

Document: EB 2018/124/R.19  
Agenda: 7(c)(i)  
Date: 21 August 2018  
Distribution: Public  
Original: English

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INDIA

Country Strategic Opportunities Programme  
2018-2024

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Executive Board — 124th Session  
Rome, 11-13 September 2018

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For: Review

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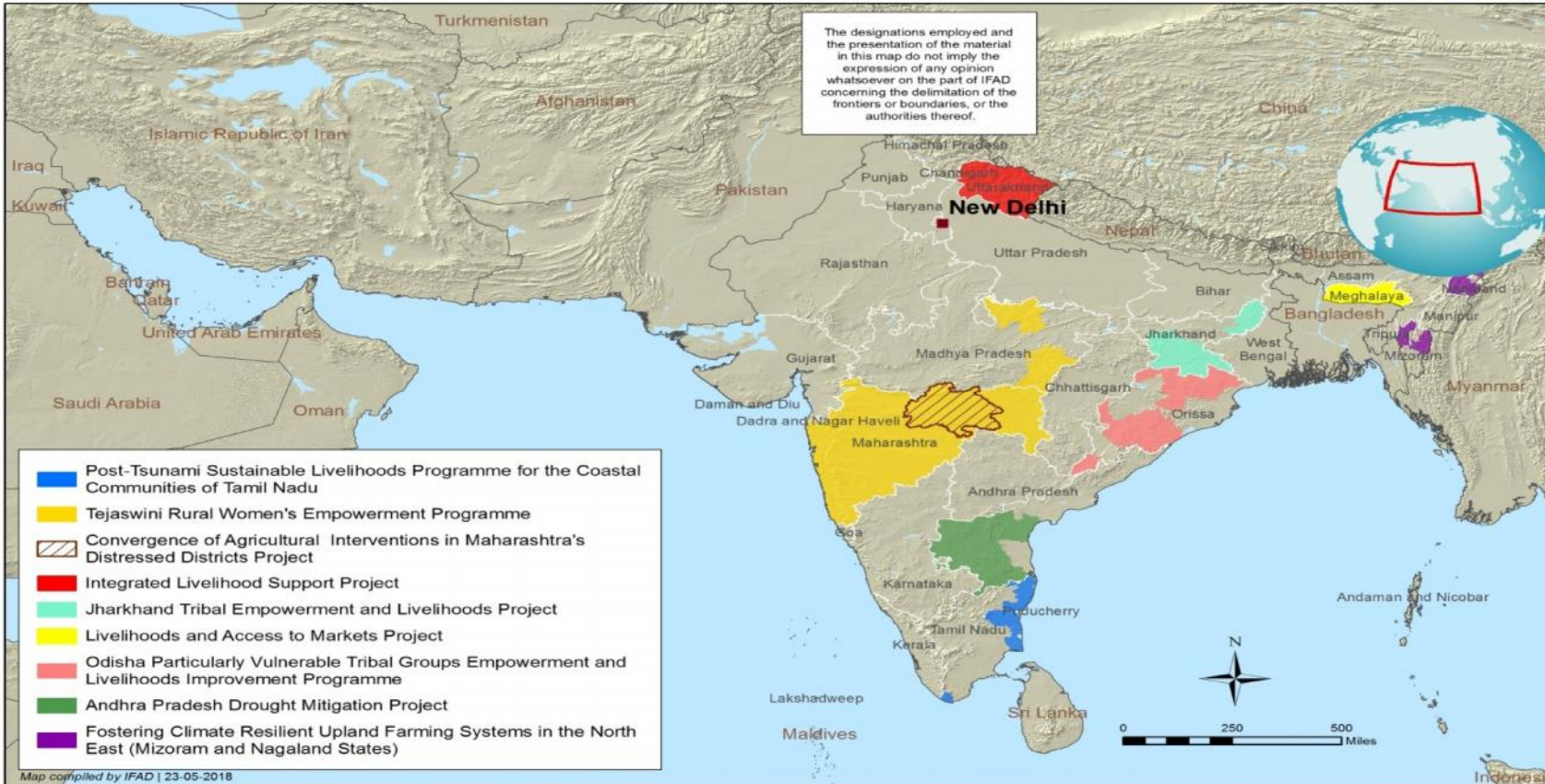
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## Abbreviations and acronyms

CPE	country programme evaluation
COSOP	country strategic opportunities programme
DEA	Department of Economic Affairs, Ministry of Finance
M&E	monitoring and evaluation
PBAS	performance-based allocation system
PRI	Panchayat Raj Institutions
RBA	Rome-based agencies
SAARC	South Asian Association for Regional Cooperation
SDG	sustainable development goals
SO	strategic objective
SSTC	South-South and Triangular Cooperation
TPRM	Tripartite Portfolio Review Meetings

# Map of IFAD-funded operations in the country

## India IFAD-funded operations



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## Executive summary

1. The results-based country strategic opportunities programme (RB-COSOP) has evolved through a two-year-long engagement with the Government of India and other stakeholders. It reflects the ambitious development agenda set by the Government and the rising aspirations of a rural community in a state of rapid transition. The COSOP design takes into consideration the learning and recommendations of the 2016 country programme evaluation (CPE),<sup>1</sup> building on programme successes while seeking to exploit opportunities for impact at scale.
2. The overarching goal for the IFAD country programme in India from 2018 to 2024 is to maximize IFAD's contribution to the Government strategy for doubling farmers' income by 2022. To this end, the country programme has a single, focused strategic objective (SO): Smallholder food and agricultural production systems are remunerative, sustainable and resilient. All IFAD activities – lending and non-lending – will contribute to its achievement.
3. Investment projects that respond to this agenda will be simpler, larger and shorter in duration, and will reflect one or all three key elements of the strategic objective. Unbundling these in programmatic terms would mean: (i) supporting better price realization, agro-based enterprises and the promotion of value chains with the multiplier effect of reducing migration and making agriculture attractive for youth; (ii) tried and tested techniques such as low external input sustainable agriculture and precision farming practices that contribute towards sustainable agriculture intensification; and (iii) diversification of crops and livelihoods, promotion of integrated farming and improving the outreach of social security nets to build resilience to climate change and market variability. Projects will continue to target disadvantaged areas with predominantly rainfed agriculture that are vulnerable to climate change – particularly the north-east region and eastern states. With its focus on poor and marginal smallholder farmers and the landless, the programme will specifically target scheduled tribes, scheduled castes and other groups that are vulnerable to poverty and malnutrition. Recognizing that women and youth not only engage in agriculture in large numbers, but are also key to rural transformation, there will be a strong focus on women's empowerment and the engagement of youth as change agents, innovators and entrepreneurs.
4. The scaling-up plan will be inbuilt into project designs and pursued through strong evidence generation and innovative partnerships with government, the private sector and other stakeholders. South-South and Triangular Cooperation (SSTC) will be pursued to expand the outreach of India's agricultural expertise, while also enhancing the performance of the country's agricultural sector. Partnerships with government, knowledge centres, the private sector, civil society and development partners – including the other Rome-based agencies (RBAs) – will contribute to the agenda.
5. The COSOP will cover two cycles of the performance-based allocation system (PBAS): 2019-2021 and 2022-2024. Based on IFAD's PBAS formula, the allocation for 2019-2021 is US\$166,250,000.<sup>2</sup>

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<sup>1</sup> The main recommendations of the CPE (2016) are summarized in the agreement at completion point in Appendix II.

<sup>2</sup> The PBAS figure is the indicative allocation for the Republic of India, estimated at US\$166,250,000. The final allocation will be presented to the 125<sup>th</sup> session of the Executive Board for endorsement by the forty-second session of the Governing Council in 2019.

# INDIA

## Country strategic opportunities programme

### I. Country diagnosis

#### A. Socio-economic context

1. Overview. India is the world's seventh-largest country by land area, with a vast range of ecosystems<sup>3</sup> that offer a spectrum of livelihood challenges and opportunities. With 1.31 billion inhabitants and a population growth rate of approximately 1.2 per cent per year, India is also poised to become the world's most populous country by around 2028. While the country's urban population grows at a much faster rate than the rural population,<sup>4</sup> two out of every three people in India live in rural areas. However, the rural population is expected to peak around 2030 and then decline.
2. The economy. India is now classified as a lower-middle-income country, with GDP per capita estimated at US\$1,710 (2016) and with a Human Development Index of 0.624 (2015). India ranks as the third-largest global economic power at purchasing power parity. The economy – growing at over 7 per cent per annum – is projected to be the fastest-growing of all G20 economies. With structural transformation well under way, India's service sector is the fastest-growing part of the economy, contributing 54 per cent GDP in 2016. Industry contributes 29 per cent and agriculture contributes 17 per cent respectively. The long-term prospects for growth are positive, due to India's young population, corresponding low dependency ratio, healthy savings and investment rates, and increasing integration into the global economy.
3. Poverty. Although India still has the highest number of poor people in the world, extreme poverty has been substantially reduced. In 2011/2012, the overall poverty rate was estimated at 22 per cent, although this figure hides a considerable rural-urban gap (26 per cent versus 14 per cent). Some 80 per cent of the 270 million poor people live in the rural areas. Households from scheduled tribes and scheduled castes experienced upward mobility, but poverty among these groups in rural areas is higher than the average (United Nations Sustainable Development Framework, 2018). Inclusive growth is therefore a priority for India, including inclusive agricultural transformation.
4. Nutrition. India grows sufficient food and has the world's largest public distribution system for food delivery and a wide-ranging network of state-level mechanisms to reach every citizen. However, this has not translated into comparable declines in the levels of malnutrition, which remains a major issue: 36 per cent of children under five are underweight; 38 per cent are stunted; and 21 per cent are wasted. Micronutrient deficiencies are also extremely high. The poorest, the scheduled tribes and castes, and those in rural areas, suffer the greatest malnourishment.
5. Gender issues. India ranks number 125 of 160 countries on the gender inequality index (GII=0.530 in 2015) and in order to bridge the gender gap, the Government is giving priority to women's social and economic empowerment. This is reflected in the strong support to livelihood improvement programmes and promotion of self-help groups, which have created opportunities for women to access finance, extension services for crops and livestock husbandry, and drudgery-reducing equipment, thus improving household incomes and women's decision-making

<sup>3</sup> The ecosystems comprise mountainous upland areas in the north, the low-lying Indo-Gangetic Plains, sub-humid coastal zones and the semi-arid Deccan Plateau on the southern end of the peninsula.

<sup>4</sup> At 2.2% and 0.2% respectively (during the 2014/2015 period), in 2015 the country remains predominantly rural.

power. Recognizing that in rural areas 75 per cent of female workers are engaged in agriculture, and that they have comparatively more limited access to productive resources, the Government has developed a gender mainstreaming strategy for its agricultural programmes (Volume XI of the Report of the Committee on Doubling Farmers' Income [DFI], 2017).

## B. The agricultural sector and rural economy

6. India's agricultural sector grew on average between 2 per cent to slightly less than 5 per cent annually between 2011 and 2017. As expected, the agricultural share within total output is declining. It nevertheless remains a key source of employment for almost half of India's working population. Growth in the sector has both stimulated rapid growth of the rural non-farm economy and in addition has been a major driver of rural poverty reduction.
7. Over the past 50 years India has gone from dependency on food aid to becoming a consistent net exporter of food. Food grains and oilseeds still account for almost 80 per cent of the area under cultivation, although India has diversified into high-value commodities and has become the world's largest producer of milk, pulses, horticultural products and livestock, and the top exporter of shrimp and spices globally. Although most crop yields have at least tripled, they are still relatively low by regional standards. Despite an increased area under irrigation,<sup>5</sup> 55 per cent of India's total area under cultivation and 40 per cent of all crop production are still rainfed and thus more vulnerable to monsoon variability.
8. Farm sizes are typically small: the average size has fallen from 2.28 ha in 1970/1971 to 1.15 ha in 2011/2012, with 85 per cent of holdings now under 2 ha. Smaller and marginal farms are also associated not only with lower agricultural incomes, but also with lower shares of total household income derived from agriculture. While farm sizes continue to fall, India's rural labour force is still increasing. However, growing mechanization – combined with increasing rural wage rates – have resulted in a real decline in employment in agriculture (by 37 million people between 2005 and 2012).
9. Climate change. Indian agriculture is highly vulnerable to climate change, largely because the sector continues to be very sensitive to monsoon variability. Seasonal water scarcity, rising temperatures and more frequent risk of drought jeopardize the country's food security. Should these trends persist, rice and wheat yields are projected to decline substantially. By the 2050s, the country may need to import more than twice the amount of food grains than it would require without climate change. Climate change will affect in particular the most vulnerable groups – farmers in rainfed areas, landless labourers and women, whose incomes are likely to decline by 20 to 25 per cent (Economic Survey, 2017/2018). Hence a major challenge for India is to promote the widespread adoption of climate-smart techniques and other adaptation measures that sustain production and productivity, and ensure continued national food and nutritional security.
10. Poverty and agriculture. Smaller farmers in rainfed areas are most prone to living in poverty, as they generate smaller marketable surpluses and face greater challenges in accessing markets. They are more vulnerable to climate risks, and are uncompetitive entrants in expanding credit and input markets. Water table depletion and soil erosion – as well as the unbalanced use of subsidized fertilizer that has in the long run harmed soil fertility – have emerged as pressing issues in many areas. They highlight the need for sustainable intensification of rainfed agricultural production, and improved management of soil and water resources.
11. Agriculture and the larger rural economy. Overall, the proportion of households whose principal source of income depends on agriculture had declined to 58 per cent by 2012/2013. Farmers are diversifying into more remunerative

<sup>5</sup> Today India has the largest area of agricultural land under irrigation of any country in the world.

self-employment in the non-farm sector and are becoming part-time farmers. The largest sources of non-farm employment are the construction sector, transport and services. Of the activities that make up these three categories, probably on the order of one third is related to agricultural value chains.

### C. Policy and institutional context

12. Since agriculture falls under state-level jurisdiction, state governments are those primarily responsible for the growth and development of the sector. The central Government supplements these efforts through policy and budgetary support, and specific schemes. In addition, the NITI Aayog (National Institution for Transforming India) – as the country’s principal policymaking body – brings out occasional policy papers/road maps to guide agricultural reforms. The private sector and civil society are increasingly engaged in all aspects of agriculture. The private sector is increasingly investing in service delivery to end consumers at an affordable price.
13. India’s agricultural policy reflects the Government’s priority focus on farmers’ welfare and sustainable agriculture. Accordingly, in 2015 the central Government renamed the Ministry of Agriculture as the Ministry of Agriculture and Farmers’ Welfare, and shifted its focus from enhanced productivity, to doubling farmers’ income in real terms by 2022.
14. The central Government proposed a number of policy reforms such as land tenancy reform and market reforms and these are at various stages of adoption in the states. Recently, the central Government expanded the minimum support price to a large range of agricultural produce so as to enable farmers to better cope with price volatility. To reverse the trend of deterioration of land and water resources, the Government introduced the soil health card, shifted the fertilizer subsidy to producers through a direct benefit transfer, embarked on neem coating of urea fertilizers, provided impetus to the Organic Mission and subsidized micro-irrigation equipment powered by solar energy. Through its programmes focusing on climate resilient agriculture, appropriate adaptation strategies were developed for ensuring food security and livelihoods<sup>6</sup>. In addition, India ratified the Paris Agreement in 2016 and formulated its Intended Nationally Determined Contribution (INDC) to reducing greenhouse gas emissions. It is on track to achieve the target for the use of renewable energy in power generation and to overachieve the emissions intensity target submitted under the Paris Agreement.
15. India has one of the largest and well coordinated agricultural research systems in the world, which has made a significant contribution in transforming the country into an agricultural powerhouse. The research system is primarily driven by the public sector and is structured around the Indian Council of Agricultural Research, its agencies at federal level and agricultural universities at state level. With greater focus given to farmers’ incomes and welfare, the research system needs to adapt research and development to address new emerging challenges related to climate change, market volatility, soil erosion and water depletion.
16. Public expenditure on agriculture comes from the state governments and the central Ministry of Agriculture and Farmers’ Welfare. The central Government’s agriculture budget increased by 45 per cent (in nominal terms) over the last three years. The total share for agriculture in the 2018/2019 budget reached 10 per cent, reflecting the priority accorded to the sector.

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<sup>6</sup> Despite climate variability, India could produce record food grain output of 270 million tons and 300 million tons of horticulture produce.



## D. Main country, sector and programme risks

17. There are a number of risks to be considered in designing IFAD's country strategy for 2018-2024. These risks, and the associated mitigation measures, are summarized below.

Risk	Risk level	Mitigation strategy
Policy: Major changes in national policies or introduction of new national schemes overlapping with project activities	Medium	Maintain a flexible, proactive approach to ensure contribution to the policy priorities and adaptation of projects to new policies/schemes.
Project management and performance: Limited staff capacity and high turnover of project directors	High	IFAD to work with state governments to: ensure consistent remuneration across projects/schemes; build capacity; establish performance-based contracts plus performance evaluation for senior project managers; and assign project directors with appropriate experience for a minimum of three years.
Implementation: Delayed/inadequate release of funds, contributing to low disbursement rates	High	IFAD to work closely with senior government officials in the states and the Department of Economic Affairs (DEA) to address the situation.
Scaling up: IFAD unable to leverage its project experience	Medium	Leverage partnerships and invest in knowledge management and policy engagement, at project and programme levels.
Conflict: Local conflict in some programme areas, undermining operations or leading to implementation delays	Low	IFAD to work with government to monitor situations and promote community-driven approaches that have proven effective in past interventions.
Climate: Climate shocks/increased frequency of drought make rainfed smallholder agriculture unviable	Medium	Promote climate-smart agricultural production and diversification of income sources, and converge with government schemes for insurance and social protection. In the event of climate-related disasters, implement IFAD Guidelines for Disaster Early Recovery. <sup>7</sup>

## II. Lessons learned<sup>8</sup>

18. Long engagement in India. IFAD has been working in India for more than 30 years. IFAD's programme – its largest in the world – comprises 29 investment projects valued at US\$2,900,000,000 and benefiting an estimated 4.78 million households. IFAD-financed projects have targeted the poorest and most vulnerable groups, including marginal farmers, women, youth, the landless, tribal communities and scheduled castes. Projects have consistently tackled structural issues such as socio-cultural exclusion and a lack of access to natural resources, agricultural land and quality public services.
19. Evaluation results. The Independent Office of Evaluation's 2016 CPE and the 2011-2017 COSOP completion review found that most projects achieved their objectives. Within the portfolio, progress on gender equity was seen as particularly strong. Overall portfolio impact was assessed as satisfactory in terms of household assets and income and of human and social capital. The CPE recommended: (a) using a more contextualized approach to community organization; (b) focusing more prominently on rainfed agriculture; (c) improving the efficiency of portfolio

<sup>7</sup> Please refer to IFAD Guidelines for Disaster Early Recovery, 2011 and in particular sections VII and VIII of the report.

