understanding of the CSA concept. The four initiatives have not sufficiently contributed to filling this gap of CSA knowledge generation by strengthening specific climate change adaptation-related knowledge. PROFIT lacked knowledge-sharing mechanisms. The PCR noted that this lack directly impacted the effectiveness and efficiency of the results achieved to meet development objectives. UTaNRMP made efforts to work with county and sub-county teams to collect success stories, document them, disseminate and transfer the knowledge captured to all stakeholders. KCEP-CRAL does not yet have a KM strategy.
Kyrgyzstan	IFAD's KM strategy in the assessed LMD project was facing important challenges. While at the level of the country director (and above), there was strong support and awareness for the importance of KM, at the local level, the KM strategy was mostly inexistent and reduced to M&E matters. In fact, M&E has been neglected in the LMD project, and a M&E officer was hired only once the project ran for over a year's time. Monitoring of project indicators was affected by a reportedly faulty software-based tracking system. The 'blind spot' or negligence of KM does not come as a surprise. There is a pronounced reluctance to share knowledge and information in Kyrgyzstan, even within organizations, but particularly between institutions, and if partners are unwilling to share knowledge, it also cannot be managed. IFAD's hierarchical intervention mode without any in country residence may contribute to the challenges. The APIU under the government is mostly interested in reporting success stories, not failures from which the organization could probably learn more. And the implementing partners on the ground are functioning often detached and shielded from the KM experts requesting to share information, best practices or learnings. Trust as a major precondition for sharing knowledge and information is not strongly developed in Kyrgyzstan's business culture (and IFAD's activities are often viewed as 'business opportunities'). IFAD's non-residential intervention mode seems to impede the flow of information and knowledge not only within IFAD's projects (vertically), but also among international partners (WFP, FAO, WB, UNDP, GIZ etc.). However, at least in one KM related aspect the LMD project seems successful, when it was collaborating with a local university in Bishkek for the development of pasture management curricula as well as pasture user manuals.
Nepal	DFID funded projects have held exchanges with ASHAP and replicated practices on enhancing individual livelihoods as practised in ASHAP. There is a high level of informal exchange with donors, especially those such as DFID and WFP.
Niger	The rural development experiences of the case study projects are rich but their CCA potential, which is evidently there but dispersed, and therefore difficult to grasp and build on for future more explicitly climate-resilience oriented programmes and projects. To this effect the projects lack effective KM systems that can capture and share those experiences with decision makers for their scaling up and for informing policy processes.
Rwanda	KM and communication activities were implemented as per design plan. The national exhibition in agriculture was successfully conducted with more than 25 farmer organizations supported to exhibit and more than 200 participants. In 2018-2019 various KM activities were delivered including (i) weekly newsflashes with 12 stories shared through different platforms, (ii) success stories: 4 booklets on LFFS produced and distributed to LFFS groups, (iii) 3 videos produced and shared and 4 TV videos on milk consumption and quality broadcast, (iv) establishment of a District VC platform, which if successful could be extrapolated to other value chains, and (v) promotion of the LFFS approach
Sudan	The revised design of the LMRP (after the MTR) includes a more explicit attention to KM. LMRP has developed a KM Strategy which is supposed to serve as a roadmap for taking the project in the right direction. In addition, while the responsibility for KM was up to MTR given to the 2 M&E officers, all staff have now been allocated basic tasks in KM. IFADs capacity for KM support decreased with the departure of the staff member in late 2018 who used to provide substantive inputs in this area. Since then, systematic and coordinated KM undertakings have been reduced. There has been an intention to strengthen the Central Coordination Unit's role in supporting KM, but capacity has been insufficient. While some bilateral, ad hoc or informal exchanges between different project staff do take place, structured knowledge-sharing and follow-up on application of learning are insufficient

D. Executive Summary: Learning Thematic study – Climate Adaptation Responses: Human-Eco systems nexus

29. Agriculture is a human action undertaken for human benefit and is essential for human survival. Agriculture is also one of the main mechanisms through which humans adversely affect sustainability of natural systems and climate. The connection or coupling of human and natural systems is both strong and direct, that is agriculture and the landscapes on which agriculture is practiced and from which it draws are intimately, directly and strongly coupled. Nexus describes settings where both human and natural systems are present, where the systems couple, each affecting the other and the totality affecting sustainability of the natural system and of agriculture itself. And because agriculture is essential to human existence the character of the agriculture natural system nexus also strongly affects sustainability of human life. In this way nexus goes to the heart of the SECAP guidance and the SDGs. This learning case study considers smallholder climate adaptation from a nexus perspective, that is, adaption to improve the resilience of both human and natural systems.

30. IFAD guidance on climate and environment provided by the 2015 SECAP and its updated version in 2017 called for looking beyond "doing no harm" towards "doing good". This is here interpreted as environmental conditions should be no worse from IFAD interventions and should seek to leave the environment better off by providing restorative contributions as feasible. The direct implication is that IFAD is directed to achieve development goals with approaches that do not leave the environment worse off. This evaluation confirms proof of concept, an important subset of IFAD climate adaptation projects were performing at or beyond doing no harm and through their restorative actions at landscape scales were doing significant good for smallholders and ecosystems.[159] At the same time, a significant share of IFAD projects reviewed as part of this evaluation were falling short on the "do no harm" standard and posed net harm to the environment. Thus while achieving the ambition of the SECAP guidance is attainable many IFAD projects reviewed fall short of the SECAP standard. The projects reaching or exceeding SECAP direction generally had important contributions from climate funds or the GEF and include concessional loans or grants, involved significant engagement of key stakeholders in design, and focused on landscape scale integrated interventions targeting natural solutions to the underlying climate threats such as drought.

31. An important distinguishing characteristic of projects reaching or exceeding the IFAD do no harm stance is the project addresses the adaptive needs of smallholder farmers via natural system interventions using natural solutions, for example, providing community water needs while also restoring aquifers. Sustainable natural resource management is a critical element in all four projects and in each employs participatory approaches. These projects reflect important elements of good practice using holistic approaches treating agriculture as an integrated system alongside natural resource management and climate, operating at ecosystem and landscape scales and using social networks and collective actions to address smallholder and environmental outcomes. It also appears that the SECAP is better at safeguarding humans than it is the environment.

32. This evaluation confirms proof of concept, a strong subset of IFAD climate projects are performing at or beyond doing no harm and through their restorative actions at landscape scales were doing significant good. This shows that IFAD already has capacities and vision needed to develop and implement interventions that win on both fronts, development and environment. At the same time, a significant share of IFAD projects reviewed as part of this evaluation were falling short on the "do no harm" standard contributing net harm to the environment. Clearly some IFAD

[159] Case studies in Kenya, Niger, Burundi, Mali and Sudan point to projects at or going beyond 'do-no-harm' to natural systems and towards restoring them.

projects show that his need not be and that reaching and exceeding the SECAP guidance is within reach.

E. Executive Summary – Evaluability Study: Climate Change Adaptation Performance using Geospatial and Earth Observation Technologies for IFAD interventions

Introduction

33. This assessment report was developed in the context of a Thematic Evaluation of IFAD Climate Change Adaptation program portfolio 2020-2021. The challenges created by COVID-19 epidemic to conduct 'physical' monitoring missions and evaluation activities in the field, the cost effectiveness of remote monitoring schemes contributed to this assessment. The Rationale and introduction is presented first, followed by Country Case Study Assessments, and concluded with Findings and Recommendations. Illustrative figures and maps are provided in the Annex.

