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الاستثمار في السكان الريفيين

مشاركة منظمة الأغذية والزراعة والصندوق الدولي للتنمية الزراعية في التنمية الرعوية تقرير التقييم التجميبي المشترك

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لجنة التقييم – الدورة الثانية والتسعون
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للاستعراض

المحتويات

ii

شكر وتقدير

iii

موجز تنفيذي

الذيل

التقرير الرئيسي - مشاركة منظمة الأغذية والزراعة والصندوق الدولي للتنمية الزراعية في
التنمية الرعوية: تقرير التقييم التجميبي المشترك

شكر وتقدير

تولت تنسيق تقرير التقييم التجميحي Catrina Perch، موظفة التقييم، في مكتب التقييم المستقل في الصندوق الدولي للتنمية الزراعية (الصندوق) بالاشتراك مع Tullia Aiazzi، كبيرة موظفي التقييم السابقة، وبالاشتراك بعد ذلك مع أروى خالد، موظفة التقييم، في مكتب التقييم في منظمة الأغذية والزراعة (المنظمة). وقدّم الدعم لهما باقتدار Saverio Kratli، كبير الخبراء الاستشاريين، و Marie Monimart، و Jeremy Swift، الخبيران الاستشاريان. وعملت Marina Izzo محللة بحوث في المنظمتين.

واستفاد هذا العمل من التعليقات والمشورة التي قدمها كل من Ashwani Muthoo، نائب مدير مكتب التقييم المستقل في الصندوق؛ و Pradeep Itty، كبير موظفي التقييم في مكتب التقييم المستقل في الصندوق؛ و Marta Bruno، الموظفة المسؤولة عن إدارة المعرفة والتقييم في مكتب التقييم في المنظمة؛ و Cees de Haan، كبير المستشارين المستقلين.

والشكر موصول للعديد من موظفي المنظمة والصندوق على مشاركتهم الفعالة، ونخص بالذكر Philippe Ankers، رئيس شعبة الإنتاج الحيواني وصحة الحيوان في المنظمة؛ و Antonio Rota، كبير الأخصائيين التقنيين في شعبة السياسات والمشورة التقنية في الصندوق؛ وسائر أعضاء شراكة التعلم الأساسي. وقدّمت الدعم الإداري Laure Vidaud، مساعدة التقييم في مكتب التقييم المستقل في الصندوق.

موجز تنفيذي

1- أعد هذا التقرير التجميعي عن التقييم المشترك مكتب التقييم في كل من منظمة الأغذية والزراعة (المنظمة) والصندوق الدولي للتنمية الزراعية (الصندوق) ضمن إطار بيان النوايا المؤرخ 2 أبريل/نيسان 2013 من أجل تعزيز التعاون بين الوكالتين اللتين تتخذان من روما مقراً لهما. والهدف الرئيسي لهذا التقرير التجميعي هو التوصل إلى نتائج وتوصيات ثنري تصميم وتنفيذ سياسات الصندوق والمنظمة واستراتيجياتهما وأعمالهما الجارية والمقبلة في التنمية الرعوية. ويمكن لهذه العملية الاستعراضية المكتنبة الموسعة أن تصب في عمليات صنع القرار في المستقبل بشأن التنمية الرعوية عندما يتعذر إجراء تقييمات كاملة. والجمهور الرئيسي هو الإدارة والموظفون والهيئات الرئاسية في الوكالتين. وتغطي العملية الفترة من عام 2003 حتى عام 2013.

2- ويجمع تقرير التقييم التجميعي المشترك مواد التقييم القائمة في المنظمة والصندوق، ويشمل عينة أساسية من 65 وثيقة مناصفة بين الوكالتين (بما فيها تقييمات على مستوى المشروعات وعلى المستويين الوطني والإقليمي، وكذلك وثائق مشروعات) وحصراً شاملاً للمشروعات ذات التوجه الرعوي التي حددها مكتب التقييم في المنظمة ومكتب التقييم المستقل في الصندوق (163 للمنظمة و31 للصندوق). وتشمل المحتويات الخارجية الإضافية بعض آخر البحوث المتعلقة بنظم الرعي، حيث عدلت نظرية التنمية الرعوية تعديلاً جوهرياً خلال الفترة المشمولة بالتقرير، كما طرأت تغييرات كبيرة على تعريف الرعي نفسه. وأجري أيضاً استعراض تناول أعمال مجموعة مختارة من الجهات المانحة الأخرى لمقارنتها. واضطلعت المنظمة والصندوق بأعمال هامة ومفيدة في ميدان الرعي طيلة عدة عقود. وكان مجرد الإقدام على معالجة قضايا الرعي قراراً جريئاً في حد ذاته نظراً لما ينطوي عليه من تحديات هائلة، بما في ذلك القيود العملية والمؤسسية والتحولت التي طرأت على المعارف التأسيسية في مجال التنمية الريفية والتعديلات التي ما زالت جارية.

3- ويبدأ التقرير بطرح رؤية علمية للنظم الرعوية والأراضي الجافة قيل أن ينتقل إلى مشاركة المنظمة والصندوق في التنمية الرعوية. ويركز تحليل عينة المشروعات على سبعة مواضيع (الحد من الفقر، والمخاطر والهشاشة، والمؤسسات، والمساواة بين الجنسين، وإدارة الموارد الطبيعية، والدعوة وإدارة المعرفة). ويتناول التقرير بعد ذلك الدروس الأوسع المستفادة في التنمية الرعوية، قبل أن يختتم المناقشة بطرح النتائج والآثار الاستراتيجية والتوصيات.

4- وتمثل الأراضي الجافة 40 في المائة من مجموع كتلة اليابسة على الكوكب، ويسكنها زهاء 2.5 مليار نسمة، 40 في المائة من أفريقيا، و39 في المائة من آسيا، و30 في المائة من أمريكا اللاتينية. ولا يُعرف عدد الرعاة على وجه الدقة، ولكن التقديرات تشير إلى أنه يتراوح بين 50 مليون و200 مليون على نطاق العالم. ويعتقد أن أعلى نسبة للفئات السكانية الريفية الهشة تتركز في الأراضي الجافة. وتربية الماشية في النظم الرعوية هي في الغالب أفضل خيار استثماري أمام سكان الأراضي الجافة سواء الريفيين أم سكان الحضر، وسواء الأغنياء أو الفقراء. وتبيّن من دراسة أجراها مؤخراً المعهد الدولي لبحوث سياسات الأغذية أن "الرعي ما زال المصدر الغالب الذي يدر الدخل ويوفّر فرص العمل، ولا ريب أنه قطاع يتمتع بميزة نسبية في مناطق الأراضي المنخفضة شبه القاحلة في القرن [الأفريقي]".

- 5- وسادت في معظم مراحل تاريخ التنمية الرعوية نظرة غير صحيحة إلى النظم الرعوية. وشهدت المعرفة التأسيسية للتنمية الرعوية تحولاً شاملاً قبل نحو 20 عاماً في أعقاب مراجعة النموذج التفسيري الرئيسي في الإيكولوجيا. وخلفت عقود من التدخلات القائمة على الافتراضات غير الصحيحة إرثاً إشكالياً، إن لم يكن مقصوداً، من التشويهات وسوء الفهم وعدم الوضوح، وهي كلها أمور يجب الاعتراف بها اليوم عند الانخراط في النظم الرعوية. ويتعلق الأثر الرئيسي باستخدام الرعاة للتنقل. وتتجسد تقلبات التوزيع المكاني والزمني للأمطار في الأراضي الجافة في الأنماط التي تتراكم بها العناصر المغذية وتصل إلى ذروتها في الغطاء النباتي، وهي تقلبات تستغلها القطعان المتنقلة. وتكشف البحوث عن أن التنقل هو السبيل أيضاً إلى أشكال متعددة من التكامل بين المحاصيل والماشية على النطاقين الإقليمي والأقاليمي، وهي في كثير من الأحيان غير متصلة في المكان والزمان.
- 6- ويشكل تقلب البيئة جزءاً لا يتجزأ من نظام الإنتاج في الرعي الناجح. وينطوي إنتاج الأغذية في الأراضي الجافة على مجازفات، ولكنه عمل يُقيم أود ملايين الأشخاص منذ قرون، وتبوأ هذا الإنتاج مكانة هامة لدى أصحاب الاهتمام والشجاعة الكافيين لتحويل الخطر إلى فرصة. والرعي تخصص يجعل من التقلبات ميزة. ولذلك من الضروري، في وجه زيادة التقلبات الناجمة عن تغير المناخ، أن ينصب التركيز على القدرة على الصمود في إنتاج الأغذية. وتتجاوز حالياً بعض أبعاد الخطر نطاق استراتيجيات إدارة المخاطر الرعوية: وهي مخاطر استجرت بسبب الارتباطات الدينامية الجديدة بالحوكمة والتنمية وقوى السوق، ويفاقمها تغير المناخ. ولا بد من إدارة هذه الأبعاد الجديدة للمخاطر على المستويات ذات الصلة.
- 7- وتنتج النظم الرعوية ثروة هائلة تكون تكلفتها البديلة منخفضة، بالرغم من الإهمال النسبي للأراضي الجافة في التنمية والخسائر الكبيرة في الموارد الرعوية خلال القرن العشرين. والرعي بالنسبة لأكثر من 100 مليون شخص هو خيار كسب العيش الذين هم أقدر على الأخذ به بالاعتدال في كثير من الأحيان مع استراتيجيات أخرى، وفي وجه الظروف غير المواتية التي تهدد بازاحتهم منه. وغالباً ما تمثل تربية الماشية في النظم الرعوية خيار الاستثمار الأفضل لكثيرين آخرين في هذه المناطق - سواءً أكانوا أغنياء أم فقراء وسواءً أكانوا ريفيين أم حضريين. وتكشف دراسات القيمة الاقتصادية للإنتاج الرعوي ونظم كسب العيش الرعوية، وإمكانات تنميتها، أنها تسهم في العادة بدور كبير في الناتج المحلي الإجمالي وتوفر في بلدان كثيرة معظم صادرات الإنتاج الحيواني.
- 8- وتتصل المشاركة في التنمية الرعوية اتصالاً وثيقاً بالأهداف الأساسية للمنظمة وللصندوق. وتشير وثائق الاستراتيجيات والسياسات الخاصة بالوكالتين صراحة إلى الرعاة باعتبارهم من بين "أفقر" و"أكثر الفئات هشاشة". ولا يمكن للصندوق أن يفي بتصميمه على السعي أيضاً إلى استهداف الأشخاص المعرضين لخطر الوقوع في دائرة الفقر، كما لا يمكن تحقيق الهدف الاستراتيجي الخامس للمنظمة المتعلق بزيادة قدرة سبل المعيشة على الصمود أمام التهديدات والأزمات، من دون المشاركة في النظم الرعوية. وتشير الدراسات المتعلقة بالنظم الرعوية التي أنتجتها أو ساندتها المنظمة خلال السنوات العشر الأخيرة باستمرار إلى أن هذه النظم هي محور سبل كسب العيش والاقتصادات في الأراضي الجافة. وتسلط الدراسات الضوء أيضاً على الأسس الاقتصادية المنطقية التي تُبرر دعم الظروف اللازمة لفعالية أداء النظم الرعوية (خاصة من خلال التنقل) والعزوف عن التدخلات المناوئة.

- 9- وترى الوكالتان أن من الضروري الأخذ بنهج بنوي لزيادة الإنتاج الزراعي في السياقات التي تحظى فيها الاستدامة والقدرة على الصمود بالأولوية. ويتفق ذلك مع الفهم الجديد للرعي والأراضي الجافة. وترغب المنظمة في استغلال علاقات التآزر بين مختلف أبعاد سُبل كسب العيش ونُظم الإنتاج؛ وبيّن الهدف الاستراتيجي 4 الفلق بشأن الارتباط المحتمل بين النمو الاقتصادي القائم على الأعمال التجارية الزراعية في العالم وزيادة الفقر بين المنتجين الريفيين المحليين. ويشدّد الصندوق على أن مجرد النمو القطاعي لن يساعد الفئات المحرومة، وأن من الضروري التدخل على المستوى الهيكلي ومعالجة بيئات السياسات والاستثمارات التي تأتي بنتائج عكسية. وهناك أيضاً التزام بدعم النهج العابرة للحدود والنهج الإقليمية. وترى الوكالتان أن أعمال الدعوة ضرورية لتكميل عملياتها.
- 10- **تعريف المنظمة للميزة النسبية مفيد في إبراز وتحييد الأخطار التي يمكن أن تنشأ عن استخدام هذه الفكرة كأساس منطقي، خاصة فيما يتعلق بسياقات العمل "الصعبة"، مثل النُظم الرعوية والأراضي الجافة: خطر الانزلاق بعيداً عن الأهداف الجوهرية للوكالة عند اتباع منطق تعظيم الأثر؛ وخطر التضحية بالتعلم والتجاوب مع الكفاءة عند مواجهة الحدود الحالية للقدرات؛ وخطر التغاضي عن الشمول والتلاقي مع كل الآخرين في المجموعة الفرعية من الأنشطة التي تُبشر بتحقيق عائد أفضل على الاستثمار.**
- 11- **وشمل تحليل نطاق الانخراط في التنمية الرعوية فيما بين عامي 2003 و 2013 كما هو موثّق في السجلات، 31 مشروعاً بالنسبة للصندوق (وهي عموماً مشروعات كبيرة وطويلة الأجل) و 163 مشروعاً للمنظمة (تعمل عموماً مع مجموعات من المشروعات الأقصر مدة والأصغر حجماً). وتشمل هذه المجموعات مشروعات تتألف من مكونات رعوية صغيرة أو ذات صلة عامة بالإنتاج الحيواني. وبلغ تركيز المشروعات أعلى معدلاته في أفريقيا. ولا ترد في نُظم تصنيف المشروعات في المنظمة والصندوق إشارات كافية إلى انخراط كل منهما في التنمية الرعوية. وافترقت أيضاً فرق التقييم إلى الخبرة المتوازنة بالرعي، إذ انخفضت عن 3 في المائة مقابل ما متوسطه 30 في المائة من مشروعات العينة التي تركز على الرعي (42 في المائة للصندوق و 20 في المائة للمنظمة).**
- 12- **واستعرضت الموارد المخصصة لأنشطة التنمية الرعوية في المشروعات خلال الفترة من عام 2003 حتى عام 2013. وغالباً ما يمول الصندوق المشروعات الصغيرة ذات التركيز الواضح على الرعي من خلال المنح؛ وأما في المشروعات الكبيرة حيث الانخراط في التنمية الرعوية يمثله مكون واحد أو مكونان، فمن الواضح أن القروض مهيمنة عدداً وقيمةً. من أصل إجمالي الموارد التي خصصها الصندوق، وهي تناهز 7.4 مليار دولار أمريكي للفترة 2003-2013، بلغت النسبة المخصصة للمشروعات الموجهة إلى الرعي، وهي 31 مشروعاً، زهاء 11 في المائة، وعندما تُوزَّع على الأنشطة المحددة الموجهة للرعي فإنها تبلغ 5 في المائة. ولا تتيح التقارير المالية الحالية للمنظمة استخلاص معلومات عن حصة المبلغ المخصص تحديداً داخل المشروعات للأنشطة الموجهة للرعي، ولكن حصة المشروعات الموجهة إلى الرعي في الميزانية الإجمالية للمنظمة بلغت حوالي 5 في المائة. وأكبر فئة من الاستثمارات هي "الوصول إلى الخدمات والأسواق" (53 في المائة للصندوق و 45 في المائة للمنظمة). وفي إطار هذه الفئة أو بالاقتران بها، استثمر الصندوق أساساً في "بناء القدرات" (ويأتي بعده "البناء المؤسسي" و"إدارة المراعي/صحة الحيوان")، واستثمرت المنظمة في مجال "التدخلات في حالات الطوارئ" (يليه "مجال السياسات" و"الخدمات البيطرية").**

13- وركزت جهود الحد من الفقر على زيادة الدخل والنمو القطاعي (مثل التركيز على مراحل ما بعد الإنتاج في سلسلة القيمة). وتُعبّر التقييمات إجمالاً عن مستوى متوسط من الارتياح في هذا الصدد، ولكن المستوى ضعيف فيما يتعلق بالأدلة. وتبيّن من التقرير التجميحي عدم إمكانية تقييم الحد من الجوع أو الفقر على أساس العينة. وانخفض، فيما يبدو، مستوى المشاركة في معالجة الأسباب الهيكلية للفقر في المناطق الرعوية، أو الأثر السلبي غير المقصود على النظم الرعوية بسبب المشروعات المعنية بمجالات التدخلات الأخرى. وتبيّن في كثير من الأحيان أن الاستهداف والرصد غير ملائمين، خاصة التركيز على المخرجات وليس على النتائج. وعلى الجانب الإيجابي، تمثل النهج التشاركية المجتمعية حيال بناء المؤسسات (الصندوق) وتدريب عمال الصحة الحيوانية في المجتمعات المحلية (المنظمة) استثناءات هامة أشادت التقييمات بما بُدّل فيها من جهود للوصول إلى الرعاة. وسلطت الأضواء في بعض الأحيان على عدم "القراءة" الكافية للسياق المحلي، خاصة عدم المرونة في استخدام مجموعات التدابير التقنية الجاهزة. وتفنقر أحياناً التدخلات الهادفة إلى تحقيق المستوى الأمثل لسلاسل القيمة إلى فهم سليم للعلاقة بين المستفيدين وسلسلة القيمة، وبالتالي تزداد إمكانية التعرض للهشاشة. وتفنقر العينة بشكل صارخ إلى الإشارة إلى الألبان، خاصة أهميتها الرعوية المميزة في الاستهلاك الأسري والأمن الغذائي (تعتبر الإشارات القليلة الألبان مجرد سلعة في سلسلة من سلاسل القيمة).

14- وظل التركيز على تعزيز القدرة على الصمود في البيئات الزراعية، خاصة من خلال الاستعداد وتُظم الإنذار المبكر، يشكّل لأمد طويل جزءاً من الإطار الاستراتيجي لكل من المنظمة والصندوق. غير أن الاهتمام المطلوب توجيهه إلى القدرة على الصمود لم يصل حتى الآن إلى دورة المشروعات ولا يتجسّد بصورة ملموسة في التقييمات. وتُعالج المخاطر وجوانب الهشاشة، أو إدارة المخاطر والحد من المخاطر، باعتبارها متداخلين من الناحية الجوهرية. وفي حين أن هذا التداخل متسق مع النهج العام حيال المخاطر، فإنه لا يسلم بخصوصية السياق الرعوي في هذا الصدد، حيث التقلبات جزء هيكلي من البيئة وجانب وظيفي في نظام الإنتاج. ويمكن للتركيز على الحد من المخاطر أن يعترض سبيل الاستراتيجيات الرعوية القائمة على تحمل المخاطر (وإدارتها). وتشير عدة تقييمات إلى الافتقار إلى استراتيجية لإدارة المخاطر. وينبغي أن تشمل الاستراتيجية السليمة لإدارة المخاطر الرعوية توسيع تدخلات التمويل الريفي في المجتمعات المحلية الرعوية.

15- وركز بناء مؤسسات أفضل تكيفاً على البُعد العرفي وعلى دعم الحوكمة الرسمية، ولكنه أغفل المشاركة التأميلية في البُعد المؤسسي للتنمية ذاتها (مثل التنظيم الداخلي للمشروعات، وإجراءات تصميم المشروعات، والرصد والتقييم) من أجل التكيف مع الظروف المعينة وتحديات التنمية الرعوية. وغالباً ما يمثل البُعد المؤسسي في المنظمة الجانب الأضعف حتى في التدخلات التي تُقيّم بأنها إيجابية بدرجة كبيرة (مثل عمال الصحة الحيوانية في المجتمعات المحلية). والنقيض من ذلك هو حالة بعض مشروعات الصندوق، خاصة في مجال إدارة الموارد الطبيعية.

16- واكتسب الاهتمام المحدد بالمنظور الجنساني صبغة رسمية في الوكالتين بعد أن بات يشكّل معياراً من معايير التقييم في عام 2010، وعقب اعتماد سياسات بشأن المساواة بين الجنسين في عام 2012. وظلت الجهود المبذولة حتى الآن تتخذ في معظمها شكل تطبيق تحليل جنساني عام من أجل التنمية الريفية وليس من أجل التعامل مع خصوصية السياقات الرعوية. وأحجمت التقييمات عن التعرض لآثار استقرار النساء

(والأطفال) على وضعهم في المدى البعيد وقدرتهم على ممارسة الأدوار ذات الصلة كمنتجين داخل النظام الرعوي؛ أو تداعيات ذلك على سيطرتهم على وسائل الإنتاج. ولما استهدف التمكين الاقتصادي دور المرأة في الرعي كمتخصصة تحترف الإنتاج الحيواني. وافترضت المشروعات في العادة أن المرأة تربي الماشية لتلبية احتياجاتها الكافية، مع وجود ازدواجية شديدة بين الكفاف والتسويق. ويمكن لتعزيز الاستغلال التجاري للألبان في غياب فهم سليم للبعد الجنساني للاقتصاد القائم على الألبان والعلاقة الدقيقة مع سلسلة القيمة أن يحدث تحولاً في السيطرة على تسويق الألبان للرجال والسعي في الوقت نفسه إلى تمكين المرأة. والاستثناء الملحوظ هو المبادرة الصغيرة التي ساندت تجمعاً دولياً للنساء الرعويات، وهي مبادرة اتخذها الصندوق في عام 2010 وتمخضت عن إعلان ميرا.

17- وتتباين نتائج تدخلات الإدارة المستدامة للموارد الطبيعية، ولا ترقى البيانات المتعلقة بالآثار البيئية للمشروعات في كثير من الأحيان إلى المستوى المرضي. وواجهت التدخلات الهادفة إلى تعزيز الإدارة المستدامة للمراعي وزراعة الحفاظ على الموارد الطبيعية في بعض الأحيان سياقات سياساتية تعطي الأولوية للميكنة والري الواسع النطاق والاستعاضة عن الاتفاقات العرفية بأشكال استخدامات الأراضي القائمة على السوق. وأدخلت المشروعات التي حققت مستويات كبيرة من النجاح نهجاً ابتكارية قائمة على المشاركة والشراكة انطلاقاً من أنماط الاستخدام العرفي، وتعزيزاً للتعاون بين الرعاة والمزارعين. ومع ذلك، عملت المشروعات بشكل عام وفقاً لنموذج التوازن القديم، معتبرة أن المراعي نظم ذاتية التنظيم وأن الرعي بدون ضوابط يتسبب في اختلالها.

18- وللدعوة أهميتها الخاصة في سياق التنمية الرعوية. وسجلت بعض التقييمات جهوداً هامة في مجال الدعوة والاتصال، وخلص بعضها إلى أن هذه الجهود غير كافية. وحُدِّت الدعوة باعتبارها أولوية عليا في إعلان ميرا الذي يدعمه الصندوق، وهو الإعلان المنبثق عن التجمع العالمي للنساء الرعويات، وتشكّل الدعوة حالياً هدفاً أساسياً من أهداف مشروع مركز المنظمة لمعارف الرعويين. ويهدف الصندوق في استراتيجيته الحالية إلى تعزيز أعماله في مجال الدعوة، ويُنظر إلى الدعوة والاتصال باعتبارهما وظيفة أساسية في المنظمة. وأثرت الافتراضات السلبية أو المضللة بشأن النظم الرعوية على التنمية الرعوية في معظم مراحل تاريخها واعتمدت في كثير من الأحيان على تلك التأثيرات. وما زالت تلك الافتراضات مترسخة في المعرفة العامة في كثير من السياقات. وينبغي النظر إلى استراتيجيات الدعوة بعين ناقدة في ضوء الفهم الجديد للأراضي الجافة والرعي.