<sup>8</sup> Detailed lessons learned are available in the 2011-2017 RB-COSOP completion review, which is one of the background documents for this COSOP.

implementation; (d) promoting scaling up of results by strengthening partnerships; and (e) enhancing capacity and resources for non-lending activities. All of these are reflected in the current COSOP.

20. Programme successes. The completion review for the COSOP 2010-2017 confirms that IFAD-supported projects have had several important successes. In supporting smallholder farmers, projects have brokered partnerships between government and civil society organizations for last mile delivery of public services to remote and marginalized groups. In doing so, they have ensured convergence with government development schemes. They have also: promoted community ownership of those services; supported a range of technologies and practices to enhance productivity, sustainability and resilience; promoted the diversification of agricultural enterprises; and supported aggregation of demand (for inputs) and supply (of produce). All these experiences offer valuable building blocks for future investments.
21. However, opportunities are not fully exploited. While the programme has achieved real successes, rigorous evidence is lacking for these successes and their underlying factors. IFAD has not sufficiently shared the innovations of its projects with key sectoral ministries in the central Government; nor has it helped draw out key lessons or scaled-up successes. This has led to missed opportunities to influence national policies. Under the new COSOP, IFAD will: pay greater attention to knowledge management; stay focused on key sectoral ministries; and engage with state and central governments on key policy issues drawn from project results with direct benefit to poor and marginalized rural people.

### III. Strategic objective and comparative advantage

22. IFAD is a well-respected development partner for the Government of India. Nevertheless, in recent years India has changed rapidly: at the macroeconomic level; in its agricultural and rural economy; in the economic aspirations of its rural people – particularly women and youth; and in its government's policy and strategic priorities. In order to stay relevant, IFAD must offer services that recognize and respond to this dynamic, capitalizing on its specific mandate and organizational strengths.
23. IFAD's financial offer to India is tiny relative to the national budget for agriculture. As an emerging middle-income country, India's interest is in achieving its ambitious policy goal of doubling farmers' incomes while drawing on support from IFAD's innovations, experience and knowledge. To respond to this agenda, IFAD will strengthen the focus on climate-resilient agriculture and value chain development (with an understanding of agriculture as encompassing crop and livestock production, fisheries and forestry activities).
24. IFAD's comparative advantage will thus be in supporting government efforts by innovating to develop smarter solutions for doubling the incomes of poor and marginalized farming communities that are dependent on rainfed production systems and vulnerable to the effects of climate change. The projects that respond to this agenda will be simpler, larger and shorter in duration. The Government is also emphasizing the importance of evidence-based results and independent assessment of the innovative features of IFAD-supported projects to inform further scaling up of tested solutions. Thus enhanced knowledge management – and South-South and Triangular Cooperation – will be key dimensions of IFAD's approach.
25. The overarching goal for the IFAD country programme in India for 2018 to 2024 is to maximize its contribution to the government strategy for doubling farmers' income. To achieve this goal, the country programme has a single, focused SO to which all IFAD activities – lending and non-lending – will contribute.

SO1: Smallholder food and agricultural production systems are remunerative, sustainable and resilient.

26. This SO focuses on economic empowerment of smallholder farmers through more productive farm systems and more profitable participation in agricultural markets, and through the generation of agro-related enterprises that create jobs and serve smallholder farmers along agricultural value chains. The programme will develop solutions along three key dimensions: remunerative, sustainable and resilient.
27. Remunerative. IFAD will address four key areas: (a) promoting technologies aimed among other things at reducing production costs and drudgery, increasing productivity, reducing post-harvest losses and adding value at farm/local level; (b) supporting the development of pro-poor agricultural value chains, building commercial relations between market intermediaries and smallholder producers, supporting enterprises along value chains that provide services to smallholder farmers, and helping organizations of farmers to participate on more favourable terms in larger marketing platforms (e.g. e-National Agriculture Market); (c) promoting diversification into high-value crops and farm enterprises; and (d) enhancing access to markets and investing in market infrastructure, where needed.
28. Sustainable. IFAD will promote sustainable intensification of agriculture and diversified and integrated farming systems. Building on experience, efforts will focus on two key areas: (a) participatory natural resource planning and management, with a special focus on water demand management, combined with geographical information system (GIS) technologies for land and water development; and (b) tried and tested techniques such as low external input sustainable agriculture and precision farming practices.
29. Resilient. Adaptation to climate change will continue to be a core consideration. The programme will help smallholder farmers become more resilient by diversifying their production systems and livelihoods, not only into high-value crops, but also into other (agro-related) activities. The programme will also encourage high-value and nutrition-dense commodities within farming systems. In addition, it will promote access to financial services and government social protection schemes, to broaden the reduction of smallholders' vulnerability to shocks.
30. In promoting these three key dimensions, the IFAD programme will maintain and build on the features that have contributed to the success of the past COSOP. These include: paying close attention to poverty targeting and gender equality; development of customized solutions for extension services and – more broadly – for last-mile delivery of services; building sustainable membership-based organizations; empowering marginalized rural people and building social capital; ensuring linkage with the Panchayat Raj Institutions (system of governance in which gram panchayats [village committees] are the basic units of local administration), active convergence with a range of government schemes; and helping in efficient community delivery.
31. Investment projects. At the start of the COSOP period in 2018, IFAD will have six investment projects<sup>9</sup> in their first to fourth year of implementation, with a total implementation period ranging from six to eight years per project. Four of these are aligned with the SO of the COSOP;<sup>10</sup> the remaining two focus on tribal development in areas where multiple deprivations call for continued integrated rural development.<sup>11</sup> Three of the six projects will close during the COSOP period – including one of those that is less aligned.

<sup>9</sup> There are currently nine on-going projects; however, three of these will be completing by March 2019 at latest. Their results are reported against the previous COSOP.

<sup>10</sup> The four projects are ILSP, LAMP, APDMP and FOCUS.

<sup>11</sup> The two projects are JTELP and OPELIP.

32. In addition, four new projects will be financed during the COSOP period, which is to say two per PBAS cycle. The decision to restrict the number to two project designs per cycle is aligned with the CPE 2010, which recommended “reducing the number of loans but increasing their average size”. This enables more effective portfolio management by IFAD and reduces the transaction and administrative burden on the Government. The first of the four projects (appendix VII) is expected to be presented to the IFAD Executive Board in 2019. The remaining projects will be selected by the Government of India based on their alignment with national/state priorities and the present COSOP.
33. Linkage to the SDGs. Through this COSOP, IFAD will contribute to achievement of SDG1 (no poverty), SDG2 (zero hunger), SDG5 (gender equality), SDG8 (decent work and economic growth), SDG10 (reduced inequalities) and SDG13 (climate action). In addition, the country programme is aligned with the IFAD Strategic Framework 2016-2025, in particular its SO 2 and SO 3, and with the United Nations Sustainable Development Framework (UNSDF) for India (2018-22).

## IV. Sustainable results

### A. Targeting and gender

34. IFAD defines targeting as purposefully designed actions and measures that ensure, or at least significantly increase the likelihood, that specific groups of poor people – women and men equally – will benefit from the development initiatives it supports, while at the same time diminishing the risk that people who are less poor will benefit disproportionately. IFAD defines its priority target group as the poorest rural people with productive potential, and the organization measures its development effectiveness against the needs of these people. IFAD works to support not only people who are chronically poor, but also those at risk of becoming poor and vulnerable to external shocks.<sup>12</sup>
35. Geographical targeting. In line with the CPE recommendation, the Government’s interest in prioritizing lagging states and aspirational districts, and IFAD’s comparative advantage in India, investment projects will continue to target disadvantaged areas, in states with predominantly rainfed agriculture. The north-east region and eastern states will be prioritized.
36. Target groups. With its focus on doubling farmers’ income, the programme will target poor and marginal smallholders and the rural landless. Many of these will be drawn from scheduled tribes, scheduled castes and other vulnerable groups. Target groups will be identified using the Government’s extensive poverty database, further refined at community level through use of participatory tools for wealth ranking.
37. Gender. The programme will maintain its strong focus on gender<sup>13</sup> and on the key drivers of women’s empowerment. It will, among other things, support women as agricultural producers, test labour-saving agricultural equipment, promote entrepreneurial activities for women and negotiate women’s participation in project-related decision-making bodies. It will in addition focus on improving nutrition outcomes for rural households.
38. Youth. Young adults make up an expanding share of the population in India. While rural youth have growing economic ambitions, they also have limited opportunities. The programme will partner with youth as change agents and innovators, and promote entrepreneurship for rural youth – both as agricultural producers and as

<sup>12</sup> [IFAD Targeting](#) Policy: Reaching the rural poor, Rome 2006.

<sup>13</sup> The results of the women’s empowerment index from two projects (Tejaswini Maharashtra and Mitigating Poverty in Western Rajasthan) show women beneficiaries have higher levels of participation in decision-making regarding loan utilization, production, income and access to resources and skills – and in family planning and the marriage of girl children. Women beneficiaries are also more active in the social realm.

economic actors in the upstream and downstream segments of agro-based value chains.

## B. Scaling up

39. The CPE assessed the performance of the country programme on scaling up as satisfactory; scaling up will continue to be an integral dimension of IFAD's strategy in India.
40. IFAD's approach to scaling up will work at two levels. First, IFAD will look to scale up innovations through investment projects. Second, it will support further scaling up of proven successes during project implementation, through rigorous assessments and by pursuing the path of national programmes, larger development projects and the private sector.

## C. Policy engagement

41. Three broad, linked approaches can help the country programme contribute to the Government's policy agenda: (1) use projects to operationalize national policies at the local level and test approaches; (2) identify policy blockages that constrain project implementation and results, with possible solutions to these blockages; and (3) share lessons that can be taken up through state- and national-level policies, strategies and programmes, thus supporting the scaling-up agenda. Potential sources of lessons and drivers of the policy agenda will include the project portfolio, selected regional grants and global best practice that IFAD can help to broker. This will focus on areas supporting achievement of the SO and capitalize on IFAD's demonstrated areas of strength.
42. Policy-related activities will involve: analysis – the gathering of "policy evidence" from the portfolio; dialogue, particularly among policymakers and other national stakeholders; and dissemination and advocacy. Responsibility for the policy engagement agenda will lie with the project management units, reputable policy research institutions that will conduct analysis as necessary, and IFAD – which will facilitate dialogue and disseminate lessons learned.

## D. Natural resources and climate change

43. IFAD will make natural resource management and climate change adaptation a core feature of the programme<sup>14</sup>, through the sustainability and resilience dimensions of the SO, as they are fundamental to increasing farmers' income. It will invest in promoting innovative, environmentally sustainable and climate-resilient technologies and practices, covering crop varieties, soil health and water conservation measures, integrated pest management, agroforestry and precision farming. It will maintain those environmental services at watershed level that are critical to ensuring reliable water supply and natural resource-based livelihoods and agricultural production systems. It will invest in climate-proof infrastructure for access to markets. The knowledge capacities of local communities and institutions will also be enhanced through better access to information (including best adaptation practices and climate data) and research products (cropping systems and stress-resistant varieties). IFAD will also explore options for climate change mitigation, including by reducing emissions from farming systems and accessing carbon markets by selling sequestration services.

## E. Nutrition-sensitive agriculture and rural development

44. While India has reduced malnutrition, levels stubbornly remain high. Food systems represent one of the many dimensions of this situation. Supporting the Government's multi-sectoral approach, IFAD will focus on major drivers for increasing and diversifying dietary intake, such as: assisting households to increase their incomes and assets; promoting nutrition-sensitive agriculture; diversification into nutrition-dense crops, livestock products and kitchen garden activities;

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<sup>14</sup> The summary of the study on natural resources management and climate change adaptation is in appendix 4.

empowering women; and providing nutrition education. In pursuing this agenda, IFAD will work with partners with relevant expertise, including the other RBAs. In Odisha, where consultations are ongoing with the state government, the Food and Agriculture Organization of the United Nations, the World Food Programme, and the United Nations Children's Fund will develop a multidisciplinary and integrated pilot intervention to end malnutrition in the tribal districts, thus achieving SDG2.

## V. Successful delivery

### A. Financing framework

45. In 2018, IFAD's lending terms to India changed from blend to ordinary terms. For the duration of the COSOP, ordinary terms will apply, given strong and stable growth projections (The Organisation for Economic Co-operation and Development [OECD], 2018).
46. The indicative financial allocation for the 2019-2021 PBAS cycle is equivalent to US\$166,250,000. Table 1 illustrates how this allocation is derived. It is expected that two projects would be funded in each PBAS cycle and US\$1,000,000 to US\$2,000,000 per project will be set aside for in-loan grants for capacity-building for the nodal and implementing agencies by well-reputed regional and international agencies. The cofinancing ratio is envisaged at 1:1.4, in line with the Eleventh Replenishment of IFAD's Resources (IFAD11) commitment.

Table 1

**Indicative PBAS allocation, 2019-2021**

<b>Average rural sector performance</b>	<b>4.22</b>
PAR ratings (2017)	4.00
IRAI ratings (2017)	NA
<b>Indicative country allocation (2019-2021)<sup>15</sup></b>	<b>US\$166,250,000</b>

47. Non-lending activities will be supported through regional grants, resources allocated to the subregional hub for knowledge management, and potential supplementary funds.

### B. Monitoring and evaluation (M&E)

48. IFAD<sup>16</sup> and the Government of India will monitor progress in COSOP implementation against its results management framework. Key outcomes and milestone indicators are based on expected results from the project portfolio and the related policy engagement. Project logical frameworks will be systematically aligned with the COSOP results framework.
49. The M&E system of the country programme will be strengthened to provide reliable data on programme outcomes and impacts, and a dashboard will be created to offer real-time access to data on these and on key dimensions of project-level performance. The IFAD Country Office will also develop partnership(s) with reputable policy research institute(s) that can assist in standardizing the methodology for annual project outcome surveys, in conducting targeted evaluation studies that can provide the evidence necessary for effective policy engagement, and in disseminating the findings. In addition, the ongoing monitoring and evaluation certification project (CLEAR)<sup>17</sup> is expected to boost M&E capacity in the projects, while support from IFAD's Research and Impact Assessment Division will help institutionalize a robust impact assessment methodology.

<sup>15</sup> Country receiving the maximum allocation.

<sup>16</sup> For COSOP monitoring, the IFAD team will be led by the country programme manager, who is accountable for leading and managing development and implementation of the COSOP and for IFAD's collaboration with government.

<sup>17</sup> Centers for Learning on Evaluation and Results.

50. IFAD and DEA will review COSOP implementation and the results achieved on an annual basis, as part of the Tripartite Portfolio Review Meetings (TPRM), and the COSOP review reports will be disclosed. The mid-term COSOP Results Review will take place in 2021, and the completion review in 2024. The annual review, as well as the COSOP Results Review, will serve to realign COSOP implementation – as and where needed – with the evolving national policies and priorities, as well as with the lessons learned from ongoing projects.

### C. Knowledge management

51. Knowledge management will be closely linked to the M&E function, and to the policy engagement and scaling-up agendas. The programme's knowledge agenda will seek primarily to generate evidence from implementation to engage partners and national stakeholders in dialogue on scaling up successful technologies, approaches and processes. This sort of knowledge, generated from project level, will be built both through systematic documentation of best practices and lessons learned, and independent assessments to document the good practices and innovations.
52. At project level, IFAD will support and encourage knowledge management, both through implementation and by bringing together the management units of different projects to share experience and lessons learned and collectively resolve implementation problems. At programme level, IFAD will seek opportunities to engage more often on knowledge-sharing platforms beyond the current TPRM and joint review of the IFAD-supported grant portfolio. As the country office in India is transforming into the South Asia subregional hub,<sup>18</sup> learning events will be conducted on thematic issues and innovations derived from the country programmes, and it will help broker global knowledge and experience for national stakeholders to use.

### D. Partnerships

53. Within the context of the COSOP's SO, IFAD will use partnerships to identify innovations, strengthen performance, access expertise and services, promote learning and pave the way for scaling up. At central level, IFAD will continue to work closely with the DEA, state governments and selected sectoral ministries,<sup>19</sup> as well as with research centres and the NITI Aayog. Closer partnerships will be developed with policy research institutes to support M&E and knowledge management.
54. The partnership with the NGO community for project implementation at community level will continue as an intrinsic strength of the IFAD business model. Partnerships with the private sector to create better business opportunities for farmers,<sup>20</sup> particularly at project level, will be an important aspect of the programme.
55. RBA collaboration will be further pursued, and joint action is envisaged in several states. IFAD will remain an active member of the SDG2 and north-east region working groups of the United Nations Sustainable Development Framework. Building on already established relations, collaboration will be nurtured with the international financial institutions, bilateral organizations and foundations<sup>21</sup>. These will be structured principally around opportunities for knowledge-sharing, cofinancing and scaling up.

### E. Innovations

56. Innovating, learning from the innovations, and bringing these innovations to scale are central to IFAD's offer in India. Innovations will be identified in collaboration

<sup>18</sup> The South Asia subregional hub based in New Delhi covers Bangladesh, Bhutan, India, the Maldives, Nepal, and Sri Lanka.

<sup>19</sup> Above all, the Ministry of Agriculture and Farmers' Welfare and the Ministry of Rural Development.

<sup>20</sup> This builds on the current successful initiative with the Sustainable Trade Initiative for implementation of the Better Cotton Initiative in the State of Maharashtra, and soon with the Sustainable Spices Initiative in north-eastern India.

<sup>21</sup> The potential for working with various development partners is presented in key file 3.

with government and promoted through ongoing and entirely new investments. Project design processes will actively scout for relevant, scalable innovations. The sources will include: IFAD's own experience in India; those it has promoted or identified in other countries and regions; and innovations developed domestically by research organizations, NGOs, start-ups, etc.

57. Given that innovations are often about the "how" rather than the "what", potential areas may be expected around: climate-proofing agriculture and building smallholders' resilience to price/climate shocks; agricultural farm machinery powered by renewable sources of energy, for reduced drudgery and a lower carbon footprint; organization of farmers; promoting the public-private-producers partnerships (4P) model for value chain development; optimizing input use; and piloting nutrition-sensitive approaches.