34. Earth Observation and Geospatial Technologies (EO & GT) made important progress in recent years, allowing the study Earth's surface phenomena. These provided images of greater detail than ever before with a dramatic increase in the availability, accessibility and quality of satellite imagery. The EO and GT instruments also offer several benefits for monitoring and tracking key aspects of resilience, and for planning interventions to strengthen climate adaptation responses. The most important benefits are listed below.

35. Passive EO satellite systems are designed to scan almost every location on the Earth's surface during daytime while orbiting the Earth - which is especially useful for monitoring remote areas far from ground-based surveillance infrastructure, contributing to the cost-effectiveness of EO systems. EO satellites are usually designed to orbit the earth in polar mode, allowing the sensors to cover large parts of the Earth's surface in one swath at stable conditions. The resulting synoptic perspective and geometric stability are crucial for analytical applications relying on consistent atmospheric properties affecting solar radiation, e.g. for comparing earth surface features in certain time intervals in order to monitor for instance land cover change.

36. The underlying hypothesis for the assessment on the use of EO & GT for assessing the Climate Change Adaptation (CCA) impact of IFAD projects is threefold: (a) GT hold an important potential for substituting field visits through remote assessment of selected IFAD project interventions ('potential'), (b) CCA measures and impacts of these project interventions can be assessed and evaluated through approximation with GT ('evaluability'), (c) IFAD's monitoring and evaluation (M&E) system can be strengthened through the mainstreamed use of GT in order to improve efficiency, replicability and accountability ('spatial empowerment & enablement').

37. The potential role of GT in tracking and monitoring processes and features resulting from CCA interventions were highlighted and is being discussed intensely in many fora recently. CCA Interventions such as conservation agriculture (CA) or sustainable land management (SLM), improved pasture & livestock management, infrastructure resilience, are highly context specific but provide potential areas for the use of GT technologies. Particularly the technical advancement, availability and usability of products from satellites holds considerable potential where GT can contribute critically to track adaptation processes through direct monitoring or modeling of proxy processes.

38. Through observation and analysis of remotely sensed imagery covering spatial and temporal dimensions (often referred to as a 'data cube'), characteristic time-space patterns can be associated with certain biophysical or socio-economic drivers of land use or land cover change. For instance, certain types of vegetation or crops

can be inferred from observed phenological cycles; or drought conditions can be inferred from typical reflectance / spectral signatures of vegetation suffering from water stress; etc. - but importantly, this involves contextual information, which traditionally is collected on the ground, depends on local expert knowledge or is captured in spectral libraries under development.

Analysis

39. **Case Study Selection.** Of the 20 case study countries, only cases featuring spatial information, georeferenced intervention sites or interventions with an important potential for the use of GT were selected for this assessment, resulting in a sample of nine cases (See Table 1 below).

40. Criteria and Ratings. All cases featured a component to build climate resilience. The column 'Spatial Awareness' rates the awareness of the project (assessed mostly from available project documentation) or the project staff (assessed from interviews) for the potential of using GT for design, planning, management, implementation or monitoring and documentation purposes, by scoring the level of awareness observed between 1 (lowest) and 5 (highest). The basic assumption for the assessment here was that GT could play an important role as a spatially referenced information system (e.g. linked maps and attributes tables), storing project management information spatially and serve as a project information repository (connection to knowledge management).

41. The column 'Availability of Spatial Data' assesses the capacity of the project/program to share relevant spatial information and data (e.g. intervention sites, additional spatial information), as well as the quality of the data shared (format, precision, relevance). If no data or information were shared, neither with the Rome based central spatial data repository nor the evaluation team, the project intervention was scored 1 (lowest score). If data were shared, but with low quality, then the project was scored 2. None of the cases was scored 5 (highest score) – which would require that data is provided in reliable quality and following international standards.

42. The column 'Relevance of GT' finally assesses the value of GT to be used meaningfully for the assessed intervention. The latter also includes 'evaluability', which refers to the capacity of GT to adequately measure relevant aspects (or proxy indicators) of adaptive capacity / climate resiliency of an intervention context. Most of the projects show a high relevance score for the use of GT – which is the case when GT serves several roles during the project cycle – from design to implementation and monitoring. If the project intervention was mostly focusing on community development aspects, then the score in this column cannot reach the maximum score (which e.g. is the case for the Kyrgyz Republic, featuring a strong component on community-based pasture management and training of veterinarians).

General Findings

Table 3

Assessment of Evaluability [scoring from 1 (lowest) to 6 (highest).

	Country	*Intervention type*	*Spatial Awareness*	*Availability and use of spatial data*	*Relevance of GT*
1	Bangladesh	Rural Development	5	5	6
2	Belize	Rural & Economic Development	2	2	5
3	Burundi	Integrated Watershed Management	2	1	5
4	Cabo Verde	Integrated Watershed Management	4	3	5

5	Chad	Rural Development & Sustainable Land Management	4	4	4
6	Ethiopia	Integrated Watershed Management & Sustainable Land Management	5	4	5
7	Kyrgyz Republic	Community based Natural Resource Management	3	3	5
8	Mali	Rural & Economic Development	1	1	4
9	Moldova	Sustainable Land Management	4	4	4

43. The success of EO & GT for M & E (and further impact assessments) typically depends on the context and the level of integration - GT tools need to be incorporated from the design stage, and all project stakeholders and partners need to buy into it - including the allocation of sufficient financial, technical and human resources means to carry it out, e.g. including the means for a thorough baseline survey for benchmarking.

44. Monitoring the impacts of conservation agriculture/sustainable land management measures - e.g. efficient irrigation techniques, mulching or soil structural measures usually requires more or less complex ground-based measurements; substituting these measures with geospatial technologies (remote sensing) implies the use of models e.g. for modelling evapotranspiration, or spatial & spectral pattern detection. This usually involves computational costs since such datasets are not readily available for IFAD's target areas (countries). In some cases, ESA SP were developing models e.g. for crop monitoring or drought detection, but recalibration would be required for most applications in new environments / IFAD countries.

45. Feedback from in-country staff - but also at HQ - often reveals a lack of understanding of the potential of GT to support their work and is often perceived as an add-on resulting in additional work, without an immediate benefit for the project. Access to data is also often limited for local project staff and there are no provisions from the project at design stage to allow for thorough baseline setups and regular data collection and monitoring.

46. The discussion with partners such as WFP highlighted the willingness to develop thematic countrywide spatial databases for IFAD; such databases apparently exist for selected countries.

47. IFAD seems to face similar challenges as other organizations, i.e. the management requests maps and charts to show macro level impact, while the field staff needs handy and efficient protocols in order to cope with limited time resources, yet useful for activity tracking and reporting at the plot level. M & E and quality assurance departments wish to efficiently collect as many relevant indicators as possible. This requires a well-designed methodology integrated into the project from the design stage to ensure that data and instruments are developed and functional.

48. During the design phase and early discussions with the host country efforts have to be made to include as many national and regional partners who can support GT in-country and have much easier access to national data. There is a potential to foster the collaboration with local partners (universities, think tanks, etc.).