19- وتوجد بصورة منفردة في التقييمات فرص التعلم وإدارة المعرفة في مجال التنمية الرعوية؛ ولكنها قلما تُدرج في المعالم البارزة. ولا يشير أكثر من 65 في المائة من تقييمات العينة إلى الرعي في الموجز التنفيذي أو في التوصيات. وفي التقييمات الأخرى، تتعلق التوصية الأكثر شيوعاً بضرورة تحسين فهم النظم الرعوية، وتليها التوصية بالتركيز على "إنتاجية الماشية وتسويقها"، و"التنقل الرعوي". وينشأ في عينة المشروعات الجارية تغيير بشأن فهم النظم الرعوية ودعم التنقل الرعوي، ولكنه فهم مجزأ ومحدود، مثلما في مركز معارف الرعويين الذي أطلقته المنظمة مؤخراً، أو في الدعم المقدم من الصندوق والمنظمة للمبادرة العالمية للرعي المستدام التي أطلقها الاتحاد الدولي للمحافظة على الطبيعة.

20- ويزداد الاهتمام الدولي بالنظم الرعوية خارج المنظمة وال صندوق، وهو ما تشهد عليه البرامج الكبيرة الجديدة للبنك الدولي في منطقة الساحل والقرن الأفريقي، وكذلك من جانب إدارة التنمية الدولية للمملكة المتحدة في أفريقيا/جنوب آسيا. وتتجه المنظمات الثنائية والمتعددة الأطراف والمؤسسات المالية والمنظمات غير الحكومية إلى تجريب طرق إدماج الفهم الجديد للنظم الرعوية والأراضي الجافة. ونشأ ضمان التنقل كأولوية رئيسية، حيث ينصب الاهتمام على عدم فرض عقبات جديدة أو إدخال أنشطة اقتصادية بديلة تتنافس مع النظم الرعوية على نفس الموارد. ويزداد النظر إلى الاقتصادات الرعوية المزدهرة القائمة على التنقل باعتبارها أفضل حليف في النضال العالمي من أجل منع المناطق النائية والصحراوية من أن تصبح مرتعاً للجريمة المنظمة والإرهاب.

توصيات تقرير التقييم التجميعي المشترك:

1- **وضع سياسة للمشاركة في التنمية الرعوية.** يتصل دعم التنمية الريفية بالولاية الأساسية للمنظمة وال صندوق وأهدافهما. ولا يمكن للمنظمتين تحقيق أهدافهما الاستراتيجية بدون برامج للتنمية الرعوية، وبات الألوان مناسباً لصياغة تلك السياسات. ولم يترجم الفهم الجديد للنظم الرعوية حتى الآن بصورة كاملة إلى ممارسة إنمائية بدءاً بتصميم المشروعات ووصولاً إلى تنفيذها ثم تقييمها. ويمكن لوضع السياسة المذكورة أن يكون وسيلة مفيدة عن طريق توجيه تكيف المفاهيم الجديدة للرعي مع الواقع على الأرض. وينبغي ألا توضع تلك السياسات بمعزل عن غيرها، وينبغي أن تشدّد على التنسيق داخل الوكالتين وفيما بينهما. وينبغي أن يراعى بدقة الاقتصاد الطويل الأجل لمنع وإدارة النزاع وتثبيط الهجرة غير المستدامة من الريف إلى الحضر.

2- **بناء وتكيف القدرات في المنظمة وال صندوق.** تجري تدخلات التنمية الرعوية على خلفية ميراث تعثره إشكاليات. وتتخلل الأفكار المضللة والضارة الموروثة من الماضي عملية التعلم بأسرها. ومن ناحية أخرى، من الحاسم لفعالية الأثر وكفاءته قراءة السياق قراءة صحيحة والتعلم والتكيف. وينبغي توسيع وتكييف قدرات المنظمة وال صندوق على تحقيق أهدافهما بشأن النظم الرعوية. ويشمل ذلك بلورة فهم أفضل للنظم الرعوية ومنطقها التشغيلي وعلاقتها باقتصادات الأراضي الجافة بصورة أعم. ولكن ذلك يتطلب أيضاً بناء قدر الموظفين المكتسبين وموظفي المشروعات على إجراء تتبّع منهجي للمشاركة في التنمية الرعوية وإدارتها، بما يشمل شكل التقييمات وطريقة إجرائها وتكوين فرق التقييم.

3- **إدارة أبعاد المخاطر.** من الهيكلي لتحقيق الأهداف الأساسية للمنظمة وال صندوق عند الانخراط في تنمية الأراضي الجافة والتنمية الرعوية معالجة مختلف أبعاد المخاطر: (1) المخاطر المتأصلة في البيئة حيث التقلبات سمة هيكلية رئيسية في البيئة الطبيعية والاقتصادية والأمنية؛ (2) المخاطر المتأصلة في العمل باستخدام ميراث إشكالي من بيئات السياسات التي تسبب أثراً ضاراً؛ (3) مخاطر زيادة الإقصاء على أساس تقني. ومن المهم أن يكون الموظفون الميدانيون وموظفو المقر في الوكالتين على ثقة تامة بهذه الأفكار الجديدة. وينبغي إعداد استراتيجية لإدارة المخاطر السياقية وبناء القدرة على الصمود في كل برنامج أو مشروع رعوي.

4- **دعم الدعوة من جانب الرعاة وبالنيابة عنهم وبالنيابة عن الأشخاص الذين تعتمد سبل كسب عيشهم على النظم الرعوية.** يتسم التأثير الكبير للمنظمة وال صندوق في الساحتين الدولية والوطنية بأهمية كبيرة في

الجهود العالمية الجارية لتحديث التصورات العامة بشأن الأراضي الجافة والنظم الرعوية والتخلص من ميراث سوء الفهم والإقصاء التقني اللذين ربما يمثلان أكبر عقبة أمام تنمية سبل معيشة قادرة على الصمود في الأراضي الجافة. وتمثل الدعوة عنصراً تكملياً حاسماً في الانخراط اليوم في التنمية الرعوية، ولكن ينبغي الحرص على أن يكون ذلك وفق نهج بنيوي وأن يكون خاضعاً لتمحيص نقدي موجّه توجيهاً دقيقاً في ضوء الفهم الجديد للأراضي الجافة والرعي.

Main report

FAO's and IFAD's Engagement in Pastoral Development Joint Evaluation Synthesis

Contents

Abbreviations and acronyms	2
I. Introduction	3
II. Objectives, methodology and process	4
III. Pastoral systems	8
A. The U-turn in foundational knowledge	8
B. Pastoralism and poverty	11
IV. Portfolio review	15
A. Pastoralism in the strategic planning of IFAD and FAO (2003-2013)	15
B. Typology and focus of interventions	21
C. Allocations	24
D. Changes in interventions and allocations 2003 – 2013	27
E. Methods of evaluation and pastoral development	27
V. Analysis of FAO and IFAD interventions on the ground	30
A. Overall considerations	30
B. Reducing poverty and hunger in and around pastoral settings	32
C. Increasing resilience and strengthening pastoral risk management	35
D. Building new and better adapted institutions in pastoral development	38
E. Promoting gender equality and women's empowerment in pastoral settings	41
F. Promoting sustainable natural resource management	45
G. Advocating on behalf of rural poor in pastoral settings	47
H. Lessons learned and knowledge management	48
VI. Wider pastoral development context	52
VII. Storyline, conclusions, and recommendations	56
A. Storyline	56
B. Conclusions	56
C. Recommendations	58
Annexes	
I. Core sample	61
II. Pastoral systems	65
III. Visibility of pastoralism in the project management system	80
IV. Average rating of pastoral-oriented projects in IFAD	81
V. Specialist expertise in the evaluations of the core sample	82
VI. Total number of projects in the core sample	83
VII. Joint evaluation synthesis comprehensive inventory	84
VIII. Senior independent advisers' report	94
IX. List of key persons met	98
X. Learning event on joint FAO/IFAD evaluation synthesis report on pastoral development	100
XI. References	104

Abbreviations and acronyms

AFD	Agence française de développement French Development Agency
CAHW	Community Animal Health Worker
FAO	Food and Agriculture Organization of the United Nations
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IGAD	Intergovernmental Authority on Development
IIED	International Institute for Environment and Development
IOE	Independent Office of Evaluation of IFAD
IUCN	International Union for Conservation of Nature
JES	joint evaluation synthesis report
NGOs	non-governmental organizations
NRM	natural resources management
OED	FAO's Office of Evaluation
PCDP	Pastoral Community Development Project
PTA	Policy and Technical Advisory Division
UNDP	United Nations Development Programme
VSF	Vétérinaires sans Frontières Veterinaries without Borders

I. Introduction

1. A synthesis of evaluations on IFAD's interventions in pastoral development was included in the Work Programme and Budget of the Independent Office of Evaluation for 2014 upon the request of the IFAD Evaluation Committee. In late 2013, FAO and IFAD Evaluation Offices (OED and IOE) decided to conduct this work jointly within the framework of the 'Statement of Intent' (2 April 2013) signed by the heads of evaluation of CGIAR, FAO, IFAD and World Food Programme to strengthen collaboration across the Rome-based agencies (RBAs), as requested by the respective Governing Bodies.
2. Pastoral development is still sometimes considered synonymous with livestock development, but overall it has been understood as a distinct approach for more than two decades. While livestock development focuses on increasing production and productivity, the prime objective of pastoral development is to improve living standards of people in pastoral systems. Livestock development has historically operated through self-contained interventions that depend heavily on imported technology, knowledge and infrastructure. On the other hand, the promoters of pastoral development as a distinct approach have highlighted the importance of building on local production and livelihood systems, starting from a sound understanding of their basis in socio-cultural practices and institutions, and the way these relate to drivers of change.¹ The JES use the current understanding of pastoral systems in specialist circles (see para 24-32).
3. Over the years, IFAD and FAO have engaged with 'pastoral development' with interventions sometimes closer to livestock development and other times closer to pastoral development in its distinct meaning. The FAO Evaluation of Livestock Production, Policy and Information in 2005, came to the conclusion that FAO had 'lost its technical capacity to support pastoral livestock systems', while recognising that 'Pastoralists are generally among the very poor in spite of their cattle herds. Their needs, problems and constraints are different from those of settled producers'. The evaluation team therefore recommended that the then Animal Production Service (AGAP) and Sector Analysis and Policy Service (AGAL) secured strong technical expertise in pastoral production systems.²
4. The purpose of this joint effort was to: (i) create and share awareness and knowledge of the respective agencies' work and comparative advantage on pastoral development; (ii) increase effectiveness, including widening the possible impact of evaluation work; and (iii) provide a platform for reflection aimed at further sharpening the two agencies' future roles and approaches in engaging with pastoral development.
5. In addition, the findings of this report will inform and feed into the special session on livestock issues and pastoralism scheduled for February 2016 in connection with the 6th Global Farmers' Forum Meeting.

¹ On the need to distinguish pastoral development from livestock development, with examples from Nigeria and Sudan, cf. Mohamed Salih 1991.

² FAO 2005. Evaluation of Livestock Production, Policy and Information (Programme 2.1.3), <http://www.fao.org/docrep/meeting/009/i4779e/i4779e00.htm>.

II. Objectives, methodology and process

6. The objective of this JES is to generate findings, document lessons and good practices, and provide recommendations that can inform the design and implementation of IFAD's and FAO's ongoing and future policies, strategies and work in pastoral development. It is prepared primarily to promote learning by synthesizing existing evaluation material together with selected external input from the latest research and the work of other donors. It is meant to allow evaluation evidence to feed into the decision-making process in an effective way when neither adequate time nor resources allow for a full-fledged evaluation.
7. The audience for this report is the management, staff and Governing Bodies in the two agencies: the Evaluation Committee in IFAD, and the Programme Committee in FAO. Many of the issues addressed will be of concern to a wider audience including other development agencies and donors with pastoral development programmes.
8. Scope. The JES focuses on the following strategic question: 'To what extent, in what activities and subsectors, and by what methods IFAD and FAO concentrated project and non-project work (past and ongoing) to best support pastoral development, and how could this be improved in the future?' The analytical framework, set in the JES concept note and based on the agencies strategic objectives, included six evaluation questions concerning the contribution of IFAD's and FAO's interventions to: (i) reducing poverty and hunger in and around pastoral settings; (ii) increasing resilience and strengthening pastoral risk management; (iii) building new and better-adapted institutions in pastoral development; (iv) promoting gender equality in pastoral communities; (v) promoting sustainable natural resource management; and (vi) strengthening advocacy on behalf of rural poor in pastoral settings.³ A section on 'learning and knowledge management' (vii) was added following the first round of review from OED and IOE. The period covered by the exercise is 2003 to 2013.
9. Methodology. This JES is a desk study based on documentary evidence mainly from IFAD and FAO. Documents reviewed include: background literature on pastoral systems; IFAD and FAO strategic frameworks and relevant policy papers produced over the last ten years; a sample of thematic, country and project evaluations of IFAD's and FAO's pastoral-oriented activities worldwide;⁴ a sample of ongoing pastoral development-related projects; and strategically selected literature from other agencies so that wider lessons of relevance to the JES can be identified. The review of documents was combined with interviews with FAO and IFAD headquarters at the early stages of the exercise.⁵
10. Overall process. The evaluation was carried out jointly by OED and IOE working closely with a team of consultants. OED and IOE also supported the exercise with research-assistant time and the production of thematic briefs (e.g. on gender; on other institutions; and on allocations). In addition, a Core Learning Partnership of key staff involved in pastoral development from IFAD and FAO⁶ was established at

³ This set resulted from aggregating questions 2 and 4, as well as questions 3 and 6 from the concept note. A focus on advocacy was derived from the original question 6 of the concept notes, on promoting good governance, but also because of its cross cutting relevance when operating in an environment such as pastoral development, with a strong legacy of exclusion and misunderstanding.

⁴ The early evaluations in this time window concern projects that started before 2003. With the qualifier 'pastoral-oriented' the JES refers to projects or activities relevant to IFAD and FAO engagement in pastoral development, or recorded as such by these agencies.

⁵ See annex 9 for a list of people interviewed.

⁶ The core learning partnership was composed by: Antonio Rota, Senior Livestock Expert (IFAD), Shyam Khadka Senior Portfolio Advisor (IFAD), Eric Patrick, Climate Change Adaptation Specialist (IFAD), Robson Mutandi, Country Programme Manager (IFAD), Hani Elsadani, Country Programme Manager (IFAD); Pradeep Itty, Senior Evaluation Officer (IFAD) Phillip Ankers, Chief, Livestock Production Systems Branch (AGAS-FAO) (FAO); Stephan Baas, Senior Officer, Climate Impact, Adaptation & Environmental Sustainability Team; Climate, Energy and Tenure Division (NRC-

the start to channel views and feedback from each agency into the synthesis process. This report has benefited from the active collaboration and peer review of this group. The entire exercise was developed over three phases. The initial phase included preparatory work and preliminary literature review, the drafting and approval of the concept note, preliminary analysis by OED and IOE, and interviews in Rome (Jeremy Swift). The second phase included the selection of the core sample by OED and IOE; analysis of the core sample; and writing up and reviewing⁷ the report (Saverio Krätli and Marie Monimart, between October 2014 and January 2015). The final phase consisted in communication and dissemination, including a learning workshop (Saverio Krätli, between February and July 2015).

11. The sample for the JES consisted of two sets. The first set was a collection of 65 documents selected by IOE and OED (half each), including 43 evaluation documents covering project, country, and regional levels;⁸ 4 management responses; and 18 documents concerning ongoing projects (including 2 IFAD grants).⁹ The JES refers to this set as the 'core sample'. All in all, because of the regional and country-level evaluations, the core sample covers some 600 projects,¹⁰ about 10 per cent of which included a pastoral-oriented component. The ongoing projects from the two organizations were included to assess current directions of work in pastoral development, and the extent to which lessons have been learned from previous evaluations. All items in the core sample are listed in annex I.¹¹ The second set resulted from a portfolio analysis undertaken by IOE and OED, aimed at identifying all 'pastoral-oriented'¹² projects initiated between 2003 and 2013 (therefore including many that were not/will not be evaluated). This analysis led to the identification of 31 IFAD projects and 163 FAO projects.¹³ The JES refers to this set as the 'comprehensive inventory'.
12. The criteria used to select the ongoing projects for the core sample are outlined below. For FAO: (i) projects designed following completion of country evaluations (five selected in Somalia and Sudan, with the focus on vaccination, inputs distribution, development and resilience strengthening); (ii) projects addressing FAO normative work (one selected, for the set-up of a pastoralism knowledge hub, recently started). For IFAD: (i) projects designed following an evaluation (regional representation covering 4 out of 5 IFAD regions, namely Latin America (Bolivia), Near East and Northern Africa (Syria, Sudan, Kyrgyzstan), East Africa (Ethiopia), Asia and Pacific (global grant – First global gathering of women pastoralists, Mongolia). It was not possible to include West and Central Africa as there are no new pastoral-oriented projects approved in this region; (ii) particularly innovative projects (Kyrgyz Republic for the new pastoral law), and two grants.
13. The sample was analysed combining a simple quantitative approach to both sets, evaluations and projects, with strategic reading of the documents in the core sample against the background of academic work on drylands and pastoral systems. A selective analysis of a few other agencies' work in pastoral development

FAO); Caterina Batello, Team Leader, Ecosystem Approach to Crop Production Intensification (AGPME- FAO); Felix Njemi, Animal Health Officer, Animal Health Service (AGAH-FAO).

⁷ The draft report was subjected to the following review steps and revisions: a. IOE/OED internal per review process; b. review by Core Learning partnership members and Senior Independent Advisor; c. review by selected staff; d. review by FAO/IFAD management.

⁸ The majority of which were ex post with the exception of a few mid-term evaluations and the country programme evaluations which covered projects at different stages of implementation. Three of the IFAD documents were Project Completion Report Validations.

⁹ The FAO sample also included a document summarising strategic objectives.

¹⁰ See annex 7.

¹¹ The JES refers to individual documents by their number in the core-sample list, between square brackets and preceded by the zero digit: e.g. the reference [015: 6] means page 6 of the document number 15.

¹² Were considered 'pastoral-oriented' all the project with at least one pastoral-oriented component.

¹³ The level of detail varies across this set. Some project-records provide a precise description of the objectives, modality, areas of intervention and targeted beneficiaries; others are limited to a general line such as 'Household income of rural families increased through improved agricultural production' (OSRO/SOM/511/EC).

was also carried out to broaden the context of IFAD and FAO work. The analysis of the comprehensive inventory allowed the defining of the degree of engagement with pastoral development based on title and objectives (pastoral development as the main focus of the project; as a component; or no apparent engagement) and the distribution of allocations. The projects in the comprehensive inventory were also analysed with regard to the frequency of activities by category. The documents in the core sample were analysed with regard to the frequency of words such as 'pastoralists', 'farmers', 'mobility', 'camp', 'village' and 'seed' (in the language of the document) and close alternatives (e.g. for 'mobility': 'migration' and 'transhumance').¹⁴ The distribution of expertise in the evaluation teams and the frequency and number of recommendations focused on pastoralism were also analysed.

14. The documents in the core sample were analysed paying particular attention to the passages relevant to the JES's focus on pastoral development and the evaluation questions. Also in this case, computer-search functions were used to navigate the documents, tracking relevant passages (e.g. checking all occurrences of 'gender', 'risk', 'advocacy', etc.). In a handful of cases, complementary factual information about a project was integrated using a document outside the core sample. In addition, in the case of e.g. the World Bank/IFAD Pastoral Community Development Programme in Ethiopia [014], use was also made of the World Bank's Implementation Completion Report of this programme.
15. Limitations. It is useful in this kind of exercise to be explicit about boundaries of robustness. The JES generates findings mainly from secondary sources (the documents of evaluation). Its understanding of the work carried out by both agencies is determined and constrained by the approach and methodology of the evaluations, the range of expertise in the evaluation teams, the scale of the evaluation (e.g. project vs regional programme) in relation to the scale of the interventions relevant to the JES (e.g. full project vs component), and the purposive nature of project documents. The result is a snapshot that necessarily leaves out more than it captures and inevitably does not do full justice to the complexity, challenges, and nuances of putting together a project and seeing it to completion.
16. In addition, when considered in relation to the JES focus on pastoral development, the core sample is a highly heterogeneous collection. The documents span from 10-15 pages to more than 150 in length. They are of different kinds (evaluations of projects, country and regional programmes, final and mid-term evaluations, project documents). Pastoral-oriented activities sometimes concern the entire project and sometimes a minor component. The relevant projects are a mix of emergency and development in over 30 countries spread over the globe, with duration varying from a few months to more than ten years. Funding modalities include fully funded projects, loans and grants. In light of this heterogeneity, the JES has treated the core sample as generally indicative of the agencies' engagement in pastoral development, analysing it from a variety of angles without attempting to draw category-specific assessments or force it into a highly structured methodological framework.
17. Finally, the engagement in pastoral development has both an intended and an unintended dimension. The history of rural development is not unrelated to the processes that have contributed to the problems afflicting dryland regions today.¹⁵

¹⁴ The following words were checked (in the language of the document) and counted for each document: pastoralist (including p. groups, communities, systems, livelihoods, activities etc.); agropastoralist; pastoral; farmers; cattle/livestock camp; kraal; seed; village; mobility (pastoral, seasonal, livestock m.); mobile (people, services); migration (pastoral, route, seasonal); transhumant/transhumance; nomad/nomadism/nomadic.

¹⁵ A recent paper on minimum standards in supporting sustainable pastoral livelihoods, co-funded by IFAD, aims 'to help planners and policy makers avoid investment strategies and policies that impact negatively on pastoralists' (IUCN 2012: 28).

Development does not need to be directly concerned with pastoral systems to impact on them, whether positively (e.g. the introduction of mobile phone communication) or negatively (e.g. the large-scale conversion of pasture land to other uses). Within the scope of the JES and the boundaries of our sample, the dimension of unintended systemic effects on pastoralism from projects concerned with other areas of intervention could only be touched on tangentially. This is perhaps the most important gap in this exercise.

18. Structure of the report. The report is organized in seven chapters. Chapters I and II provide the background to the JES and describe the methodology. Chapter III provides an overview of the scientific understanding of pastoral systems and drylands, summarising the main points of the paradigm shift in the 1990s and focusing on aspects particularly relevant to the JES (e.g. poverty, risk, gender). Chapter IV describes the general traits of IFAD's and FAO's engagement with pastoral development during the period 2003-2013, including an analysis of the agencies' strategies, the type and focus of interventions, distribution of allocations, and methods of evaluation. Chapter V presents the findings based on the analysis of the sample and answers the evaluation questions. Chapter VI looks at wider lessons from the work in pastoral development by a small group of other agencies. Finally, chapter VII provides a storyline of the findings and strategic implications including recommendations.

Key points

- Pastoral development has been identified as a potential area of collaboration between IFAD and FAO. In 2013 FAO and IFAD Evaluation Offices decided to conduct this Evaluation Synthesis jointly within the framework of the 'Statement of Intent' of the evaluation units of the Rome-based agencies.
- The evaluation synthesis aims at generating findings, documenting lessons and good practices, and providing recommendations that can inform the design and implementation of IFAD's and FAO's ongoing and future policies, strategies and work in pastoral development.
- The process of the evaluation synthesis consists of three phases: (i) a preliminary literature review, the drafting and approval of the concept note, preliminary analysis by OED and IOE, and interviews in Rome; (ii) selection of the core sample by OED and IOE; analysis of the core sample; and writing up and review of the report; (iii) communication and dissemination, including a learning workshop.
- An evenly distributed sample of 65 documents has been evaluated against IFAD's and FAO's strategic objectives.