#### F. South-South and Triangular Cooperation

58. India has a strong SSTC agenda, which IFAD will support through the COSOP and through incorporating SSTC into the design of new loan and grant projects. SSTC will be pursued to expand the outreach of India's agricultural expertise while also enhancing the performance of the country's agriculture sector. SSTC activities are likely to cover the following three main activities: (i) sharing knowledge between India and other developing countries around agriculture and rural development technologies, policies and processes; (ii) fostering collaborative research between the Indian Council of Agricultural Research and its network of centres in Asia and Africa, the CGIAR centres and the IFAD portfolio in the Global South; and (iii) supporting business-to-business collaboration between Indian enterprises and start-ups/small and medium-sized enterprises from the Global South to enable agricultural transformation. These activities will benefit from the role of the subregional hub as convenor and facilitator of collaborative efforts between the hub countries. It is worth mentioning here that IFAD and the Government of India are currently formulating an India-IFAD partnership agreement for SSTC.



## RB-COSOP 2018-2024 results management framework

Note on abbreviations used:

Indicators listed in the logframe will be disaggregated by tribal population (IP); women (W); men (M) and Youth.

PHL refers to post-harvest losses

Country strategy alignment	Key Results for RB-COSOP					
Strategic Objectives	Impact indicators		Means of verification	Risks/ Assumptions		
<p><b>Doubling farmers' incomes centered around :</b></p> <p>(i) increasing crop productivity; (ii) increasing livestock production; (iii) improving efficiency of input use; (iv) increasing crop intensity; (v) diversification towards higher value crops; (vi) improving price realization by farmers; (vii) shifting cultivators to non-farm jobs..</p>	<p><b>Overarching Goal:</b> to maximise IFAD's contribution to the Government strategy to double farmers' incomes</p>		<p>Baseline Agricultural Income: 58,000 Rs in 2015/16; share of agriculture in total farm income is 60%</p> <p>By 2022, 164,000 Rs (current price); share of agriculture in total farm income is approx. 70%</p> <p>Outreach of the country programme : 5 million households in 2024 (70% women participation)</p>	<p>Reports by MOAFW, Niti Aayog</p> <p>Project baseline and endline surveys COSOP MTR and Completion Report</p>	<p>- Sustained growth of agriculture and allied sectors 8-10% (A) - Inflation , 5%/ year (A) - Continuation of social safety net schemes (A) - Accelerated growth in food and agri-processing industries (A)</p>	
<p><b>Central and State Schemes addressing :</b></p> <ul style="list-style-type: none"> <li>- <b>Soil and Water Conservation and effective use of water</b> – Pradhan Mantri Krishi Sinchai Yojana</li> <li>- <b>Sustainable Agriculture</b> through the National Mission for Sustainable Agriculture and the sub-mission on Agroforestry, Organic Mission, and Mission promoting traditional farming</li> <li>- <b>National Food Security Mission</b> for improving productivity of cereals and pulses</li> <li>- <b>Climate Change adaptation:</b> National</li> </ul>	<p><b>SO1:</b> Smallholder food and agricultural production systems are remunerative, sustainable and resilient</p> <p>Supporting projects : ILSP, LAMP, JTELP, OPELIP, APDMP, FOCUS and 4 projects designed under COSOP 2018-2024</p>		<p><b>Results indicator</b></p> <p><b>Remunerative:</b></p> <ul style="list-style-type: none"> <li>- Number of apex rural producers' organizations engaged in formal partnerships for input/ output supply with public or private entities and financially sustainable: 300 (IP) ; 2 million members (IP, W, M)</li> <li>- % of apex organizations with women in leadership position: 100%</li> <li>- Number of producers reporting decrease in production costs by 30%: 2 million (IP, Youth, W, M)</li> <li>- Number of producers reporting increase of 10% in marketing margins: 2 million (IP, Youth, W, M)</li> </ul>	<p><b>Milestone indicator by 2021</b></p> <ul style="list-style-type: none"> <li>- Number of rural producers' organizations supported: 900 (IP)</li> <li>- Number of supported rural producers who are members of a rural producers' organization : 900,000 (IP); 70% women</li> <li>- Number of Public Private Producer Partnerships in place : 3 per project</li> <li>- Number of producers who diversified into higher value commodities : 0.5 million (IP, Youth, W, M)</li> <li>- Number of producers trained on low external input agriculture and similar techniques: 3 million (IP,</li> </ul>	<p>Annual reports Annual Outcome Surveys Baseline and Endline surveys of projects COSOP MTR and Completion Report</p>	<p>Market reforms implemented by Gol and States and Integration of agricultural markets is complete (A)</p> <p>Scaling up of successful Public Private Producers Partnerships tested in COSOP 2011-2017 and current COSOP (A)</p> <p>Effective consolidation of producers' groups into apex organizations (A) Effective collaboration with ICAR and CGIAR to scale up innovations in climate resilient agric and allied sectors (A)</p> <p>Collaboration with State</p>

Country strategy alignment	Key Results for RB-COSOP			
<p>Initiative in Climate Resilient Agriculture</p> <ul style="list-style-type: none"> <li>- <b>Improved price realization</b> through market reforms (e-NAM, new APLMC Act), expansion of Minimum Support Price, Kisan Sampada Yojana (for agri-processing and food industries), and shift towards higher value production through National Horticulture Mission, Crop Insurance</li> <li>- <b>Social protection schemes</b> with MGNREGS (provide 100 day of unskilled wage employment in rural areas)</li> <li>- <b>Shift to employment in non-farm sector</b> : Skill India mission, Government support to manufacturing sector, job creation in non-farm sector.</li> </ul>		<ul style="list-style-type: none"> <li>- Yield increase for major commodities is 40% over baseline</li> <li>- Post-harvest losses (PHL) reduced by 50% over baseline</li> <li>- Number of jobs created in agri-value chains: 100,000 (IP, Youth, W, M)</li> </ul> <p><b>Sustainable:</b></p> <ul style="list-style-type: none"> <li>- Number of households reporting reduced water shortage vis-à-vis production needs : 2 million (IP, Youth, W,M)</li> <li>- Number of households adopting improved soil nutrient management: 2 million (IP, Youth, W,M)</li> </ul> <p><b>Resilient :</b></p> <ul style="list-style-type: none"> <li>- Number of producers reporting adoption of environmentally sustainable and climate-resilient technologies: 3 million (IP, Youth, W, M)</li> <li>- New projects meet carbon sequestration targets calculated at design</li> <li>- No of HH reporting dietary diversity score &gt; 8 : 2 million (IP, Youth, W, M)</li> <li>- % of households satisfied with support mechanism to cope with adverse weather conditions : 80%</li> </ul>	<p>Youth, W, M)</p> <ul style="list-style-type: none"> <li>- Number of producers trained on reduced PHL: 4 million (IP, Youth, W, M)</li> <li>- Number of persons trained in IGA or business management: 200,000 (IP, Youth, W, M)</li> </ul> <p><b>Sustainable:</b></p> <ul style="list-style-type: none"> <li>- Number of hectares of irrigated farmland (water harvesting and groundwater, and micro-irrigation): 200,000 Ha</li> <li>- Number of households trained on agroforestry and soil and water conservation: 500,000 (IP, Youth, W,M)</li> </ul> <p><b>Resilient :</b></p> <ul style="list-style-type: none"> <li>- Number of producers supported to sustainably manage natural resources and climate-related risks: 5 000 000</li> <li>- New projects incorporate climate change adaptation in design: 100%</li> <li>- Number of persons provided with targeted support to improve their nutrition : 300,000 (IP, Youth, W, M)</li> <li>- % of households supported to benefit from Government social safety nets and insurance products : 100%</li> </ul>	<p>Gvts and Banks to scale up financial services tested in COSOP 2011-2017 to finance uptake of new technologies; and expansion of coverage of the crop and fishing assets insurance (A)</p> <p>Climate shocks / increased frequency of drought make rainfed smallholder agriculture unviable (R)</p> <p>Effective management and convergence of projects with Government schemes</p>

## Agreement at completion point of last country programme evaluation

### A. Introduction

1. This is the second country programme evaluation (CPE) by the Independent Office of Evaluation of IFAD (IOE) in the Republic of India since the Fund started its operations in the country in 1979. The first CPE was completed in 2009 and the report published in 2010. The current CPE had two main objectives: (i) assess the overall partnership between India and IFAD in reducing rural poverty; and (ii) generate a series of findings and recommendations that will inform the definition of future cooperation between the Government of the Republic of India and IFAD, as well as to assist in the implementation of ongoing operations and in the design of future IFAD-funded projects in the country.
2. Based on the analysis of the cooperation during the period 2010-2015, the CPE aims at providing an overarching assessment of: (i) the performance and impact of programmes and projects supported by IFAD operations; (ii) the performance and results of IFAD's non-lending activities in India: policy dialogue, knowledge management and partnership building; (iii) the relevance and effectiveness of IFAD's country strategic opportunities programme (COSOPs) of 2011. This Agreement at Completion Point (ACP) contains a summary of the main findings from the CPE (see section B below).
3. The ACP has been reached between the Government of India (represented by the Department of Economic Affairs, Ministry of Finance) and the IFAD management (represented by the Programme Management Department) and reflects their understanding of the main findings from the CPE as well as their commitment to adopt and implement the recommendations contained in section C, within specified timeframes.
4. It is noted that IOE does not sign the ACP, although it facilitates the process leading up to its conclusion. The implementation of the recommendations agreed upon will be tracked through the President's Report on the Implementation Status of Evaluation Recommendations and Management Actions, which is presented to the IFAD Executive Board on an annual basis by the Fund's Management.
5. This ACP will be included as an annex of the new COSOP for India. In line with the decision of the Executive Board in 2013, the India CPE will be discussed in the IFAD Executive Board at the same time when the new India COSOP is considered by the Board. IOE will prepare written comments on the new COSOP for consideration at the same Board session, focusing on the extent to which the main findings and recommendations from the India CPE have been internalized in the new COSOP.

### B. Main evaluation findings

#### Portfolio Performance

6. Portfolio relevance is assessed as satisfactory. IFAD-funded projects focused on particularly disadvantaged groups, including the scheduled tribes, scheduled castes, women and the landless. A considerable portion of the investments were for agricultural activities. In the past, the technical contents of agricultural interventions were not always built upon a sound analysis of local farming systems and did not optimise opportunities to collaborate with local agricultural research and extension centres. These issues are better acknowledged in recent project designs. Recent projects have tried to build "convergence" with national rural development schemes, notably with NRLM and MNREGS and to coordinate with local government entities (Panchayat Raj Institutions).

7. Effectiveness is assessed as moderately satisfactory. Results are better consolidated in community mobilization and infrastructure serving basic needs, while emerging in two key areas: promoting agricultural production and rural livelihoods and enabling access to credit and financial services.
8. Efficiency has been rated moderately unsatisfactory. The main problems have been: delays in entry into force and in project implementation, reflected in loan disbursement lags. Looking at the factors that explain delays and sluggish implementation, on the one side there are the challenging agro-ecologic and socio-economic conditions of the project areas. On the other hand, there are gaps in the implementation capacity of state level agencies responsible for the projects.
9. Rural poverty impact is assessed as satisfactory under the domains of household assets and income, human and social capital, while moderately satisfactory in food security, natural resource management and climate change, and institutions and policies. In several instances, IFAD-funded projects have contributed to raise income and diversify income sources and helped build assets for the targeted households. Most projects have been successful at establishing high numbers of community-based organizations. People are better aware of opportunities to improve their lives and undertake collective initiatives.
10. Sustainability of benefits is overall assessed as moderately satisfactory due to the combination of political support, community-based support to the initiatives, and positive (albeit variable) support from the technical and economic fundamentals. In the past, design attention to "sustainability" was mostly confined to creating federations of self-help groups. More recent projects have better acknowledged at the design stage the need to support in the long-run institutions, human capacities as well as linkages to markets.
11. Pro-poor innovation and scaling up is assessed as satisfactory. There has been progress in introducing improved agricultural technologies and techniques which are also pertinent to climate change adaptation. There are some recent initiatives on ICT and commodity value chains and insurance products.
12. There are several examples of scaling up. In Odisha, the state government is funding the largest share of tribal community development project to expand outreach to 90,000 households in 1,500 villages. In addition, convergence with central government schemes is being pursued with MNREGS, NRLM and other national and state initiatives. In the North Eastern Region, there is an example of a third phase of a community development project, entirely funded by the central Government of India, so as to cover new districts.
13. Gender equality and women's empowerment is assessed as satisfactory. IFAD-funded projects try to create an enabling environment for women to take part in village councils, claim rights to agricultural land, access natural resources and financial services. There is qualitative evidence that intra-family household decision making now happens in a more participatory form. An increasing number of women are running for local elections.
14. Projects have also focused on reducing both household and livelihood related drudgery. Initiatives include the introduction of smokeless stoves, strengthening access to drinking water, sanitation and roads, increasing forest cover and access to fodder. In Madhya Pradesh, the Tejaswini project cooperated with a state initiative to introduce initiatives against gambling, alcoholism, domestic violence which directly affect the welfare of women and their families. The Madhya Pradesh government plans to scale up this strategy to the entire state.

#### Non-lending activities

15. Individual projects and the IFAD country office ran knowledge sharing and learning initiatives and products (websites, videos, blogs, newsletters, and booklets). Yet,

much of the knowledge from the programme has not been documented or analysed. In India there is a higher level of expectation from IFAD as a knowledge broker to help address an expanded range of issues confronting rural poverty.

16. During the evaluation period, the relationship with the central coordinating ministry (DEA, Ministry of Finance) was cordial and characterized by mutual respect. However, IFAD has had little engagement with key related technical ministries in the central government (e.g., Tribal Affairs, Rural Development, and Agriculture).
17. Overall, there is good ownership at the state level: state governments are responsible for the implementation of IFAD-funded projects and there are cases of replication of projects or project sub-components funded by state resources (e.g., in Odisha and in Madhya Pradesh). The appreciation of the importance of a sustained relationship with the Panchayat Raj Institutions is emerging. Partnership with the NGO community for project implementation at the grass roots level has been an intrinsic strength of the IFAD business model.
18. IFAD has been involved in UN sponsored cooperative efforts (UN Country team, UNDAF Task Teams) but fully-fledged programmatic partnerships with UN agencies are yet to emerge. According to the CPE interviews, multilateral donors such as the World Bank and Asian Development Bank recognize IFAD's comparative advantage and niche in rural poverty alleviation interventions, especially involving the extreme poor. However, the present level of interaction with IFAD is only one of consultation during project formulation.
19. Partnership with the National Agriculture Research System, including state and local research centres, presents opportunities for availing of the fruit of cutting-edge research and applying appropriate farming solutions. IFAD-funded projects do not make adequate use of this resource. An exception is the Integrated Livelihood Support Project, building cooperative partnerships in Uttarakhand on fruit, vegetable, milk production. Private sector partnerships are flagged as an important aspect of IFAD's strategy and this has been only an emerging area, with some pilot experiences in Maharashtra and in Uttarakhand.
20. At the state level, some projects usefully contributed to policy-related inputs. For example, projects in Maharashtra and Madhya Pradesh have provided an input into the Maharashtra Women's Policy 2013 and the Madhya Pradesh Vision 2018. There have also been missed opportunities, as in Jharkhand and Chhattisgarh where little policy dialogue happened on convergence options with public programmes in the two states.

#### Strategic (COSOP) performance

21. COSOP relevance is assessed as satisfactory. The COSOP 2011 reflected well the previous CPE's findings and recommendations. It maintained IFAD's focus on the deeper poverty segments, with a thrust on convergence with public schemes. It had more explicit recognition for the "technical" side of rain-fed agriculture development, linkages to markets and processing. It stated two key objectives: (i) increased access to agricultural technologies and natural resources; and (ii) increased access to financial services and value chains. These are not only strategically relevant to the IFAD portfolio but imperatives for agricultural and rural development, nationally. The 2011 COSOP brought in for the first time the cross-cutting objective of sharing knowledge and learning on poverty reduction and nutritional security.
22. COSOP effectiveness is assessed as moderately satisfactory. As for the first strategic objective, the programme contributed to productivity increase and risk management for rain-fed agriculture, albeit with variations between projects. Most project interventions contributed to increase yields and enhanced risk management by promoting sustainable agricultural practices, water conservation, agroforestry,

soil fertility management, selected livestock breeds, vaccination campaigns. Progress is visible across the portfolio, although with implementation delays.

23. With reference to the second strategic objective, propelled by self-help group, monetary savings and credit linkages have helped beneficiaries invest in circulating capital, sometimes also fixed capital. Despite good track record of SHGs and associated borrowers, public sector banks have been extremely cautious before extending credit support to community-based organizations.
24. The cross-cutting objective of knowledge and learning on poverty reduction and nutritional security has been partly achieved. In spite of the efforts at project-level to prepare communication products, there is a gap between the rich experiences on the ground and the capacity to analyse and systematize them in a way that is suitable for higher-level policy discussion.

### C. Recommendations

25. The following recommendations are geared towards the preparation of the next COSOP, through a consultation between the Government of India, IFAD and other key partners. It is assumed that the future lending envelope for India will remain at the same level as at present: US\$130-140 million per triennium.
26. Recommendation 1. Keep priority to disadvantaged areas and groups but explore differentiated approaches. Disadvantaged areas will continue to be a priority in the national rural development context and IFAD has recognized comparative advantages in disadvantaged areas in India. IFAD-funded interventions should continue to target disadvantaged areas, particularly in states with large rain-fed areas, where they can establish effective and innovative approaches for future replication and scaling up of results. At the national level, it will be important to avoid excessive geographic spread-out of the portfolio. Given the human resources available in the IFAD country office, there is a limit to the number of states and projects that can be effectively supervised. Key recommendations of the previous CPE continue to be well-grounded such as the general principle of "one state one loan" and the "saturation" approach (maximizing coverage of a block/district before moving to the next one).
27. Differentiating the approaches according to the target groups. The future programme should continue to target disadvantaged communities and groups, with special attention to women and scheduled tribes. Attention to building and strengthening social capital should continue. However, in different agro-ecological and socio-economic contexts, IFAD will face different challenges. The design approach, component-mix and level of specialisation will need to be adapted.
28. The traditional self-help group paradigm will continue to be relevant for areas and groups where basic needs, building of grassroots organizations and subsistence agriculture are still the priority. These are interventions requiring several years of investments, starting from low economic base and human development conditions. Instead, in areas where communities are already organized and there is potential for marketing of surplus production, project designs, in addition to SHGs, should continue to explore additional approaches to community and group building with focus on collectively linking to markets and commercialisation (e.g., producers' groups, mutually-aided cooperative societies and producers' companies).