49. Currently, access to and use of IFAD's GeoNode spatial online application remains very limited due to prohibitively tight security restrictions, which may also explain

the little data hosted on the platform. This setup also diverts from the intended principles of the GeoNode application.

Key Take Away

50. The use of GT should be streamlined and integrated into the full project cycle/process – from project design to monitoring and final impact assessment.
51. Data collection and processing protocols should be developed helping project managers to identify resources and solutions
52. Staff capacity related to GT should be developed or upgraded – not only technical capacity, but also to understand and apply the concepts
53. Satellite image processing and classification workflows should be developed and optimized / parametrized for specific data sources (satellite imagery providers) and application needs (adapted to the scale of structures or processes)
54. The use of open-source technology for developing required processing chains (QGIS, ORFEO Toolbox, etc.) should be favoured ensuring a high degree of flexibility and limited lock-in effects and dependency on commercial software providers

Portfolio analysis - Descriptive statistics of IFAD's projects and country strategies supporting Smallholder Adaptation to Climate Change

The portfolio review provides a descriptive analysis of IFAD's climate response under IFAD operations, Country Strategic Opportunities Programme (COSOP) and Country Strategy Notes (CSNs). For the purpose of this evaluation, all projects approved between 2010 and 2019 will be considered. IFAD8 in 2010 declared climate adaptation as a corporate priority for the first time.

1. Portfolio Analysis of Projects

The projects selected for desk review represents operations in 101 countries in the five regional divisional of IFAD (Table 1).

Table 1

Distribution of projects by region

APR (23 countries)		*ESA (18 countries)*		*LAC (18 countries)*		*NEN (19 countries)*		*WCA (23 countries)*	
Country	**Num. of projects**	**Country**	**Num. of projects**	**Country**	**Num. of projects**	**Country**	**Num. of projects**	**Country**	**Num. of projects**
Afghanistan	2	Angola	4	Argentina	3	Armenia	2	Benin	3
Bangladesh	8	Botswana	1	Belize	1	Azerbaijan	1	Burkina Faso	3
Bhutan	2	Burundi	5	Bolivia	2	Bosnia Herzegovina	3	Cabo Verde	1
Cambodia	4	Comoros	1	Brazil	5	Djibouti	2	Cameroon	2
China	8	Eritrea	3	Colombia	1	Egypt	4	Central African Rep	2
East Timor	1	Eswatini	2	Cuba	3	Georgia	2	Chad	3
Fiji	1	Ethiopia	5	Dominican Republic	2	Iraq	1	Congo	2
India	6	Kenya	4	Ecuador	3	Jordan	2	Cote D'ivoire	3
Indonesia	7	Lesotho	3	El Salvador	2	Kyrgyzstan	3	Dem. Rep of Congo	3
Kiribati	1	Madagascar	3	Grenada	2	Lebanon	1	Gabon	1
Lao	4	Malawi	4	Guyana	1	Moldova	3	Gambia	2
Maldives	1	Mozambique	5	Haiti	2	Montenegro	1	Ghana	3
Mongolia	1	Rwanda	5	Honduras	4	Morocco	5	Guinea	3
Myanmar	3	Seychelles	1	Mexico	3	Sudan	6	Guinea-Bissau	2
Nepal	4	Tanzania	1	Nicaragua	3	Syria	1	Liberia	5
Pakistan	5	Uganda	6	Paraguay	3	Tajikistan	3	Mali	4
Papua New Guinea	2	Zambia	3	Peru	3	Tunisia	4	Mauritania	2
Philippines	4	Zimbabwe	1	Uruguay	1	Turkey	3	Niger	6
Samoa	1					Uzbekistan	3	NIGERIA	3
Solomon Islands	2							Sao Tome	1
Sri Lanka	4							Senegal	4

Tonga	2							Sierra Leone	3
Viet Nam	6							Togo	3
Subtotal	**79**	**Subtotal**	**57**	**Subtotal**	**44**	**Subtotal**	**50**	**Subtotal**	**64**

Source: IOE Elaboration based on Portfolio Analysis

Climate Risk Assessments in Projects: The database presents information on the status of projects (pipeline, ongoing, complete or closed) and SECAP ratings of climate as well as environmental and social risks. The desk review identified if the design provides a climate risk rating (qualitative or quantitative). Table 2 summarizes the information on the projects with climate risk assessed. As can be seen, 256 of the 294 projects identified climate risks. Projects with no risks identified or those without risk ratings were excluded from the portfolio.

Table 2

Portfolio General Distribution

Description (SECAP risk assessment)	*Num. of projects*
projects with identified risk assessment	256
Projects with no risk assessment	38
Total	**294**

Source: IOE Elaboration based on Portfolio Analysis

The projects that identified climate risks were analyzed for their activities addressing the stated risk(s). Project Completion Reports (if the project was completed) or Project Supervision Reports (PSR) (if the projects were ongoing) were reviewed to check if these design activities were implemented The ratings for all evaluation criteria specified in IOE evaluation manual were provided for projects that have Project Completion Reports (PCR) or IOE evaluations. These ratings include climate change as well as environment and natural resources.

Level of climate risks (as assessed by the projects**)**: The following tables show the distribution for the Level of Environment and Social Risk assessed in PDRs (1= A (Low), 2= B (Moderate), 3= C (High)) and the Level of Climate Risk assessed in PDRs (1= High, 2= Moderate, 3= Low, with a TE addition 4=No mention of risk and 5= Risk identified without rating) is shown on the tables below.

Table 3

Distribution of risk ratings environment and social standards as assessed in PDRs

Rating	*Number of projects*	*Percent*
A	9	4%
B	244	95%
C	3	1%
Total	**256**	**100**

Source: IOE Elaboration based on Portfolio Analysis

Table 4

Distribution of Climate Risk assessed in PDRs

Rating	*Number of projects*	*Percent*
High	45	18%
Moderate	127	50%
Low	12	4%
No mention of risk	6	2%
Risk identified without rating	66	27%
Total	**256**	**100**

Source: IOE Elaboration based on Portfolio Analysis

Table 4 presents the description of the method to identify the project level climate risk and Table 6 the distribution of projects among the ratings.

Table 5

Key - Methods to identify project level climate risk

Key	*Description*
1	quantitative assessment of risk at the correct level
2	qualitative assessment of the risk at the correct level
3	non-rigorous/neither qualitative nor quantitative

Source: IOE Elaboration based on Portfolio Analysis

Table 6

Methods to identify project level climate risk

Key	*Number of projects*	*Percent*
1	94	37%
2	93	36%
3	69	27%
Total	**256**	**100%**

Source: IOE Elaboration based on Portfolio Analysis

The analysis shows that 95 per cent of the projects in the portfolio (243 of the 256) declared intent to address climate risk (Table 7). It should be noted that 10 of the 13 projects that did not declare intent to address the climate risk were those that did not have rigorous risk analysis (Table 7).

Table 7

Intent to address climate risk

Rating of the method to identify project level climate risk	*Intent to address climate risk*		*Total*
	No	***Yes***	
1	2	92	94
2	1	92	93
3	10	59	69
Total	**13**	**243**	**256**

Source: IOE Elaboration based on Portfolio Analysis

Rio Markers: The evaluation team classified the intensity of project engagement with climate adaptation in line with the Rio markers of OECD DAC. Table below provides the key to the classification of this marker.