III. Pastoral systems

19. The foundational knowledge in pastoral development saw a U-turn about twenty years ago, from constructing pastoralism as an irrational way of life barely able to cope with a harsh environment, to understanding it as a rational adaptation to environments dominated by variability, and as a production and livelihood system that is both ecologically sustainable and economically efficient. The primary implication of such a U-turn is that much of the history of pastoral development was based on incorrect assumptions leaving a problematic legacy that needs to be acknowledged and addressed.
20. This fundamental change of understanding has led to a substantial body of studies and reached international donors and policy-making circles. However, by and large it is still being absorbed and operationalized. In practice, this means that an updated understanding of pastoralism and the drylands cannot yet be taken for granted in the public knowledge: (i) it is still met with resistance, in particular by national authorities; (ii) when officially adopted, it is often not well implemented; and (iii) experience on how to make use of it in policy and project implementation needs further development (cf. Bonnet and Hérault 2011). In order to set our analysis on the right foot, this chapter sketches the main elements of the new paradigm, highlighting points of specific relevance to the JES. A more detailed and referenced discussion is provided in annex II.

A. The U-turn in foundational knowledge

21. Since its early days, pastoral development had been characterized by an ecological perspective. Classical ecology represented nature in terms of relatively closed systems self-regulated to a point of stability, as, for example, in the premise of range management concepts like 'carrying capacity'. That model, now known as the equilibrium model, was gradually replaced during the 1970s.
 22. Rather than seeing equilibrium as the cornerstone of all ecological explanations, the new model considers self-regulation to a point of stability as a condition only specific to particular spatial and temporal scales (Pickett et al 2007), a province in a world where variability is the rule rather than the exception. One of the implications of this shift in perspective has been to provide the theoretical grounds for the development of the now popular resilience thinking (Holling 1973).
 23. Research in the 1980s and 1990s found that most of the environmental processes that matter for food production in the drylands, and especially for pastoralism, happened outside the equilibrium model. Characteristics that had been represented as structural limitations were finally understood as structural differences. This reflected also on the understanding of flexible resource-management institutions in pastoral systems (van den Brink et al 2005; Turner 2011).
- Mobility as a strategy to increase productivity
24. Perhaps the most dramatic implication of the U-turn concerned the understanding of mobility. In the drylands, variability in the spatial and temporal distribution of rains can result in drought conditions and green areas existing only a few miles apart. This variability is reflected in the patterns in which nutrients accumulate and peak in the vegetation, before being used to complete a reproductive cycle.
 25. Through mobility, pastoralists interface this variability in the environment with variability in the production system: stability can be experienced also by 'moving at the same pace' as variability. The discontinuous distribution of nutrients can be taken advantage of to stretch the 'growing period' in the experience of mobile livestock: mobility is key to make the rangelands 'work harder' in relation to the herd. Livestock in pastoral systems have been observed to enjoy a diet that is higher in nutrients than their average concentration over the rangeland (Breman and de Wit 1983; Behnke and Scoones 1993; Oba et al 2000). As nicely put by a World Bank economist: 'The spatial mobility of pastoral systems [...] exploits the

economic benefits associated with flexibility—a benefit which can be shown to increase with increased rainfall variability’ (van den Brink et al 2005: 10). Pastoral systems are highly diverse, but related in their specialization to make use of environments characterized by structural variability, with a fundamental strategy of interfacing variability with variability.

Managing drylands variability

26. Other examples of strategies for embedding variability in the production system include keeping adapted breeds of a variety of species and, within breeds, a variety of ‘types’ or lineages with different types of performance to match a wide range of conditions; developing forms of flexible or negotiable access to land; and adapting the size of the herding household to seasonal labour requirements and alternative options (Kaufman 2007; Krätli 2008; van den Brink et al 2005). This is similar in its logic to strategies observed in small-scale dryland farming, for example, keeping different cultivars and sub-varieties, intercropping and with different layers, or cultivating relatively small fields in different microclimatic zones rather than just one large one (Mortimore and Adams 1999). Pastoralism’s specialization to manage variability makes it highly relevant to the work on resilience in food production in the face of increasing weather volatility from climate change.¹⁶

Multiple paths of crop-livestock integration

27. Mobility also plays a key role in a multitude of paths to crop-livestock integration beyond the scale of the farm. These forms of integration can be flexible and discontinuous over time and space and are therefore another dimension through which drylands producers embed variability in their systems, allowing for higher resilience in the dryland economy as a whole (Schiere et al 2006).¹⁷ There are many variations resulting from local differences and development, for example, the promotion of chemical fertilizers and the commercialization of crop-residues (Scoones and Wolmer 2000; Mortimore and Adams 1999). Increasingly, integration also concerns livelihood strategies other than farming. What matters is not so much the particular path of integration, but the additional order of managed variability that integration embeds in the system to interface the variability in the environment. With variability on the increase globally, in the natural, economic and security environments this logic has relevance also for a much wider set of contexts than just the drylands.

Variability and risk

28. Food production in the drylands is a risky business but also one on which millions of people have lived for centuries, managing to carve out for themselves a niche where others could see no interest or dared not go, therefore turning risk into opportunity. The drylands can offer significant rewards to productive systems that work with variability rather than against it, taking risk and managing it with the appropriate resources (including specialist strategies and the option to use them).¹⁸ On the other hand, processes that result in closing down options or eliminating the variability embedded in the production system—e.g. limiting mobility or replacing complementarity with competition in the use of resources—can be expected to reduce resilience and trigger impoverishment and conflict. In the words of an ECHO-funded report on good practices in disaster risk reduction in the drylands of the Horn of Africa: ‘Instead of competing against pastoralism, alternatives need to

¹⁶ For accessible presentation of the case for valuing variability in dryland development, see IIED 2015.

¹⁷ A recent study on the role of mobility in the livelihood strategies of rural peoples in semi-arid West Africa, found that i. a large fraction of rural households rely on livestock as part of their livelihood strategies; ii. grazing management of a large majority of village livestock depends on movements outside of the village territory; and iii. the mobility of village livestock is not strongly influenced by the village’s socio-professional composition (farmer, herder, fisher, artisan, etc.) (Turner et al 2014).

¹⁸ In a recent example, investments in strengthening the local customary institutions for natural resource stewardship in Isiolo County, Kenya, triggered a return in benefits estimated by local producers of almost 90:1 in occasion of a recent drought (King-Okumu C. 2015).

strengthen the economic resilience and sustainable growth of the region, supporting those who remain in pastoralism as well as those that don't' (REGLAP 2011: 46).

29. In pastoral systems, risk management is not automatically synonymous of risk reduction. In conditions dominated by variability, systematic risk-aversion is not possible and may be a strategy leading to poverty traps.¹⁹ What matters about pastoral risk, therefore, is not so much whether it is high or low in absolute terms, but whether producers can manage it, and if not, why not. Pastoralism specializes in taking significant levels of risk with the lowest possible incidence of disasters. Some dimensions of risk in pastoral systems are now beyond the reach of traditional pastoralists' risk-management strategies, brought about by new dynamic correlations with governance, development or market forces. These include undermining pastoral social organization, restricting mobility, replacing tested risk-management technology with new high-input and thus risk-prone technology, as well as initiatives leading to large-scale land-use conversion. The effective management of these new dimensions of pastoral risk requires the development of institutions capable of operating at the appropriate scales (e.g. early warning systems, but also international pastoral organizations).²⁰

Definitions and classifications

30. Practitioners engaging in pastoral development need to be aware of the underlying assumptions still embedded in definitions developed before the U-turn. Pastoralism is usually nested within agricultural classification systems developed from a crop-farming experience in temperate climates and based on a theory of change that leads to intensification by crop-livestock integration in mixed farming at the farm level. When dealing with pastoral systems, this legacy can be problematic as it represents intensification as conditional to sedentarisation whereas in many cases crop-livestock integration in the drylands actually depends on mobility.
31. Alternative approaches developed within the new perspective can now be found in progressive policy documents, including the first African Union policy on pastoralism (African Union 2010). The first policy for the development of Kenya's arid and semi-arid lands, defines pastoralism thus: 'The term refers to both an economic activity and a cultural identity, but the latter does not necessarily imply the former. As an economic activity, pastoralism is an animal production system which takes advantage of the characteristic instability of rangeland environments, where key resources such as nutrients and water for livestock become available in short-lived and largely unpredictable concentrations. Crucial aspects of pastoralist specialization are: 1. the interaction of people, animals and the environment, particularly strategic mobility of livestock and selective feeding; and 2. the development of flexible resource management systems, particularly communal land management institutions and non-exclusive entitlements to water resources' (Republic of Kenya 2012: Glossary).
32. The JES uses this description as a general point of reference, acknowledging that there are many variations within this logic, often also associated with various forms of integration with crop farming.

The magnitude of pastoral systems

33. Drylands represent 40 per cent of the planet's total land mass and are inhabited by some 2.5 billion people; including 40 per cent of Africans, 39 per cent of Asians

¹⁹ Cf. McPeak and Barret (2001: 68): 'as more near-stockless pastoralists get driven toward towns, stocking densities there increase, reducing range and thus animal productivity. Moreover, herders in town face difficulties obtaining good information on current conditions in open range areas, and reduced protein and energy intake limit boys' strength to undertake arduous treks necessary to reach good pasture and water'.

²⁰ On pastoralism and risk, see for example Scoones 1994; Roe et al 1998; Bollig 2006; Krätli and Schareika 2010; Moritz et al. 2011; Behnke et al 2011. Also annex 3, para 41-43.

and 30 per cent of South Americans.²¹ While only a fraction of these people are directly involved in running pastoral systems, many more have a stake in them (Koochafkan and Stewart 2008; Asner et al 2004). The figure of 200 million pastoralists worldwide (UNDP-GDI 2003; USAID 2012) is sometimes used. The review for the 'Pro-Poor Livestock Policy Initiative' estimated the number of pastoralists/agropastoralists at 120 million worldwide, 50 million of which are in sub-Saharan Africa (Rass 2006). In reality the number of pastoralists is unknown with any precision and obviously depends on the definition used.²² For most people in the drylands, rural or urban, rich or poor, keeping livestock in pastoral systems is often the best investment option. A recent study from the International Food Policy Research Institute (IFPRI) study found that 'pastoralism is still the dominant source of income and employment [and] undoubtedly a sector of comparative advantage in the semiarid lowland regions of the Horn [of Africa]' (Headey 2012: 3).

B. Pastoralism and poverty

34. Poverty in pastoralism has often been met with polarized positions in the ranks of development: those who believe that pastoralists are mostly poor and those who believe that they are mostly rich (UNDP-GDI 2003). In practice, both positions have often led to the same policy orientation: facilitating exit. When pastoralists are seen as all poor, this is taken as confirmation that the system is inherently inefficient and that people will quickly abandon it if provided with viable alternatives.²³ When pastoralists are seen as all rich, development efforts concerned with poverty reduction are concentrated outside pastoralism, on those who have abandoned the system or are being pushed out. Facilitating exit is argued today on the basis of 'new challenges' such as demographic growth and climate change. However, it was already a key policy recommendation in pastoral development in the early 1960s, when none of these drivers was on the horizon.²⁴
35. A different approach to facilitating exit, often misread in light of this legacy, hinges on the understanding of pastoral systems as economically and ecologically valuable. In this view, facilitating exit is needed in order to give pastoral systems enough room to operate. As synthesized by Stephen Sandford in what has become known as the 'Too many people, too few livestock' argument: 'Successful and sustainable land use in dry areas of the Horn requires a mobile system of land use and often household herds of mixed species, able to exploit different types of vegetation in widely separated locations at different seasons [...] Diversification of livelihoods by the pastoral population as a whole, but specialization by individual households, is the key to successful and sustainable land use'.²⁵ Most alternatives to pastoralism for poor individuals, generate unsustainably low incomes and/or involve high risk during periods of stress (Little et al 2001; Homewood et al 2006).

²¹ Cf IUCN 2009. A few facts about drylands

https://www.iucn.org/about/union/secretariat/offices/asia/asia_news/?3837/A-few.

²² A background paper to the forthcoming World Bank *Africa Drylands Study*, estimates over 40 million people in 'livestock only' systems in West and East Africa only (Robinson and Conchedda 2014). The number doubles if the people recorded under 'mixed systems' in 'arid' and 'semi-arid' regions, most likely also depending on pastoral systems, are included. This paper also concludes that (in West and East Africa) vulnerable rural population is concentrated in the drylands.

²³ This happens with regard to small-scale producers also in other sectors, e.g. fisheries; farming; community forestry, cf. the on going debate on the economic importance of family farming (FAO-IYFF 2014).

²⁴ Following 'the successive severe drought years of 1959 and 1960', a team of specialists from FAO carrying out a reconnaissance in Turkana in 1963 found that 'Livestock will always remain of great importance for the Turkana people. Irrigated agriculture can only be practiced in comparatively very small areas, leaving the district as a whole only suitable for ranging purposes'. Nevertheless, the team concluded that: 'The most important step in a possible rehabilitation of the Turkana people is considered to be the establishment of permanent settlements [...] Apart from settling people outside the district, the various possibilities of improvement are: 1. The establishment of a fisheries industry at Lake Rudolf; 2. The improvement of grazing and animal husbandry; 3. The establishment of large-scale irrigation areas; 4. Irrigation by water spreading; 5. Flood irrigation; 6. Pumped irrigation' (Dames 1964: 12, 2).

²⁵ Cf. Sandford S. 2011. Pastoralism in Crisis? [Too many people, too few livestock](http://www.future-agricultures.org/publications/e-debate/pastoralism-in-crisis/7646-too-many-people-too-few-livestock), Future Agricultures website, <http://www.future-agricultures.org/publications/e-debate/pastoralism-in-crisis/7646-too-many-people-too-few-livestock>.

36. Although during the 20th century, pastoral systems worldwide have probably lost more resources than they have gained (Rass 2006), today's pastoralists are neither all rich nor all poor. There is growing differentiation (Catley and Aklilu 2012; Mongolian Society for Range Management 2010; Breuer and Kreuer 2011), with a minority of wealthy owners and the bulk of livestock in small to medium or even micro enterprises nested within bigger ones, as many poor pastoralists herd their livestock in other people's herds. It is therefore crucial to differentiate between the vulnerable pastoralists whose security and best returns from livestock investments depend on their ties with thriving pastoral systems, and those who have lost access to these options, and to understand why. Even when pastoralists are relatively rich in assets, they are usually 'poor' in terms of services. This poverty also induces exit strategies in the hope of increasing access to services only available in settlements and usually at the expense of efficiency in production (families splitting and partially settling to allow at least some of the children to access school education is the most common example).

Gender in pastoralism

37. The progress made on gender issues²⁶ has not generally captured their specificity in pastoral development. A particular example is ownership of the means of production. The legal exclusion of women from owning land in many countries feeds a belief that women also struggle to own livestock in pastoral societies. But in many such societies there are no restrictions on women's ownership of livestock, even amongst those described as most 'traditional' such as the Peul Wodaabe in Africa. Therefore, a deeper analysis of gender issues within pastoralism is much needed, in particular to circumvent beliefs that women have a net 'benefit' from sedentarisation by gaining access to services when in fact there are important trade-offs as services are often poor and, by settling, women lose access to the bulk of the herd. This has significant costs both in terms of their social status as pastoralists and with regard to their control over milk, for children and marketing (Ridgewell and Flintan 2007; Sadler et al 2009; Kristjanson et al 2010).

Insecurity and conflict

38. Insecurity and localized conflict, in the drylands as elsewhere, are often interwoven with processes of redistribution of assets and competition over the same resources. Common explanatory frameworks emphasize lack of resources; less frequently an imbalance in access rights, or individuals' decisions that disregard the potential consequence to the community, especially in contexts where customary institutions of governance have been weakened while modern-state institutions are still only nominal. Dryland systems of production and livelihoods that developed along complementary paths now use the environment in the same way and therefore need the same resources. Small and medium-scale producers face the threat of a vicious circle of impoverishment and reduced mobility, as sedentary life leads to reduced opportunities for pastoral strategies and increased costs (e.g. for feed and water). In some areas, a generalized sense of neglect and frustration vis-à-vis an institutional environment historically geared to serve the interests of crop-farming and settlers—and, increasingly, urban investors—can be easily exploited by particular groups for political or personal interest.²⁷
39. When pastoral systems decline in the drylands, vast and remote spaces previously populated with civil society become 'empty' and ungoverned. The possible consequences of this scenario became clearer in the early 2000s, when international organized crime and radical jihadist groups penetrated these relatively

²⁶ Gender issues could be: education, conflict, sedentarization, marginalization by national development agendas, health and lack/limited social capital.

²⁷ On insecurity and conflict in relation to pastoral systems and development see (amongst many other works): OAU/IBAR 2003; ECAPAPA 2005; Benjaminsen and Ba 2009; Moritz 2011; Behnke 2012; Pavanello and Scott-Villiers 2013. A recent publication by IFPRI and IFAD concludes that 'little is known about the effectiveness of different interventions to enhance resilience to weather shocks and conflict in pastoralist areas' (Breisinger et al 2014: 18).

empty spaces, especially in Saharan/Sahelian Africa. The subsequent intensification of insecurity, with open conflict in Mali and several other Saharan countries, has important implications on the ability of states to manage their territories. The value of pastoralism too became clearer, reflected in the cost of losing it, as the international community looked at the budget for reconstructing Mali as a state and stabilising the Sahara.²⁸ International interest is now turning to the positive role that can be played by vibrant mobile pastoral economies in populating and 'monitoring' remote areas.

Political and technical exclusion

40. In most parts of the world, drylands enjoy a lower presence of key state functions (e.g. justice), basic infrastructures and services compared to the national average and are described as neglected even in policy-making circles (e.g. African Union 2011). The lack of reliable and systematic quantitative data on these regions is part of such imbalance, but some cases are better known. For example, in post independence Kenya there was a conscious public policy choice to invest first of all in high-potential areas (Republic of Kenya 2012).²⁹
41. Exclusion can have political causes (annex II, para 43-44) but often is on technical grounds, embedded in inadequate classifications, bureaucratic procedures, mechanisms of appraisal, and systems of statistical representation. For example, funding education based on the numbers of children in school 'discriminates against the counties with low enrolment [...] The budget share of Turkana county [in Kenya arid lands] is less than 40 per cent of the county's share of the primary school-age population' (Elmi and Birch 2013: 13).
42. According to a recent study published by the World Bank and FAO: 'all sources of livestock data and statistics—such as agricultural censuses, livestock censuses, periodical and ad hoc agricultural sample surveys, household income or expenditure surveys—rarely if ever generate comprehensive information on pastoral production systems' (Pica-Ciamarra et al 2014: 1). The conventional definition of pastoral systems as 'traditional', forgetting almost a century of development interventions, is another such example as it effectively excludes pastoral systems from any scenario of modernization and, more generally, from the representation of 'the future'. Political and technical exclusion can reinforce each other, but even when the former is eliminated the latter, unless addressed directly, lingers on. There are of course differences in the ways these trends have played out in different pastoral areas.

²⁸ Cf. AGIR (2013); Declaration de N'Djaména (2013); De Haan et al (2014); Krätli, Swift and Powell (2014). An attempt to cost the potential use of mobile pastoralism compared to traditional forms of military estimated that about nine million euros could pay for one year of surveillance of two thirds of Niger while securing more than 3500 jobs. This should be compared to the cost of surveillance by drone: more than 55 million euros for a single device, excluding the cost of operating it (cf. Krätli 2014).

²⁹ Cf.: 'Under the heading 'Provincial Balance and Social Inertia', Sessional Paper No. 10 of 1965 stated the following: One of our problems is to decide how much priority we should give in investing in less developed provinces. To make the economy as a whole grow as fast as possible, development money should be invested where it will yield the largest increase in net output. This approach will clearly favour the development of areas having abundant natural resources, good land and rainfall, transport and power facilities, and people receptive to and active in development' (Republic of Kenya 2012: 1).

Key points

- Incorrect assumptions used by pastoral development for most of its history left a problematic legacy that needs to be addressed.
- Variability in the drylands can be either a problem or an advantage depending on the strategy of production. Pastoralists interface variability in the environment by embedding variability in their production system.
- The underlying logic of pastoral systems offers lessons for resilience in contexts where variability is structural, e.g. in the case of climate change challenges.
- Pastoralism specializes in taking and managing risk. Pastoral risk reduction should not eliminate functional risk-taking elements of the system. What matters is not whether risk is high or low in absolute terms but whether it can be managed.
- Poverty reduction in pastoral development has traditionally facilitated exit. Now this approach is also presented as a way of supporting pastoral systems.
- Reduced access to livestock by settled women and children can impact negatively on nutrition/food security, and weaken women's status and entitlements.
- Pastoralists' exclusion is often on technical grounds (e.g. in classifications or mechanisms of appraisal).

IV. Portfolio review

43. This chapter examines the general context of the engagement in pastoral development by the two agencies starting from their strategic frameworks and then looking at the patterns of interventions and allocations, the methods of evaluation and trends.
- A. Pastoralism in the strategic planning of IFAD and FAO (2003-2013)
44. According to IFAD's literature, 'IFAD is the only international financial institution mandated to contribute exclusively to reducing poverty and food insecurity in the rural areas of developing countries' (IFAD 2011). IFAD 'works with the governments of developing countries to strengthen their capacity to enable poor rural people to overcome poverty [...] Most of its resources are provided in the form of loans to governments – many on highly concessional terms, while its limited grant funds are provided not only to governments but also to international and national non-governmental agencies' (IFAD 2006).
45. According to FAO's literature, the organization is defined by (i) being 'the United Nations specialized agency [...] with a comprehensive mandate [...] to work globally on all aspects of food and agriculture (including fisheries, forestry and natural resources' management), food security and nutrition across the humanitarian-development continuum'; and (ii) by 'its intergovernmental status [...] and the authority to provide a neutral platform where nations can call on each other for dialogue and knowledge exchange' (FAO 2013).
46. Rural poverty reduction is a fundamental goal for both agencies. The overall frame of reference is the threshold of US\$1.25 a day used to define extreme poverty and hunger in United Nations Millennium Development Goal 1. However, this indicator is engaged within an understanding of poverty that highlights its roots in historical and new forms of exclusion, and an uneven playing field with regard to accessing basic resources. Weak governance mechanisms and ill-advised policies are mentioned among the causes of vulnerability, together with access to natural resources by the most vulnerable groups being threatened by the emergence of 'new, commercially-driven governance systems' and the risks associated with inadequately regulated processes of expansion of the agro-industrial sector.³⁰
47. Both agencies favour a systemic approach, see for themselves as enablers for rural poor, and commit to advocacy on their behalf with national, regional, and international policy-making shaping rural development options. Both IFAD's and FAO's national and international presence and track record as neutral 'honest brokers' place them in an ideal position to fulfil this role.
48. Within the two series of planning documents, two notions gain strength over the years and become pivotal after 2007. One is that planning must take into consideration each agency's comparative advantage. The other is that partnership and collaboration should be opened to the private sector.
49. The JES time window includes three rounds of strategic frameworks for both IFAD and FAO. For IFAD, the documents investigated concern the periods 2002-2006, 2007-2010 and 2011-2015. FAO uses longer-term strategies; the first document

³⁰ Cf. IFAD (2008: 26): 'In a context of growing population densities, a breakdown of traditional natural resource governance systems, and the emergence of new, commercially-driven governance systems that give inadequate recognition to "secondary rights" of land use, there are even more conflicts over resource access. In most cases, it is the poorest who lose out; indigenous peoples are particularly vulnerable in this regard'. Cf. FAO (2009: 7, 8-9): 'The [livestock] sector is complex and differs with location and species, but a growing divide is emerging, in which large-scale industrial producers serve dynamically growing urban markets while traditional pastoralists and smallholders, who often serve local livelihood and food security requirements, risk marginalization. In many parts of the world, this transformation is occurring in the absence of adequate governance, resulting in failures in terms of natural resource use and public health' (FAO 2009: 7, 8-9).

relevant to our study covers the period 2000-2015. In 2009, FAO produced a new strategy for 2010-2019; this was extensively modified in 2013, following the transformational change process triggered by the Director-General who took office in January 2012.