### Proposed follow-up by the Government and IFAD

29. The new country strategy for India will retain the focus on improving the incomes and nutrition of the rural poor households whose livelihoods rely on rainfed agriculture. The country programme will continue to pursue one loan – one state and the saturation approach. It is worth noting here that the current country programme demonstrated effective one loan-multiple state operations (such as

NERCORMP II). Under the new country strategy, one loan multiple states operations would be considered on an exceptional basis particularly for the North East Region where implementation through a regional agency (NEC) proved satisfactory. The Government of India invites IFAD to expand the size of the country office in India in order to increase the geographic reach and effectiveness of its programme.

30. With regard to the sub-recommendation related to the differentiated approaches which is more relevant to new projects, the design of IFAD-funded operations will be informed by poverty and gender analysis studies (current practice) and value chain studies. The information derived from these studies would help define the problem/ opportunity statement and therefore the component/ activity mix required and arrive at approaches that would add value to Government's on-going efforts to reduce rural poverty, increase agricultural productivity, and improve farmers' welfare. Attention will be given to ensure that the projects do not have an unduly long tenure and that all projects have a well-defined exit strategy.
31. Building social capital will continue to be a key feature of the country programme and the new strategy. Experience has shown that the Self-Help Group methodology and its focus on poverty targeting, thrift and credit activities and women empowerment, is an effective entry point to building socially cohesive and autonomous higher-tier organizations. Experience shows that the higher-tier organizations are now playing an important role in financial intermediation and development of agricultural services to farmers (input supply, machinery/equipment hiring centers, and produce aggregation and processing). The legal entity for the higher-tier organizations will be explored on a case by case basis to determine the most appropriate set-up in view of the nature of services to be provided to farmers.

Responsible partners: IFAD, GOI

Timeline: New RB-COSOP covering the period 2017-2021.

32. Recommendation 2. Projects' agricultural development components need to focus more prominently on technical solutions for rain-fed agriculture, especially in light of the climate change, collaborate more with local and national applied research and extension, and commercialisation of smallholder agriculture. From a technical perspective, interventions need more direct emphasis on reducing the large intra-district yield differentials, better analyse constraints, risks and opportunities of farming systems. There is also a need for more systematic programme-based partnerships with state and local public research and extension organizations (e.g., district-level Krishi Vigyan Kendras and higher research organizations) on technical packages to improve productivity of crops, fodder, fruit trees and livestock and mitigate weather-related losses.
33. Investments in agriculture need to be crafted more strategically around territorial and commodity clusters, to better coordinate interventions and concentrate on a critical mass and streams of initiatives. This will also put projects in a better position to support linkages to markets and opportunities for value addition. To improve farmers' access to information on markets and reduce risks, attention needs to be paid to expose them to information technology and insurance products.
34. Emphasis on market access and value chains also implies: (i) better market access and value chain diagnostics upfront to identify the barriers that smallholder farmers face; (ii) clearer identification of the envisaged role of a project (e.g., enhancing access to market information; facilitating access to wholesale markets; investing on improved processing capacity); and (iii) exploring the interest of private sector operators at the design stage. Recent legislation on reinvesting a percentage of corporate profits on corporate social responsibility provides new opportunities.

#### Proposed follow-up by the Government and IFAD

35. The design of new operations will pay more attention to defining clear farming system and packages of practices (POP) to improve the crop and livestock production systems and their integration. The supervision and implementation support of on-going projects will share tested packages of practices that reduce production costs, promote sustainable methods of agricultural production, and improve productivity. Expanding the partnership with national applied research and extension organizations will be pursued more vigorously building on the lessons learned from the on-going country programme. The successful results from the IFAD grant programme will be mainstreamed into new or on-going operations taking into consideration the agro-ecological and socio-economic contexts. With the development of IT and Communication tools geared to agriculture, the new and on-going operations will strive to link farmers with knowledge resource centers, low cost extension/communication services through IEC and will strive to document success stories & case studies. The new and on-going projects will also collaborate with the flagship government programs for water and soil conservation, soil health management, crop insurance and e-marketing.
36. With regards the sub-recommendations related to the territorial and commodity clusters and market access, these are well noted. As indicated under the first recommendation, the detailed component/ activity mix and approach will be based on the conclusions of the value chain studies and the definition of the problem/opportunity statement.

Responsible partners: IFAD, GOI.

Timeline: On-going. Recommendation already implemented for the design of the Drought Mitigation Project in Andhra Pradesh.

37. Recommendation 3. Complementary interventions in non-agricultural activities are important not only as a measure to diversify rural incomes (primary production will absorb only a part of the burgeoning youth labour supply in rural areas) but, equally important, to develop processing and value addition in agricultural commodity supply chain. In particular, there is scope to better connect these activities with projects' agricultural investments (e.g., in the areas of processing and packaging of products, agricultural tool repair shops, marketing of agricultural inputs, eco-tourism).

#### Proposed follow-up by the Government and IFAD

38. It is important to note that smallholders and marginal farmers currently derive less than 60% of their incomes from agriculture. Non-agricultural income is therefore an important complement to the income of rural households. We take note of the CPE recommendations of connecting the non-farm agricultural activities with the development of value chains and the services linked with improving the effectiveness of the forward and backward linkages in the value chain; as well as targeting youth in such activities. Such activities are already on-going and we will pursue these efforts both in on-going and future projects, and build on achievements and lessons learned to date.

Responsible partners: IFAD, GOI.

Timeline: on-going projects; design of new projects under COSOP 2017-2021.

39. Recommendation 4. Portfolio implementation efficiency needs to be addressed aggressively. A first area of thrust is to simplify project design. This may entail more conservative plans for project coverage (e.g., fewer blocks or districts, following a saturation approach). In addition, in particularly disadvantaged communities (e.g., scheduled tribes), projects could follow a modular approach:



rather than concentrate numerous components and sub-components in a single project, the intervention could be sequenced in a modular fashion. For example, a first loan could focus on human and social capital building, support to food self-sufficiency and sustainable livelihood approach. A follow-up loan could then emphasise market linkages and support and scaling up in collaboration with public programmes and local governments (PRIs).

40. The central government, state governments and IFAD should review issues that cause delays in recruiting the project team, staff turn-over and lengthy procurement, affecting the pace of implementation, for example: (i) project personnel recruitment procedures, particularly for senior staff, given the difficulty to hire staff on deputation from state agencies and programmes; (ii) procurement procedures and contractual arrangements that have proven to be non-conducive (e.g., the output-based payment schemes for NGOs); (iii) compensation packages for project staff, to ensure equal treatment with other public programmes; (iv) concurrent charges of project directors that compete for their time and focus. IFAD could further support by preparing guidelines based on previous implementation experience and training modules on financial management, procurement and other fiduciary aspects.

#### Proposed follow-up by the Government and IFAD

41. The efficiency of Portfolio implementation is indeed an area where additional improvements are required and yet it is also important to take stock of what has been achieved so far. IFAD and the Government of India have been addressing efficiency in implementation in a vigorous manner over the last 5 years and the main results achieved to date are (and reported in the CPE): (i) the time from approval to first disbursement has decreased from 16.2 months to 9.5 months for the last 5 projects; (ii) the volume of disbursement has doubled from approx. 11 million USD in 2010 to 23 million USD in 2015; (iii) the number of problem projects has reduced from 5 to 2 over the period 2010-2015. We plan to build on these results to further improve the programme implementation efficiency with special focus on: (i) ensuring that the project design process further meets the DEA and IFAD readiness conditions for start-up in order to reduce the period from board approval to first disbursement ; (ii) ensuring that experienced candidates are designated as project directors as their competency, their personality and their full time responsibility for the project are a determining factor for project efficiency and effectiveness; (iii) streamlining project management in terms of delegation of authority and staffing; (iv) working on effective mechanisms for the release of loan proceeds by State Governments.
42. Based on the consultation with programme stakeholders at the CPE roundtable, it was agreed that additional measures to improve efficiency would cover: (i) simplify project design in line with recommendations 1 and 2 above; (ii) provide hands-on and systematic capacity building to project management units on project planning, M&E, financial management and procurement especially in the start-up phase; (iii) plan start-up workshops in such a manner so as to facilitate sharing knowledge between design and implementation teams on project rationale and modalities of implementation; (iv) allow for sufficient time during the first year for detailed planning of implementation, undertaking required staffing and procurement, setting up the financial management and M&E systems; (v) ensure that appropriate delegation of authority is provided to PMU and that employment conditions are competitive so that qualified staff are attracted to the job, motivated and retained. It is also agreed that all new and on-going operations will have a computerized financial management system.
43. It is worth noting that despite issues in implementation efficiency, the projects are effectively reaching their objectives : once the implementation systems are in place, the projects quickly achieve very good coverage of the beneficiaries and

become very good at mobilizing community participation, bank financing and convergence with Government programs and this somewhat compensates for delayed disbursement of IFAD funds. The projects are subsequently scaled up by the State Government.

Responsible partners: IFAD, GOI.

Timeline: On-going

44. Recommendation 5. Strengthen partnerships and non-lending activities at four levels: state government, central government, private actors and the rural finance sub-sector and south-south cooperation. There are four main levels of action, each requiring slightly different partners and skills. First, at the state level, project partnerships and experiences could be supported by analytical work to provide inputs into policy design and revision and pave the way for benefits to reach a larger number of people.
45. Second, at the central level, building on previous state-level experiences, lessons of processes and experiences could be distilled at a higher level and shared with central-level authorities and international development partners, including RBAs and International Financial Institutions in a number of fora.
46. Third, the private sector needs to be involved more prominently at the time of the new COSOP preparation and project design. Pilot experiences of CAIM and ILSP with private operators need to be analysed more in detail to extract lessons and approaches. The rural finance sub-sector needs more attention given the so far limited responsiveness in financing village groups. In addition to working with private microfinance entities, the experience of MPOWER with publicly-owned banks deserves dissemination.
47. Fourth, experiences need to be shared with other countries in the sub-region (and beyond). The sub-regional mandate of the IFAD country office in India creates fertile ground for south-south knowledge exchanges. Beyond the sub-region, there should be central-level efforts from IFAD headquarters to facilitate strategic initiatives of South-South cooperation from a global perspective.

Proposed follow-up by the Government and IFAD

48. The country programme is already active at state level in disseminating successful experiences to state authorities which in turn scale these up and the CPE has confirmed the policy impact and scaling up at state level. Knowledge and policy related activities at national level are addressed under the sixth recommendation. Private sector is increasingly consulted at project design and supervision and as recommended by the CPE, IFAD is in the process of documenting the successful private sector and bank linkage activities of the portfolio. With regard to the sub-regional mandate of the country office in India, a work plan was already developed for knowledge sharing and is under implementation. IFAD has just provided a grant to a regional organization, South Asia Watch on Trade, Economics and Environment, to define the engagement with the South Asian Association for Regional Cooperation community and this is likely to strengthen cooperation within this sub-region. The Government of India is also in the process of developing its South-South cooperation strategy and IFAD will contribute to the key areas of relevance to its mandate and competencies, within the available resources.

Responsible partners: IFAD

Timeline: On-going

49. Recommendation 6. Enhance capacity and resources for non-lending activities. At present, non-lending activities are constrained by limited in-house technical expertise and budget. Within the current resource profile, some improvements could be made by exploring the following options: (i) embedding

knowledge management and policy dialogue components in individual loan project financing; (ii) using the already existing opportunity of periodic tripartite meetings to discuss selected sectoral/thematic issues and facilitate knowledge transfer across projects; (iii) mobilising additional funding from external sources (e.g., national, international foundations).

50. IFAD also needs to demonstrate capacity of strategic thinking and to bring specialised technical skills to the table. Partnerships with reputed national and international high-calibre specialists and think tanks would enhance quality and credibility of policy analysis. IFAD could consider creating an engagement forum comprising of researchers/scholars and practitioners, commission think pieces on issues of priority and convene with the government an annual or bi-annual high profile event. This would require IFAD Headquarter engagement and support including a moderate allocation of additional resources.

#### Proposed follow-up by the Government and IFAD

51. The implementation of this recommendation is already on-going. Inclusion of knowledge management and policy dialogue activities in every individual project may not be relevant. Therefore, the Government of India believes that the issue of inclusion of KM and policy dialogue may be need based and should be included in a particular project only if necessary and in consultation with the Government.
52. In terms of knowledge management, the more recent projects, have expanded the activities in this field and are very active in the production of communication materials, training materials, case studies as illustrated by CAIM, ILSP and LAMP. There is also agreement on using the TPRM as a knowledge sharing platform. Within the next country strategy , and given the limitations on resources and time of staff, and the existence of several well recognized policy fora, IFAD plans to engage with the existing fora as well as existing Government-donor policy platforms (such as the work that the Food and Agriculture Organization of the United Nations and the World Bank are conducting on the policy options for agricultural development). IFAD will strive to mobilize additional resources to the extent possible , with the approval of GOI, to support relevant policy dialogue.

Responsible partners: IFAD and GOI.

Timeline: On-going

## COSOP preparation process including preparatory studies, stakeholder consultation and events

### COSOP preparation process including preparatory studies, stakeholder consultation and events

The design team of the COSOP. The COSOP design was anchored by Ms. Aissa Touré , Programme Officer, Asia and Pacific Division, with contribution from all the members of the IFAD country team including Ms. Rasha Omar, Country Programme Manager and Country Representative, Ms. Meera Mishra, Country Coordinator, Mr Vincent Darlong, Country Programme Officer, Mr. Sriram Sankarasubramaniam, Programme Support Analyst, Ms. Mehry Ismaili, Programme Assistant.

The Lead Advisor for the COSOP is Mr Edward Heinemann. The IFAD HQ CPMT is composed of Mr. Nigel Brett, Lead Portfolio Advisor, APR; Mr. Fabrizio Bresciani, Regional Economist, APR; Mr. Thomas Chalmers, Consultant, APR; Mr. Roshan Cooke, Regional Climate and Environment Specialist, ECD; Ms. Antonella Cordone, Senior Technical Specialist - Indigenous Peoples and Tribal Issues, PTA ; Ms. Waafa El Khoury, Senior Technical Specialist – Agronomy, PTA; Mr. Antonio Rota, Senior Technical Specialist – Livestock, PTA; Mr. Mattia Prayer Galletti, Senior Technical Specialist - Rural Development and Institutions, PTA; Ms. Juliane Friedrich, Senior Technical Specialist – Nutrition, PMD. In addition, the COSOP design team also benefitted from the support of Mr. Tom Chalmers, who carried out an in-depth stock take of rural poverty in India as well as a review of the constraints and opportunities for rainfed agriculture.

Preparatory studies. The major preparatory study was a desk-based Environment and Climate Change Assessment carried out for India and initiated in last quarter of 2015 and completed during the first quarter of 2016. In addition, a study was commissioned on the modalities for convergence with Government programs in the rural and agricultural sector. An in-depth stock-taking of the COSOP results was undertaken in first quarter of 2017 and led to a comprehensive mapping of the results of the previous COSOP against its targets. This is reflected in the COSOP Completion Report. A literature review was also conducted for the agricultural sector. These studies were further complemented by recent policy and strategy documents developed by the Government of India, notably the 3 year action agenda 2017-18, Agricultural Marketing and Farmer Friendly Reforms Across Indian States and UTs, Doubling Farmers' Incomes, Raising Agricultural Productivity and Making Farming Remunerative for Farmers, all produced by Niti Aayog. The Niti Aayog publications present the outline of the Government strategic plan for the country's social and economic transformation in the short and medium term.

COSOP consultations. The COSOP design team took advantage of key events in the country programme to discuss future strategic directions for IFAD in India. The key events that have contributed to shape the current COSOP are :

- Initial COSOP consultation held after the CPE workshop in May 2016. Participants in this consultation included the representatives of DEA and Ministry of Agriculture, the management teams of IFAD supported projects in India, representatives of UN and multilateral development banks. The overall focus of the country programme on climate resilient agriculture and market access was broadly endorsed. Participants however raised the following issues : maintaining the empowerment approach and development of robust community institutions; addressing challenges and opportunities of rural youth in rural areas.

- The Tripartite Portfolio Meetings which are held on a bi-annual basis and which provide feedback on the GoI assessment of project performance, areas of improvement and future expectations. The two TPRM held during the COSOP design period were attended by representatives of DEA, Ministry of DONER, and project directors. During the TPRM, held in March 2017 in Jharkand, the Secretary Welfare Dept attended the meeting. The discussions brought to the forefront the issue of IFAD value added to agricultural and rural development in the country. Main areas of strength for IFAD are institutional development of community organizations with strong focus on their inclusive representation of the poor and financial sustainability; and financial inclusion and expanding access of the poor to financial services especially from private banks. Main areas of improvement are the evidence based knowledge and program design and implementation ; systematically capturing the good practices of specific projects and mainstreaming these within the program and exploring their scale up through Government programs.
- Bilateral meetings held with DEA, with Ministry of Agriculture and Farmers' Welfare, and with Ministry of Development of the North East Region, and the North East Council to confirm the overall strategic focus. During these meetings aspects of IFAD value added were discussed and the following features of IFAD business model are appreciated : flexibility and successfully tested community driven approaches to empower and enable communities in remote and conflict prone areas to improve their livelihoods. Discussions with DEA have focused on developing solutions to address the causes that lead to weak programme efficiency which was rated moderately unsatisfactory by the Country Programme Evaluation. Such solutions include tightening the provisions in the state agreements to clarify the roles and responsibilities of the State Government in ensuring the successful implementation of the projects; training of project directors on project management; setting in-depth project reviews after 18months from entry into force to review project performance and revise the project design, institutional arrangements and fund flow mechanisms as appropriate.
- New round of Consultations with Indian Council of Agricultural Research, IFAD supported Projects, Multilateral agencies and private sector. Two such consultations were held on 14 and 23 June, 2017, in Delhi. The discussions focused on validating the proposed strategic objectives, IFAD value added to the development of the agricultural and rural sectors in India and proposed innovation agenda. The participants found that the economic centric approach underlying the new COSOP is aligned with the Government new approach to the agricultural and rural sectors. They also advised to focus IFAD programme on areas where comparatively low investments can yield high impact. The participants pointed to the existence of many initiatives led by Government and development partners in the space of climate resilient agriculture and farmers' access to markets and that potential for partnership should be mapped systematically. Despite this, certain gaps exist and IFAD may consider addressing these, such as : systematic use of the tools developed to better aid in planning and building producers' resilience to drought; the quality of planting material especially for horticulture and agroforestry; credit financing of sub-sectors such as agro-forestry; how to ensure that the environmental footprint of livestock is reduced; prevention of zoonotic diseases especially transboundary diseases; mitigating antibiotic microbial resistance in livestock and humans which puts the attention squarely on the food

safety agenda; phasing out banned agrochemicals from the market in India and their use by farmers; use of warehousing to reduce farmers' risks with regard the price volatility; development and improvement of ecosystem services. Participants also cautioned on investment in renewable energy which stop proving profitable when the electricity grid is extended. There was also strong demand from the participants for IFAD to step up its knowledge management role and better capitalize on the learning from its diverse portfolio. The ICAR and CGIAR centers expressed their interest in SSTC and use of the regional grants accordingly.