Table 8

KEY - Description of Prioritization of climate risk (OECD DAC RIO markers)

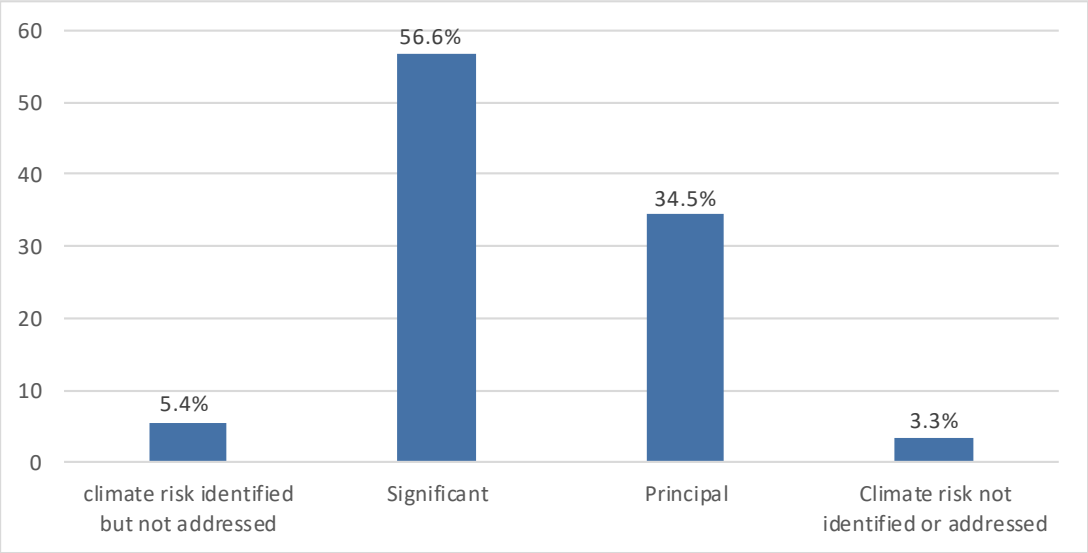
Category	*Description*
0	If climate risk is identified in the project but not addressed
1	A project can be marked as **significant (1)** when the objective (climate adaptation) is explicitly stated but is not the fundamental driver or motivation for undertaken it. Instead, the activity has other prime objectives but it has been formulated or adjusted to help meet the relevant climate concerns.
2	A project can be marked as **principal (2)** when the objective (climate adaptation) of the project explicitly stated as fundamental in the design of, or the motivation for, the activity. Promoting the objective will thus be stated in the activity documentation as one of the principal reasons for undertaking it.
3	Climate risk not identified or addressed

Source: OECD DAC Rio Markers for Climate: Handbook (https://www.oecd.org/dac/environment-development/Revised%20climate%20marker%20handbook_FINAL.pdf)

Of the 256 projects in the portfolio, 147 (57%) stated that climate adaptation is a significant objective, 90 (35%) stated that climate adaptation was the principal objective while 19 (8%) did not state any intent to address climate adaptation. (Figure 1).

Figure 1

Prioritization of climate risks (OECD DAC RIO markers)



Source: IOE Elaboration based on Portfolio Analysis

1.1 Categories of Climate Adaptation Interventions

An analysis of the 256 climate-related interventions (those that assessed climate risk and declared the intent to address this climate risk) identified the following categories and sub-categories of activities (Table 9).

Table 9

Climate Adaptation Interventions - Categories and subcategories

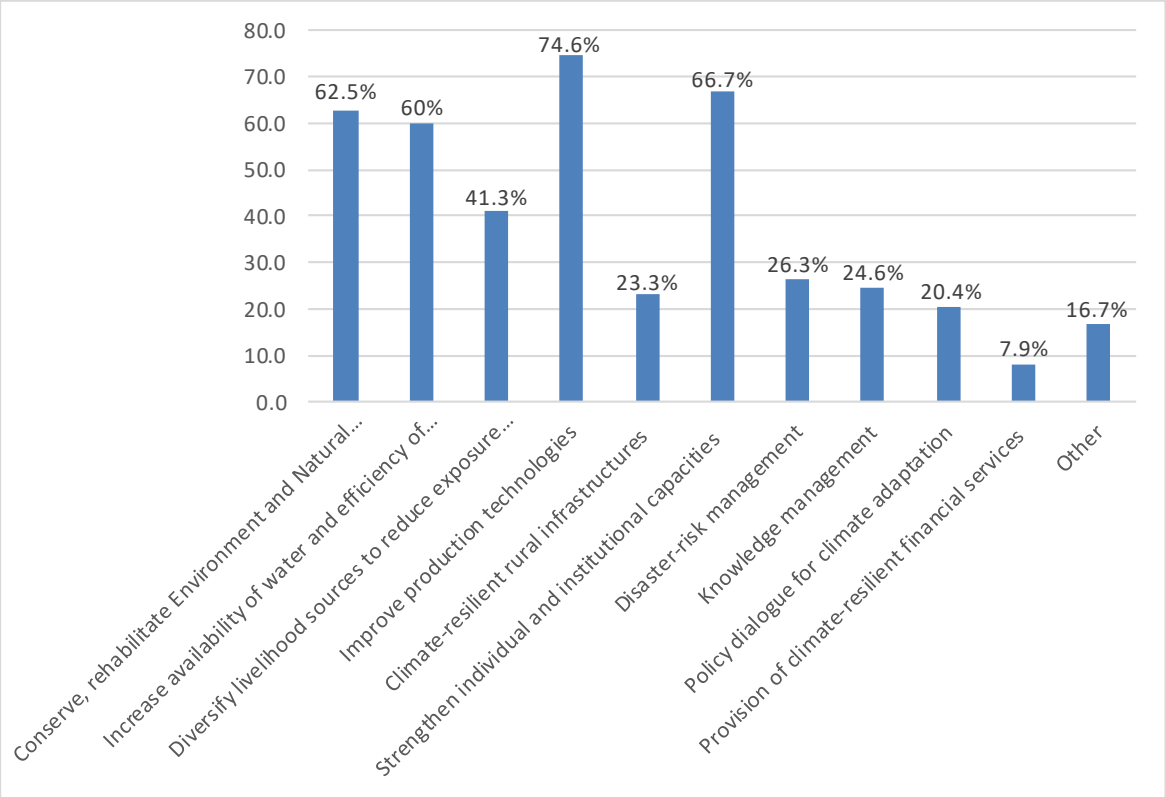
Category	*Subcategory*
1. Conserve, rehabilitate Environment and Natural Resources	Improve management of Environment and Natural Resources (ENR)
	Integrated watershed management
2. Increase availability of water and efficiency of water use	Water management
	Irrigation infrastructures/Technologies
3. Diversify livelihood sources to reduce exposure to climate risk (farm/off-farm)	
4. Improve production technologies	Integrated production systems
	Climate resilient seeds/breeds/practices
	Pest and disease management
	Improved livestock productivity
	Fisheries
5. Climate-resilient rural infrastructures	
6. Strengthen individual and institutional capacities	
7. Disaster-risk management	Capacity building on disaster risk management
	Early warning systems
8. Knowledge management	SSTC
9. Policy dialogue for climate adaptation	
10. Provision of climate-resilient financial services	Financial services for climate-risk management
	Weather-index insurance

11. Other

Source: IOE Elaboration based on Portfolio Analysis

Figure 2

Distribution of Activities: Main Categories



Source: IOE Elaboration based on Portfolio Analysis

According to Figure 2, improving production technologies was the most frequent - 77 per cent of the projects had activities in this area. Strengthening individual and institutional capacities (70 per cent of the projects), conserving, rehabilitating environment and natural resources (63 per cent) and increasing availability of water and efficiency of water use (62 per cent) appear as more frequent IFAD CCA interventions. The least common category was provision of climate resilient financial services (10 per cent).