50. IFAD also produced a series of thematic policies on targeting (IFAD 2006), engagement with indigenous peoples (IFAD 2009); improving access to land and tenure security (IFAD 2008); gender equality and women's empowerment (IFAD 2012a); and engagement with the private sector (IFAD 2012b). FAO has had a policy on gender since 2012 (FAO 2013b) and has a policy on Indigenous and Tribal Peoples (FAO 2010).
 51. Several position documents on pastoralism and the drylands have been produced by both agencies including a number of relevant policy briefs through a recent collaboration between FAO and ILRI-CGIAR.³¹ Both agencies have contributed, through the Committee of Food Security (CFS), to the development and adoption of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (which is also FAO's policy on land tenure, FAO 2012).
 52. At the moment, neither agency has a policy on engagement with pastoral development. However, both agencies emphasize their commitment to target disadvantaged and excluded groups, especially in remote and neglected areas.
- Pastoralism in IFAD strategic frameworks between 2003 and 2013
53. The three IFAD strategic frameworks in the JES time window make reference to 'pastoralists' among the vulnerable, marginalized, excluded or poorest groups.
 54. The 2002-2006 framework (IFAD 2002) lists 'nomadic pastoralists' among the rural poor whose vulnerability is 'intimately linked to weak local governance'. Vulnerability is described as 'an inability to influence decisions affecting their lives, negotiate better terms of trade and barter, stop corruption, and make governmental and non-governmental organizations (NGOs) accountable to them'. The strategy includes a commitment to advocacy on behalf of the rural poor and, based on their perspective, 'to seek to influence regional and international policies that shape rural development options'. There is emphasis on contextualized and responsive interventions, for example, in rural finance. The successful achievement of poverty reduction is described as conditional to 'modifying the unequal power relations that contribute to generating poverty, and by making a conscious effort to enable historically excluded people to exercise their full potential'.
 55. The 2007-2010 strategic framework mentions pastoralists four times, including a reference to 'nomadic pastoralists' being amongst 'the poorest' (IFAD 2006: 2). Uneven resource access and distribution are highlighted, with a need of securing key assets vis-à-vis 'new commercially driven governance systems that give inadequate recognition to "secondary rights" of land use' (Ibid: 10). A primary area of comparative advantage for IFAD is identified as innovation (the JES finds this highly relevant as the fusion of modernization with pastoral systems is a dimension of pastoral development that has hardly been explored, see annex II, para 48-49). Remote and marginal areas are found poorly served by private sector-led markets for agricultural inputs and products, which emerged in the void left by governments following structural adjustment programmes. Stimulating private sector investment in rural areas and 'ensuring that it works to the benefit of poor rural people' is a key concern.
 56. All the thematic policies published between 2007 and 2012 make explicit references to pastoralists. The 2006 policy on targeting quotes a passage from IFAD 2005 Rural Policy Reduction referring to smallholder farmers and 'herders'.

³¹ The briefs by the [Technical Consortium for Building Resilience to Drought in the Horn of Africa](#).

This policy is relevant to pastoral development for several reasons. First, it follows the 2002-2006 strategic framework (IFAD 2002) in defining poverty not just in terms of income but as 'vulnerability, powerlessness and exclusion' adding that 'rural poverty reduction and food security will not happen simply as a result of macro-economic or sectoral growth' (2006: 2). Second, it emphasizes the targeting of 'the productive poor' or 'active poor': 'IFAD will work to support not only people who are chronically poor, but also those at risk of becoming poor because of vulnerability to such risks and external shocks' (2006: 8). This is a perfect match with the condition of almost all the people who are directly operating pastoral systems. Third, it emphasizes a focus on targeting 'disadvantaged or excluded groups', in order to enable rural women and men 'to claim their rights; access resources, technology and needed services; and expand their influence over public policy and institutions to shift "the rules of the game" in their favour'.

57. Pastoralists are in the forefront of the policy on indigenous peoples. The policy points out that: 'in Africa, many rural communities, including nomadic pastoralists and hunter-gatherers, suffer from discrimination and have been excluded from national policies and programmes' (IFAD 2009: 9).
58. Pastoralists are briefly mentioned in the policy on gender. The policy on land has several references to pastoralism and mentions participatory land-use planning and multi-stakeholders user agreements as particularly important for communal and common property lands, and the challenge of integrating different uses by farmers and pastoralists. There is emphasis on the need for cross-border and regional approaches. The policy on the engagement with the private sector lists 'livestock herders' as part of the target group amongst IFAD's actors in the 'spectrum of private-sector entities in rural areas' (IFAD 2012: 6).
59. In the 2011-2015 strategic framework, the attention to the private sector takes a more prominent role, now clearly identified together with governments as desirable partners in interventions.³² There is one reference to 'pastoralists', perhaps implied also in the few occurrences of 'livestock keepers', in a passage on 'Policy failures and weak political representation of the poor', about 'policy decisions and investments that either result in the neglect of agriculture and rural areas, or are not adequately targeted to issues faced by poor rural people, tend to perpetuate rural environments where opportunities for overcoming poverty are few, and rural economic activities undervalued' (IFAD 2011: 20). In this present strategy, there is emphasis on the importance of working in 'countries characterized by conditions of fragility' defined as 'a combination of persistent high levels of poverty and vulnerability, and low institutional and governance capacity (which may also result in, or from, conflict)' (IFAD 2011: 36). IFAD is also to 'step up its advocacy and communication efforts around small-scale agriculture, rural development, and food security and nutrition' (Ibid: 8).
60. Beside the policy and strategy documents, over the last ten years IFAD has produced knowledge-sharing documents and online resources on relevant topics, including pastoralist incentive structures; pastoralist organizations; pastoralist risk management; and, IFAD supporting pastoralism.³³

Pastoralism in FAO's strategy between 2003 and 2013
61. In the period under consideration, FAO modified its strategic frameworks twice. The first time, the strategic framework 2000-2015 was replaced with a completely new strategy for the 2010-2019 period. This new document was then reviewed

³² Cf. 'In the future, IFAD aims to become a partner of choice for governments and private entities seeking to support small-scale agriculture and rural development to enhance the livelihoods of poor rural women and men (principle of engagement 7) [...] IFAD seeks to leverage private investments through project co-financing and risk-sharing or investment in projects that reduce transaction costs for private-sector partners'.

³³ All these documents are available from the [IFAD web portal](#).

- extensively in 2013. An important change in the 2013 reviewed framework was the return to a multidisciplinary structure as in the 2000-2015 strategy.
62. The 2000-2015 strategic framework makes no mention of pastoralists, herders or rangelands (FAO 1999). Drylands are mentioned once as part of the corporate strategy on the 'conservation, rehabilitation and development of environments at the greatest risk'. Despite the lack of specific references to pastoralism, the strategy has a few passages that concern pastoral development. For example, there is emphasis on 'taking advantage of the potential synergies between farming, fishing, forestry and animal husbandry' as a way of strengthening rural livelihoods. There is also emphasis on the importance of preparedness for agricultural emergencies especially with regard to early warning systems and enhancing resilience (Strategic Objective-A3). Overall, the strategy is centred on three goals, which remain substantially unchanged throughout the two following documents, and that hinge respectively on (i) global food security; (ii) elimination of poverty and sustainable rural development; and (iii) sustainable management (conservation, use and improvement) of natural resources. Pastoral development would fit well in all three.
 63. The 2010-2019 strategic framework mentions pastoralists twice in the thematic sections on livestock and natural resources. There is one reference to 'herders', none to 'drylands' or 'rangelands', but 'natural grasslands' are mentioned twice. The theme of strengthening synergies between production systems appears again in more detail. While mentioning pastoralists, the document appears somewhat out-dated with regard to the understanding of their role in the national economies and especially in the export of livestock to large urban markets (annex II, para 25-31)³⁴: 'The [livestock] sector is complex and differs with location and species, but a growing divide is emerging, in which large-scale industrial producers serve dynamically growing urban markets while traditional pastoralists and smallholders, who often serve local livelihood and food security requirements, risk marginalization' (FAO 2009: 8).³⁵ Core Function (b) is about 'stimulating the generation, dissemination and application of information and knowledge, including statistics'. The almost complete lack of statistical data on pastoral systems in Africa (Pica-Ciamarra et al 2014) is a measure of the relevance of this core function to FAO's engagement in pastoral development.³⁶ Under Core Function (c), advocacy and communication, FAO is to support consensus-building 'for ambitious, yet realistic objectives of eradicating hunger; enhancing FAO's status as a reference point and authoritative source of technical information in global debates on hunger relief and other issues related to agriculture, forestry, fisheries, livestock and rural development'.
 64. In the 2013 Reviewed Strategic Framework, there is one reference to 'herders', in a list of 'vulnerable groups'. There are no references to 'pastoralism' or 'rangelands'. Drylands are mentioned once in reference to 'vulnerable communities' particularly exposed to the adverse effects of climate change. Besides this, the framework touches upon a number of issues of strong relevance to pastoral development. For example, pursuing 'a holistic approach across sectors' is presented as a

³⁴ Cf. also the FAO-ILRI brief on market access and trade in the Horn of Africa: 'Most livestock production in these countries that is traded takes place in the lowlands. Since the dry areas are predominantly populated by pastoralist and agro-pastoralist populations, the focus of this document is on lowland trading and production systems' (Aklilu et al 2013: 4).

³⁵ That pastoralists use their animals for subsistence but rarely market them, therefore remaining peripheral to the national economies, has been listed as one of the 'myths' of pastoral development (UNDP-DGI 2003). Particularly with regard to Sub-Saharan Africa, empirical evidence shows that not only pastoralism is a key supplier to domestic livestock markets, but often plays a direct role in regional livestock-export circuits (Kerven 1992; McPeak and Little 2006; Little 2009; Aklilu and Catley 2010; Buchanan-Smith et al. 2012; Corniaux et al 2012).

³⁶ It is important to mention that FAO Statistics are fed with data provided by Governments.

requirement for the sustainable increase of agricultural production³⁷ and the best way to address prevention, mitigation, preparedness, response, recovery and rehabilitation as part of the effort to build livelihood resilience.³⁸ Attention is drawn to the importance of food losses, especially associated with industrial food processing and marketing, and the patterns of consumption associated with these systems.³⁹ A reference to 'considerable pressures on natural resources such as land, water, forest, aquatic resources and biodiversity, which could also fuel potential conflicts', listed as an important concern in the 2010-2019 strategy (FAO 2009: 3) disappears, together with almost all mention of violent conflict. However, Strategic Objective 3 (reducing rural poverty) starts with 'give the poor a voice and equitable access to resources'. Strategic Objective 5, on increasing resilience of livelihoods to threats and crises, can only be achieved in the drylands by engaging with pastoral systems.

65. The discussion of Strategic Objective 4,⁴⁰ points out that, if potentially increasing economic growth and efficiency, the current drive towards 'increasingly globalized, concentrated, industrialized and science-intense [food and agricultural systems] may create competitive barriers for small and medium producers and processors and therefore may significantly downgrade lifestyles and employment opportunities in rural areas' (FAO 2013: 25). Following on from this, it concludes that making food and agricultural systems more inclusive is both a moral and political imperative.
66. A specific section on governance calls for 'broader, more flexible and responsive, and more capable governance institutions and mechanisms' (2013: 27). FAO maintains a core function on 'advocacy and communication' at national, regional and global levels in areas of its mandate.
67. Over the last decade or so, FAO has also been involved in the production and publication of substantial reference works where the new understanding of pastoral systems and the drylands is well captured (FAO 1997; FAO 2002; Rass 2006; Neely et al. 2009; Levine et al. 2010; Touré et al 2012). FAO also collaborated, through the LEAD initiative, to the collection, *Livestock in a Changing Landscape*, including several papers on pastoral systems (Steinfeld et al 2010; Gerber et al 2010).
68. The briefs, produced by the Technical Consortium for Building Resilience to Drought in the Horn of Africa, covered conflict and peace building (Pavanello and Scott Villiers 2013); disaster risk reduction management (Fitzgibbon and Crosskey 2013); knowledge management and research (Tilstone et al 2013); livelihood and basic service support (Morton and Kerven 2013); market access and trade (Aklilu et al 2013); and natural resource management (Flintan et al 2013). All of them underline that pastoral systems are the basis and main aspect of the economy and livelihoods in the region; all remark on the economic rationale of proactively supporting these systems, especially recommending that conditions for pastoral mobility (e.g. land tenure, grazing reserves, corridors, cross-border movements, etc.) are secured, and suggest refraining from interventions that compete with pastoral production.
69. In 2009, a collaboration between FAO, IFAD, and the International Institute for Environment and Development in the United Kingdom, led to a substantial study on new patterns of agricultural investment and international land deals in Africa. The study drew attention to the risks arising from unclear or ill-informed definitions of

³⁷ SO-2: 'Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner' (FAO 2013).

³⁸ SO-5: 'Increase the resilience of livelihoods to threats and crises' (FAO 2013).

³⁹ The production of human-edible proteins in livestock systems where pastoralism is predominant has been calculated to be between up to 100 times more efficient (Gliessman 2007; Steinfeld 2012).

⁴⁰ SO-4: 'Enable more inclusive and efficient agricultural and food systems at local, national and international levels' (FAO 2013).

land 'productive use' in formal land tenure frameworks, which, especially in the case of pastoral production systems, 'may open the door to abuse, and undermine the security of local land rights' (Cotula et al 2009: 91). Besides direct dispossession, indirect impact of new forms of land investment on local small-scale producers was found to 'include loss of seasonal resource access for non-resident groups such as transhumant pastoralists, or shifts of power from women to men as land gains in commercial value' (Ibid: 15).

Comparative advantage

70. The introduction of the 'Delivering as One United Nations' approach at the 2007 United Nations General Assembly provided a framework for better division of labour and synergy (cooperation, collaboration, and coordination) within the United Nations development system and with the Bretton Woods institutions (United Nations General Assembly 2007). Following the Triennial Comprehensive Policy Review adopted in that context, the notion of comparative advantage has become a driving concern.
71. The FAO 2013 Review provides a definition of comparative advantage sufficiently general to be relevant to any United Nations agency with a development mandate. Comparative advantage is defined in relation to three dimensions: (i) the organization's mandate and consequent goals and objectives; (ii) the activities and the potential learning they involve; and (iii) the operating environment including the other actors and their capacities to address the same challenges. This definition has important implications with regard to an engagement with pastoral development on the part of FAO or IFAD, as it addresses and tries to neutralise possible dangers associated with the adoption of the notion of comparative advantage as a driving logic.
72. Under the first dimension, the identification of comparative advantage is hinged on what needs to be achieved according to the organization's goals and objectives. There is acknowledgement here of the risk of drifting away from fundamental goals in trying to maximize total impact, and a mechanism to secure that covering all aspects of the mandate takes priority, including where the promise of returns is low compared to the challenge, as is often the case with minorities and marginalized groups. Following a plain logic of comparative advantage in development investments, the rural drylands usually have the lowest rate of infrastructures and basic services (para 41-42). Both intended and unintended processes of active exclusion or even plain dispossession of pastoral groups have a long history and in some cases are ongoing.⁴¹ It is therefore part and parcel of this first dimension of comparative advantage, that the potential opportunities offered by collaborating with governments and powerful stakeholders in the private sector do not alter the fact that some of these players may be part of the problem.
73. Under the second dimension, the definition of comparative advantage is not static or tied to the organizations' legacy of activities, but dynamic, seeing activities and capacities as boosting each other through learning. There is acknowledgement of the possible temptation of playing safe by concentrating on existing capacities. The relevance in this case is in the implication that, although the present engagement with pastoral systems and consequent set of capacities might be limited, this should not reduce the scope for engagement in the future. Capacities that can allow the organizations' comparative advantages to match all aspects of their fundamental goals can and should be acquired. Pastoral systems have only recently become open to sophisticated avenues of understanding. For institutions committed to learning about agricultural production and livelihoods, and to supporting them in remote and marginalized areas, this is an extraordinary opportunity.

⁴¹ For example the recent threat of eviction to Maasai pastoralists in Tanzania, and the 'global outcry over plans to turn vast plains into hunting ground for Arab monarchy' ([The Guardian, 25 November 2014](#)).

74. Under the third dimension, the definition of comparative advantage is subject to a principle of economy, avoiding redundancy in areas where other actors are operating with similar capacities, but also avoiding being distracted from the real goals by competition embedded in the concept of comparative advantage.
75. Applying these principles to an engagement in pastoral development as United Nations agencies is bound to create serious challenges. For a start, there are so many rural poor, marginalized and vulnerable groups worldwide, which are easier to work with, geographically more concentrated, and which seem to allow 'better returns to investment' when providing services and other forms of enabling interventions. Moreover, the institutional structure of IFAD and FAO channels these agencies into working in partnership with and at the demand of governments and in line with national development policies. These are rarely interested in pastoral systems, and, when they are, often for the wrong reasons. Even in countries where these systems are believed to represent a substantial proportion of the economy, such a contribution is rarely captured in official statistics and therefore invisible to policy-makers and problematic to address (para 43 above).

B. Typology and focus of interventions

76. Most projects across the two sets are in the African continent. The average duration of projects is 72 months for IFAD and just below 20 months for FAO (which in pastoral development is fairly short). IFAD national projects tend to be large and long-term investments in successive phases up to or over 10 years. Regional and cross-border projects, however, are shorter and smaller in budget and financed through grants. FAO projects are, overall, relatively small and short-term, often comprising of technical-assistance packages in animal health, but with important exceptions.⁴² Cross-border and sub-regional programmes (e.g. Horn of Africa or Great Lakes) maintain the same structure of a constellation of relatively small projects.
77. IFAD and FAO's project classification systems do not systematically tag activities in pastoral development.⁴³ Looking at projects with livestock-oriented components is only partially helpful, as pastoral development is not consistently treated as synonymous with livestock development, and not all livestock-development concerns pastoral systems. For example, the Hills Leasehold Forestry and Forage Development Project in Nepal [04] in the JES core sample had a livestock-oriented component. The evaluation document uses the word 'livestock' around 120 times but the project shows no evident direct relevance to pastoralism.⁴⁴
78. This JES is based on inventories elaborated ad hoc by the offices of evaluation in the two agencies. For IFAD, this resulted in the identification of a set of 31 projects initiated between 2003 and 2013. For FAO, working with constellations of relatively short-term projects, an initial inquiry in the Field Programme Management Information System (FPMIS), for the term 'pastoral', returned 240 projects. OED then polished this initial set down to 163 items. Based on the information in the records of these inventories (title and a brief description of the project), the JES has further identified three subsets, as described below.
79. Projects and programmes with a focus on pastoralism. These explicitly refer to pastoralism as their main focus. In terms of numbers of projects, they represent about 45 per cent and 21 per cent respectively of IFAD and FAO inventories. This category includes large projects such as the FAO Somalia Resilience (US\$13 million) and the IFAD loan on Pastoral Community Development

⁴² For example, in Sudan (OSRO/SUD/622M—24 million USD; OSRO/SUD/623M—25 million USD), Somalia (OSRO/SOM/124—50 million USD) and Ethiopia (GCP/ETH/083—13.7 million USD).

⁴³ There has been some change in IFAD in this regard with the shift from PMMS to GRIPS in 2014, see annex 4.

⁴⁴ As confirmed by IFAD staff during the review of the JES (telephone meeting of 27 February 2015).

Programme in Ethiopia Phase 2 (US\$39 million)⁴⁵, and very small ones such as the FAO Uganda nutrition campaign and the IFAD grant to the Kenya Tuvilini Trust (each one with a budget of about US\$33,000).

80. Projects and programmes with a pastoral-oriented component. In this subset, there is reference to pastoralism in the objectives and/or title, as part of a broader spectrum of activities. They represent about 45 per cent and 42 per cent of IFAD and FAO inventories. This category includes bigger projects both in terms of budget and duration, the magnitude of which is not necessarily reflected in the pastoral component, for example IFAD's Agricultural Sector Development Programme-Livestock in Tanzania (US\$360 million over nine years, with a 'pastoral' component close to a negligible size), and the FAO project on 'Livelihood Support to Pastoral, Agro-pastoral, and Riverine Households in Southern Somalia' (US\$19 million over six months).⁴⁶
81. Projects and programmes with no evident focus on pastoralism as such. These are projects with no reference to pastoralism in their title or description. They were included in the comprehensive inventories because of activities in the livestock sector or, sometimes, with Internally Displaced Peoples in drylands areas or pastoral households. In the case of FAO, these are often projects targeting 'agro-pastoralists' rather than pastoralists, but with a focus on sedentary activities (para 112, 114). The existence of this subset, representing respectively about 10 per cent (IFAD) and 37 per cent (FAO) of the comprehensive inventories reflects a weakness in the record systems suffered by both agencies when it comes to identifying their engagement in pastoral development (this point is discussed in detail in Ch. 5 section A and, for IFAD, annex III).
82. In light of these subsets, the category of 'pastoral-oriented' projects with which the JES has operated in analysing the scale of engagement and investment based on the agencies' comprehensive inventories, represents not only a proportion of total projects and investments, but also a gradient of relevance with significant difference between the extremes.

Table 1
Analysis of the inventories by project focus & budget*

<i>Pastoral relevance</i>	<i>IFAD</i>		<i>FAO</i>	
	<i># of projects</i>	<i>Allocation (USD M)</i>	<i># of projects</i>	<i>Allocation (USD M)</i>
Pastoral focus	14	213	34	60
<i>Average per project</i>		15		2
Pastoral component	14	604	69	145
<i>Average per project</i>		43		2
Total 'pastoral'	28	818	103	210
No evident pastoral focus or component	3	28	60	173
<i>Average per project</i>		9		3
Grand total	31	845	163	383
<i>Average per project</i>		27		2

* Budget refers to the entire project (no disaggregated figures for components are available). Average duration of projects in the three categories is respectively 47, 97 and 60 months for IFAD (average, 72), and 21, 14 and 25 for FAO (average, 20).

⁴⁵ This amount refers only to the IFAD financing of the loan. The full project costs co-financed by the World Bank is US\$138,719,000).

⁴⁶ This project, prepared at the time of the acute famine in Somalia and mostly focused on Cash For Work, was eventually stretched to 3 years with a budget of US\$50 million.

Domains of interventions

83. IFAD and FAO classify interventions in slightly different ways with a more detailed differentiation in the provision of services by IFAD, e.g. education, commercialization, micro-finance, human and animal health.
84. In IFAD, once a project is approved by the Executive Board, a 'project type' is assigned. Projects are classified with reference to the component that represents 50 per cent or more of the project's costs, excluding Project Management and M&E. If no component represents more than 50 per cent of the costs, the project is classified by default under the type 'Agricultural Development'.⁴⁷ As pastoral components are rarely the main project component, this system further contributes to the 'invisibility' of the engagement in pastoral development.
85. IFAD's and FAO's focus during 2003-2013 is summarized in table 2 (including only projects with a recorded pastoral focus or pastoral-oriented component, para 79-80). The activities repeated most frequently in the FAO subset is 'food security/human health' followed by 'emergency', including both disaster risk reduction and management, and 'animal health/veterinary services'. In the case of IFAD, the bulk of interventions are in 'capacity-building', followed by 'commercialization', 'natural resource management' and 'animal health'.