## Natural resources management and climate change adaptation: Background, national policies and IFAD intervention strategies

1. India accounts for 4.5 percent of the world's greenhouse gases. A decline in monsoon rainfall has already been observed, since the 1950s. The frequency of heavy rainfall events has also increased and a 2°C rise in the world's average temperatures will make India's summer monsoon highly unpredictable. India is therefore at forefront of efforts to adapt to and mitigate climate change.
2. Climate change is expected to affect hydrological balances, input supplies, livestock production, and other components of agricultural systems. Recent studies shows that wheat yields peaked in India around 2001 and have not increased since despite increasing fertilizer applications. Observations show that extremely high temperatures in northern India - above 34°C - have had a substantial negative effect on wheat yields, and rising temperatures can only aggravate the situation. Seasonal water scarcity, rising temperatures, and intrusion of sea water would threaten crop yields, jeopardizing the country's food security. Should current trends persist, substantial yield reductions in both rice and wheat can be expected in the near and medium term. Under 2°C warming by the 2050s, the country may need to import more than twice the amount of food-grain than would be required without climate change.

### National policy context

3. The broad policy framework on environment and climate change is laid down in the National Environment Policy (NEP) 2006, which promotes sustainable development along with respect for ecological constraints and the imperatives of social justice. The current development paradigm reiterates the focus on sustainable growth and aims to exploit the co-benefits of addressing climate change along with promoting economic growth. The National Action Plan on Climate Change (NAPCC) provides a sharper focus on required interventions. Currently, NAPCC is implemented through eight National Missions, outlining priorities for mitigation and adaptation to combat climate change.
4. On 2 October 2016, India ratified the Paris Agreement. India 's Nationally Determined Contribution (NDC) targets to lower the emissions intensity of GDP by 33%–35% by 2030 below 2005 levels; increase the share of non-fossil based power generation capacity to 40% of installed electric power capacity by 2030; and to create an additional (cumulative) carbon sink of 2.5–3 GtCO<sub>2</sub>e through additional forest and tree cover by 2030. The NDCs will be fulfilled through 8 missions under the NAPCC<sup>22</sup>. The continuing rapid growth in renewable energy in India, combined with sustained reductions in coal imports is a strong indication that the low carbon transformation of India's energy supply sector is gathering momentum. The list of technologies/practices identified as having mitigation and adaptation co-benefits are as follows:

<sup>22</sup> National Mission for Sustainable Agriculture (NMSA), Paramparagat Krishi Vikas Yojna (PKVY), Pradhan Mantri Krishi Sinchayee Yojna (PMKSY), Sub-Mission on Agroforestry (SMAF), National Initiative for Climate Resilience Agriculture (NICRA), National Food Security Mission, Soil Health Card Scheme (SHC), Mission for Development of Integrated Horticulture (MIDH).

Deliverables being monitored/ action points	Programmes
Area under organic farming	Soil Health Card, Paramparagat Krishi Vikas Yojana (PMKVY, traditional farming), National Mission on Oilseeds and Oil palm, Mission for Integrated Development of Horticulture (MIDH)
Production of biofertilizers	Soil Health Card and National Mission for Sustainable Agriculture (NMSA)
Precision irrigation	Mission for Integrated Development of Horticulture
SRI/DSR against conventional rice cultivation	National Food Security Mission (NFSM)
Diversification to less water consuming crop/ cropping system	National Food Security Mission (NFSM)
Additional area under plantation in arable land	Mission for Integrated Development of Horticulture
Climate resilient varieties identified/ released	National Innovations on Climate Resilient Agriculture (NICRA)
Identification of genotypes of crops with enhanced CO <sub>2</sub> fixation potential and less water consumption, nutrients  Climate resilient genotypes with greater adaptation to drought, flood, salinity and high temperature	National Innovations on Climate Resilient Agriculture (NICRA)
Coverage of milch animals under ration balancing programme	Ration Balancing Program
Establishment of bypass protein feed making units	FFDS

#### IFAD's Climate adaptation strategy

- IFAD would consciously mainstream climate change adaptation with a set of complementary activities and investments that are specifically aimed at climate risk management and improving the adaptation capacity of households to cope with these adverse weather events. It would require integrating climate vulnerability assessment and adaptation planning in IFAD's projects- through : (i) specific bottom-up village participatory community planning processes, (ii) biophysical and socio-economic resource mapping to better understand the environmental and climate risk issues within the village and options for their mitigation, (iii) vulnerability assessment and mapping of vulnerability and local adaptive capacities that build on the participatory resource mapping, (iv) participatory gender-differentiated village adaptation action planning to define community land and water management and climate adaptation investments to reduce vulnerability, increase resilience and enhance the adaptive capacity of the local communities; and (v) a participatory monitoring system to inform multi-sectoral planning methodologies. Targeted investments would be specifically designed for integrating climate change adaptation into natural resource management, enhancing agricultural diversity and cropping systems, livelihood and income generation and poverty reduction programs, and the maintenance of environmental services



important for ensuring reliable and assured water supply and natural resource based livelihoods and agricultural production systems.

6. Enhanced knowledge capacities of local communities to address climate change impacts, documentation and dissemination of best practices, and capacity development support to district and local level entities would enable better provision of climate relevant information to local farmers and households to complement adaptation measures. Support to research for developing new cropping systems and stress resistant species; to national and district level for developing policy related information on climate change adaptation, management of climate change, and strengthening mechanisms of coordination across sectors and agencies and adaptation financing are important for enhancing responses to climate change.
7. These initiatives will benefit from a conducive enabling environment as the Government of India has enacted a number of policies that improve resilience to climate change in the agriculture sector. Chief among them are : the national agroforestry mission formulated in 2014 to encourage the expansion of tree plantation and make it a commercially viable and environmentally sustainable enterprise; integration of different programmes of water sector in one common platform to ensure end to end solution in irrigation management; specific thrust on organic farming; e-NAM to create a unified national market for agricultural commodities; management of crop residues; monitoring of soil health and rationalizing input use thanks to the soil health card; judicious use of urea through neem coating; improved safety net mechanisms ; formulation of district agriculture contingency plans to allow timely implementation of preventive and remedial measures to reduce damage caused by climate shocks.

## Country at a glance

### GDP (purchasing power parity)

\$8.721 trillion (2016 est.)  
 \$8.103 trillion (2015 est.)  
 \$7.534 trillion (2014 est.)  
 note: data are in 2016 dollars  
 country comparison to the world: [4](#)

### GDP (official exchange rate)

\$2.251 trillion (2016 est.)  
 GDP - real growth rate  
 7.6% (2016 est.)  
 7.6% (2015 est.)  
 7.2% (2014 est.)  
 country comparison to the world: [7](#)

### GDP - per capita (PPP)

\$6,700 (2016 est.)  
 \$6,300 (2015 est.)  
 \$5,900 (2014 est.)  
 note: data are in 2016 dollars  
 country comparison to the world: [159](#)

### Gross national saving

30.2% of GDP (2016 est.)  
 31.3% of GDP (2015 est.)  
 32.8% of GDP (2014 est.)  
 country comparison to the world: [27](#)

### GDP - composition, by end use

household consumption: 60.8%  
 government consumption: 11.4%  
 investment in fixed capital: 27.6%  
 investment in inventories: 3%  
 exports of goods and services: 19%  
 imports of goods and services: -21.8%  
 (2016 est.)

### GDP - composition, by sector of origin:

agriculture: 16.5%  
 industry: 29.8%  
 services: 45.4% (2016 est.)

### Industrial production growth rate

7.4% (2016 est.)  
 country comparison to the world: [13](#)

### Labor force

513.7 million (2016 est.)  
 country comparison to the world: [2](#)

### Labor force - by occupation

agriculture: 49%  
 industry: 20%  
 services: 31% (2012 est.)

### Unemployment rate

8.4% (2016 est.)  
 8.4% (2015 est.)  
 country comparison to the world: [96](#)

### Population below poverty line

29.8% (2010 est.)

### Household income or consumption by percentage share

lowest 10%: 3.6%  
 highest 10%: 31.1% (2005)

### Distribution of family income - Gini index

33.6 (2012)  
 37.8 (1997)  
 country comparison to the world: [101](#)

### Budget

revenues: \$200.1 billion  
 expenditures: \$283.1 billion (2016 est.)

### Taxes and other revenues

8.9% of GDP (2016 est.)  
 country comparison to the world: [214](#)

### Public debt

52.3% of GDP (2016 est.)  
 52.4% of GDP (2015 est.)  
 country comparison to the world: [83](#)

### Inflation rate (consumer prices)

5.6% (2016 est.)  
 4.9% (2015 est.)  
 country comparison to the world: [178](#)

## India Country Programme – Key Statistics and Achievements

## Active Country Programme as of 30 June 2018

Project Name and brief description	Approval Date	Total Project Cost	Effective Date	IFAD		Co-financing
				Loan & Grant Amount	% Disbursed	Amount
Fostering Climate Resilient Upland Farming Systems in the North East (Mizoram and Nagaland States)	11-Dec-2017	168,514,200	25-Jan-2018	USD 76,550,000	5.23%	91,964,200
Jharkhand Tribal Empowerment and Livelihoods Project	21-Sep-2012	115,592,000	04-Oct-2013	USD 51,001,000	26.80%	64,591,000
Odisha Particularly Vulnerable Tribal Groups Empowerment and Livelihoods Improvement Programme	22-Apr-2015	130,396,000	18-Mar-2016	USD 51,208,000	7.39%	79,188,000
Convergence of Agricultural Interventions in Maharashtra's Distressed Districts Programme	30-Apr-2009	118,645,691	04-Dec-2009	USD 41,108,962	59.99%	77,536,729
Andhra Pradesh Drought Mitigation Project	14-Dec-2016	148,842,000	07-Sep-2017	USD 75,500,000	0.00%	73,342,000
Livelihoods and Access to Markets Project	08-Apr-2014	169,904,756	09-Dec-2014	USD 50,062,624	4.72%	119,842,132
Post-Tsunami Sustainable Livelihoods Programme for the Coastal Communities of Tamil Nadu	19-Apr-2005	113,451,986	09-Jul-2007	USD 52,837,327	57.91%	60,614,659
Tejaswini Rural Women's Empowerment Programme	13-Dec-2005	228,160,100	23-Jul-2007	USD 54,448,488	85.35%	173,711,612
Integrated Livelihood Support Project	13-Dec-2011	258,790,235	01-Feb-2012	USD 89,910,166	52.48%	168,880,069

## Project/programme CONCEPT NOTE



Date: 21 August 2018

Concept Note on: India: Scaling Up Renewable Energy Based Agricultural Technologies for Empowering Smallholder Farming Families in India

### **A. Strategic context and rationale for IFAD involvement, commitment and partnership**

1. The Government of India has set the ambitious goal of doubling farmers' incomes by 2022 in real terms. A number of integrated interventions are required to achieve this goal. The Agricultural Engineering Division of Indian Council of Agricultural Research (ICAR) proposes to contribute to this goal through:

- Mechanization of agricultural operations. In India, energy use in agriculture is estimated at 2-2.25 kW/ha, which is very low when compared with other countries. Absolute mechanization of agricultural sector would require a fourfold increase from current levels, and would encompass both production and processing operations. Achieving higher level of mechanization among smallholders while maintaining a low carbon pathway would entail promotion of technological innovations better suited to smallholders and higher use of renewable energy sources.
- Support small holder farmers in better price realization. This will be achieved through the introduction of appropriate technologies for on-farm value addition that can operate on various energy sources and help manage processing and storage costs, and reduce crop losses;
- Facilitate the development of supply chains of agricultural technologies that cater to smallholders and create a business model for long term sustainability. ICAR aims to remove the bottlenecks that hinder taking technological innovations from the laboratories to the markets, and to help manufacturer's access financial services/ skilled labour/ government incentives to produce and sell the technologies at scale.

2. Moreover, and according to action tracker of Intended Nationally Determined Contributions to reduce Green House Gas emissions (INDC), India is on the path to achieve the targets for the use of renewable energy in power generation and to over achieve the emissions intensity target submitted under the Paris Agreement. ICAR proposes to contribute to this INDC, by promoting agricultural technologies that use renewable energy; and enable farmers to switch from dependence on fossil fuels to the use of renewable sources of energy or hybrid systems (conventional and renewable energy). Access and availability of fossil fuel based energy in remote rural areas are irregular and come at a higher cost, hence in remote and off-grid rural areas, renewable energy technologies will be accepted as more affordable than fossil fuel based ones.

## B. Possible geographic area of intervention and target groups

3. Geographic area. The project aims to cover eight states of India. Potential states for the project are Odisha, Jharkhand, Bihar, Chhattisgarh, Punjab, Haryana, Tamil Nadu and Karnataka. The basis for identifying the states was (i) large population likely to be off grid (ii) pre-existing strong community based institutions that could serve as a platform to reach out to the communities ; (iii) states with scope for uptake of the proposed ICAR technologies as they are lagging in agricultural productivity<sup>23</sup>; (iv) states with strong research capacity and achievements in agricultural machinery and equipment. Within these states, preference would be given to locations with : 1) evidence of strong agricultural extension system organized around Agriculture extension centres, NGOs, State Rural Livelihood Missions, cooperatives/ farmers' organizations, lead farmers and community resource persons; 2) presence of IFAD supported projects having established well-functioning producer organizations and farmers' service centers (as of March 2018, there are 260 grassroots organizations in IFAD portfolio in the States of Tamil Nadu and Jharkhand). Within these locations, priority will be given to areas that have irregular access to electricity or are off-grid. Given the geographic scale of the project area, implementation will follow a modular approach and during design the gradual roll out of the project will be planned accordingly.

4. Target group. The primary target group of the project will be smallholder and marginal farmers already organized into producer organizations/ cooperatives/companies, village organizations, Federations of Self-Help Groups. In addition, the project will provide support to medium and small enterprises involved in the manufacturing and after sale services of agricultural machinery and equipment; as well as scientists/ innovators working on developing new technologies for farm machinery and equipment. Women and youth will form a significant part of all these groups, not just as beneficiaries but also as potential partners in implementation. In line with the COSOP focus on rainfed farming systems, rainfed agricultural areas will be selected.

5. Outreach. The project plans to reach 1 million smallholder and marginal farmers in 4000 Gram Panchayats in 8 states, as direct beneficiaries; and about 5 million smallholders as indirect beneficiaries.

## C. Justification and rationale

6. Up to 2016/17, ICAR filed for the patent of 1025 technologies by 69 research institutions. However, the technology developed in ICAR laboratories does not reach the farmers' fields in the same pace. For example, according to the available information in the annual reports of ICAR for 2015-16 & 2016-17, only 104 technologies were licensed. This situation is due to the following reasons:

- The technologies developed by ICAR are demonstrated in farmer fields, but it is done on a small scale. This is due to the fact that the budget allocated for demonstration is limited. Due to limited fund availability, higher share of contribution from the farmer is required to demonstrate and adopt the technology. Smallholder farmers are generally not able to contribute to that level, which limits the demonstration of the technology. Hence, awareness and adoption of new technologies among farmers are limited in scale.
- The new technology does not fall under the subsidy schemes announced by Government and credit is not readily available for such technologies. Thus it limits the up-take by smallholders and the subsequent manufacture of the technology at scale. This is particularly true for renewable energy based/ hybrid technology<sup>24</sup>.
- The technology developed is crop and region specific and thus the demand may be much localized. This usually dissuades agricultural equipment manufacturers, who look for volume and economies of scale.

<sup>23</sup> This refers mainly to the Eastern States of Bihar, Jharkand, Odisha and Chattisgarh.

<sup>24</sup> Subsidy is currently available only on solar powered irrigation pumps.

- The practice of custom hiring to make the technology more widely available at an affordable cost, is not prevalent in all states and where prevalent usually includes generic machines/ technologies. Small and medium manufacturers face difficulty in accessing unorganized farmers and rely on word of mouth to sell their technology. This impacts their outreach and the scale of the business.
- Small holders require farm technologies for enhancing their productivity as well as reducing post-harvest losses and increasing their price realisation; but they neither have the information about, nor the access to, these technologies. The importance of renewable energy based/ hybrid technologies is dual : enable access to electrical power and clean energy for farmers who live in remote and off grid areas ; reduce cost of production.

7. The proposed project aims to bridge this gap between research in labs and needs of farmers in the field by using the existing platforms of farmers' organisations and other collectives to demonstrate and validate technology, and create a demand as well as engaging manufacturers, thereby creating a sustainable business model for promotion of agriculture technology for small holders with a focus on renewable energy based/ hybrid technology. This is expected to enable smallholders to move out of poverty and double their agricultural incomes through the following pathway: the mechanization <sup>25</sup>of agricultural operations (production, harvest, post-harvest, storage and processing) and the use of agricultural by-products as sources of renewable energy, would increase smallholder productivity, ensure timeliness of agricultural operations, reduce post-harvest losses, and ensure higher price realization for farmers, while maintaining a lower carbon footprint.

#### D. Key Project Objectives

8. The project's goal is to enable the rural poor to overcome poverty through remunerative farming activities. The project development objective is to increase smallholder farmers' productivity and income by adoption of affordable technologies that use renewable or hybrid sources of energy.

9. The project is aligned with the strategic objective of the RB-COSOP (2018-2024) which states "Smallholder food and agricultural production systems are remunerative, sustainable, and resilient". The project will contribute to two dimensions of the strategic objective of the IFAD country programme in India : (i) remunerative by promoting mechanization to improve returns to labour , and processing of agri-products to improve price realization ; (ii) resilient by ensuring that operations are timely implemented given the limited window for effecting different cultural operations as a result of climate change , and by adopting a low carbon pathway for agriculture thanks to the use of renewable energy.