1.2 Analysis of climate adaptation interventions and markers by Countries with fragile situations

This section presents the distribution of climate adaptation activities in countries with fragile situations. Of the 101 countries in the portfolio, 41 (40%) were classified as fragile states during the period 2013 – 2019. Of the 256 projects in this portfolio, 65 (25 per cent) were implemented in states with conditions of fragility.

The table below presents the share of categories of climate adaptation activities in these 65 projects. The second column presents the percentages of the activities in countries with fragile situations; while the third column presents the share of the activities in the full portfolio. The most common activity in countries with fragile situations was addressing climatic risks is *Improve production technologies* with 75 per cent of the projects, followed by *Strengthen individual and institutional capacities* (72 per cent). On the other hand, the activity with the lowest percent of the projects in countries with fragile situations is *Provision of climate-resilient financial services* with 12 per cent of the projects.

Table 10

Categories of Climate Adaptation Activities in Countries with Fragile Situations

Climate Adaptation Categories of intervention	*Distribution of Activities within fragile states*	*Distribution of Activities in the full portfolio*
Conserve, rehabilitate Environment and Natural Resources	58%	63%
Increase availability of water and efficiency of water use	61%	62%
Diversify livelihood sources to reduce exposure to climate risk (farm/off-farm)	40%	46%
Improve production technologies	75%	77%
Climate-resilient rural infrastructures	43%	25%
Strengthen individual and institutional capacities	72%	70%
Disaster-risk management	35%	30%
Knowledge management	31%	25%
Policy dialogue for climate adaptation	22%	21%
Provision of climate-resilient financial services	12%	10%
Other	25%	21%

Source: IOE Elaboration based on Portfolio Analysis

1.3 Analysis of ASAP projects

The 41 ASAP projects constitute 17% of the overall TE portfolio. The Table below shows the countries with ASAP projects in every region.

Table 11

Countries with ASAP funded CCA components in projects

APR	*ESA*	*LAC*	*NEN*	*WCA*
Bangladesh	Burundi	Bolivia	Djibouti	Benin
Bhutan	Comoros	Ecuador	Egypt	Cabo Verde
Cambodia	Ethiopia	El Salvador	Iraq	Chad
Lao	Kenya	Nicaragua	Kyrgyzstan	Cote D'ivoire
Nepal	Lesotho	Paraguay	Moldova	Gambia
Viet Nam	Madagascar		Montenegro	Ghana
	Malawi		Morocco	Liberia
	Mozambique		Sudan	Mali
	Rwanda		Tajikistan	Mauritania
	Uganda			Niger
				Nigeria

Source: IOE Elaboration based on Portfolio Analysis

Majority of ASAP projects (53.7 per cent) identified a *Moderate* level of climate risk and 12 per cent rated the climate risk as *High.* Nearly 30 per cent of the projects observe the existence of climate risk without rating it.

Table 12

Distribution of Climate Risk in ASAP projects

Level of Climate Risk assessed in PDRs	*Number of projects*	*Per cent*
High	5	12.2%
Moderate	22	53.7%
Low	1	2.4%
No mention of risk	1	2.4%
Risk identified without rating	12	29.3%
Total	**41**	**100**

Source: IOE Elaboration based on Portfolio Analysis

The table below shows that 90 per cent of ASAP projects are implemented in *Low income* and *Lower middle income* countries (43.9 per cent and 46.3 per cent respectively).

Table 13

ASAP projects by Income Status

Income Status	*Number of projects*	*Per cent*
Low income	18	43.9%
Lower middle income	19	46.3%
Upper middle income	4	9.7%
Total	**41**	**100**

Source: IOE Elaboration based on Portfolio Analysis

Table 14

Climate Adaptation Activities in ASAP projects

Climate Adaptation categories and sub-categories	*Number of interventions by project*
1. Conserve, rehabilitate Environment and Natural Resources	**30**
Improve management of Environment and Natural Resources (ENR)	29
Integrated watershed management	6
2. Increase availability of water and efficiency of water use	**30**
Water management	24
Irrigation infrastructures/Technologies	25
3. Diversify livelihood sources to reduce exposure to climate risk (farm/off-farm)	**19**
4. Improve production technologies	**34**
Integrated production systems	10
Climate resilient seeds/breeds/practices	34
Pest and disease management	11
Improved livestock productivity	15
Fisheries	4
5. Climate-resilient rural infrastructures	**18**
6. Strengthen individual and institutional capacities	**30**
7. Disaster-risk management	**17**

Capacity building on disaster risk management	11
Early warning systems	12
8. Knowledge management	**19**
SSTC	2
9. Policy dialogue for climate adaptation	**19**
10. Provision of climate-resilient financial services	**2**
Financial services for climate-risk management	0
Weather-index insurance	1
11. Other	**9**

Source: IOE Elaboration based on Portfolio Analysis

Using the Rio markers of OECD DAC to categorize the extent to which CCA was prioritized, 66 per cent of the ASAP projects identified climate adaptation as the principal objective, while 27 per cent identified CCA as a significant objective (Table 15).

Table 15

Prioritization of climate risks (OECD DAC RIO markers) in ASAP projects

Prioritization of climate adaptation (OECD DAC RIO markers)	*Num. of projects*	*Percentage*
Climate risk identified but not addressed	2	4.9%
Significant	11	26.8%
Principal	27	65.9%
Climate risk not identified or addressed	1	2.4%
Total	**41**	**100**

Source: IOE Elaboration based on Portfolio Analysis

Table 16 shows that 63 per cent of projects stated the intent to be scaled up at the design.

Table 16

Scaling-up strategies in PDR for ASAP projects

Intervention Strategies for scaling up spelled out in PDR	*Num. of projects*	*Percentage*
no	14	34.1%
yes	26	63.4%
NA	1	2.4%
Total	**41**	**100**

Source: IOE Elaboration based on Portfolio Analysis

1.4 Climate adaptation response and Country Income Status

The analysis presented in this section is based on the World Bank income classification available for the years 2010 - 2019. The analysis considers the project approval year as reference point for the classification of the four income groups: high, upper-middle, lower-middle, and low. Lower middle income countries represents the highest percentage (45) of projects implemented.