Table 2
Domains of intervention by frequency*

Domain	FAO (103 projects)		IFAD (28 projects)	
		rank		rank
Commercialization	5	11	16	2
Natural resources/rangelands management	13	6	16	2
Animal health / vet services	20	4	15	3
Animal feed	7	10	1	11
Animal restocking	2	12	0	
Agricultural inputs	8	9	2	10
Increase animal productivity	9	8	3	9
Food security/nutrition/Human health	47	1	7	6
WASH	2	12	1	11
Education	0		2	10
Pastoral infrastructures	8	9	10	4
Capacity-building	16	5	21	1
Institutional building	10	7	8	5
Microfinance	0		6	7
Emergency reactive	38	3	3	9
Emergency proactive	42	2	4	8
Information service	5	11	1	11
Policy dialogue	9	8	8	5

* Includes only projects with a focus on pastoralism or a component focusing on pastoralism (para 79-80). The identification of the activities is based on the project title or description as appearing in the IFAD and FAO databases (source: OED and IOE). The same project can be counted more than once, hence the differences in the totals.

⁴⁷ With the exception of 'Settlement' and 'Programme Loan', which are supposed to be directly selected (IFAD 2012c: 17).

C. Allocations

86. IFAD uses two main forms of funding: loans and grants.⁴⁸ Loans, the most important form of financing by IFAD, require a manifestation of interest by a government (sometimes represented in market terms as 'demand'). This makes it difficult for IFAD to engage in pastoral development when pastoralism is the object of exclusion, when the policy environment is antagonistic to pastoral systems, or simply when pastoralism is not seen as a development priority. IFAD's loans, on average, represent a contribution of about 50 per cent of the total cost of projects, the rest being covered by the government and other donors. The leverage role of IFAD funding is clear.
87. Small projects with a clear pastoral focus are often funded through grants. In large projects, where the engagement in pastoral development is represented by one or two components, loans are clearly dominant, in number as well as in amount. During 2003-2013, IFAD approved a total of 902 grants (over 60 per cent of which, regional and global) for a sum of US\$480 million or 6.4 per cent of the total budget for operations. Seven of these grants were allocated to pastoral-oriented activities, for a total of US\$2.5 million (0.5 per cent of all grants).
88. IFAD policy for the allocation of grants focuses on two areas: (i) pro-poor research and innovations; and (ii) capacity-building. Overall, the profile of recipients is diverse, ranging from research institutions (31 per cent, with 22 per cent to CGIAR)⁴⁹; civil society organizations (26 per cent); inter-governmental organizations (24 per cent, with 13 per cent to the United Nations); member states (17 per cent). FAO is the largest recipient of IFAD grants, with almost 10 per cent number-wise or over 5 per cent of the grant budget (US\$29 million). This ongoing relationship is a possible entry point for exploring collaboration on pastoral issues between the two agencies.
89. From IFAD's overall allocations in loans and grants of approximately US\$7.4 billion for the 2003-2013 period, the proportion that concerned the 31 pastoral-oriented projects in our comprehensive inventory was about 11 per cent.
90. IFAD's system allows an approximate breakdown of project expenditure by intervention. Out of US\$847.5 million estimated to have been allocated to the 31 pastoral-oriented interventions in our comprehensive inventory, about US\$80 million are recorded as allocated specifically to pastoral-oriented activities (see table 3). When recalculated against this figure, the proportion of total allocations used specifically in pastoral development drops to 5 per cent.

Table 3
IFAD allocations 2003-2013 (US\$ million)

	<i>All allocations</i>	<i>31 pastoral-oriented interventions</i>	<i># of allocations</i>
Grants	480	2.5	7
Loans	6 968	845.0	24
Grand total	7 448	847.5	31
Pastoral-oriented activities	380 (or 5%)	380 (or 44 %)	

Source: IFAD Annual Reports.

⁴⁸ IFAD also uses DSF (Debt Sustainability Framework), a non-reimbursable financial instrument that can be used to part-finance an IFAD investment project in highly indebted countries. As their distinction made no difference to our analysis, for the sake of simplicity, the JES treats them as loans.

⁴⁹ Seven of the top-ten grant-recipients are CGIAR organizations. The International Center for Agricultural Research in the Dry Areas (ICARDA) and the International Center for Research in Agroforestry (ICRAF) rank second and third after FAO in terms of number and financial volume of grants; both organizations received 4 per cent of the total financial volume of grants approved between 2004 and 2013.

91. The FAO budget comes from assessed contributions (General Fund) paid by members as set out at the biennial FAO Conference, and from voluntary contributions from members and other partners. Governments are the main contributors to FAO's voluntary resources. Other United Nations agencies, international financing institutions, the private sector and local authorities also make significant contributions, while the general public can also fund the Organization through its Telefood programme. Voluntary resources are channelled through different funding modalities: earmarked funding modalities such as the Government Cooperative Programme and Unilateral Trust Fund agreements; and un-earmarked funding modalities such as the FAO Multidonor Mechanism (FMM) and the Special Fund for Emergency and Rehabilitation Activities (SFERA).
92. The voluntary contributions provided by members and other partners, support technical and emergency and rehabilitation assistance to governments, for clearly defined purposes linked to the Strategic Framework, as well as providing direct support to FAO's Programme of Work and Budget. Since the 1990s, pastoral interventions in FAO are funded mostly through voluntary contributions using the different funding modalities.
93. The total budget of FAO projects approved in the period January 2003-December 2013, including both extra-budgetary funded initiatives and the Technical Cooperation Programme of the Organization, was US\$7.8 billion allocated to 7,142 initiatives. Of these, US\$380 million was allocated for the 163 projects in the comprehensive inventory, corresponding to 5 per cent of the total allocated resources. FAO's current financial reports do not allow extracting information on the share of this amount that (within projects) was specifically allocated to pastoral-oriented activities. With 26 per cent of these funds (US\$60 million) allocated to emergency activities spread over 80 per cent of the projects (see tables 4 and 2), the average amount per activity seems modest (US\$0.5 million).
94. IFAD and FAO group domains of interventions in slightly different ways, as shown in the two diagrams below. However, taken together, IFAD's categories of commercialization, animal health, human health, education, capacity-building, and microfinance can be seen as corresponding to the FAO category of 'access to service and markets'. When the classification is reorganized in this way, the repartition of allocations shows no major differences between the two agencies (see table 4).

Diagram 1. IFAD funding per category of intervention in pastoral projects

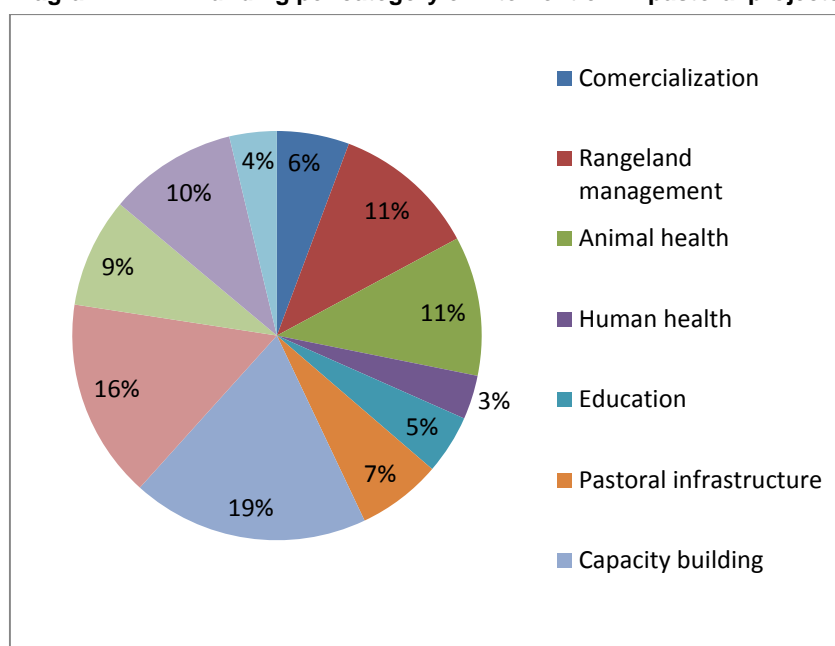


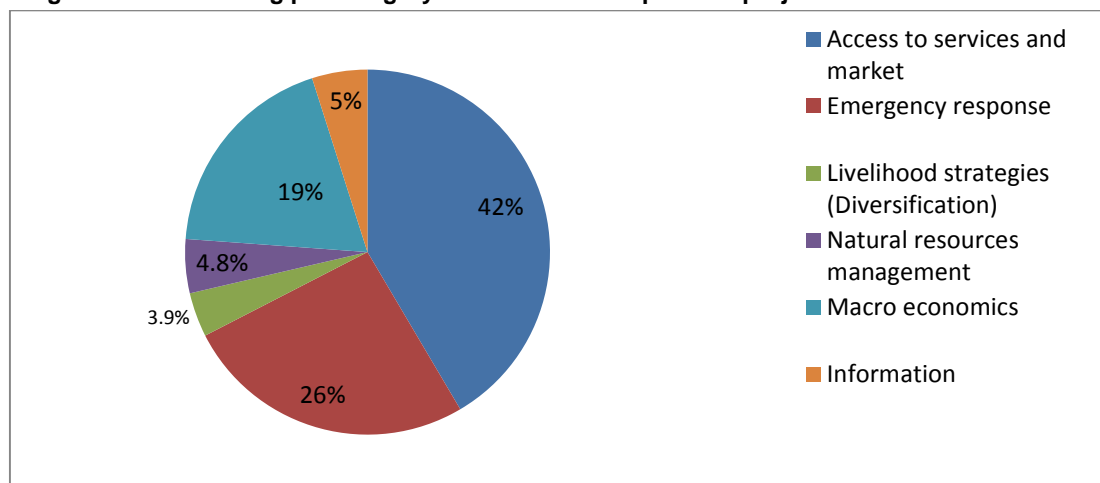
Diagram 2. FAO funding per category of intervention in pastoral projects

Table 4*
Distribution of allocation (merged domains)

<i>Domains (merged IFAD-FAO)</i>	<i>FAO (163 projects) % of funding over the set</i>	<i>IFAD (31 projects) % of funding over the set</i>
Policy arena	19%	4%
	Macroeconomics, Livestock Emergency Guidelines and Standards, private sector, livestock trading, health certification, strategic animal production	Policy dialogue
Institutions /governance herders and communities	- (aggregated with 'access to services', 'policy arena', and 'natural resources management')	16%
		Institutional building
Risk management	5%	10%
Information, Climate Change Adaptation, Early Warning Systems		
Natural resources management	5%	18%
Water management, land tenure, pasture management or improvement, mediation for peace		Pastoral infrastructures (7%) Rangeland management (11%)
Access to services and markets	42%	53%
	(includes: veterinary services, public health infrastructures, extension services, animal services infrastructures, capacity-building, education, water & sanitation, milk & dairy products)	Commercialization (6%) Animal health (11%) Human health (3%) Education (5%) Capacity-building (19%) Microfinance (9%)
Diversification of livelihoods strategies	3.9%	Na
Emergency interventions	26%	Na
	100%	100%

Source: FAO-OED, Pastoral Interventions, brief for the JES, November 2014; IFAD-IOE, Trends in IFAD Financing of Pastoral Projects, brief for the JES, September 2014.

* Any discrepancies in the totals are due to rounding of the figures.

D. Changes in interventions and allocations 2003 – 2013

Changes in interventions

95. In IFAD, there have been recent recommendations to focus investments on areas with the highest concentration of poor in order to enhance effectiveness and efficiency and favouring the measurement of impacts, e.g. in the 2013 Mali CPE, although the issue is also being discussed beyond the context of Mali. A systematic change in this direction can be expected to impact negatively on the engagement in pastoral development in two ways. First, because it would further concentrate interventions in settlements. Second and more generally, because low demographic density may shift attention away from pastoral regions. Similar arguments apply to doing nothing to support pastoral systems and the logic that hinges on them in the use of the drylands, with the expected consequences of increased conflict and rural-to urban-migration (with fast-growing urban slums), and a growing feeling of neglect and abandon by the state among youth (e.g. de Haan et al 2015).
96. With the new Somalia Resilience Programme 2012-2015 [064], which includes the development of basic services accessible by mobile populations, FAO is engaging in an innovative approach of cooperation and co-financing with World Food Programme and UNICEF Somalia, plus an NGO consortium. The three United Nations agencies will share a common framework of monitoring and evaluation. This will include a household budget survey (baseline) and the use of the comprehensive databases from FAO, World Food Programme and UNICEF. The agencies will also lead in-depth community consultations (qualitative). As this programme gives attention to pastoral mobile populations and the provision of mobile services [064], it might represent a significant step towards a monitoring and evaluation system specifically sensitive to pastoral resilience.
97. The adoption of gender policies in both agencies in 2012 and the introduction of 'gender' as a distinct parameter of evaluation, has resulted in an increased attention to this dimension in evaluations and project design.

E. Methods of evaluation and pastoral development

98. Evaluation benefits from powerful apparatuses in both agencies, with independent departments—IOE for IFAD, OED for FAO—endowed with substantial human and financial resources, representing the agencies' commitment to accountability and lesson learning.
99. During the 2003-2013 period, evaluation policies have been designed and revised, with strong guidelines being produced. IOE-IFAD produced an evaluation manual in 2009 currently being revised; OED-FAO redeveloped a questionnaire on project quality where all evaluation criteria are scored according to a six-point scale, similar, although not identical, to the rating system used in IFAD.
100. Both agencies use a rating system from 1 to 6 over 16 criteria of performance, including a specific focus on 'gender'. An analysis of ratings carried out by IOE for the JES found no significant difference in the case of pastoral-oriented projects. Over all evaluation criteria, pastoral-oriented projects have an average rating of 3.88, while IFAD's average, for the same period, is 4.02. The most remarkable difference, although still small, is in the 'impact on household income and assets' (3.8 vs 4.3). The difference in rating for 'efficiency' is 0.3 (see annex IV).
101. A review of the core sample points to relatively limited expertise in pastoralism in the evaluation teams. Based on the lists of team members and their expertise as provided in the documents of evaluation (for a total of 217 experts), only four evaluations (10 per cent) included in their teams consultants with expertise in pastoralism (six individuals in total, including two team leaders [08; 025]) (annex

- VI).⁵⁰ Considering that the projects officially focusing on pastoralism in 2003-2013 were an average of about 30 per cent (45 per cent for IFAD and 20 per cent for FAO, see para 79 and table 1), 3 per cent of pastoral expertise in the evaluation teams, or even 10 per cent of evaluations, seems out of balance.
102. It is evident that the existence of pastoralism expertise in the evaluation teams—an expertise that is distinct from conventional expertise in livestock development or range management and which often uses fundamentally different theoretical frameworks—is a deciding factor for the visibility of IFAD's and FAO's engagement in pastoral development and for these agencies' capacity to learn from their own activities in this context.
 103. There is an analogy with gender, where it is now well understood that in order to secure the visibility of women's contribution and perspective it is necessary to embed specific expertise and dedicated parameters in the process of evaluation.⁵¹ As it used to be, and in part still is the case, with regard to gender, also with pastoralism there is a lack of 'sensitive' baseline studies. There is no systematic attention to pastoral-specific indicators such as access to milk and the state of the milk economy, both formal and informal), or the modalities of pastoral mobility, in relation to productivity, risk management, and resilience.
 104. For reasons that span from reducing costs to adapting to insecurity, the general approach to evaluation and project design in the two agencies is shifting away from long fieldwork (up to four weeks) and direct contacts with final beneficiaries, towards desk reviews and national-level focus. Distancing project design and evaluation processes from the field reduces the scope for participatory approaches, although there are important exceptions.⁵²
 105. In conclusion, an important issue emerging from this analysis is that, at present, IFAD and FAO have difficulties to effectively represent to themselves their own engagement in pastoral development through the current systems and databases.

⁵⁰ This calculation is based on 40 evaluation teams including both FAO's and IFAD's evaluations. (034 and 035 had the same team; 039 and 042 were counted as one as they had identical terms of reference). The figure of 3 per cent for pastoralism expertise was obtained by counting the team members recorded in the evaluations as pastoralism experts (1 per cent) plus a few more recognized as such by the JES team although not recorded as such in the evaluation document.

⁵¹ An interesting example is the 2013 *Evaluation of FAO's Cooperation in Somalia 2007-2012* [025], where both pastoral and gender expertise highlighted the exclusion of pastoralists by interventions focusing on post-production stages of the value chain (meat commercialization), while 'gender has been badly neglected in monitoring so far', in spite of the new corporate strategy on gender.

⁵² In the IFAD PRODAM programme in Senegal, the midterm review of Phase I experimented with a 'popular evaluation' exercise, leading to important lessons for the preparation of Phase II, both from pastoralists (a minority in the programme's target, that would otherwise have been much more difficult to represent), as well as from women and youth.

Key points

- An engagement with pastoral development appears highly relevant to IFAD's and FAO's strategic frameworks.
- The scale of engagement has been around 5 per cent of total allocations for IFAD (31 projects) and less for FAO (163 projects). Projects in Africa are the majority.
- Most interventions have been in capacity-building, rangeland management, and animal health (IFAD); emergency, policy arena, and veterinary services (FAO).
- In IFAD, ratings of pastoral-oriented projects, are almost identical to average ratings for other projects, including efficiency.
- Very few experts on pastoralism (3 per cent of evaluators) were part of the evaluation teams for projects officially focusing on pastoralism (30 per cent of sample). IFAD's and FAO's engagement in pastoral development remains at the periphery of institutional memory and learning processes.
- IFAD and FAO have difficulties to effectively represent to themselves their own engagement in pastoral development through the current systems and databases.

V. Analysis of FAO and IFAD interventions on the ground

106. IFAD and FAO have carried out important and useful work in the field of pastoralism for several decades. Engaging with pastoral issues at all was a brave decision considering the huge challenges which range from practical and institutional constraints to the fact that the foundational knowledge in pastoral development has been fundamentally transformed and is still adjusting. The initial decision was backed up by the full weight of the two organizations (e.g. FAO 1977; IFAD 1987; Swift 1988a; Swift 1988b). Notably, IFAD largely resisted the temptation to argue that pastoralism was a historical anachronism and that a much greater impact per dollar could be obtained by funding farming instead of herding.
107. The two agencies also engaged in a certain amount of advocacy on behalf of pastoralists. FAO work on pastoral risk in Central Asia, especially Mongolia, reflected the new thinking about pastoralism, as did work on pastoral food security and the ways in which pastoralists and farmers were engaged with it on different terms. Much IFAD work on pastoral organizations and pasture tenure has reflected the changing perceptions of pastoralism and IFAD has taken some rather hesitant steps in the right direction. Occasionally, projects by IFAD and FAO and their partners have been at the forefront of thinking on pastoralism.
108. This chapter presents the main findings from the analysis of the core sample. The references to 'projects' or 'interventions' are made on this basis. There is obviously a big difference between seeing a project through and reading about it. While the scope of the JES could not have been covered without relying on the evaluations, we fully acknowledge that the reality at project level might at times have been more complex and nuanced than what is captured here. On the other hand, it is also fair to expect that, had an evaluation failed to pick up on good work on pastoralism, this would have been highlighted and addressed by the project management during the process of feedback while finalising the evaluation document.
109. The chapter starts with an overview of the sample based on a simple quantitative analysis and then addresses the JES evaluation questions. The first question concerns the contribution to reduce poverty and hunger, crucial to the mandates of IFAD and FAO. The others examine six dimensions of pastoral poverty reduction as identified by the JES vis-à-vis the strategic objectives of IFAD and FAO: resilience building and risk management, institutional development, promoting gender equality, sustainable natural resource management, advocacy, and learning.

A. Overall considerations

110. The evaluations of pastoral-oriented interventions selected and analysed for the JES are remarkably silent about pastoralism, although with important exceptions. Likely explanations for this relative silence are: (i) in most projects, even 'livestock'-oriented interventions, often including fisheries, represent just a component, only exceptionally above 20 per cent and sometimes as small as 5 per cent, including in areas where livestock-keeping in pastoral systems is the main livelihood option and the driving economic force (e.g. in Darfur, Somalia, or the Ethiopian lowlands);⁵³ (ii) the focus of livestock-oriented interventions is often on sedentary producers, both in terms of area-targeting and community-targeting; (iii) evaluations mirror this imbalance with the limited expertise in pastoralism in the teams.

⁵³ In Niger, a Sahelian country where pastoral systems represent the main livelihood strategy and source of resilience for most of the rural population (including large numbers of dryland farmers) the last evaluated COSOP (2006-2010) had pastoral interventions in one project out of six, the Programme Special pour le Niger (PSN). The PSN I and II had one component focusing on pastoralism, corresponding to respectively 17 per cent of the cost of phase I (4.37 per cent of IFAD's investment in the six projects) and 31 per cent of the cost of phase II [013: 99; 08: 4].

111. Some 10 per cent in the core sample do not contain reference to 'pastoralists'. In the evaluations, the crucial concept in the new understanding of pastoral production and livelihood, 'mobility', showed up 21 times in 8 documents (one of which had 10 hits). If 'migration', 'transhumance' and 'nomadism' are included in the search, an extra 78 hits are obtained, for a total of 99 hits distributed in only about 20 per cent of the evaluations. The term 'camp' (including kraal), another revealing indicator of engagement with pastoral systems, shows up only in 5 evaluations (42 hits, 36 of which concentrated in 2 documents). By comparison, searches for 'village' and 'seed' returned, respectively, more than 1,300 and 1,200 hits.
112. Within the new understanding of pastoralism and the drylands, 'farmers', 'agro-pastoralists', or 'settled pastoralists' represent all good entry points to a complex system of dryland production and livelihood strategies hinged on taking advantage of variability, and in which pastoral systems are the main integrating force (para 29). However, this is not the perspective applied within the evaluations in the sample, where these categories are used in the traditional, reductionist way, to represent boundaries rather than relationships, and embedding the notion that any degree of crop-farming distinguishes some dryland livelihoods from others in a stable and clear cut way.
113. For most project evaluations, supporting 'pastoral and agro-pastoral communities' means supporting them in sedentary activities whether through the provision of agricultural inputs (seeds, implements, animal traction, or training), small-scale irrigation (if for fodder cultivation); village committees; village water infrastructures; or through value-adding technologies for the sedentary processing of livestock outputs (e.g. production of feed supplement, 'improved' breeds for small feedlot operations, milk processing for dairy operations). Even in restocking, there is an emphasis on 'house-based' species or schemes such as poultry, rabbits and pigs, or goats for fattening (e.g. 'chèvre à la case'). In Somalia, a project in Support to Pastoral Livelihood Development targeted the post-production side of the value chain (butchers, slaughterhouses, meat vendors, traders) [043]. Although a focus on sedentary activities and post-production does not necessarily exclude relevance for producers in pastoral systems, relevance cannot be automatically assumed either. However, there is usually no indication in the evaluations of how the project engaged with securing the links between a focus on sedentary activities and post-production and the objective of supporting pastoral livelihood.
114. The imbalance in focus, away from pastoralism, includes the work on information systems. Milk is not mentioned in the concept note and evaluation of a project on Nutrition Surveillance in Somalia [049], nor in the evaluation of a project in Support to Food Security Information System in Ethiopia [044]. Livestock/pastoralism data remain marginal or external to food security information systems, for example, the 'Somalia Food Security Integrated Data Base' [025]. There are, however, important exceptions which are addressed in detail in the next section.
115. The 2009 Sudan CPE remarks, on the Western Sudan Resources Management Project, that 'though UNOPS⁵⁴ supervision missions were regular and useful, they gave little precedence to the follow-up and assessment of the natural resources and range management components. Indeed, little was reported about interventions, constraints and issues related to range management, with the exception of supervision report 2007 for Western Sudan Resources Management Project, thanks to the presence among the supervision team of an international range management expert. The UNOPS missions have often included a gender and

⁵⁴ United Nations Office for Project Services (UNOPS).

community expert and the community component has always been highlighted' [012: 43].