#### E. Scaling up

10. The project will scale up (i) the custom hiring centres and the farmers' one stop shops that have been already developed and tested but are still at limited scale especially in areas where rainfed farming predominates; (ii) the Government's start-up incubation programs by allowing successful start-ups to access larger market for their products; (iii) the use of machinery and equipment powered by renewable sources of energy or hybrid energy across the various cultural practices pre- and post-harvest. The project approach has also the potential to be further scaled up through Government schemes and private investments related to access to clean energy and promotion of value addition of agricultural products.

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<sup>25</sup> This project would not address variety improvement or improved package of agronomic practices as these activities are already under-way among organized producers' groups. This project will principally address technologies in form of machinery and equipment that would improve labour productivity, reduce post-harvest losses, and improve productive use of agricultural waste.

## F. Ownership, Harmonization and Alignment

11. The project is aligned with the national goal of doubling farmers' incomes in real terms by 2022 and with the Intended Nationally Determined Contributions to reduce Green House Gas emissions (INDC). During discussions with the Ministry of New and Renewable Energy, the Mission for Integrated Development of Agriculture and the Ministry of Food Processing Industries, areas of complementarity were identified between their on-going schemes and the proposed project. Main aspects that make this project distinct from on-going schemes is : its focus on promoting mechanization of farm and post-harvest operations among smallholder and marginal farmers; its last mile delivery; and the fact that it promotes the use of renewable energy across different agricultural operations (production, post-production, irrigation and waste/biomass management).

## G. Components and activities

12. The project will have 3 components as described below :

- 1) Component 1: Participatory development of agri-technologies: Under this component, a comprehensive system will be evolved to facilitate smooth transition of technologies from lab to the farms capitalizing on smallholders' need/ demand for new technologies in areas such as production, harvest, post-harvest, storage & processing and agricultural residue management etc. It will consist of the following activities :
  - a. Selection of existing producer organizations under IFAD supported projects, Krishi Vigyan Kendras (KVKs)<sup>26</sup>, NGOs, government schemes. Producer organizations may include livelihood collectives, federations of SHGs, Producer Companies, Cooperatives etc. The project will select producers' organizations with strong social cohesion, good field presence, good systems for governance, basic input and output aggregation activities or custom hiring services. Producers' organizations would be operating in rainfed areas.
  - b. Assessment of the smallholders' technological needs based on analysis of the constraints in labour productivity and in timely implementation of operations, effective irrigation/storage/ processing practices as well as management of agricultural waste. The project will adopt a gendered analysis in assessing technological needs of smallholder farmers. The project will also assess the cost and regularity of supply of fuel and electricity to determine best energy solutions for the proposed technologies..
  - c. Organizing demonstration of technologies developed by ICAR and trial of machinery/ equipment. Based on the technological needs of smallholders, the project will organize demonstration, extension services and trial of the machinery/ equipment with the farmers' organizations. The technologies will be assessed during the demonstration/ trial stage in terms of: i) productivity under rainfed conditions; ii) reduction in input costs; iii) reduction in greenhouse gas emission; iv) level of acceptance of the technology by the farmers during the demonstration phase; v) reduction in drudgery; vi) affordability; vii) relevance to smallholder farmers; comparative advantage with similar technologies that exist on the market.
  - d. Capacity building of producers' organizations in operating custom hiring centers and farmers' one stop shops. The project will support selected Farmers' Organizations in setting up and operation of custom hiring centers (CHC) or farmers' one stop shops (FOSS)<sup>27</sup> : this will include selection of appropriate equipment/ machinery, pricing of hiring the equipment/machinery, management of the costs and revenues of the CHC

<sup>26</sup> The Krishi Vigyan Kendra are agricultural extension centres created by the Indian Council for Agricultural Research and its affiliated institutions at district level to provide various types of farm support to the agricultural sector.

<sup>27</sup> During design the project can also look at the option of building capacity of local youth to become agri-preneurs and provide services to other farmers.

and FOSS, book-keeping for CHC and FOSS, and training of the CHC/FOSS workforce on management of CHC/FOSS and operation/maintenance of equipment/ machinery. The project will also support the Farmers' Organizations to benefit from Government schemes supporting CHC/FOSS and to mobilize bank financing as required. As a result of this support, Farmers' Organizations will be able to run custom hiring centers and farmers' one stop shops in a financially viable manner.

- e. Contract between Farmers' Organizations and manufacturers. The project will facilitate the establishment of a contractual arrangement between the Farmers' Organizations and the manufacturers for the purchase and servicing of equipment/ machinery and training of farmers' on their use. The Farmers' organizations will be able to hire out the equipment/ machinery to their members.
- f. Convergence plan for each Farmers' Organizations for agriculture mechanization. The project will assist each of the selected Farmers' Organizations develop a convergence plan to ensure that the organizations benefit from the available Government schemes supporting the mechanization of agricultural operations at production, storage and processing stages.

2) Component 2 : Development of the supply chain and a business model for technologies from labs to markets: This component will focus on developing commercially viable solutions for the licensing, manufacture and sale of technologies developed by ICAR. The main activities are:

- a. Short listing the technologies developed by ICAR engineering network for licensing and which are relevant to producers' requirements as identified under component 1 above. Shortlisted technologies would demonstrate clear gains in terms of savings in labour, post-harvest losses, input costs and reduced greenhouse gas emissions. The project will shortlist the technologies that are ready for licensing as they proved to be relevant and affordable; they reduced women drudgery; and they generated acceptance from farmers during the demonstrations.
- b. Licensing the technology. Based on the results of the technology demonstrations as reported in component 1, and short listing of technologies ready for licensing, the project will facilitate the licensing of the ICAR technologies to interested manufacturers and provide the full information for each technology in terms of the scale and results of the demonstrations and equipment/ machinery trials with farmers' organizations. The project will carry out an exhaustive assessment of the manufacturers operating in project locations as well as at district and state levels, and the start-ups supported by the ARYA and AGRI UDAAN schemes of ICAR, to determine the scope and scale of their business. This will allow the issuance of expression of interest for the licensing of those ICAR technologies that have better uptake and marketability and are better targeted. The project will also work closely with Ministry of New and Renewable Energy (MNRE) on the norms of renewable energy technologies developed by ICAR.
- c. Commercializing the technology. Following the principles of Public Private Producers Partnerships (4P), the project will develop a specific support package for small and medium enterprises that purchase the license of the ICAR technology with the aim to produce smallholder technology and market it among smallholder farmers. The support package will be for a two year period and include: 1) formulation of a business plan for the manufacture of the technology distribution/dealership and marketing, as well as technical assistance to farmers and after sales services; 2) preparing the financing package that would include manufacturers' own contribution, a loan from the bank, and a grant element from the project. The project will also support



manufacturers to obtain an insurance policy; 3) facilitating the manufacturer's compliance with MNRE norms and registration for renewable energy technologies; 4) training the workforce of the manufacturer; 5) facilitating contractual arrangements between manufacturers and farmers' organizations for the purchase and servicing of the equipment/ machinery; 6) support to the manufacturers in carrying out market studies to expand their outreach and sales to farmers and Farmers' Organizations; 7) ensuring flow of information between farmers' groups and manufacturers to enable technology refinement ; 8) monitoring the manufacturers' implementation of the business plan and regular repayment of the loan.

- 3) Component 3 : Project Management: The project will be managed by the Agricultural Engineering Division of ICAR. This will be done through a dedicated Project Management Unit (PMU) housed in the Division. In each project state, a state level PMU will be formed for managing implementation and will be supported by a committee comprising the ICAR centres, KVKs, NGOs, Farmers' Organizations and IFAD financed projects to implement the project activities under component 1. With regard to Component 2, Zonal Technology Management Units of ICAR will draw on their business development skills and will work closely with the ICAR centres, originators of the technological innovations, and the manufacturers interested in the license of the technology. This component also includes building laboratory facilities in the participating ICAR centres as required; training and capacity building of researchers and scientists on participatory technology development; exposure visits, conferences and collaborative research involving national and international partners with the aim to transfer tested technologies to other similar agro-ecological zones and production systems in the global South, and to adapt technologies developed by other countries in India. Knowledge Management will form a critical part of the project both for informing programme implementation and for policy inputs based on experiences of farmers adopting technologies.

## H. Preliminary Environmental and Social category

13. The project could be classified as category B project. The proposed project aims to encourage the use of clean/renewable energy sources for agriculture purposes, which will address the twin aspects of low level of mechanization in smallholder farming and high carbon footprint of smallholder agriculture due to usage of conventional sources of energy. The project will also promote the use of existing solar panels established through government schemes for promotion of solar water pumps, to fuel other agricultural technologies for the farmers. This in turn will reduce over exploitation of ground water and optimise the use of solar energy being produced.

## I. Preliminary Climate Risk classification

14. The climate risk classification of the project is moderate. As indicated above, the project will promote renewable sources of energy which contribute to reducing greenhouse gas emissions and therefore mitigate climate change, in rainfed agriculture system which are particularly vulnerable to climate change.

## J. Costs and financing

15. The total project cost is estimated at 200 million USD and the IFAD contribution is a loan of 90 million USD and an in-loan grant of 1 million USD. The Government contribution is estimated at 109 million USD in terms of staff salary, infrastructure, laboratory, manufacturing facility, and convergence with Government schemes and programs. The share of the private sector in total project financing is yet to be estimated.

## K. Organization and management

16. The Lead Project Agency will be the Indian Council of Agricultural Research (ICAR). It is worth mentioning here that ICAR managed externally funded projects, particularly the National Agricultural Higher Education Project (on-going) and the National Agricultural Innovation Project (closed), both financed by the World Bank with loan financing of 82.5 million USD and 200 million USD respectively.

17. The project will be managed on a day to day basis by the Agricultural Engineering Division of ICAR. This will be done through a dedicated Project Management Unit (PMU) in the Division which will include a multidisciplinary team. The PMU in the Engineering Division will be responsible for the following activities : (i) planning project activities on an annual basis; (ii) monitoring project implementation progress against the annual work plan and evaluating the project outcomes and impact; (iii) knowledge sharing and communication about project activities and results, and the knowledge will be shared both nationally and internationally; (iv) financial management of project accounts including organization of the external audit on an annual basis.

18. In each project state, a state level PMU housed in the ICAR of the state , will be formed for managing implementation and will be supported by a committee comprising KVKs, NGOs, Farmers' Organizations and IFAD financed projects. The State level PMU will be responsible to implement the project activities under component 1.

19. With regard to Component 2, Zonal Technology Management Units of ICAR will draw on their business development skills and will work closely with the ICAR centres, originators of the technological innovations, and the manufacturers interested in the license of the technology.

20. A steering committee will be established for the project chaired by Secretary, Department of Agricultural Research and Education, and with the participation of senior representatives of the Department of Agriculture Cooperation and Farmers Welfare, the Ministry of New and Renewable Energy, Ministry of Food Processing and Industries, , Ministry of Micro, Small, and Medium Enterprises, NABARD and SFAC. Representative from Business Houses or Conglomerates such as FICCI, ASSOCHAM, as well as Farmers' Organizations etc will be invited to participate as a Special invitee on the Steering Committee to ensure producers' and private sector perspectives are fully presented. The Agricultural Engineering Division of ICAR will act as secretary to the Steering Committee. The Steering Committee will review the project progress and facilitate interdepartmental collaboration at national and state level, convergence among Government schemes promoting farm mechanization and access to renewable energy, as well as bank financing to the entrepreneurs and Farmers' Organizations.

## L. Monitoring and Evaluation indicators, KM and Learning

21. The project M&E system will report on inputs, outputs, processes and outcomes. The result framework will be aligned with the core indicators used to monitor doubling farmers' incomes in real terms. within this framework, farm mechanization is assessed through energy consumption/ ha, level of mechanization of various agricultural operations, labour productivity, and reduction on crop losses (given focus on disseminating technologies for post-harvest handling/ storage/processing). Additionally an Evaluation Plan will be developed at design outlining the key policy and technical issues the evaluation would focus on, the evaluation methodology and the sampling strategy for baseline and subsequent surveys.

22. Knowledge management and learning will be facilitated by reporting on tested technologies and their benefits/limitations, adoption among farmers and performance of the small and medium manufacturers. Knowledge sharing will be organized at the level of producers through agricultural extension and exposure visits; at the level of scientists and entrepreneurs for cross-learning and further innovation. The project will also support

transfer of technology to the global south as well as adaptation of successful technologies tested elsewhere to the Indian context.

## **M. Risks**

23. There are two main risks : (i) reduced scope for renewable energy based technologies with fast paced electrification ; (ii) increased cost of supervision for an 8 state project for IFAD.

- Towards mitigating the two risks the following actions are proposed: Whereas the Government of India is undertaking electrification at a fast pace, the country is also promoting use of new and renewable energy resources. Hence, it is likely that the demand for renewable energy based technology may not go down significantly. Nevertheless, the project is focussing on hybrid technologies that can be used through both renewable and conventional energy sources.
- IFAD will work with ICAR to set up the necessary procedures and systems to supervise the project and review its performance in a comprehensive manner. It will help set up a strong MIS for robust data collection and monitoring as well as use of technological platforms for interfacing with project teams in the different states such as skype, VC etc. Additionally, review missions will be done using local teams where possible and field visits will be undertaken on rotation basis in select states based on analysis of MIS data and field reports..

## **N. Timing**

24. The project is proposed for a period of 5 years. The design of the project would be undertaken in the third quarter of 2018 and would be scheduled for EB presentation in April 2019 .

## O. Logical Framework

Results Hierarchy	Indicators					Means of Verification			Assumptions (A) / Risks (R)
	Name	Baseline	YR[X]	Mid-Term	End Target	Source	Frequency	Responsibility	
Goal: To enable the rural poor to overcome poverty through remunerative farming activities	HH income is above poverty line	TBD	TBD	TBD	TBD	Impact assessment	At baseline and completion	PMU	Sustained economic and agricultural growth
Development Objective: To increase smallholder farmers' productivity and income by adoption of affordable technologies that use renewable or hybrid sources of energy	Farm income doubled in real terms	TBD	TBD	TBD	TBD	Impact assessment	At baseline and completion	PMU	
	Number of tons of greenhouse gas emissions (CO <sub>2</sub> ) avoided and/or sequestered	TBD	TBD	TBD	TBD	EXACT analysis	Annual	PMU	Government incentives for farm mechanization and use of renewable energy maintained
	Level of mechanization	2-2.5 KW/ha	TBD	TBD	TBD	Impact assessment	Annual	PMU	
Outcomes/ Components: Outcome 1: Environmentally sustainable and climate-resilient technologies adopted by smallholder farmers.	Number of producers (W/M) reporting adoption of environmentally sustainable and climate-resilient technologies	TBD	TBD	TBD	6 million	Annual Outcome Survey	Annual	PMU	Effective operation of CHC and FOSS
Outputs: 1.1 Demonstrations on new/ improved technologies organized	Number of rural producers (W/M) accessing new/improved technologies	TBD	TBD	TBD	1 million	Project monitoring	Semi-annually	PMU	Technologies promoted are affordable, relevant, reduce drudgery, and have effective after sales services

Results Hierarchy	Indicators					Means of Verification			Assumptions (A) / Risks (R)
	Name	Baseline	YR[X]	Mid-Term	End Target	Source	Frequency	Responsibility	
1.2 Producer groups strengthened to operate CHC and FOSS	Number of rural producers' organizations supported	TBD	TBD	TBD	TBD	Project monitoring	Semi-annually	PMU	
Outcome 2: SME obtaining licenses for ICAR technology increase their turn-over	(Number) Percentage of supported SME reporting an increase in profit	TBD	TBD	TBD	TBD	Thematic survey	Annually	PMU	Access to finance, qualified labour force and market intelligence
Outputs: 2.1 Tested ICAR technologies are licensed in an open and competitive process	Number of ICAR technologies licensed	TBD	TBD	TBD	TBD	Project monitoring	Semi-annually	PMU	Assessment of demand for new technologies is reliable
2.2 Financial and technical support provided to SME obtaining license for ICAR technologies	Number of SME accessing business development services and financial support	TBD	TBD	TBD	TBD	Project monitoring	Semi-annually	PMU	
Outcome 3: ICAR technologies successfully adopted in selected countries of the global south	Number of rural producers accessing new/improved technologies	TBD	TBD	TBD	TBD	Thematic survey	Annually	PMU	IFAD facilitates linkage with selected projects in global South
Outputs: 3.1 Collaborative research with NARS in selected counties of global South	No of collaborative research	TBD	TBD	TBD	TBD	Project monitoring	Semi-annually	PMU	
3.2 Support SME to expand their market in selected countries of the global South	No of SMEs supported to expand in selected countries	TBD	TBD	TBD	TBD	Project monitoring	Semi-annually	PMU	

\*Up to 15 indicators including a few optional RIMS indicators. In addition to these, RIMS mandatory indicators must be added. \*\*The distribution of indicators is illustrative \*\*\*Intermediate targets for the Goal and Outputs are optional

## Key file 1: Rural poverty and agricultural/rural sector issues

Priority Areas	Affected Groups	Major Issues	Actions Needed
Rural Poverty in general	<ul style="list-style-type: none"> <li>-Poor smallholder farming households</li> <li>-poor leasehold / tenant farmers</li> <li>-Landless labour</li> <li>-Agricultural &amp; seasonally migrant labour</li> <li>-Tribal communities</li> <li>-Women</li> <li>-Youth</li> </ul>	<ul style="list-style-type: none"> <li>-Limited land in fragmented holdings</li> <li>-Limited productive assets and poor technology</li> <li>-Very limited access to markets, technology and -financial services and institutions.</li> <li>-Irregular and unstable income flows</li> <li>-Low productivity, limited use of available technology and unsustainable production practices.</li> <li>-Limited opportunities for livelihoods and employment opportunities</li> <li>-Seasonal migration of households</li> <li>-Seasonal migration in search of livelihoods</li> <li>-High level of geographical dispersion in tribal areas</li> <li>-Limited access to cultivable land and secure tenure particularly among tribals.</li> <li>-Low access to basic infrastructure like roads, water supply, irrigation, electricity, post-harvest facilities and technology</li> <li>-Nutritional, food and water insecurity</li> <li>-Poor health especially of women, girls and infants (anemia, malnourishment, infant mortality)</li> <li>-Limited access to quality health care</li> <li>-Poor access to sanitation, hygiene and water facilities</li> <li>-Gender Discrimination</li> <li>-Limited access to quality education and vocational training</li> <li>-Social, economic, political, financial exclusion and discrimination.</li> <li>-Low levels of social and institutional capital</li> </ul>	<ul style="list-style-type: none"> <li>-Expanding business development and employment enhancing services to more remote areas</li> <li>-Expanding investment in rural infrastructure to connect unreached villages</li> <li>-Expanding incomes and surpluses from agriculture and farm based livelihoods through improved package of practices and post-harvest storage and handling</li> <li>-Expanding viable and sustainable farm and off farm income generating activities including micro, small and skill based enterprises.</li> <li>-Expanding inclusion and access to fair and favourable markets and value chains</li> <li>-Expanding financial, technical, insurance and underwriting services</li> <li>-Expanding solidarity groups of women and their federations, empowering them and facilitating their access to information, markets, institutions and resources.</li> <li>-Expanding access to quality health care that is affordable</li> <li>-Expanding access to affordable and quality primary, secondary, higher education and vocational training</li> <li>-Strengthening representative, social and gender inclusive community and traditional organizations for self-help, self-governance, sustainable production and marketing, community driven development, securing entitlements and holding the system accountable.</li> <li>-Expanding access to land, tenure and entitlements particularly in tribal areas.</li> <li>-Expanding social security and insurance services.</li> <li>-Sensitization about the Right To Information Act (RTI) and encouraging its use.</li> <li>-Expanding support to all rural poor to access social security card for access to benefits from Govt of India schemes/programmes.</li> </ul>