Table 17

Projects distribution by Income Status

Income Status	*Num. of projects*	*Percentage*
Low income	85	33%
Lower middle income	114	45%
Upper middle income	56	21.6%
High income	1	0.4%
Total	**256**	**100**

Source: IOE Elaboration based on Portfolio Analysis

2. COSOP Portfolio Analysis

The purpose of this analysis is twofold: whether IFAD has taken into consideration climate change in engaging with the Government (mainstreaming); and, to assess if the activities/investments appropriate to address the climate risks identified at country level.

The portfolio includes all Country Strategic Opportunities Programme (COSOP) and Country Strategy Note (CSN) desk review approved on or after 2010 from 81 countries in the five regional divisions (Table 18) and Table 19 presents the number of COSOP and CSN analyzed.

Table 18

Country strategies documents (approved during 2010-2019)

APR (17 countries)	*ESA (18 countries)*	*LAC (14 countries)*	*NEN (12 countries)*	*WCA (20 countries)*
Afghanistan	Angola	Argentina	Armenia	Benin
Bangladesh	Botswana	Brazil	Bosnia and Herzegovina	Burkina Faso
Bhutan	Burundi	Belize	Djibouti	Cabo Verde
China	Comoros	Bolivia	Egypt	Cameroun
Cambodia	Eritrea	Colombia	Jordan	Central Africa Republic
Indonesia	Eswatini	Cuba	Kyrgyzstan	Chad
India	Ethiopia	Dominican Republic	Lebanon	Congo
Kiribati	Lesotho	Ecuador	Montenegro	Côte D'Ivoire
Laos	Madagascar	El Salvador	Syria	Gabon
Maldives	Malawi	Grenada	Tajikistan	Gambia
Nepal	Mozambique	Guatemala	Turkey	Ghana
Papua New Guinea	Rwanda	Guyana	Uzbekistan	Guinea Bissau
Pakistan	Seychelles	Haiti		Liberia
Samoa	South Africa	Venezuela		Mali
Sri Lanka	Sudan			Mauritania
Tonga	Tanzania			Nigeria
Viet Nam	Zambia			Senegal
	Zimbabwe			Sierra Leone
				São Tomé and Principe
				Togo

Source: IOE Elaboration based on Portfolio Analysis

Table 19

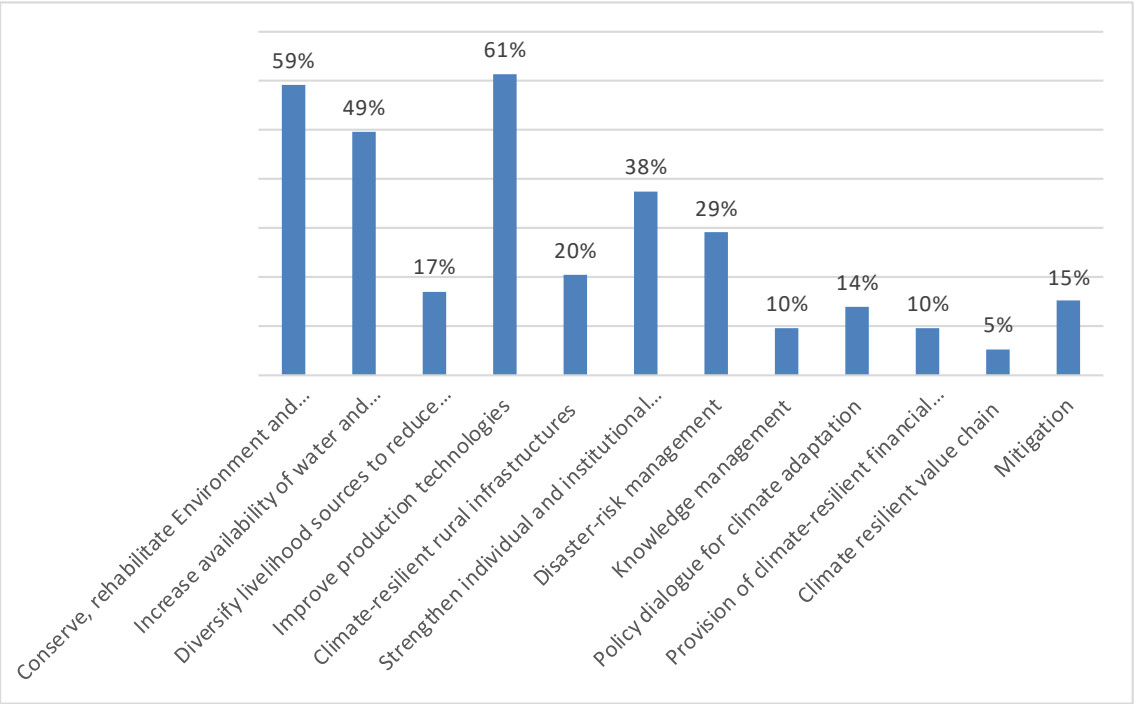
COSOP and CSN approved during 2010-2019

Type of Document	*Number of Country Strategy documents*
COSOP	66
CSN	27
Total	**93**

Source: IOE Elaboration based on Portfolio Analysis

Figure 3

Main Categories of Climate Interventions in Country Strategy Documents



Source: IOE Elaboration based on Portfolio Analysis

Bibliography

Binet, S., et al. 2021. *Independent evaluation of the adaptation portfolio and approach of the Green Climate Fund. Evaluation Report No. 9, February 2021*. Independent Evaluation Unit, Green Climate Fund. Songdo, South Korea. Executive summary available at: https://ieu.greenclimate.fund/sites/default/files/evaluation/210406-adaptation-final-report-ex-sum-top.pdf.

Boltz, F., LeRoy Poff, N., Folke, C., Kete, N., Brown, C.M., St. George Freeman, S., Matthews, J.H., Martinez, A. & Rockström, J. 2019. Water is a master variable: Solving for resilience in the modern era. *Water Security, 8(May).*

Carpenter, S., Walker, B., Anderies, J.M. & Abel, N. 2001. From Metaphor to Measurement: Resilience of What to What? *Ecosystems, 4(8),* pp. 765–781.

Deininger, K.W, & Jin, S. 2006. Tenure security and land-related investment: Evidence from Ethiopia. *European Economic Review, Volume 50, Issue 5,* 1245-1277.

Donatti, C. I., Harvey, C. A., Martinez-Rodriguez, M. R., Vignola, R. & Rodriguez, C.M. 2019. Vulnerability of smallholder farmers to climate change in Central America and Mexico: current knowledge and research gaps. *Climate and Development, Vol. 11, No. 3,* 264–286.

Elmqvist, T. 2014. Urban resilience thinking. *Solutions Journal 5 (5):* 26-30.

FAO. 2015. Evaluation of FAO's contribution to climate change adaptation and mitigation. Thematic Evaluation Series, October 2015. Food and Agriculture Organization, Rome, Italy.

http://www.fao.org/3/bd903e/bd903e.pdf.

FAO. 2021. Evaluation of FAO's support to climate action (SDG 13) and the implementation of the FAO Strategy on Climate Change (2017). Thematic Evaluation Series, 03/2021. Food and Agriculture Organization, Rome, Italy. http://www.fao.org/3/cb3738en/cb3738en.pdf.

Folke, C., Carpenter, S., Walker, B., Scheffer, M., Chapin, T., & Rockström, J. 2010. Resilience thinking: integrating resilience, adaptability and transformability. *Ecology and Society 15.*

Fyfe, A. 2002. *Bitter harvest, child labour in agriculture*. International Labour Organization, Geneva.