116. Some evaluations do offer valuable insights on the ways the projects did or didn't engage with pastoral systems. However, with pastoralism being a small component in a much bigger project, such observations remain out of the recommendations or the executive summary, therefore substantially out of sight to the process of appraisal.⁵⁵ This inevitably affects the learning process.

B. Reducing poverty and hunger in and around pastoral settings

117. This main strategy area concerns directly both the core mandate of IFAD and the first fundamental goal of FAO. Both agencies operate with the UN-MDG1 poverty threshold, but also understanding poverty as linked to historical forms of exclusion and an 'uneven playing field', and emphasize their role as enabling excluded people to exercise their full potential (Ch. 3.A).
118. As one would expect, most projects in our sample include reducing poverty among their objectives. Overall, the evaluations found them moderately satisfactory in reaching this objective. However, there is usually a call for caution against the background of two fundamental drawbacks (i) targeting (of interventions and beneficiaries) was almost always found inadequate; and (ii) monitoring was often found weak or inappropriate (e.g. lack of a baseline study). The JES therefore found that for the period under consideration it was not possible to assess reduction in hunger or poverty through the evaluations.
119. There are, nevertheless, some positive highlights, especially with regard to strengthening the household's economy following on from animal health interventions with the training of Community Animal Health Workers in FAO projects, and in community-based participatory approach to institution-building in IFAD projects, used to help identify and manage key resources and/or conflict.

Project design and implementation

120. When designing programmes to engage with pastoralism, challenges start from the agencies' infrastructure: the thematic and disciplinary lines along which the agencies are organized and the practices through which they become aware of their own activities, such as, for example, the systems used in classifying projects and interventions. Neither IFAD nor FAO have a team working specifically on pastoral systems or a systematic way of disaggregating pastoral-oriented interventions from their portfolio. In IFAD headquarters, technical advice on pastoralism was, up until recently⁵⁶, nested in one worldwide 'livestock and fisheries' position. There is no framework to analyse unintended systemic effects on pastoralism from projects concerned with other areas of intervention—a dimension that would be highly relevant with groups historically at the periphery of development.
121. Most evaluations lament a lack of data at project level for key evaluation criteria. Several, mention poor project design [09; 014; 017; 018; 037; 040; 044; 045; 047—exceptions are 06; 021; 022], the absence of baseline studies [06; 014; 015]⁵⁷, and sometimes an erratic follow up process, including for non-pastoral-oriented components [09; 014; 026; 044]. In some cases, the problem concerns the early phases of the project but lessons learned are incorporated into the design of the later ones (e.g. the ILPD in Syria: 016 and 053).

⁵⁵ For example, the documents of 'management response' (to the evaluation) examined as part of our sample, only engage with the recommendations.

⁵⁶ Since December 2014 a Senior Technical Specialist has been recruited to cover fisheries and aquaculture.

⁵⁷ In one case, plans for a baseline study were implemented four years after the beginning of the project [015].

122. Several documents remark that data on impact and effectiveness are limited to the accountancy of outputs⁵⁸—the number of ‘items’ delivered: livestock; services; numbers of animals treated or vaccinated by owner and location [03; 09; 014; 032; 025]. Sometimes, the project and the evaluation seem to operate with the assumption of a linear relationship between the creation of infrastructures and the creation of wealth. In Tunisia [017], the impact on poverty is measured by the number of hectares of rangelands supposedly opened by creating new wells. It cries out for a reflection on management, e.g. potential conflict over access, entitlements, or sustainability, as, in the absence of appropriate management framework, more rangeland may lead to increased relative poverty, if the elite monopolizes the new resource or conflict arises, while poorly managed water infrastructures in the drylands rapidly lead to land degradation.⁵⁹
123. In Sudan [029], groups of women involved by the project in a cheese-making activity were immediately put out of business. The project had assumed that business was centred in town and considered the local context as a blank canvas for its technical package. In reality, the town-based women in the project faced competition from highly mobile businessmen able to secure milk at a lower price by establishing temporary industrial units near seasonal pastoral camps in the bush.
124. Poor monitoring can be expected to have a particularly strong impact in the context of pastoral development. The fundamental changes necessary in catching up with the U-turn in pastoral development theory depend on effective monitoring of practices and awareness of the assumptions behind them.

Targeting

125. A detailed account of IFAD’s targeting found that most projects could not identify and characterize target groups or capture their diversity and specificity (IFAD-IOE 2013). Somehow emblematically, the study on targeting itself does not address pastoralism specifically and even livestock is mentioned only 3 times (farmers and crops are mentioned more than 40 times). Besides, targeting pastoral poverty presents its own challenges associated with the specificity of pastoral settings, the inadequacy of standard typologies and the ongoing process of re-qualifying and updating the analytical tools to work with pastoral systems.
126. Animal-health services, the largest slice of FAO livestock-oriented interventions beside emergency, is ambivalent in this respect, depending on what producers were effectively reached. Large-scale vaccination campaigns are driven by epidemiological concerns, a perspective, within which, livestock mobility is usually viewed as a problem. Interventions can be successful in delivering a particular sectoral output while remaining tangential to the system of production as a whole [029; 045]. For example, anti-parasite treatments focus on treating individual animals (in herds and flocks), but we found no reference to tackling ‘systemic’ hotspots of infestation like mechanized water points that generate huge concentrations of livestock and designated grazing areas along the transhumance corridors. A systemic approach would include going beyond the technical input and facilitating and supporting processes of organization among the discontinuous users who are very busy herders traveling to the facility 1-3 times a week.
127. On the positive side, evaluations praise the efforts on animal health inspection and certification for export (e.g. in the Horn of Africa) and the development of veterinary field services [037; 040; 045; 047]. In particular, the training of Community Animal Health Workers (CAHWs) is consistently found effective in reaching ‘pastoralists’ [026; 029; 035]. However, the ‘upgraded’ version, the

⁵⁸ For a discussion on the implications of using outputs vs outcomes, see Perrin 2006.

⁵⁹ The evaluation mentions that ‘a concerning trend is reported by the PCR, namely growing water salinity [...]. The PCR gives no explanation on whether increased water salinity could be the result of more widespread water pumping from boreholes funded by the project’ [017: 6].

Community Animal Resource Development Associates (CARDA), meant to engage more with production, was not used with mobile producers in the projects covered by this study [027]. Besides, the added requirement of literacy creates a barrier for herders and women, who are those competent in animal care and production.⁶⁰

128. Targeting poor pastoralists with the conventional knowledge-based approach has high transaction costs even in relatively data-rich countries. In Mongolia, targeting within the Rural Poverty Reduction Programme (RPRP) [018] ended up excluding less than 10 per cent of the rural population within the project area; the Project for Market and Pasture Management Development [050] had a similar problem. There is also always the danger that the local population will not understand this level of targeting and the project reputation will suffer. The evaluation of RPRP [018] points out that transaction costs of targeting aid should not exceed its benefits. Blanket targeting was used in Ethiopia [011], Morocco [010], Senegal [021], Eritrea, and Syria [016]—in combination with a group-based approach, recognising the strengths of family, clan and tribe.
129. A shortfall in ‘reading’ the local context is often highlighted. Some evaluations refer to a use of technical packages as off-the-shelf products with little or no room for adjustment [031; 032; 049]. The 2004-2009 programme in South Sudan (over US\$200 million), failed to adapt its approach to the needs and challenges of the changing situation with respect to state-building priorities and the necessity of engaging with peace-building efforts [037]. In the Sudan, a good call to balance the contribution to internally displaced people (IDP) with a similar contribution to the pastoralists who had lent them land to farm resulted in extending a distribution of seeds to the pastoralists [029]. In Tajikistan, fodder cultivation activities were extended, unchanged, to high-altitude sites where the benefits in terms of income did not compensate the labour costs [04]. One project in the Horn of Africa started without adjustments and with more than two years delay although the emergency it was supposed to address had disappeared [047].
130. Sometimes, failing to read the local context results in interventions that, albeit targeting vulnerable pastoralists, actually benefit other groups. This appears to be often the case in interventions with an underlying goal of increasing off-takes for marketing, particularly exports, maybe assisted by modern processing technologies and input-intensive breeds. Vulnerable pastoral producers rarely have enough animals to take advantage of export-focused interventions. Besides, their main priority is rebuilding a productive herd or flock, with an effort to reduce off-takes, not increase them [07; 016; 030; 043; 048]⁶¹. The evaluation of a project of technical backstopping in Darfur (Sudan) found that: ‘Nomadic groups in particular were somewhat marginalized by the projects [034: 33]. Awareness of a tension between reducing rural poverty and opening the local economy to the global market is reflected in one of the objectives of the Arhangai Rural Poverty Alleviation project in Mongolia which aims to: ‘facilitate the transition of the livestock industry and its support services into the market economy, while minimizing personal economic loss’ [09: 10, emphasis added].
131. In Somalia, the evaluation team found the project’s focus on post production stages such as packaging and branding, ‘neither relevant nor practical’ in light of

⁶⁰ An FAO study in Northern Kenya ranked qualities expected from Community Animal Health Workers (CAHWs) according to groups of policy makers and livestock keepers. The three most important qualities according to the policy makers were ‘literacy’, ‘training’ and ‘ethnic to the area’, whereas livestock keepers wanted ‘trustworthiness’, ‘commitment’ and ‘responsibility’ (Riviere-Cinamond and Eregae 2003).

⁶¹ This is not to say that supporting marketing increases vulnerability. The problem is in the detail, particularly in the ‘single-path’ approach to problems and solutions. Different groups of people engage with marketing in different ways. There is no ‘best’ way across these differences. Supporting marketing *the way wealthy people would engage with it*, on the medium/long term, supports wealthy people even if the intervention targets the poor. A systemic approach to supporting marketing in poverty reduction would start from understanding in which ways the poor people in the target group effectively engage, and can engage, with marketing.

declining livestock numbers and the need for 'value-addition at the production end of the chain' (i.e. animals in better form) to overcome the bottleneck of high rejection rates on export markets [025: 28]. In Morocco [010, *Projet de développement des parcours et de l'élevage dans l'Oriental (PDPEO)*], the local agriculture authority (DPA)⁶² found that, during the period of the project, the wealth gap between large livestock owners and small producers increased by over 150 per cent, leading many of them to exit the system and migrate to towns. The evaluators felt the need to claim that 'it is difficult to conclude that the project contributed to this process of impoverishment' [010: 32].

132. Targeting is not only defined by the choice of the beneficiaries and achieved by ensuring delivery of benefits, but also embedded (intentionally or unintentionally) in the choice of the benefits and the underlying assumptions about the context. Benefits assuming a sedentary livelihood and concerning crop farming (e.g. seeds, farming tools or irrigation) will eventually benefit sedentary farming even when 'targeted' at pastoralist beneficiaries. Similarly, a project targeting poor elderly women with a restocking scheme, but using an input-intensive breed that can only be maintained by wealthy producers, will eventually benefit the latter as the animals can only end up in their herds or die. The elderly women will have been just a stage in an indirect process in which wealthy producers secure expensive animals at a subsidized cost.⁶³
133. The poor contextualization of design and implementation also means missing opportunities to build on ongoing processes of spontaneous modernization. For example, there is little mention, in the evaluations, of the new technologies that are already transforming pastoral livelihoods: motorbikes, portable motor-pumps, bladders,⁶⁴ phone banking, markets information or paying medical and veterinary services over smart phones, and resource mapping using Google earth.
134. Weak targeting is of particular relevance to pastoral development where conditions are atypical and interventions take place on the back of a legacy of ill-oriented efforts. Therefore flexibility in design and implementation and the capacity to learn and adapt are critical to success. There is little evidence of innovation in this direction in our sample of ongoing projects.

C. Increasing resilience and strengthening pastoral risk management

135. Resilience is a relatively new concept in development rapidly gaining recognition as an effective way of summarising objectives of particular interest with regard to pastoral livelihood systems. A recent study commissioned by the United Kingdom Department for International Development, modelled the impact of droughts on pastoral communities over 20 years, comparing the relative cost of building resilience vs conventional humanitarian interventions (Venton et al 2012). The model showed substantially higher returns from investing in resilience.
136. Virtually every organization has developed its own definition of resilience (FAO 2014 lists 6). The main distinction hinges on the approach to change: definitions within the legacy of equilibrium thinking emphasize self-regulation and a capacity not to change (absorbing, withstanding, recovering, bouncing back); definitions developed from the new resilience thinking in ecology include or emphasize a capacity to change (transformation, reorganization, adaptation). The latter is a

⁶² Direction provinciale de l'agriculture.

⁶³ A similar point has been made with regard to 'targeting' poor pastoralists with interventions aimed at increasing livestock marketing, especially for exports (Aklilu and Catley 2010).

⁶⁴ The local name for flexible water containers, like heavy-duty water mattresses, that can be large enough to water a few hundred sheep for a month, but can be packed empty on the back of a camel (or a pick up), placed where there is good pasture, and filled with a phone-call to a cistern-truck service (now commonly used by pastoralists in certain areas of North Kordofan, The Sudan).

better match with the logic of pastoral systems to interface variability with variability (para 26-28).

137. An emphasis on enhancing resilience in agricultural settings, especially through preparedness and early warning systems, has been part of FAO strategic frameworks since 2000. In IFAD, the concept is used in the 2002-2006 strategic framework, then disappears in the following one but reappears in a central role in the framework for 2011-2015. For FAO (2014) 'Resilience is the ability to prevent disasters and crises, and to anticipate, absorb, accommodate or recover from them in a timely, efficient and sustainable manner. This includes protecting, restoring and improving food and agricultural systems under threats that impact food and nutrition security, agriculture, and/or food safety/public health'.
138. Adopted only relatively recently, the concept of resilience has not yet worked its way through the project cycle to the point where a significant body of evaluations is available. Out of the 163 'pastoral-oriented' projects in the FAO set, 31 mention resilience in the title or in the objectives.⁶⁵ In IFAD, at least in pastoral development, we found it operational only in ongoing projects [050; 051; 052; 053]. The evaluations in the JES sample recommended resilience-building more than measuring its impact [e.g. 018; 019; 024; 025; 032; 045].
139. Risk management has long been a key concern of FAO. In Kenya, FAO supported the development of ALARMP, with its multisectoral contingency plans at district level for which funding can be released based on early warning alerts. FAO has been on the frontline of developing and using the Livestock Emergency Guidelines and Standards.⁶⁶
140. In 2007, FAO published a retrospective analysis of over a decade of work on pastoral risk management, resulting from collaboration between technical divisions of FAO and the Institute of Development Studies at the University of Sussex (Swift 2007). There is only one reference to this document in our core sample.⁶⁷
141. The lack of a risk management strategy is mentioned in several evaluations, especially of IFAD projects [09; 018].⁶⁸ A 'pastoral risk management' component in the joint World Bank/IFAD Pastoral Community Development Project I (PCDP-I) in Ethiopia was evaluated weak and ineffective in its design [011; 014] and later restructured by government to become part of the national machinery for drought-contingency planning, largely focused on the highlands and on crop-farming.⁶⁹
142. In Mali [019] the Kidal Integrated Rural Development Programme had a risk management component but there was little planning about what to do in case of drought early warning. The appraisal omitted to engage with the fact that the project was going to be entirely in an area at high-risk of conflict [019].
143. In Mongolia, the Arhangai Rural Poverty Alleviation Project [09] targeted restocking loans especially to women-headed households, but operated without an adequate strategy for managing the risk of dzud.⁷⁰ A poorly designed and monitored system of livestock insurance made things worse. As a consequence, restocking effectively increased the vulnerability of the beneficiaries (when a dzud hit, killing the animals). Years later, some very poor households were still trying to pay back their

⁶⁵ Seven of these projects are actually phases 1 to 4 and 1 to 3 of two projects.

⁶⁶ <http://www.livestock-emergency.net/about-legs/management-and-funding-of-legs/>

⁶⁷ In an ongoing IFAD project in Mongolia [050], the expression 'institutionalizing pastoral risk' is used, but in a description of the work of the World Bank and the United Nations Development Programme.

⁶⁸ A brief description of the components of a comprehensive pastoral risk management strategy is in [018: annex 14].

⁶⁹ Cf. the following passage from the PCR: 'The ICR [the self-assessment carried out by the World Bank] also notes that the Bank did not adequately follow-up on several shortcomings in design, i.e. lack of outcome indicators, no useful baseline studies, and sequencing issues, especially under the risk management component, which was considered critical to safeguarding the vulnerability of pastoralists' [014: 11].

⁷⁰ When deep snow, severe cold or ice cover (or other conditions) prevent livestock from accessing the pasture, resulting in disastrously high livestock mortality.

- loans [09]. The recognition of the limits of traditional approaches to livestock insurance lead the World Bank to experiment with index-based insurance in Mongolia [09: 21]. The evaluation of the follow-up Rural Poverty Reduction Programme found a persistent problem with the system of restocking through micro-credit vis-à-vis pastoral risk management [018].
144. Even when focusing on dryland areas where the main economic opportunities depend on livestock keeping in pastoral systems, early warning systems and capacity-building interventions are rarely focused on pastoralism. The evaluation of FAO's work in the Horn of Africa between 2004 and 2007 found that the information systems supported as part of the programme 'could be more relevant by drawing more effectively upon [...] better analysis of pastoralist livelihoods' and pointed out that 'Links between food security and livestock information systems in the region are weak despite the condition and movement of livestock being a critical early warning indicator in predominantly pastoralist areas' [045: 9, 50]. Documents on information systems concerned with food security and nutrition in regions where livestock/pastoralism is a critical livelihood strategy make no reference to milk [44; 49]. Livestock/pastoralism data remain marginal or external to food security information systems, for example, the 'Somalia Food Security Integrated Data Base' [25]. In Somalia, 'Progress in developing a coherent approach for monitoring early warning and longer-term indicators for the livestock/pastoralist sector has not advanced as rapidly as hoped' while 'the balance of skills in the FSAU [food security assessment units] does not reflect the importance of pastoral/livestock economy in Somalia' [048: 6, 7].
 145. The same bias is reflected in the capacity-building/training interventions with producers: in Kenya and Uganda most of the field schools have focused on crops [045]. An ongoing project in Uganda to increase resilience to climate change in the pastoral region of Karamoja, set out to organize Agro-Pastoral Field Schools adapted from the Farmer Field School model but only by adding a module on basic animal husbandry in sedentary conditions to what remains a curriculum focused on agro-forestry and cultivation⁷¹ [065; 066].
 146. Three general issues emerge from the analysis. First, there is the challenge of capturing risk-management or resilience factors at the scale of operation relevant to pastoral systems (including regional crop-livestock integration and urban-rural linkages). Most projects used a development approach set by default at the village or household scale. A national resilience strategy produced by FAO Somalia, (in collaboration with UNICEF and World Food Programme) focused at household and community level (FAO, UNICEF and World Food Programme Somalia 2012). As government authorities are key players in setting the policy and economic environment within which production and livelihood strategies operate, interventions need to operate at a scale large enough to include governance issues [025].
 147. Second, there is a need to distinguish between risk reduction and risk management. Work on risk and vulnerability in pastoral development appears to follow in the tradition of treating the two as substantially overlapping [011; 027; 032; 033; 037; 038; 050; 066]. However, in pastoral settings, risk-taking is a constitutive part of the functioning of the production system (para 29-30). For example, mobility, now understood to be the main basis of pastoral resilience, involves taking and managing high levels of risk. Therefore, in engaging with pastoral development, managing risk and reducing risk are strategies that may go in opposite directions: formally risk-aversion strategies aimed at introducing stability (which under structural variability conceal risk or increase it by reducing

⁷¹ Three activities out of nine concern livestock, including: 'skills in basic animal husbandry through season long learning studies; promote appropriate technologies for conservation and strategic use of locally and available feed supplements for animals; fodder bank demonstration' [065: 41].

options), may get in the way of strategies aimed at taking and managing risk associated with structural variability.⁷²

148. Third, there is a need to consider that there are winners and losers from resilience, and that reducing risk in a part of the system may increase it in another (risk always exists for someone and under certain conditions, and whether it is a problem or an opportunity depends on the terms of the relationship).⁷³ The most common strategy to decrease vulnerability, followed by the projects in the sample, has been trying to increase income by increasing production or productivity, typically of the most valuable output. However, the most valuable outputs are usually controlled by the most powerful players. Within a context where a variety of outputs are produced, the weaker players may secure a niche at lower levels of return. This niche may disappear when production is rationalized around the most valuable outputs. If so, the weaker players are made more vulnerable, not less, even if productivity increases. In Lebanon [07] and Nepal [04], the projects introduced 'vulnerability-reduction' solutions that turned out to be appropriate for better-off producers, while the poor households targeted by the interventions found them 'too risky' a way to increase income. In Somalia, the last country level evaluation states that 'livestock interventions may have had a comparatively larger positive impact on wealthier livestock-owning households' [025: xi].
149. FAO has recently developed a Resilience Index Measurement and Analysis model (RIMA), under the Improved Global Governance for Hunger Reduction Programme (co-funded also by IFAD).⁷⁴ The model identifies and weighs factors that make a household resilient to shocks affecting their food security over time. So far, the model does not appear to identify conditions dominated by variability, or production systems adapted to take advantage of such conditions (such as pastoral systems), as a particular case with regard to the building of resilience.
150. If stabilising measures may increase resilience in many situations, introducing stability in systems dominated by variability has been observed to effectively decrease their resilience (see annex II, para 10). Whether or not resilience can and should always be measured by the same rod (or set of indicators) is therefore a pertinent question for an engagement in pastoral development.

D. Building new and better adapted institutions in pastoral development

151. Attention to the institutional dimension and its relationship with rural poverty has a significant position in the strategic frameworks of IFAD and FAO. Governance institutions that are rigidly sectoral, weak, unresponsive, unaccountable to the poor, or hijacked by commercial interests, are all identified in the strategic frameworks as being among the causes of poverty, together with the lack of relevant representation of the poor in the institutions that decide for their lives and equitable access to resources (see chapter 3.A). IFAD's policy on targeting intends to 'enable rural women and men [to] expand their influence over public policy and institutions to shift "the rules of the game" in their favour' (IFAD 2006: 8).
152. Besides conventional typologies by sector (service, land, water, advocacy, microfinance, etc.), the principle of building new and better-adapted institutions in pastoral development, concerns three main dimensions. First, customary pastoral institutions (or customary-formal hybrids), from those regulating collective action

⁷² The editors of a recent book on 'pastoralism, markets, and livelihoods' find emblematic of pastoral strategies of production the following quote from a Chicago Board of Trade official: 'Stability, gentlemen, is the one thing we can't deal with' (Gertel and Le Heron, 2011, p. xv).

⁷³ Representing risk as a relationship also opens up a window on gender-specific differences, not just differences in degree (more or less risk) but also in kind (gender-specific dimensions of risk and opportunities—see section on 'gender' below).