		<ul style="list-style-type: none"> <li>-Low ability to secure entitlements and hold accountable public services and functionaries.</li> <li>-Low access to information and media and e-connectivity.</li> <li>-All needy poor not having social security cards (such as FSA card, BPL card, etc.).</li> </ul>	
Rain-fed Smallholder Agriculture in the context of Climate Variability	<ul style="list-style-type: none"> <li>-Poor smallholder farming households in marginal lowlands &amp; uplands</li> <li>-Tribal Communities dependent on rain-fed agriculture</li> </ul>	<ul style="list-style-type: none"> <li>-Soil degradation and fertility loss</li> <li>- Inadequate productive assets and appropriate tools</li> <li>-Lack of technical knowledge, skills and resources for sustainable agricultural practices.</li> <li>-Poorly managed natural resources affecting water, soil and biodiversity.</li> <li>-Changes in timing of onset and withdrawal of rain as well as erratic precipitation pattern</li> <li>-Unseasonal agrometeorological events that affect survival, growth and productivity of crops and livestock.</li> <li>-Low crop and livestock productivity and output.</li> <li>-Poor access to irrigation facilities</li> <li>-inadequate post-harvest infrastructure and unfavourable access to credit and markets.</li> <li>-Inadequate access to quality planting material and affordable inputs.</li> <li>-Knowledge deficit in regard to sustainable and viable management of smallholder farmsteads.</li> <li>-Inadequate investment and lack of knowledge for in-situ and ex-situ water conservation and management</li> </ul>	<ul style="list-style-type: none"> <li>-Expanding the adoption of and investment in soil and water conservation (SWC) measures on a watershed basis.</li> <li>-Promoting biodiversity awareness, conservation and identification of economic and livelihood opportunities.</li> <li>-Expanding access to specific knowledge, best practices regarding sustainable agriculture</li> <li>-Promotion of diversified and mixed farming systems</li> <li>-Expanding access to water for protective irrigation and the skills, knowledge and inputs to optimize output per unit of water used (water demand management and drip irrigation).</li> <li>-Expanding access to quality planting material, agricultural inputs and implements.</li> <li>-Dissemination of knowledge, skills, inputs and resources for IPM, INM and integrated soil moisture management (IMM)</li> <li>-Establishment of infrastructure for storage, sorting, grading, packaging, transportation and communication.</li> <li>-Facilitating favourable access to financial, market and insurance services.</li> <li>-Expanding use of weather based advisories</li> </ul>

<p>Environmentally Fragile Zones and Degraded Natural Resources</p>	<p>-Poor smallholder farming households in marginal lowlands &amp; uplands</p> <p>-Tribal communities dependent on nature based resources</p>	<p>-Degradation and overexploitation of land resources and biodiversity.</p> <p>-Water scarcity, contamination and declining quality of water.</p> <p>-Excessive withdrawals, over utilization, misuse and wastage of water</p> <p>-Unsustainable agricultural and grazing practices.</p> <p>-Systematic deforestation, encroachment and privatization and non-sustainable use of commons.</p> <p>-Critical shortages of firewood, fodder and biomass.</p>	<p>-Regeneration of land and water resources along watershed and drainage basin boundaries and sustainable management of ecosystems.</p> <p>- Community driven environmental regeneration and management of natural resources.</p> <p>-Establishment of capacitated , representative and resourced community based and local governance institutions to effectively manage common property resources.</p> <p>-Increased investment in social and economic infrastructure and proper implementation of rehabilitation policies.</p> <p>-Incentives like Payment for Environmental Services</p>
	<p>-Poor migrant herders including tribal herders</p>	<p>-Increasing risk of desertification.</p> <p>-Declining productivity of soils, forests and pastures</p> <p>-Increasing industrialization and mining operations resulting in environmental degradation, social disruptions and unrest.</p> <p>-Inadequate investment and inefficient implementation of watershed and ecosystem development.</p> <p>-Absence of adequate viable livelihood opportunities.</p> <p>-Degrading/unproductive jhum land / shifting cultivation / podu land.</p> <p>-Declining NTFPs and risks on forest-based livelihoods</p>	<p>- (PES) mechanism to be devised and implemented.</p> <p>- Participatorily building biodiversity, local resources knowledge registers such as envisaged in recent laws passed (NBA, Farmers Plant genetic Rights, etc.) and initiatives (Traditional Knowledge Digital Library (TKDL), IPR documentation protocols, etc.)</p> <p>-Capacity building, technology support and Involvement of communities in determining sustainable land use, agricultural, grazing, livelihood practices and CPR access and management regimes.</p> <p>-Support in productive jhum/podu cultivation; settled cultivation.</p> <p>-Support in NTFPs regeneration and management.</p>



Marginalized tribal communities	-Tribal Communities and Particularly Vulnerable Tribal Groups (PVTG)	<ul style="list-style-type: none"> <li>--Extreme levels of social and political exclusion, poverty, nutritional and water insecurity</li> <li>-Lack of awareness of the risks arising from eco-degradation resulting from unsustainable practices.</li> <li>-Inadequate access to social services (health, education) and to entitlements specifically aimed at tribal communities.</li> <li>-High levels of anemia and under and malnutrition in women and children respectively.</li> <li>-Inadequate land tenure and effective user rights to common property resources, NTFPs, etc.</li> <li>-Lack of connectivity and proper infrastructure and service provisioning.</li> <li>-Lack of fair access to markets and systemic exploitation by middle men.</li> <li>-Cultural heritage, identity and indigenous knowledge is under threat.</li> <li>-Development and governance mechanisms is effectively under-resourced and often culturally insensitive.</li> <li>-Inadequate implementation of existing</li> </ul>	<ul style="list-style-type: none"> <li>-Study and documentation of traditional adaptive practices and knowledge of biological resources of local communities as well as securing community accruing IPRs.</li> <li>- Promoting nutrition specific and sensitive interventions</li> <li>-Implementing the various legislative enactments and entitlements specifically targeting tribal development and welfare.</li> <li>-Promoting transparent, accountable and last mile delivery of governance and developmental services.</li> <li>-Promoting community-based NRM and linking it to household level sustainable livelihoods.</li> <li>-Promoting programs specifically aimed at improving the nutrition status especially of children, girls and women; increasing food and water security; promotion of traditional foods and medicines and access to health, sanitation and education services.</li> <li>-Encouraging inclusive and innovative institutional arrangements that ensure tribals are involved in decisions (free prior and informed consent) regarding use/appropriation of natural resources, get fairly compensated and become stakeholders in economic and commercial ventures</li> <li>-Communities are made aware of their entitlements and</li> </ul>
		<ul style="list-style-type: none"> <li>laws and entitlements specifically designed for tribals.</li> <li>-Economic and industrial development leading to displacement of tribals.</li> <li>- Landlessness and land rights under FRA not being implemented.</li> <li>-Tribal habitations especially those of PVTGs with lack of basic amenities and infrastructures.</li> </ul>	<ul style="list-style-type: none"> <li>encouraging its use.</li> <li>- Implementation of FRA both for individual rights and CFR.</li> <li>-Habitat improvement of tribal people particularly those of PVTGs.</li> </ul>

<p>Gender &amp; demographic issues</p>	<p>-Women -Youth</p>	<ul style="list-style-type: none"> <li>-Increasing numbers of educated youth with high aspirations and limited employment opportunities.</li> <li>-Inadequate appreciation and compensation for women's work (household and other work) and discrimination (vis-à-vis males) in terms of access to food, health, education, assets and other resources..</li> <li>-Lack of effective representation of women's interests, needs and aspirations in traditional community organizations and local governance institutions.</li> <li>-Skewed sex ratio</li> <li>-Concerns on security of young women in work places and elsewhere.</li> <li>-Elderly/senior citizen women from rural areas not receiving social security entitlements (such as old age pension)</li> </ul>	<ul style="list-style-type: none"> <li>-Skill building, entrepreneurship promotion and employability enhancing programs should be undertaken on a massive scale for youth.</li> <li>-Promotion of micro and small enterprises supported by business development services, financial services inclusion and favorable access to markets.</li> <li>-Mobilizing women into organized structures, building their awareness, skills and capacities for empowerment, resource accessing, asset acquisition and income generation.</li> <li>-Supporting capacity building and leadership development programs for women representatives in governance and other bodies as mandated by law.</li> <li>-Promotion of the Right To Information Act (RTI) and encouraging its use.</li> <li>- Creating awareness on women safety.</li> <li>- Working with panchayats / concerned line departments for timely inclusion for old age pension, etc.</li> </ul>
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## Key file 2: Organizations matrix (strengths, weaknesses, opportunities and threats analysis)

Organization	Strength	Weaknesses	Opportunities & Threats
Dept. of Economic Affairs, MOF, GOI	<ul style="list-style-type: none"> <li>-Has an overall perspective of external resource inflows and their convergence with national priorities.</li> <li>-Effective coordination of multiple programs</li> </ul>		<ul style="list-style-type: none"> <li>-Can coordinate synergistic engagements and partnerships between various programs and donors.</li> </ul>
Ministry of Agriculture & Cooperation, GOI	<ul style="list-style-type: none"> <li>-Programs impact the lives of the majority of Indians and the poor.</li> <li>-Has a vast network of agricultural knowledge centers</li> </ul>	<ul style="list-style-type: none"> <li>-Agriculture is a state subject and the Ministry can only play the role of coordination, knowledge dissemination, policy and financing.</li> </ul>	<ul style="list-style-type: none"> <li>-Become a Knowledge Management and Capacity Building Centre for sustainable rainfed and small holder farming systems.</li> <li>-Feed into the Ministry needs from the field so as to strategize agricultural research to address farmer problems in an integrated, multidisciplinary manner.</li> <li>-Strengthen extension system especially for rainfed systems.</li> </ul>
Ministry of Rural Development, GOI	<ul style="list-style-type: none"> <li>-Primary funders of rural development programs at the state level through centrally supported schemes</li> <li>-It mandate and involvement touch crucial aspects of governance, poverty reduction and livelihoods.</li> </ul>	<ul style="list-style-type: none"> <li>Rural development is a state subject and it can only play the role of coordination, knowledge dissemination, policy and financing.</li> </ul>	<ul style="list-style-type: none"> <li>-IFAD can partner MORD through knowledge and best practices sharing and dissemination.</li> <li>-Convergence and dovetailing with MORD programs at the ground level.</li> </ul>
Ministry of Tribal Affairs, GOI	<ul style="list-style-type: none"> <li>-Plays a key role in coordinating tribal affairs in Schedule 5 Areas.</li> </ul>	<ul style="list-style-type: none"> <li>-Weak linkages with and influence on state tribal plans</li> </ul>	<ul style="list-style-type: none"> <li>-Can play a key role in defining policies and overseeing their implementation especially in conflict affected tribal areas.</li> <li>-IFAD can provide inputs for policy dialogue.</li> <li>-Can become a Knowledge Centre for tribal development</li> </ul>

Organization	Strength	Weaknesses	Opportunities & Threats
Ministry of Development of North Eastern Region, GOI /	<ul style="list-style-type: none"> <li>-Plays a key role in coordinating tribal affairs in Schedule 6 Areas.</li> <li>-Coordinates donor programs.</li> <li>-Because of direct linkage to</li> </ul>	<ul style="list-style-type: none"> <li>-</li> <li>- Need to synergize MDONER and State initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>-IFAD can contribute to the knowledge base of DONER.</li> <li>-IFAD can provide inputs for policy dialogue.</li> </ul>
Indian Council of Agricultural Research	<ul style="list-style-type: none"> <li>Among largest and well coordinated research organizations</li> <li>Significant contribution to the Green Revolution, and food security</li> <li>Innovations developed in climate resilient agriculture</li> </ul>	<ul style="list-style-type: none"> <li>Traditionally, high focus on production and productivity, whereas current policy is on farmers' incomes and on nutrition security</li> </ul>	<ul style="list-style-type: none"> <li>-Expanding global network with support to research systems in Africa and South Asia</li> <li>-ICAR, hub of innovation and extending support to start-ups</li> <li>-Connecting research in labs, markets for agricultural technologies and farmers' fields</li> </ul>

## Key file 3: Complementary donor initiatives/partnership potential

Agency	Priority sectors and areas of focus	Period of current country strategy	Complementarity and potential synergies
World Bank (WB)	<p>The World Bank strategy in India has 3 main pillars : 1) resource efficient growth; 2) enhancing competitiveness and creating jobs; 3) investing in human capital. In the rural and agricultural sectors, WB will focus on the following investment areas : promoting more resource efficient, inclusive and diversified growth in the rural sector; increasing access to sustainable energy, and improving disaster risk reduction. WB will also look at improving the business environment and firm capabilities, financial inclusion, access to quality and market relevant skill development and more jobs for women. On the social front, support is planned to improve the coverage and coordination of social protection systems.</p> <p>WB is currently proposing two sets of investments : 1) rural transformation type projects that have a large focus on enterprise development, job creation and inclusive growth through the development of commodity clusters, along economic/industrial corridors and support is provided across the enterprise and business spectrum; 2) agriculture competitiveness projects that focus on improvement of resource use, innovative technologies for climate resilient agriculture, diversification of advisory and other services to producers, organization of producers and market linkages. Both types of projects have strong focus on developing clear pathways out of poverty.</p> <p>WB will also be investing in building the capacity of public institutions, leveraging private finance and supporting "lighthouse India" where innovative practices are shared</p>	A new country partnership framework for India is being formulated and will cover 2018-2022	<p>IFAD and WB signed a corporate level agreement for knowledge management and it can be operationalized at country level given large thematic and investment overlap between IFAD and WB in states like Andhra Pradesh, Jharkand, Odisha, Uttarakhand, North Eastern region. Both organizations also share the same pool of experts. Co-financing opportunities are also under consideration.</p> <p>Currently the two organizations are planning knowledge sharing events around financial inclusion and women entrepreneurship, the water-energy-food nexus, development of farmers' organizations, livestock production and value chains, etc...</p>

Agency	Priority sectors and areas of focus	Period of current country strategy	Complementarity and potential synergies
	within the country and with the world.		
Asian Development Bank (ADB)	<p>ADB will support India's rapid economic transformation to help the country move from lower towards upper middle-income status; and achieve faster, inclusive, and sustainable economic growth. The strategy rests on 3 pillars : 1) economic competitiveness to create more and better jobs ; 2) inclusive access to infrastructure networks and social services ; 3) mitigating the negative impacts of climate change and promoting sustainable natural resource use.</p> <p>In the agriculture and rural sectors, ADB supports natural resources management projects, agribusiness development, skill development and job creation. -</p>	Country Partnership Strategy 2018-2022	IFAD and adb signed a corporate level agreement for knowledge management and it can be operationalized at country level. Currently there is good scope for collaboration in the North Eastern Region around themes such as natural resources management, skilling youth, enterprise development.
SAARC Development Fund	<p>Regional financing institution with strategic focus on economic growth, social progress and poverty alleviation in the region. Supports regional cooperation and integration among SAARC member countries.</p> <p>Two loan windows : infrastructure (energy, transport, telecommunication, tourism); and economic (agriculture, trade, industrial development, services).</p> <p>Loans under the two windows can be extended to government bodies, municipal corporations, special purpose vehicles, and private sector corporate bodies.</p>		Currently in discussion with SAARC Development for co-financing regional grant to disseminate climate smart agricultural technologies. Also exploring possibility to co-finance a pilot regional operation in South Asia region involving India.
Asian Infrastructure Investment Bank (AIIB)	<p>No country strategy. Sector strategy: none for agriculture so far, nor for rural infrastructure nor for water.</p> <p>Main focus areas are : rural infrastructure; energy and power; environmental protection; transport and telecommunication; water supply and sanitation; urban</p>	N/A	Explore co-financing opportunities to enhance the economic and social benefits of the rural infrastructure projects esp those related to transport, energy, tank based or groundwater based irrigation (given rainfed focus of the

Agency	Priority sectors and areas of focus	Period of current country strategy	Complementarity and potential synergies
	development and logistics. Pipeline projects in India in rural areas are rural roads in Andhra Pradesh and irrigation rehabilitation in Bengal. Co-financing with other IFI, esp WB, is effective for transport project in Madhya Pradesh.		present COSOP).
New Development Bank (NDB)	Focus area is sustainable infrastructure and this covers clean energy, transport, irrigation, water, sanitation, sustainable urban development, and economic integration.	No specific country strategy but overall organization strategy 2017-2021	Explore co-financing opportunities to enhance the economic and social benefits of the rural infrastructure projects esp those related to transport, energy and economic integration.  Explore co-financing of regional operation around economic integration in South Asia.
Green Climate Fund (GCF)	GCF helps developing countries limit or reduce their greenhouse gas (GHG) emissions and adapt to climate change. It seeks to promote a paradigm shift to low-emission and climate-resilient development, taking into account the needs of nations that are particularly vulnerable to climate change impacts. GCF's investments can be in the form of grants, loans, equity or guarantees.	N/A	Two GCF funded projects are under implementation in India : line of Credit for Solar rooftop segment for Commercial, Industrial and Residential Housing sectors; and ground water recharge and solar micro irrigation in vulnerable Tribal Areas of Odisha.  Capitalize on knowledge of solar powered irrigation systems and the modality for their financing, implementation and O&M and potentially replicate in OPELIP and in APDMP.  Adapt innovative financing tools for solar energy to solar powered agricultural machinery and equipment (besides irrigation pumps).
Food and Agriculture Organization (FAO)	3 main pillars : sustainable development of agriculture ; food and nutrition security; trans-boundary cooperation and enhancing India's contribution to global public good.  Approach will consist in : (i) pilot innovative	2015-2017	Complementarity with FAO lies in following areas : (i) knowledge sharing , as FAO provides technical expertise during design/supervision/completion of projects; (ii) scaling up innovative practices piloted by FAO for ex mi-SALT in Mizoram which was adopted