GEF – IEO. 2006. *The role of local benefits in global environmental programs.* Global Environmental Fund Independent Evaluation Office, Washington, DC.

GEF – IEO. 2018. *Program Evaluation of the Special Climate Change Fund, Evaluation Report No. 117,* Global Environment Facility Independent Evaluation Office, Washington, DC. https://www.gefieo.org/sites/default/files/documents/reports/sccf-2017.pdf.

Global Mechanism of the UNCCD and CBD. 2019. *Land Degradation Neutrality for Biodiversity Conservation: How healthy land safeguards nature.* Technical Report. Bonn, Germany. https://catalogue.unccd.int/1340_LDN_BiodiversityGM_Report.pdf.

Helfgott, A. 2018. Operationalising systemic resilience. *European Journal of Operational Research, 268(3)*, pp. 852–864.

IDB - OVE. 2014. *Climate Change and the IDB Building Resilience and Reducing Emissions Office of Evaluation and Oversight (OVE)*, Inter-American Development Bank, New York.: https://publications.iadb.org/publications/english/document/Climate-Change-at-the-IDB-Building-Resilience-and-Reducing-Emissions.pdf.

IEG. 2013. *Adapting to Climate Change: Assessing the World Bank Group Experience Phase III.* Independent Evaluation Group, Washington, DC. https://ieg.worldbankgroup.org/sites/default/files/Data/Evaluation/files/cc3_full_eval.pdf

IFAD. 2009. *IFAD's response to climate change through support to adaptation and related actions.* International Fund for Agricultural Development, Rome, Italy. https://www.uncclearn.org/wp-content/uploads/library/ifad71.pdf.

IFAD. 2010a. *Strategic Framework 2011-2015 Enabling poor rural people to improve their food security, raise their incomes and strengthen their resilience* (EB 2010/101/R.12). International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/eb/101/docs/EB-2010-101-R-12.pdf

IFAD.2010b. *Climate Change Strategy*. International Fund for Agricultural Development, Rome, Italy. https://www.ifad.org/documents/38711624/39417915/climate_e.pdf/91513e27-2acf-41dc-8c4d-d8e8ec9e968f

IFAD. 2011a. "Conference on New Directions for Smallholder Agriculture, 24-25 January 2011, Rome IFAD HQ." In: Proceedings of the Conference on New Directions for Smallholder Agriculture, 2011. International Fund for Agricultural Development, Rome, Italy.

IFAD.2011b. *Concept Note of Adaptation for Smallholder Agriculture Programme*, International Fund for Agricultural Development, Rome, Italy.

IFAD. 2012. *Adaptation of Smallholder Agricultural Programme (ASAP) Description.* International Fund for Agricultural Development, Rome, Italy. https://www.ifad.org/documents/38714170/40213192/asap.pdf/b5a8c1f9-f908-4a68-ad30-e3d5eeb17c31?t=1521454445000

IFAD. 2014. *Managing risks to create opportunities IFAD's Social, Environmental and Climate Assessment Procedures.* International Fund for Agricultural Development, Rome, Italy. https://www.ifad.org/documents/38711624/39563079/secap2015_e.pdf/992f952d-a52b-dd7c-31ab-078775e814b8?t=1606829044000

IFAD. 2015a. *Report of the Consultation on the Tenth Replenishment of IFAD's Resources* (GC38/L.4/Rev.1). International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/gc/38/docs/GC-38-L-4-Rev-1.pdf

IFAD. 2015b. *Policy for Grant Financing* (EB 2015/114/R.2/Rev.1). International Fund for Agricultural Development, Rome, Italy. 9985a49f-0bb2-49c1-820f-859bfbcb01ed (ifad.org)

IFAD. 2015c. *IFAD's Operational Framework for Scaling up Results*. International Fund for Agricultural Development, Rome, Italy. https://www.ifad.org/documents/38711624/40280512/IFAD%27s+operational+framework+for+scaling+up+results.pdf/43f3baee-d7bf-4e32-8e7d-bbcfe5eb488e#:~:text=What%20is%20meant%20by%20scaling,poor%20in%20a%20sustainable%20way%E2%80%9D

IFAD. 2015d. *How to Do: Measuring Climate Resilience.* International Fund for Agricultural Development, Rome, Italy. https://www.ifad.org/documents/38714170/40193941/htdn_climate_resilience.pdf/fd0b42b0-3fc1-41e2-bd45-c66506fa5004?t=1519226214000

IFAD. 2016a. *Strategic Framework 2016-2025: Enabling inclusive and sustainable rural transformation.* International Fund for Agricultural Development, Rome, Italy. https://www.ifad.org/documents/38714170/40237917/IFAD+Strategic+Framework+2016-2025/d43eed79-c827-4ae8-b043-09e65977e22d

IFAD. 2016b. *Climate mainstreaming in IFAD-funded programmes* (EB 2016/118/R.16). International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/eb/118/docs/EB-2016-118-R-16.pdf

IFAD. 2017. *IFAD's updated Social, Environmental and Climate Assessment Procedures Managing risks to create opportunities.* 2017 Edition. International Fund for Agricultural Development, Rome, Italy. https://www.ifad.org/documents/38711624/39563079/Social%2C+Environmental+and+Climate+Assessment+Procedures+%28SECAP%29_e.pdf/c3636b68-2f12-404e-b10b-3fc3cb18bc6e?t=1600681354000

IFAD. 2018a. *Strategy and Action Plan on Environment and Climate Change 2019-2025* (EB 2018/125/R.12). International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/eb/125/docs/EB-2018-125-R-12.pdf

IFAD. 2018b. *Report of the Consultation on the Eleventh Replenishment of IFAD's Resources Leaving no one behind: IFAD's role in the 2030 Agenda.* International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/gc/41/docs/GC-41-L-3-Rev-1.pdf

IFAD. 2019a. *IFAD's 2020 results-based programme of work and regular and capital budgets, and the preview of the Independent Office of Evaluation of IFAD's results-based work programme and budget for 2020 and indicative plan for 2021-2022* (EB 2019/128/R.3/Rev.1). International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/eb/128/docs/EB-2019-128-R-3-Rev-1.pdf

IFAD. 2019b. *Climate Action Report 2019.* International Fund for Agricultural Development, Rome, Italy. https://www.ifad.org/en/web/knowledge/-/publication/climate-action-report-2019

IFAD. 2019c. *Knowledge Management Strategy* (EB 2019/126/R.2/Rev.1). International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/eb/126/docs/EB-2019-126-R-2-Rev-1.pdf

IFAD. 2019d. *Revised Operational Guidelines on Targeting* (EB 2019/127/R.6/Rev.1). International Fund for Agricultural Development, Rome, Italy. https://www.ifad.org/documents/38711624/41411186/revised_targeting_guidelines_main.pdf/d97624c2-e212-be71-b86d-2617e6c31499?t=1573207703000

IFAD. 2020a. *Project Design Guidelines As of 13 January 2020*. International Fund for Agricultural Development, Rome, Italy.