⁷⁴ A description of the RIMA model is available from the website of the Improved Global Governance for Hunger Reduction Programme: <http://www.foodsec.org/web/resilience/measuring-resilience/resilience-model/en/>.

in the management of natural resources, to those overseeing the management of conflict. Second, formal government and non-government institutions associated with relevant aspects of governance and key service delivery, from pastoral codes, formal land tenure regimes, and law enforcement, to the institutions that rule over the design and provision of basic services such as education and health, and key infrastructures such as markets (e.g. animal export certificates in the Horn of Africa [047] or the innovative 2009 Pasture Law developed in the Kyrgyz Republic [056]).⁷⁵ Third, the institutional dimension of the projects themselves, for example as embedded in the funding mechanisms and the procedures of implementation, the temporal and spatial scale of projects, the systems of monitoring and evaluation, the administrative interface with partners and with beneficiaries. In our sample, the work appears to have focused on the first dimension and (to a lesser degree) the second, with little attention given to the third.

153. Adaptive forms of customary institutions still govern many aspects of pastoral life, for example, managing deep wells or overseeing the rules that govern the access to pasture. Such organizations often combine aspects of customary and formal organizations, and a crucial question concerns the relationship between the two. Often, governments and funders create a hybrid partner organization with whom to negotiate project activities.
154. In Mongolia [009; 018], projects used existing pastoral groupings—camps and neighbourhood groups, which are customary institutions, and sub-districts (bags) and districts (sums), which are modern administrative units—as the formal institutional basis for production, natural resource use, service delivery and marketing. In addition, the new Project for Market and Pasture Management Development [050] is developing community-based pasture management through Pasture Herder Groups (PHGs), integrated into district land use plans. These plans are based on geographic Pasture Units defined and mapped with the help of herders through a participatory process.
155. In Senegal [021], PRODAM II supported the Pastoral Units and helped them to organize themselves at the regional level. Together with other pastoral groups and the local authorities, these institutions played a role in decision-making processes for the management of the Ferlo region, negotiating sustainable access to pastures and regulating the drilling of private wells. The evaluation found that IFAD managed to mobilize important partnerships with public institutions, local services, producer organizations, NGOs and research institutes.
156. With a boldly innovative approach, a project in Bolivia [022] transfers the funds to cover the costs of technical assistance directly to local organizations of small producers, who are in charge of deciding how to invest them. In Lebanon [07], the model of women's self-help co-operatives developed by the Rural Women Unit (RWU) was innovative and is probably replicable.
157. In Sudan [012], the Western Sudan Resources Management Project established generally successful Village Development Committees and Community Development Committees, as well as five conflict resolution centres organized into an executive committee and an advisory council built on customary institutions.⁷⁶
158. A project-induced proliferation of community organizations can however be confusing with each donor in its allotted province promoting a different model with different degrees of linkage to kinship and customary political administration, and

⁷⁵ The law was strongly facilitated by the World Bank/IFAD Agricultural Investments and Services Project and its partners. Key elements include: *i.* delegation of pasture management responsibility to community-based inclusive and representative committees; *ii.* a shift in the system of pasture rights allocation, from area-based to a system using 'pasture tickets' to determine the number of animal grazing days and the grazing routes; and *iii.* integrated management of low, middle and upper altitude pastures to allow better seasonal movement of livestock [056].

⁷⁶ An impression of the functioning of one of these centres can be found in a recent study by Tufts University for UNEP (Krätli et al 2013).

each with different powers and funding. Existing organizational forms are sometimes too readily adopted by projects as though they were empty boxes waiting to be filled with whatever ideas on collective action their owner wants to promote. This is a misleading understanding of customary organizations and of the powers of customary office holders.

159. Key aspects of governance in the context of pastoral development include the relationship between central, regional and local government, the institutions that regulate economic behaviour and access to resources, especially land tenure rules and procedures, and the structures of economic production and exchange within customary groupings such as camps and neighbourhood groups. In most of the domains there is a set of formal, modern legal rules and procedures and also a set of customary rules of varying strength. Reforms in land tenure are included among the goals of several projects, especially as part of a 'policy dialogue' component.
160. Several projects engaged with natural resource management and service provision. The institutional dimension is often the weaker aspect of these interventions. Building a well or demarcating a transhumance route is not the same as securing the institutional framework for their sustainable and peaceful operation. Similarly, treating a herd with anti-parasites is on a different dimension from filling up an institutional gap (formal, customary or both) with regard to systematic parasite control in hotspot infestation areas.
161. The figure of the CAHW represents a significant innovative institution in the field of animal health adapted to pastoral contexts. Although the CAHW is not a creation of FAO, the agency contributed to its diffusion. In the Horn of Africa, where the impact of CAHWs is consistently recognized as positive, their anchoring in the legal and institutional context regulating animal health provision remains a weakness [037; 045].
162. Some documents link institutional inadequacy in land tenure with conflict. In Somalia, the evaluation highlights that 'transhumance is becoming increasingly complicated due to the encroachment of farms (especially mechanized farms) on rangelands and to the security restrictions imposed on pastoralist mobility in the South. Land disputes between farmers and pastoralists in such a situation are inevitable; the average reported yearly disputes are estimated at 145 incidents per locality. This number is likely to increase if grazing space is not allocated quickly'. [025: 19]. The design report for the project Supporting the Small-scale Traditional Rainfed Producers in Sinnar State, Sudan, points out that 'Current land use is inconsistent with agro-pastoral economy. Mechanized farming occupies 87% of the land use in the project area. Meanwhile, a total population of 28,600 households (50% total households in project area) who are poor and dependent on crop and animal production for their livelihoods and as their only pathway out of poverty have to contend with 11% of the land use' [052: 99].
163. In Niger, important investments were mobilized for defining and promoting a natural-resource management framework adapted to the pastoral areas [08]. In Tunisia, a good evaluation in this respect was based on positive interaction between the project, research institutes and groups of beneficiaries [03]. In Jordan [015] the project introduced an innovative 'pastoral information monitoring unit' (PRIME) to provide GIS and socio-economic information on the status of the rangeland resources, but the unit was not sustained.
164. Several projects included rural finance components [07; 08; 011; 012; 013; 019; 021; 024], but rarely extended to pastoral communities although exceptions exist [e.g. 09; 018]. Systems of loans introduced in pastoral contexts in absence of a risk management strategy would not represent an institutional improvement or adaptation to pastoral development [018]. In the Horn of Africa, FAO succeeded in setting up a staged livestock certification and trace-back system for exports [025; 047].

165. In some cases, weak or inadequately equipped engagement with governance was detrimental to herders. In Syria [016], the project was based on the assumption that grazing cooperatives (more than 140) would be given security of tenure through pasture group leases of 40 to 99 years. However, influential senior decision-makers who were not herders but had vested interests in the area successfully stalled the process and the project was not able to ensure its premises through a legal framework. In Ethiopia, after the signature of the agreement for the World Bank/IFAD Pastoral Community Development Project (PCDP-I), the Ministry of Agriculture was replaced by the new Ministry of Federal Affairs as the implementing agency for the project. While the Ministry of Agriculture was 'more decentralized [...] experienced on pastoral development issues, and [...] committed to participatory efforts', the 'Ministry of Federal Affairs' management [...] seemed to favour the settlement of pastoralists' (World Bank 2009: 5). The evaluation of PCDP-I found that 'the integration of schools with other basic infrastructure such as water supply, human and animal health facilities, further increased the enrolment of children as their mobility were reduced. This type of "package" infrastructure has contributed to permanent settlement of pastoral families, in particular women and children' [014: 6].
166. The last dimension of institutional interface is one that concerns the projects themselves. So far, this remains largely a territory to be explored. Overall, this often entails building-in procedural speed, flexibility and stronger/deeper links with the field level. In Somalia, FAO moved towards a more community-oriented model of development to build new skills and expand its comparative advantage in directions that can be expected to make it more effective in the engagement with pastoral development [025]. Similarly in Bolivia, IFAD has been experimenting with building on local competence by transferring the power to managing the funds for technical assistance directly to the small producers.

E. Promoting gender equality and women's empowerment in pastoral settings

167. United Nations agencies played a pioneering role in mainstreaming a focus on gender in development. Within IFAD and FAO, the adoption of gender as a distinct criterion in evaluations in 2010, and of dedicated gender policies in 2012, constituted substantial progress in this direction, although recent projects in our sample appear to be still searching for ways of translating this into practice. Gender equality is strongly embedded in the global goal of poverty reduction, which frames inequality as an obstacle. In both agencies gender equality is described in relation to equal voice, more access and control over resources, more equitable balanced workloads and sharing benefits. Both commit to increasing the share of agricultural aid dedicated to interventions relevant to gender equality (by 30 per cent in FAO). Within this overall encouraging scenario, however, the new policies on gender make no reference to its particularity in the context of pastoral development.⁷⁷
168. In 2009, a thematic paper on 'Gender and livestock' produced by IFAD still focused on sedentary farming systems (Rota and Sperandini 2009). A similar publication by FAO includes only passing references to pastoral communities (Distefano 2013). In November 2010, an IFAD grant funded the first global gathering of women pastoralists, held in Mera, India. The participants developed a list of key issues and top priorities for pastoralist women which resulted in the Mera Declaration, 'a call on governments, governing agencies of the United Nations, other relevant international and regional organizations, research institutes and our own customary leaders to support pastoralist women through specific actions clearly articulated in 23 points...' [058]. The Mera Gathering prompted the first IFAD thematic paper on

⁷⁷ IFAD policy on gender has a paragraph on the global gathering of women pastoralists in Mera (in the annex, box 8).

Women and Pastoralism (Rota et al 2012). This paper paves the way for more comprehensive gender and pastoralism strategy or guidelines, but it is still too recent to have influenced the projects submitted to this JES.

169. A brief review of the contribution to gender equality in pastoral-oriented projects was carried out by both agencies as an input to the JES. Out of 20 evaluations examined by FAO-OED, eight found gender equality integration moderately satisfactory, five found limited evidence, and seven no evidence of gender equality concerns in the project documents or during implementation: 'overall, the performance of FAO in integrating gender in its interventions targeting pastoralists groups has been inadequate: although the majority of projects included reference to women as heads of households in their project documents, less than half achieved improving women's livelihoods through access to inputs and to some services. Admittedly, these shortcomings are quite common in FAO's projects in general and there is no strong indication that projects working with pastoralist groups are faring worse than others in terms of gender mainstreaming. Equally, the better performing projects had a gender specialist among their staff'.⁷⁸
170. In the case of IFAD, the review of 20 evaluations produced by IOE⁷⁹ found that 'nearly all projects evaluated made an attempt to address gender equality within pastoral communities especially by offering better access to basic services (education, health care), and by providing capacity-building for women in income generating activities (e.g. dairy products processing and commercialization [015] handcraft, management and dress making [010, 016]. Yet, evidence from evaluation reports do not show that significant changes occurred in pastoral women's income and workload levels'. On the whole, the performance of these interventions has been mainly assessed as moderately satisfactory'.
171. The JES corroborates these findings in both cases. In our core sample, the assessment of the contribution to gender equality scored as predominantly 'inadequate' or 'moderately unsatisfactory'.⁸⁰ Gender analysis—ex ante and ex post—is often described in the evaluations as weak when not altogether missing [e.g. 03; 05; 014; 015; 017; 019; 021; 022; 023; 025; 030; 037; 045; 049]. In Somalia the evaluation saw 'little evidence of FAO's programmes being engendered' [025: 69]; in the Horn of Africa, it was found that 'gender considerations are not sufficiently integrated into FAO's emergency and rehabilitation activities throughout the region, nor evident in the strategic planning process [045: 11].
172. Pastoralist women are usually found by the evaluators to have benefited from the projects through services, income-generating activities, training and microcredit, but often this is simply deduced from aggregated percentages of women, pastoralists and not, among the beneficiaries of project activities. The relevance, effectiveness and sustainability of project activities towards the specific needs and roles of women pastoralists were not assessed.
173. Assessing a project's contribution to gender equality based on the proportion of women amongst the beneficiaries can be misleading, as pointed out in some evaluations. In Kenya [31], a project worked in an area where a strong out-migration of men and the traditional responsibility of women in subsistence agriculture, meant that high participation by women was inevitable. In Somalia, work in a sub-sector dominated by women resulted in above-average scoring for the criterion 'gender' (based on proportion of women involved vs men) [025]—although gender mainstreaming had not been included in the project document and no gender analysis had been conducted [025; 030].

⁷⁸ FAO-OED 2014, *Pastoral Women in FAO's projects: evidence from evaluations*. FAO, Rome.

⁷⁹ IFAD-IOE 2014, *Pastoral women in IFAD's projects: evidence from evaluations*. IFAD, Rome.

⁸⁰ In the definition of FAO, gender criterion, rate 3: 'Gender equality perspective is only superficially integrated in an explicit way in the initiative'.

174. Significant efforts were made in many projects with regard to capacity-building and institutional empowerment targeting women, for example through training, enhanced access to institutions, or the creation of mixed or women-only organizations like the innovative 'self-help cooperatives' developed by Rural Women Unit in Lebanon [07]. Some evaluations state that women were empowered [06; 07; 030], others highlight that women remained under-represented both in absolute numbers and in terms of decision-making roles [016; 017; 031; 027]. Filtering access to technical training on the basis of literacy may introduce a barrier for women. This has been the case, for example, in Sudan with CARDA (Community Animal Resource Development Associates), the 'upgrading' from CAHW [027]: while CAHWs experienced a proportion of women up to 60 [e.g. 035], and Farmer Field Schools up to 30 per cent, the proportion of women in CARDA was as low as 0-5 per cent.
175. On the positive side, an initiative like the Mera Gathering, opening up opportunities for pastoralist women to meet and voice their perspective in the international arena, is an important achievement, if small and so far with limited follow-up even within IFAD. An innovative participatory evaluation 'évaluation populaire' included in a project in Senegal [06] allowed pastoralists, women and youth to make their voices heard, and opened up the opportunity for their participation to the design of the second phase [021], which included a 'gender observatory' run by community volunteers (men/women/youth) and aimed at raising awareness on gender equality.
176. Most projects developed various types of income-generating activities involving women (in the case of IFAD, this included interventions in microfinance). The impact of these activities as sustainable economic empowerment of women is often questioned by the evaluations. Microcredit schemes for women had mixed impact, sometimes positive—associated with increased access to markets, and higher income [06]—and sometimes no impact or even negative impact, with repayment problems for female-headed households [08; 09].
177. Interventions concerned with the economic empowerment of women do not appear to have targeted women pastoralists as livestock professionals. Restocking for women is usually of small stock (including poultry) and on the assumption that livestock is kept for subsistence. Significant exceptions are the analysis of the professional role of women in the pastoralism of camelids in Bolivia [055], or some recommendations for the new resilience programme in Somalia [060]. In Mongolia, mobile kindergartens introduced by IFAD (scaled up by the Ministry of Education and the World Bank), gave women time to engage in other work [018].
178. The JES noted an almost complete absence of attention to milk except as a commodity to be traded [03; 032; 025; 040; 056]. This includes silence on the consequences of the sedentarisation of women (and children) with regard to their long-term status and their capacity to operate in relevant roles as producers within the pastoral system, or the implications this has for their capacity to control the means of production and access milk [e.g. 07; 014; 016].
179. A critical element of childhood nutrition in the first sixty months of life, milk is particularly important for food and nutrition security in pastoral contexts. Besides, small-scale milk economy, both formal and informal, is typically in the hands of women and plays a key role in the negotiation of their status. Promoting the commodification of milk, in absence of a sound understanding of the gender dimension of food sovereignty in pastoral households, is likely to lead to conditions in which the control of the value chain is taken over by men, with negative consequences on both household food and nutrition security and women's income. For example, the evaluation of FAO-Sudan cooperation for the period 2004-2009 points out that 'males rather than females are often the beneficiary of cheese making training and support [...] in promoting food production, aspects of income

generation have often been given more emphasis than household nutrition – a missed opportunity to advocate for improved diets given the role women play in decision making around household food consumption and the high levels of malnutrition evidenced in many parts of Sudan' [037: 88].

180. The small set of ongoing projects in the core sample show relatively more attention to milk economy, including its informal role in food and nutrition security, also acknowledging women's primacy in it [053; 059]. However, a recent project to increase community resilience in South Sudan seems to understand the issue 'upside-down', showing a focused concern for food-security but little understanding of the context of production: 'the phenomenon of "nomadic grazing" in Agropastoralism seems to be a factor in household food insecurity. Whenever cattle camps move long distances away from settled residences, those who remain behind have no opportunity of getting milk' [062: 10]. In Sudan [052] the analysis of gender issues includes a section looking at pastoralist women, but the plan for gender mainstreaming concentrates on crop farming.
181. Finally, historical changes in gender roles, including in pastoral households, tend to be overlooked.⁸¹ Changes like increased access to markets, new patterns of mobility or sedentarisation, new dimensions and intensity of insecurity, and new technologies such as mobile phones and motorized transport have profound influence on pastoral livelihoods, including gender relations. Projects appear strangely silent about these dimensions of change in gender relations, even when they are concerned with relevant innovations such as mobile services (education, health or microcredit and cash transfers).
182. Most evaluations talk about gender using the expression 'women and young people', but rarely engage with issues concerning the latter, and virtually never look at young people as pastoralists.⁸² A few documents mention the need to pay more attention to involving young people [03; 017; 033], training them for the labour market [024], or small business [025]. A recent project in Syria points out that 'The numbers of persons leaving education and joining the ranks of those in search of work are close to 400,000 annually, ensuring that the problem remains significant unless a very large number of jobs are created each year' [053: 11]. In Ethiopia, the evaluation commends the project for its success in engaging with youth, in the following terms: 'Jobless and desperate youths and disabled people were able to be organized and engaged in productive activities to support their livelihoods. The project has proved that these social categories can be turned into productive and disciplined citizens. Amongst other positive benefits, delinquencies such as forest destruction, theft, physical attack and robbery were reduced due to attitudinal change and engagement of youths in productive activities' [033: 47].
183. In conclusion, the engagement in pastoral development by IFAD and FAO appears so far to have entailed a very limited contribution to the objective of promoting gender equality and women's empowerment. With a few remarkable exceptions, this has been in the form of applying a blueprint gender analysis for rural development, rather than developing one relevant to pastoral settings.
184. Over time the attention to gender has undoubtedly increased. Gender inequalities, beginning with a level of invisibility as far as development is concerned, are now understood as an underlying cause of poverty. A similar link remains to be made with regard to the invisibility of the gender dimensions that are specific to pastoral settings.

⁸¹ On this issue, cf. Flintan 2011.

⁸² Projects that look at pastoral systems with a focus on youths are exceptional not only in IFAD and FAO, but there have been recently some remarkable examples: Agan Kizito et al (2012) and Stites et al (2014), the former funded by UNFPA and the United Kingdom Department for International Development.

F. Promoting sustainable natural resource management

185. Sustainable management and utilization of natural resources is one of FAO's three global goals and directly related to IFAD's first strategic objective.⁸³ The records provided by OED and IOE on pastoral-oriented projects during the period 2003-2013 (the comprehensive inventory of 31 projects by IFAD and 163 by FAO), show 'rangeland rehabilitation' and 'natural resource management' to be the project focus or a key objective in 10 cases for IFAD and 13 for FAO.
186. Overall, the allocations earmarked for this kind of intervention in the comprehensive inventory have been in the order of 11 per cent for IFAD and less than 5 per cent for FAO—perhaps twice as much if the development of pastoral infrastructures related to land management is included—these were chiefly water points, either facilitating settlement [014; 016], or more nuanced on community management and pastoral use [012] (see chapter 3.C, diagrams 1 and 2; para 224-225 on issues concerning pastoral water interventions). These proportions are representative of the entire portfolio, assuming that all or most rangeland rehabilitation projects were included in our comprehensive inventories. In Syria, the water infrastructure accomplished through the project is praised for having provided 'incentives for settlement', as 'a major step towards promoting livestock production and irrigating forage plants' [016: 8]. Sometimes water-related interventions were more nuanced on community management and pastoral use [012] (see chapter 3.C, diagrams 1 and 2; para 224-225 on issues concerning pastoral water interventions).
187. Both organizations have engaged with various dimensions of rangeland management and rehabilitation, including technical packages, community-based management solutions, and policy dialogue. Interventions aimed at promoting the sustainable management of the rangelands and conservation agriculture, sometimes taken place within policy contexts that prioritize mechanization, large-scale irrigation schemes or other forms of land acquisition, and the replacement of customary agreements with market-based forms of land use (e.g. titles and leases). The evaluation of FAO-Sudan cooperation in 2004-2009, highlights the growing importance of land issues, warning that social 'polarization is increasing with land grabbing' [037: 77]. Mentions of land grabbing were made also in the IFAD country programme evaluation in Mali in 2013 [019], and the evaluation of FAO cooperation in Somalia [025]. No other projects, including the ongoing projects, appear to have explicitly engaged with this issue.
188. However, various projects have engaged with issues of land tenure, especially promoting land tenure reforms and the introduction of titling [04; 08; 011; 015; 024; 032; 040], and sometimes alternative solutions, including community-based, aimed at guaranteeing access to poor households [09; 012], and women [040].
189. The results, from the evaluations, are mixed. Data on projects' environmental impacts are often found to be moderately unsatisfactory [012; 014; 015; 016]. The same judgement concerns the impact on climate change adaptation [014; 015; 018; 021; 033; 037]. In most cases, the available data concentrate on outputs (e.g. number of rehabilitated hectares, number of tons of seeds or thousands of seedlings distributed, number of water points created or rehabilitated, or kilometres of demarcated livestock corridors).⁸⁴ On these data-poor grounds, when

⁸³ IFAD (2011): 'A natural resource and economic asset base for poor rural women and men that is more resilient to climate change, environmental degradation and market transformation'.

⁸⁴ The Badia Rangeland Development Project in Syria is a good example. The first objective of the project was to 'restore the production of rangelands to its optimal potential'. In order to achieve this objective, the project operated with a three-folded strategy: resting, reseeding, and planting of fodder shrubs. The evaluation [016] of the project's effectiveness is based on the output, in number of hectares, in relation to these three strategies: the sum of the hectares where each of these strategies was carried out. The total number of hectares is described as 'well-developed rangelands' achieved by the project. Apart from using the outputs of strategies as a proxy of outcomes, this method of

evaluations offer an opinion on sustainability, it is usually to highlight expected challenges.

190. In Tunisia, IFAD recorded almost 17,000 ha. of rangeland rehabilitation, over 12,000 ha. cultivated fodder and over 6,000 ha. of preserved areas (mise en defense) [03: appendice 2]. In East Sudan [029] FAO recorded distributing 2.2 metric tonnes of pasture seeds and 56,000 seedlings to targeted households and school gardens; in the same region, for some time FAO supported the Range and Pasture Department of Ministry of Animal Resources in Kassala, but by 2012 such support had been withdrawn. In South Darfur [035] FAO rehabilitated 380 hectares of land by planting improved pasture during the 2009 rainy season.
191. Some projects involved significant innovations. In Sudan [012], the Western Sudan Resources Management Project set up a Regional Land Policy Committee to formulate a NRM strategy and used a participatory process in the demarcation and management of livestock transhumance corridors, involving both mobile and settled communities. In Senegal [06], the project's rangeland management committees, also built on customary use patterns and cooperation between pastoralists and farmers, were found to increase the sustainable management of the environment, including the prevention of uncontrolled bush fires and tree-cutting. A 'participatory and partnership-based' approach to rangeland management was also used in Tunisia [017], with some success. In Mali [019], an effort found successful, was made to develop a model of the rehabilitation of the bourgou, the floating pasture with high nutritional value.
192. When interventions were found inadequate or unsustainable, it was usually as a consequence of their technical focus and disconnection from existing use practices. In Nepal [04], the original project design heavily relied on the provision of subsidised high-yield exotic grass varieties while overlooking options which would have reduced costs and improved flexibility, such as those associated with the natural regrowth of vegetation and the knowledge available within the target communities. In Bolivia [022], the persistence of land degradation in the project areas was imputed to the project's narrow focus on family plots.
193. Overall, the projects operated with the received wisdom that pastoral rangelands are degraded⁸⁵ and the underlying assumption that degradation is caused by an imbalance between stocking rates and pasture availability (carrying capacity), leading to overgrazing. The evaluation of a project in Mongolia [018] highlighted the problem with relying on such an outdated approach.⁸⁶ An ongoing project in Sudan [061: 21] appears to be operating with this assumption when proposing to 'Improve livestock marketing through the regulation of stocking rates [...] with the aim of regenerating the pasture and other forage vegetation'. In Senegal [06], where rangeland users were involved in estimating fodder biomass production in the area of the project—with an innovative combination of participatory methods, remote sensing and field tests—no evidence of degradation was found. In Tunisia [016], the strategies adopted in order to 'restore the production of rangeland to its optimal potential'—namely resting, reseeding and planting—treated rangeland production as a merely botanical function, without consideration for the fact that producers and production system are the main players in optimising production.

calculation implies that the areas where the three strategies were carried out did not overlap, but the evaluation is silent in this respect.