Agency	Priority sectors and areas of focus	Period of current country strategy	Complementarity and potential synergies
	<p>approaches that are relevant to India's needs; (ii) make available successful approaches and tools for scaling-up by other donors or Union and State Governments; (iii) bring in technical assistance in introducing international best practices and global normative work standards; (iv) assist in building capacity, where it is critical; and (v) act as a policy advocate and neutral adviser in areas where it has the expertise</p>		<p>by FOCUS-Mizoram and Nagaland; (iii) technical assistance to IFAD supported projects for ex FOCUS Nagaland and Mizoram; (iv) joint analytical studies (for example on boosting millet production, processing and marketing); (v) joint RBA initiative in support of Government of Odisha nutrition action plan and achievement of SDG 2 in the state.</p>
World Food Programme (WFP)	<p>WFP is gradually shifting from focusing on safety net coverage and targeting, to advocate for modifications to the current safety net food basket to include more nutritious and fortified food products and support to improve the overall supply chain, with a focus on quality, safety and optimization. WFP will support the government's efforts to adapt its safety nets for urban populations.</p>	2018-2022 (under formulation)	<p>Complementarity with WFP lies in following areas : (i) participation in analytical studies (review of SDG 2 roadmap framework led by WFP and GOI); (ii) joint RBA initiative in support of Government of Odisha nutrition action plan and achievement of SDG 2 in the state. .</p>
UN agencies members of Result Group on nutrition and food security and Result Group on North Eastern region	<p>Main intervention areas are : rural poverty reduction; rural livelihoods promotion; nutrition security; nort eastern region social, economic and environmental development.</p>	2018-2022 (under review by GOI)	<p>Areas of complementarity are : (i) IFAD scaling up successful projects and approaches piloted by UN agencies such as UNDP's work on SLEM in Nagaland that led to FOCUS covering 2 states of Nagaland and Mizoram; (ii) capitalizing on analytical work done by UN agencies for example UNIDO and ILO assessment of the bamboo value chains in North east region; (iii) sharing successful experiences from IFAD portfolio in the area of building resilience of coastal communities with UNDP as it is designing a project entitled enhancing climate resilience of India's coastal communities, to be submitted to GCF.</p>
Deutsche Gesellschaft für Internationale Zusammenarbeit	<p>Thematic areas of intervention are : energy; environment, climate change and biodiversity; sustainable urban and industrial development; sustainable economic</p>	N/A	<p>Areas of complementarity and for which coordination is on-going are : (i) joint consultation on project design ; (ii) knowledge sharing on renewable energy, climate resilient</p>



Agency	Priority sectors and areas of focus	Period of current country strategy	Complementarity and potential synergies
(GIZ)	development		agriculture, shifting cultivation, natural resources management. There is potential to scale up successful pilots conducted by GIZ.
Japan International Cooperation Agency (JICA)	Main areas of investment are : health and medical care; transportation; power and energy; private sector development; agricultural and rural development; conservation of natural resources; urban development.	N/A	Areas of complementarity are : (i) knowledge sharing in the area of forest management in North east region considering the specific customary rights; (ii) coordination among projects in North East region to avoid overlap and duplication, and maximize synergies.
Israeli cooperation	Development cooperation focuses on : increasing crop diversity; increasing productivity; increasing resources use efficiency. This is done through the set-up of agricultural centres of excellence : there are 15 centres in six States and this will reach 40 centres in total over next 2-3 years. Israeli cooperation looking at expanding collaboration between Israeli and Indian businesses and enterprises.	N/A	Several rounds of discussions took place between IFAD, IFAD supported projects and Israeli Embassy. Main focus is on : (i) transfer of technology either from agriculture centres of excellence to project sites to improve agricultural productivity ; (ii) supporting direct collaboration between Israeli solution providers and IFAD supported projects in areas of irrigation efficiency, post-harvest/packing/grading/ and processing.

## Key file 4: Target group identification, priority issues and potential response

Typology	Poverty Level & Causes	Coping Actions	Priority Needs	Support from Other Initiatives	COSOP Response
Smallholder farming households, tenant farmers, landless households, rural wage earners and seasonal migrant labour, women and youth	<ul style="list-style-type: none"> <li>-Limited land tenure security</li> <li>-Reduced access to natural resources due to degradation</li> <li>-Nutritional insecurity, water scarcity</li> <li>-Inadequate access to entitlements</li> <li>-Low productivity in agriculture</li> <li>-Lack of access to inputs, fair markets and systematic exploitation by middle men.</li> <li>-Lack of social capital, voice and effective institutional representation.</li> </ul>	<ul style="list-style-type: none"> <li>-Intensification of agriculture where possible</li> <li>-Wage labor</li> <li>-Undertaking small income generating activities</li> <li>-Migration</li> <li>-Remittance dependence</li> <li>-Borrowings and Indebtedness</li> <li>-Discontinuance of schooling for children, reduction in food intake and health expenditure.</li> <li>-Selling /pawning of land, assets and livestock</li> </ul>	<ul style="list-style-type: none"> <li>-Food and Nutrition</li> <li>-Water for irrigation and livestock</li> <li>-Favourable access to inputs and markets</li> <li>-Livelihood and employment opportunities</li> <li>-Access to credit and insurance services</li> <li>-Access to entitlements</li> <li>-Knowledge and skills</li> <li>-Infrastructure, connectivity, electricity and communications.</li> <li>-Insurance and social security nets</li> </ul>	<ul style="list-style-type: none"> <li>-Services and assets from govt. Schemes like MGNREGA, Bharat Nirman, National Old Age Pension Scheme, PDS</li> <li>-</li> <li>- Developmental, educational and skill development programs managed by government.</li> <li>-Tribal sub plan development through SCA to TSP and Article 275</li> </ul>	<ul style="list-style-type: none"> <li>(i) Strengthen and enable empowerment of institutions of the poor and service providing organizations.</li> <li>(ii) Promote sustainable and climate adaptive livelihoods particularly in agriculture but not limited to it.</li> <li>(iii) Provide and facilitate access to financial services and inputs</li> <li>(iv) promote access to markets and ensure fair marketing margins.</li> <li>(v) Promote holistic development through facilitating convergence with state and central programs.</li> </ul>

<p>Tribal Communities and Particularly Vulnerable Tribal Groups; women &amp; youth</p>	<ul style="list-style-type: none"> <li>-Inadequate land tenure and effective user rights to common property resources, NTFPs, etc</li> <li>-Disenfranchisement and loss of control over local resources</li> <li>- Lack of connectivity and proper infrastructure and service provisioning.</li> <li>- Reduced access to natural resources due to degradation.</li> <li>- Unproductive jhum and podu land.</li> <li>- Remotely located and hence government support services cannot reach the population.</li> <li>- Inadequate access to markets</li> </ul>	<ul style="list-style-type: none"> <li>-Intensification of agriculture where possible including integrated crop-livestock-fishery farming.</li> <li>-Wage labor</li> <li>-Gathering of NTFPs</li> <li>-Migration</li> <li>-Indebtedness</li> </ul>	<ul style="list-style-type: none"> <li>-Food and nutrition security</li> <li>-Safe potable water, water for irrigation and livestock</li> <li>-Favourable access to inputs and markets</li> <li>-Livelihood and employment opportunities</li> <li>-Access to credit</li> <li>-Access to quality education, skills and health services</li> <li>-Support for improved jhum/podu/NTFPs</li> <li>-Support for community conserved areas.</li> <li>-Land rights particularly CFR under FRA.</li> </ul>		<ul style="list-style-type: none"> <li>(i) Strengthen and build the capacities of traditional community organizations, local government (PESA) bodies and related service providing organizations to better manage their affairs, to ensure tribal communities their rights and access to entitlements and help resolve conflict and build peace.</li> <li>(ii) Ensure that development is in line with Free Prior Informed Consent.</li> </ul>
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## Key file 5 – Lessons learned

### **Lessons learned from project implementation and portfolio management in India**

This section summarizes the key lessons learned from the implementation of RB-COSOP 2010-2017.

The CPE found that the traditional IFAD intervention paradigm is well established for highly disadvantaged areas and marginalized groups and the women within these groups. The paradigm rests on integrated interventions addressing social capital, agricultural development and natural resources management, off-farm livelihoods, financial inclusion and selected social services such as potable water, road connectivity, electrification of homes and villages, primary health services. Recent projects include activities to facilitate access to markets and partnerships with the private sector (CAIM, ILSP). The CPE noted that as households and communities welfare improves, their needs evolve thus requiring more specialized approaches notably in agriculture. This is particularly relevant to the new challenge of developing farmers' adaptive capacities to climate change especially in rainfed areas and ensuring profitability of agriculture despite the erratic climate and the small landholdings (less than 2 ha).

Building resilience through the promotion of sustainable intensification of agriculture and integration with livestock and trees. Where the agro-ecosystem is fragile and prone to soil and water erosion or rich in biodiversity, the projects promoted integrated natural resources management and conservation areas, through community management. A landholding of 1 ha and less can be optimized through life-saving irrigation, wadi horticulture with a combination of perennial and seasonal crops, integrated paddy and fishery. Secondary activities in terms of income are goat husbandry, backyard poultry and dryland crops. The portfolio has promoted a number of innovations in low external input sustainable agriculture, the application of integrated pest management and integrated nutrient management, community produced seed, alternative feed such as azolla. Adapting an ecosystem approach as much as possible to project design will ensure that environmental problems and solutions are seen in a broader perspective and that the suggested activities address all segments of the community.

Access to land. IFAD had a few very positive outcomes with regards to access to land that can be up scaled and adapted to specific contexts. In Odisha, OTELP collaborated with Government Agency and Department, viz. Integrated Tribal Development Agency (ITDA) under SCST Development Department and Revenue Department at the district level to secure land titling to Scheduled Tribes to improve access to secured land. The partnership with specialised services provider, the promotion of Community Resource Persons (CRP) from within the communities and capacity building are key features of successful outcomes with regards to sustainable access to land for landless, women, tribal communities etc.

Access to market. IFAD is building a nascent capacity in market access with recent interventions such as NERCORMP, CAIM and ILSP from different angles. ILSP federations has engaged in processing and packaging of spices, combined value chains development, access to market infrastructures and to productive inputs etc.. CAIM has also promoted partnership with private sector through contract farming. NERCORMP has increased trade of commodities by project households via better road access, construction of collection/aggregation centres and market sheds. In some cases Natural Resources Management Groups (NaRMG) and SHG associations have taken up aggregation and marketing activities for various commodities. The Project has established linkages with e-marketing websites IndiaMart ([www.indiamart.com](http://www.indiamart.com)) to provide market access to producers of spices, fruits, certain value added products and crafts based products.

These initiatives will be expanded and broadened in response to greater than before from partners and to align to GoI policy and vision.

**Participatory approach:** In line with the participatory approach, the active projects have promoted grassroots organizations as well as higher tier member based organizations such as the federations of Self-Help Groups (SHG), of Natural Resources Management Groups and of Farmers' and Fisherfolk organizations. The most sustainable of these higher tier organizations are the federations of SHGs. The Tejaswini Rural Women Empowerment Programme in Maharashtra has developed a model approach for building such organizations. The federations' main sources of income are service charges, membership fees and bank commissions. By project completion this year, 70% of the federations would cover 100% of their costs. Such a model needs to be adapted to the producers' groups (whether farmers or fisherfolk with a suitable business model).

**Focus on last mile delivery:** Significant effort goes into building last mile delivery channels. This usually entails selecting and training community resource persons to support SHGs, farmers, livestock producers in exchange of a service fee; organizing producers into groups to aggregate the supply of inputs and the marketing of produce; relying on NGOs to carry out the initial social mobilization and provide technical backstopping to the producers' organizations and resource persons. Once this structure is in place, producers' access to services is greatly facilitated and the government programs find an effective conduit for delivering their services.

The COSOP anticipated that IFAD would support IT innovations for better gathering and sharing of knowledge. Great use of IT was made to develop the MIS for SHG and for the M&E systems of the projects. Phone and tablet applications have remained somewhat limited. As the Government strives to realize transformational change over a limited span of time, there are greater expectations that the judicious use of IT and communication can positively influence behavioural change at a large scale. As India is a great innovator in the area of IT and many agricultural and rural applications are being developed, such IT technologies are being retrofitted into on-going projects when applicable and included as a key element in future projects.

**Grants.** The Programmes has financed several grant meant to (i) promote innovative, pro-poor approaches and technologies with the potential to be scaled up for greater impact; (ii) strengthen partners' institutional and policy capacities; (iii) enhance advocacy and policy engagement; and (iv) generate and share knowledge for development impact. In order to enhance the benefits of the grants on the programme of loans, frequent consultations will be conducted in order to address the specific needs of the projects as well as closer communications during grant implementation combined with a rigorous monitoring.

**Gender and women empowerment:** With women constituting 89% of the beneficiaries of the country programme, this reflects the successful strategy in enhancing women's social and economic status, building their livelihood skills, enhancing participation in decision making, ensuring improved access to and control over financial and natural resources and reducing drudgery. Experience shows that the main determining factors in women's empowerment are : the social mobilization; the use of SHG as entry points to general awareness, social capital and financial inclusion; complementary activities to boost women's labour productivity through reduction of drudgery; promoting home based activities that enhance women's incomes in the initial stage; converging with the main Government initiatives to reduce inequalities and violence against women; negotiating women's participation in project related decision-making bodies. The micro-livelihood plans at the level of the SHG federations have triggered the development of small enterprises in the communities at a commercial scale. Moreover, several women leaders of SHGs built up enough confidence and credibility to contest local elections and are now presiding the Gram Panchayat.

**Tribal communities:** Tribal communities traditionally isolated from the mainstream can effectively plan and implement programmes for their own development provided (i) there is adequate investment in facilitation and capacity development; (ii) the planning, implementation and reporting systems are transparent; (iii) mechanisms are set up for social audit, and (iv) decision making is decentralised. Such project methodologies can capacitate tribal communities, enhance their self-confidence and be most empowering. A tribal development project with strategies having elements of decentralization, participation, equity and empowerment, community-based approaches and transparency in planning and implementation can succeed even in areas acutely affected by left wing extremism.

**Managing lessons and learning:** The M&E system of the country programme should be strengthened to align project and country programme results' frameworks, and to provide information to the State Government and where applicable to national government on project/ programme performance. In particular, the monitoring of the productivity and business dimensions of smallholder farming needs to become more systematic. The project M&E systems are still output and activity based and this despite the information available from the annual outcome surveys. The outcome and impact reporting will require the development of appropriate methods and systems and higher attention to the timely implementation of baseline and endline surveys. Given the existence of advanced tools and applications for monitoring, the country programme should now make more regular use of off-the-shelf MIS solutions that can be customized and adopted across the country programme, link the field operations to the state management units, and systematically map the interventions (geotagging and geospatial analysis).

**Duration :** The portfolio is characterized by a long implementation period. This is principally due to the fact that given the reliance on community led processes of social and economic empowerment and the coverage of multiple dimensions of poverty, the projects are by nature process intensive and require a long implementation period (7 years and more) to develop strong grassroots organizations that can sustain the benefits of the project. Experience shows that in such long projects, there are inevitable changes in leadership, personnel and partners and this usually leads to a loss of institutional memory with respect to the core features of the project as well as data unless strong systems are put in place from the very beginning and mechanisms (such as training of new incumbents) are embedded in the implementation for smooth transition management. For this reason, it may be more appropriate to consider shorter duration projects with a modular approach , coupled with a strong emphasis on MIS, M&E and transition management. Experience shows that a degree of organization at community level is required to effectively organize service delivery and that IT and communication can be used as complementary approaches but not as sole delivery mechanisms.

**Efficiency:** The CPE rated the efficiency of the programme as moderately unsatisfactory due principally to the implementation delays and high staff turn-over. Experience shows that the projects need to adapt to the modus operandi of the state organizations and not the other way round. This means that the project readiness should be more strongly built into the design stage whereby the necessary clearances for additional staff and the resources required are agreed to in writing with the concerned nodal agency and the Finance Dept; the project director and core staff with the required profile are deputed/ appointed during the design phase; and the key procurement of implementing agencies and baseline studies is well advanced at the time the project is presented to the IFAD board for approval. In brief, this means compliance with the DEA readiness conditions. The power of authority of the project director should also be agreed upon with the State at design stage. An agreement should also be reached with the State and Central Governments that in case of low achievement of AWPB and increasing disbursement lags,

the State should proceed to request the partial cancellation of the loan proceeds and the re-design of the project if required.

F.No.10/5/2018-IFAD  
Government of India  
Ministry of Finance  
Department of Economic Affairs  
UN & OMI Division

To,

Ms. Rasha Omar,  
Country Representative,  
IFAD- India Country Office,  
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New Delhi-110057  
Email- r.omar@ifad.org

Dated the 20<sup>th</sup> June, 2018

**Subject: Country Strategic Opportunities Programme (COSOP) for India for the period 2018-2024 – reg.**

Madam,

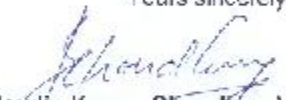
I am directed to refer to IFAD's emails dated 13.6.2018 and 14.6.2018 forwarding the revised version of draft COSOP for our approval and to say that this Department approves the same.

2. The approved Country Strategic Opportunities Programme (COSOP) for India for the period 2018-2024 along with a concept note of Indian Council of Agricultural Research (ICAR)'s project proposal titled 'Scaling up Renewable Energy Based Agricultural Technologies for Empowering Small Holder Farming Families in India' are hereby forwarded for further necessary action and compliance.

3. This issues with the approval of the competent authority.

With regards,

Yours sincerely,

  
(Jaydip Kumar Choudhury)  
Under Secretary to the Govt. of India.  
Tele No. 2309 2228  
Email: [j.k.choudhury@nic.in](mailto:j.k.choudhury@nic.in)

Encl.: As above