IFAD. 2020b. *Managing Risks to Create Opportunities. Social, Environmental and Climate Assessment Procedures of IFAD 2020* (EB 2020/131/R.4). International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/eb/131/docs/EB-2020-131-R-4.pdf?attach=1

IFAD. 2020c. *IFAD Rural Youth Action Plan* (EB 2018/125/R.11). International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/eb/125/docs/EB-2018-125-R-11.pdf

IFAD. 2020d. *Report of the Consultation on the Twelfth Replenishment of IFAD's Resources* (IFAD12/4//R.2/Rev1). International Fund for Agricultural Development, Rome, Italy. https://webapps.ifad.org/members/eb/131R/docs/EB-2020-131-R-INF-4.pdf?attach=1

IFAD. 2020e. *Rural Resilience Programme* (EB 2020/131(R) /INF.4). International Fund for Agricultural Development, Rome, Italy.

https://webapps.ifad.org/members/eb/131R/docs/EB-2020-131-R-INF-4.pdf?attach=1

IFAD. 2020f. *Core Outcome Indicators Measurement Guideline*. International Fund for Agricultural Development, Rome, Italy.

https://xdesk.ifad.org/sites/opr/opr-ts/COI/COI%20Measurement%20Guidelines%20-%20English/COI%20Measurement%20Guidelines_ENG.pdf

IFAD. 2021a. *Report of the Consultation on the Twelfth Replenishment of IFAD's Resources: Recovery, Rebuilding, Resilience* (GC 44/L.6). International Fund for Agricultural Development, Rome, Italy.
https://webapps.ifad.org/members/gc/GC44/docs/GC-44-L-6-Rev-1.pdf

IFAD. 2021b. *Report on IFAD's Development Effectiveness.* (EB 2021/133/R.9) International Fund for Agricultural Development, Rome, Italy.
https://webapps.ifad.org/members/eb/133/docs/EB-2021-133-R-9.pdf#:~:text=The%202021%20RIDE%20is%20the%20second%20report%20for,impact%20on%20IFAD%E2%80%99s%20business%20and%20results%20in%202020

IOE-IFAD. 2015. *Evaluation Manual.* Independent Office of Evaluation of International Fund for Agricultural Development, Rome, Italy.
https://www.ifad.org/documents/38714182/39748829/manual.pdf/bfec198c-62fd-46ff-abae-285d0e0709d6

IOE-IFAD. 2016. *Annual Report on Results and Impact of IFAD Operations evaluated in 2015*. Independent Office of Evaluation of International Fund for Agricultural Development, Rome, Italy.
https://www.ifad.org/documents/38714182/39709860/ARRI_2016_full.pdf/569bcea7-a84a-4d38-867f-89b3bb98e0e4?t=1516911689000

IOE-IFAD. 2017. *What works for gender equality and women's empowerment – a review of practices and results.* Evaluation Synthesis Report No. 4390. Independent Office of Evaluation of International Fund for Agricultural Development, Rome, Italy.
https://www.ifad.org/documents/38714182/39721405/gender_synthesis_fullreport.pdf/229358bf-f165-4dcd-9c4a-1af4f09ab065?t=1519897485000

IOE-IFAD. 2020. *Annual Report on Results and Impact of IFAD Operations*. Independent Office of Evaluation of International Fund for Agricultural Development, Rome, Italy.
https://www.ifad.org/documents/38714182/42126230/ARRI2020_Web.pdf/e9131b71-b2d7-949f-723a-deefad3c1a3d?t=1603099519000

IOE-IFAD. 2021. *Annual Report on Results and Impact of IFAD Operations.* (EC 2021/114/W.P.3) Independent Office of Evaluation of International Fund for Agricultural Development, Rome, Italy.
https://webapps.ifad.org/members/ec/114/docs/EC-2021-114-W-P-3.pdf

IPCC. 2018a. *Global Warming of 1.5°C.* An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. World Meteorological Organization, Geneva, Switzerland.
https://www.ipcc.ch/sr15/download/#chapter

IPCC. 2018b. *Annex I: Glossary* [Matthews, J.B.R. (ed.)]. In: *Global Warming of 1.5°C.* An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the

context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. World Meteorological Organization, Geneva, Switzerland. SR15_AnnexI_Glossary.pdf (ipcc.ch)

IPCC. 2021. *Draft Report*. Yet to be released but reported by AFP.

https://news.yahoo.com/crushing-climate-impacts-hit-sooner-010253436.html

Leavy, J. Murphy, B., Caballero, K.B., Laanouni, F. & Abdur R. 2020. *Mid-term review of IFAD's Adaptation for Smallholder Agriculture Programme.* ITAD, United Kingdom. https://www.ifad.org/documents/38714170/39155702/itad_asap_midreport.pdf/b198d59a-6758-5953-c1a1-fb19e05b2e0d?t=1612450739000

Lloyd, S.J., Bangalore, M., Chalabi, Z., Kovats, R.S., Hallegatte, S., Rozenberg, J. Valin, H. & Havlík, P. 2018. A Global-Level Model of the Potential Impacts of Climate Change on Child Stunting via Income and Food Price in 2030. *Environmental Health Perspectives, Vol. 126, No. 9*.

Lowder, S. K., Skoet, J., & Raney, T. 2016. The number, size and distribution of farms, smallholder farms and family farms worldwide. *World Development, 87,* 16–29.

Ministry of Environment, Water and Fishery of the Republic of Chad. 2017. *Stratégie Nationale de Lutte Contre les Changements Climatiques au Tchad (SNLCC)*.

Republic of Chad. 2015. Intended Nationally Determined Contribution (INDC) for the Republic of Chad, September 2015. https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Chad%20First/INDC%20Chad_Official%20version_English.pdf

TANGO International. 2018. *Overall Evaluation of the Adaptation Fund: Final report.* https://www.adaptation-fund.org/wp-content/uploads/2018/06/AF_Phase2_Eval_4June.pdf

UNDP. 2010. *Evaluation of UNDP contribution to environmental management for poverty reduction - The poverty-environment nexus.* Independent Evaluation Office. New York: United Nations Development Program.

UNEP. 2018. *The Adaptation Gap Report 2018*. United Nations Environment Programme (UNEP), Nairobi, Kenya. https://wedocs.unep.org/bitstream/handle/20.500.11822/27114/AGR_2018.pdf?sequence=1&isAllowed=y

UNEP and IFAD. 2013. *Smallholders, food security and the environment.* International Fund for Agricultural Development, Rome, Italy. https://wedocs.unep.org/bitstream/handle/20.500.11822/8127/-Small%20Holders%20%2c%20food%20security%20and%20the%20environment-2013SmallholderReport_e_WEB.pdf?sequence=3&isAllowed=y

UNFCCC. 1992. *United Nations Framework Convention On Climate Change*. United Nations, FCCC/INFORMAL/84 GE.05-62220 (E) 200705, Secretariat of the United Nations Framework Convention on Climate Change, Bonn, Germany. https://unfccc.int/resource/docs/convkp/conveng.pdf

United Nations, General Assembly. 2018. *Agriculture development, food security and nutrition: report of the Secretary-General, A/73/293* (2 August 2018). https://undocs.org/en/A/73/293

Walker, B., Holling, C. S., Carpenter, S. R., & Kinzig, A. 2004. Resilience, adaptability and transformability in social-ecological systems. *Ecology and Society, 9(2), 5.*