⁸⁵ The idea that pastoral rangelands are degraded is so ingrained in rural development that it is often taken for granted, in absence of effective evidence and despite the scientific uncertainty and long-standing debate around the scale and nature of the problem (to quote just a few examples: Swift 1996; Mortimore 1998; Eswaran et al. 2001; Bai et al. 2011; Easdale and Domptail 2014).

⁸⁶ The limitations of the concept of static carrying capacity as a planning tool in environments dominated by variability are well known, see section 2.1 above and annex 3.

194. Overgrazing of specific areas can of course cause land degradation, but this is more often the consequence of limiting pastoral activities, especially mobility and institutions for land tenure, or inducing abnormal stocking rates by concentrating key resources (e.g. water). There is a large basis of evidence linking pastoral management strategies with sustainable rangeland management (para 236),⁸⁷ emphasizing the role of embedding variability within the production system—mobility, but also variety of species, flexibility in tenure, etc., (para 26-28)—which unfortunately seems to have remained marginal to project design concerned with NRM.
195. Community-based and participatory NRM approaches, as used by several projects, are obviously key, but they need to be accompanied by an update of the underlying assumptions about rangeland degradation and its solution. In the absence of this theoretical shift, community-based NRM approaches remain tools to facilitate users' cooperation with measures aimed at restricting their activities.

G. Advocating on behalf of rural poor in pastoral settings

196. Both agencies commit to use their position as 'honest brokers' to advocate on behalf of the poor with national, regional, and international policy-making shaping rural development options. In the current strategy, IFAD is to 'step up its advocacy work'. Advocacy and communication are seen as one of FAO's core functions.
197. In the context of pastoral development, advocacy is particularly important. Negative or misleading assumptions about pastoral systems have populated rural development for decades, feeding on their own effects and—even if unintentionally—offering an easy environment to players with vested interests in pastoral areas. These assumptions remain entrenched in a number of governments' policies, as well as embedded in systems of classifications and mechanisms of appraisal, leading to both political and technical exclusion (annex II, para 43-48). While political and technical exclusion cannot be addressed by advocacy alone, they cannot be addressed without it.
198. Advocacy was identified as a top priority during the global Mera Gathering of pastoralists' women in 2010, together with representation, communication and networking [058]. To be effective in the context of pastoral development, advocacy has to go beyond general human rights and humanitarian principles or fundraising for emergencies [e.g. 032; 033; 046], and systematically target both political and technical exclusion.
199. Some evaluations recorded significant efforts in advocacy and communication [029; 045]; others found them insufficient [021; 029; 037]. Sometimes a relatively low input in direct advocacy was accompanied by support to civil society organizations. In Senegal, IFAD was able to maintain such support at times when the voices of small producers was largely unheard by the state. Good partnership with the World Bank was instrumental [021]. Between 2007 and 2012, FAO successfully advocated the formulation and ratification of the Meat Inspection and Control Acts in Somaliland and Puntland and later supported the development of their meat markets [025].
200. In Ethiopia, one of the objectives of the PCDP-I was 'Effective advocacy for pastoralists at all levels of government' (World Bank 2009). The project carried out a number of technical studies, including a Pastoral Policy Gap Analysis and a social analysis, which served as a basis for the government to prepare its Pastoral Area Development Strategy. The evaluation, however, highlighted that 'most of these studies are more appropriate to the sedentary agriculturalists' and found that 'the

⁸⁷ Cf. for example Homewood 2008 and IUCN 2012. The point was recently summarized in an IUCN-UNEP report: 'Pastoralism lies at the nexus of the 3 pillars of sustainability and provides the triple win of social, environmental and economic benefits' (McGahey et al 2014: 49).

effectiveness of these studies to influence positively the livelihoods of the majority of pastoralists is debatable' [014: 8, quoting World Bank 2009: 35].

201. The evaluation of FAO's Emergency and Rehabilitation Assistance in the Greater Horn of Africa 2004-2007 was particularly critical in this regard, finding that 'generally FAO is not drawing upon existing and credible information available in the region to challenge assumptions and the status quo of interventions within the aid and development arena and advocating for alternative solutions'. According to the evaluators, FAO should be 'more effective at "bringing to the table" food security information, analysis and advocacy, including issues relating to pastoralist livelihoods which remains under-studied, misunderstood and often marginalized in national budgetary allocations' [045: 13]. Similar remarks were made about the more recent work in Sudan [029], where FAO's logistical and technical capacities, with their unique potential for playing a 'convening role' for authorities and NGOs at national scale, were found to be underutilized.
202. Advocacy is now a core objective of the just launched FAO Pastoralist Knowledge Hub [063]: 'advocacy on behalf of the pastoralists who seek support to target their issues, enlarge their participation and enhance their capacity to engage in global, regional and/or national policy debates that affect their lives'. Building on FAO's intergovernmental dimension (critical in pastoral development) the hub supports pastoralist associations, organizations, movements and networks, and raises awareness of pastoral issues among politicians, researchers and extension workers.

H. Lessons learned and knowledge management

203. Securing institutional memory is an important challenge. The forty evaluations in the core sample include almost 400 lessons learned and recommendations, 24 of which (6 per cent) concern pastoral development, concentrated in 15 evaluations. Some 66 per cent of the forty evaluations contain no reference to pastoralism in the final section of lessons learned and recommendations. Those that refer explicitly to pastoralism concentrate on six topics (in order of frequency): (i) understanding of pastoral systems and targeting; (ii) productivity and marketing of livestock; (iii) pastoral mobility; (iv) provision of basic services and infrastructures; (v) management of key resources; and vi) institution-building.
204. Recommendations to improve the understanding of pastoral systems are found both in evaluations of IFAD projects [015; 018] and FAO projects [025; 029; 037; 045; 048]. Improved understanding of pastoral systems is seen as necessary to interventions in sustainable rangeland management [015; 045]; pastoral risk management and resilience-building [018; 025; 048]; management of farmers-herders conflicts [029; 037; 045]; and the identification of appropriate long-term indicators to monitor livestock conditions and the pastoral economy [048] as well as preparedness [012]. In the evaluation of the IFAD Rural Poverty Reduction Programme in Mongolia [018], improving the understanding of pastoral systems is presented as pivotal to all other recommendations.
205. Lessons learned about increasing livestock productivity relate to the potential of empowering small producers, pastoralists and farmers, to manage key resources in Senegal, even in conditions of poor infrastructures compared to other areas [06; 013]. The recommendations in this regard are rather general: one proposes value-chain analysis as a way of enhancing crop and livestock production and marketing enterprises [032]; one aims at increasing productivity through a systemic approach to animal health [025]; and two emphasize the need to secure access to the livestock markets in the Gulf States [045; 047].
206. With regard to mobility, recommendations vary. Two evaluations recommend securing and strengthening it as a key strategy for resilient production in pastoral systems [08; 018]; one recommends securing it as a last resort for survival [045]; two are ambiguous, one mentioning the role of mobility while also emphasizing the importance of sedentarisation [015], and one lists as a lesson learned that

'package infrastructure' contributes to the sedentarisation of pastoralist women and children, but without saying whether this is a positive or negative impact [012]; finally, one refers to mobility only indirectly, by emphasizing the need to support sedentary livestock-keeping [013].

207. Recommendations about services concern the extension of microfinance to pastoral communities [011]; the provision of education services adapted to mobile livelihood conditions [08]; the provision of animal health outside the veterinary service supply chain [029], and pastoral water infrastructures for livestock and river basin management [045].
208. Most recommendations about investment in natural resource management are found in evaluations of IFAD projects [011; 012; 017; 018]. One concerns avoiding overgrazing from exceeding carrying capacity [037]; another points out the need to update project assumptions, starting from abandoning those associated with a carrying-capacity model applied in the drylands [018]. An evaluation underlines the need to carefully understand the roots of land degradation, warning against simplistic approaches based on limiting access as they may increase rural poverty rather than reducing it [011]. Another recommends taking a systemic approach integrating the interventions in sustainable rangeland management with those on land tenure, rainfed cultivation and livestock [012].
209. Recommendations about pastoral institutions focus on strengthening them and securing legal recognition, especially of land tenure; they support local institutions for the management of key resources, but also building capacity of pastoral organizations [08; 018]. The importance of maintaining coherence and continuity in projects' work on institutions, to avoid adding to the existing confusion between the formal and customary dimension, is also mentioned [018].
210. Specific lessons for pastoral development are in some cases missed out by the current process of evaluation (e.g. only 6 per cent of lessons and recommendations are on pastoral development), and there is not always consistency in the fundamental assumptions behind the recommendations. The exception in this scenario is that many evaluations effectively point at an inadequate understanding of pastoral systems as the bottleneck to the improvement in most areas of intervention.

Ongoing projects

211. The small set of ongoing projects in the core sample would suggest that at least some of the lessons stemming from previous evaluations were embedded in later project design. However, with regard to the two main areas of required improvement—understanding of pastoral systems and support of pastoral mobility—change is not emerging in any systematic way.
212. The main achievements in this direction are also the smallest investments, namely support to the World Initiative for Sustainable Pastoralism by IFAD and FAO (including an IFAD grant to the International Union for Conservation of Nature (IUCN) of US\$950,000 over 4 years, ended in 2014), and the FAO launch of the Pastoralist Knowledge Hub (US\$800,000 for Part 1 over 16 months, ending in 2015).⁸⁸ Support to IUCN has been fruitful in the past, for example through the organization of the Mera Gathering of pastoralist women and the production of the document on minimum standards and good practices on supporting sustainable pastoral livelihoods (IUCN 2012). The Knowledge Hub is a particularly promising move from FAO, which could help pave the way for more important investments in capacity-building and the expansion of the knowledge base required if the engagement in pastoral development is to become more effective.

⁸⁸ The initial duration of 16 months is certainly too short a period to make an impact, but funds for continuation have already been secured from GIZ.

213. At project level, change is slower. The resilience programme in Somalia is unequivocal about the economic importance of mobile pastoralism.⁸⁹ However, the ways the programme intends to promote resilience do not seem to depart from conventional pastoral development blue-prints focusing on non-mobile alternatives: supporting diversification (into sedentary activities), intensification (through breeding programmes and crop-livestock integration at the farm level); and market integration [064: 19] with no connection with supporting the mobile strategies known to be the main route to sustainable land use and resilience. The FAO project for strengthening resilience in Karamoja [065; 066] appears to replicate the 'technical package' approach of earlier projects, operating entirely within the official national narrative about the region, although this had been described as prejudicially anti-pastoralism by several analysts (including work carried out by FAO itself, e.g. Levine et al 2010). There is no engagement with or recognition of contrasting positions (no mention of the Coalition for Pastoralist Civil Society Organization or the Uganda Land Alliance),⁹⁰ nor reference to recent and ongoing scholarly work in the region (e.g. the several studies published by the Feinstein International Center at Tufts University).⁹¹ While operating within a similar policy/narrative environment, phase III of the Pastoral Community Development Programme in Ethiopia appears to engage with it more clearly than in the earlier phases.⁹² However, the understanding of pastoral systems remains old fashioned and unstructured.⁹³ Across the sample, we could not find a single reference to the 'internal' literature on pastoral systems (FAO 1997; FAO 2002; Rass 2006).

⁸⁹ Cf. 'The livestock sector is based on a nomadic system characterized by high mobility [...] Mobility provides the best strategy to manage low net productivity, unpredictability and risk in the arid and semi-arid lands of Somalia' [064: 12].

⁹⁰ Cf. <http://www.copacso.org> ; <http://ulaug.org>.

⁹¹ Cf. <http://fic.tufts.edu/?s=karamoja>.

⁹² For example, the project document [052] lists as key challenges 'weak government institutions', 'limited public participation in decision-making processes' (e.g. political marginalization), and 'constrained mobility due to new settlements and large scale development schemes'; and lists 'transition of pastoralists towards permanent settlement particularly through the development of small and large-scale irrigation infrastructure' amongst the government's strategies on pastoralism.

⁹³ In a 2013 technical document on pastoral development, the section on 'targeting', described pastoralists as people 'who move around in search of pasture and water sources for their livestock' [052: 37], a cliché long dismissed in specialist literature, for an understanding of mobility as strategic and proactive. This shift is reflected in policy making, for example the African Union Policy Framework on Pastoralism refers to the 'strategic mobility' of pastoralists (African Union 2010: 1, 22).

Key points

- Overall, although with important exceptions, even pastoral-oriented components focused on sedentary activities and remained tangential to pastoral systems.
- There is general dissatisfaction in the evaluations about the projects' capacity for monitoring (e.g. at regional and country level, thus not just in pastoral projects).
- Evaluations frequently highlight a shortfall in 'reading' the local context, especially lack of flexibility in the use of off-the-shelf technical packages.
- Risk management is weak, starting from a lack of clarity on the specificity of pastoral risk management in relation to risk-taking and risk aversion.
- The specificity of the gender dimension, and the challenges facing the youth in pastoral settings are still to be grasped.
- Settled members of pastoralist households—typically women and children—have reduced access to livestock, with negative impact on nutrition and entitlements.
- In institution-building, there is little evidence of a reflective dimension, looking at structure and capacities of the institution delivering development.
- Evaluations link institutional inadequacy in land tenure, resulting in large-scale use conversion, to increased competition over resources and violent conflict.
- The most positive evaluations concern projects using community-based participatory approaches.
- Opportunities for learning and knowledge management are rarely included in the highlights. Influence on new projects is mixed.

VI. Wider pastoral development context

214. This section provides a brief overview of the pastoral development context, looking at how other international players have engaged with the important transformations in the understanding of pastoralism and the drylands and what directions they are taking for the future. As overview studies on actual interventions in pastoral development are rarely available, this chapter mainly builds on position documents stating intentions and general directions.
215. Five organizations operating in the international arena have been selected: the World Bank for being both a multilateral organization (like FAO) and an International Financial Institution (IFI) like IFAD; the Swiss Agency for Development and Cooperation and the French Development Agency, as bilateral institutions with a long involvement in pastoral development; and two NGOs, Oxfam International and VSF (Belgium and Germany), both dynamic and influential actors not only in pastoral regions but also in the international debate on pastoral development.
216. The World Bank commitment to promoting pastoral development goes back more than fifty years (de Haan 1994). The approach of interventions evolved through several stages: from a focus on introducing the American ranching model (1960s-1980s), later abandoned as economically and ecologically unsustainable in the drylands; to introducing grazing and land rights adjudication in favour of pastoral groups (1970s-1980s), with mixed results mainly because of an overly rigid approach to land tenure; to a better appreciation of the importance of flexibility, with a new focus on promoting pastoral organizations and herder-managed services (e.g. animal health). From the early 1990s, a more integrated approach to natural resource management, including all relevant stakeholders, was introduced but soon faced challenges at implementation due to its complexity.
217. The promotion of resilience and the strengthening of risk management capacities are key to the current approach, both with regard to climate change and in recognition of the new challenges faced by producers in pastoral systems, especially the restrictions to mobility and the loss of pastureland to other uses (e.g. Ericksen et al 2013). Attention to the trans-boundary nature of pastoral risk management and resilience characterizes the Regional Pastoral Livelihoods Project for Africa (World Bank 2014), from the experience of the Arid Lands Resource Management Project in Kenya (World Bank 2012).
218. Over the last couple of years, the Bank's interest in pastoralism has sharply increased in connection with issues of security and stabilization. A study on this theme recently published by the Bank concludes that 'the development of pastoral economies and livelihoods is indeed an important contributing element to stabilization in the Sahel' and warns that 'poorly designed pastoral development interventions that do not fully take the drivers of conflict and violence into account can actually create more instability and exacerbate conflicts' (de Haan et al 2014: 6).
219. On the occasion of two summits on improving pastoralism and boosting irrigation in the Sahel (in Nouakchott and Dakar in October 2013), the participating governments framed the work with pastoralism as integral to promoting agricultural resilience—with the qualifier that the proof has to be in the implementation—and defined by the following priorities: (i) increasing complementarities between extensive pastoral systems and semi intensified agricultural farming systems, by promoting trans-boundary mobility (people, animals, services); (ii) establishing effective mechanism of disease control; (iii) facilitating livestock trade; (iv) including pastoral communities in the decision-making processes; (v) developing secured land tenure systems; and (vi) adopting a value-chain approach to dairy production, including product distribution to end markets (World Bank 2013a).

220. The Swiss Agency for Development and Cooperation too has devoted particular attention to the Sahel. Earlier interventions focused on the improvement of the dairy industry through animal breeding (an area where the Swiss Cooperation saw a comparative advantage), gradually expanding to work with mobile groups and encompassing issues of conflict management and poverty reduction.
221. A notable example of the Swiss Agency for Development and Cooperation's approach to pastoralism is represented by the Programme d'Appui au Secteur de l'Elevage (PASEL, 5 phases in Niger since 1998), with the objective of securing livestock mobility and sustainable land use by herders through identification, demarcation and protection of international and secondary transhumance corridors. The strengths of this programme have been identified in the capacity to generate stakeholder-based decision-making within a participatory framework, and the emphasis on the need to secure pastoral mobility.
222. The Swiss Agency for Development and Cooperation has also worked in Mongolia since 2001, starting with a focus on natural resource management and gradually expanding to securing pastoral livelihoods, including through risk management. Other relevant areas of intervention include microfinance and livestock insurance (with the World Bank)⁹⁴ and the promotion of basic services accessible to mobile communities (mainly human/animal health and, remarkably, education). A project on 'Strengthening drought resilience of pastoral and agro-pastoral populations in the lowlands of Ethiopia' started as of early 2015.
223. The French Development Agency (AFD) is of particular interest because of their innovative work in pastoral water development in Chad, where four multi-phased projects between 1993 and 2014 tackled the entire national territory covered by pastoral systems in the annual cycle of migration (i.e. about 80 per cent of the country). The programmes started as a traditional water-sector package in a context where water interventions had been used for over forty years as an instrument to restrict pastoral mobility, possibly fixing pastoralists in the arid regions they used during the rainy season (Krätli et al 2013).
224. However, in 1995 AFD's engagement in pastoral water works saw a dramatic change to a systemic approach that used pastoral water as the structural entry point to secure pastoral production and livelihood (especially mobility). Later interventions were committed to develop pastoral water specifically in relation to the ways water was to be used by pastoral production and livelihood in the areas of intervention. This involved embedding in-depth research into the projects and relying on participatory methods to work closely with pastoralists and the other key stakeholders. One practical result of this approach was the design of pastoral water infrastructures that, as much as possible, could not be turned to other uses and did not favour the creation of settlements. Considerable resources were invested in securing the peaceful management of water points and basic resources for pastoral production, such as the transhumance corridors. AFD projects were pitched at a temporal and spatial scale large enough to effectively engage with the operational scale of pastoral systems.⁹⁵
225. Over the last five years AFD has engaged in political dialogue on pastoralism at national and regional level as well as in institutional support to the Ministry of Livestock and civil society (Platform) which have played a key role in the drafting and adoption of Chad's first pastoral code at the end of 2014. The IFAD-funded project PROHYPA is an example of the impact and legacy of the AFD approach in

⁹⁴ See http://www.sdc.admin.ch/en/Home/Countries/East_Asia/Mongolia.

⁹⁵ The three projects that started after 1995 extended over areas between 100,000 and 200,000 km² and lasted between 10 and 15 years (Krätli et al 2013).

exploring and adapting innovative forms of local governance and sustainable management of pastoral water development.

226. Oxfam's engagement with pastoral development is two-fold: implementation of projects, and advocacy aimed at acknowledging pastoralists' social and political rights and the support to pastoral mobility, including securing access to key pastoral resources. Projects concentrate on humanitarian aid in pastoral areas and initiatives to foster pastoral social capital. For example, the 2003-2013 'Kotido Pastoral Development Programme', implemented in Karamoja (Uganda) between 2003 and 2013 took an alternative angle on reducing poverty and vulnerability, by (i) investing in supporting pastoral organizations lobbying for pastoral rights; and (ii) engaging with local institutions (districts) to raise their awareness of the needs of pastoral communities. Similarly, the 2006-2009 campaign against the dispossession and forced displacement of pastoral groups by the Tanzanian government (the Joint Oxfam Livelihood Initiative for Tanzania—JOLIT), led to a Presidential Commission of Inquiry on the evictions.
227. Oxfam's briefing paper on Pastoralist and Climate Change in Africa (Oxfam 2008) drew donors' attention to the potential of pastoral production and livelihood systems in the face of climate change, and consequently to the logic of supporting and strengthening pastoral risk management: 'if it comes down to the survival of the fittest, pastoralism could succeed where other less adaptable livelihood systems fail'. Based on extensive research on pastoral risk management in East Africa,⁹⁶ Oxfam warns against seeing livelihood diversification as the solution because 'most diversification strategies in practice generate low incomes and actually can increase risk during periods of stress [...] herd mobility and herd diversification remain the major means of managing risk in pastoral areas, and efforts to encourage [livelihood] diversification should not impede these strategies'.
228. Veterinaires sans Frontières⁹⁷ works mainly with pastoral organizations in several countries in the Horn and East Africa. So far, emergency relief has outweighed development aid in the VSF programme. VSF recognizes that this saves lives but does little to support sustainable development. Their programme is moving towards supporting development investments including better veterinary services, market access and livestock exports. Mobility is supported where found appropriate. The programme includes education and training, identifying economic alternatives for those who want to leave pastoralism, help in resolving conflicts and advocacy with governments including in Europe.
229. VSF see pastoralists as the leading producers of animal protein in drylands making a decisive contribution to food security, national income and exports, despite a history of inadequately funded infrastructure and development.

Current overall trends

230. The international interest for pastoral systems is on the increase. In this context, pastoralism is understood as a social and economic force critical to securing resilience in the drylands and, more and more, a uniquely positioned, potential ally in the international struggle to prevent remote and desert areas from becoming a breeding ground for organized crime and terrorists.
231. The new understanding of pastoral systems and drylands has gained the attention of international players and some key messages, such as the economic importance of mobility, the importance of pastoral risk management at all relevant scales, the necessity to take a systemic approach, and the added value (even the necessity) of

⁹⁶ The Pastoralist Risk Management Project, funded by USAID and carried out by Cornell University, http://dyson.cornell.edu/faculty_sites/cbb2/Parima/.

⁹⁷ Based on position paper published by VSF Germany (2011) and a statement about pastoralism published by VSF Belgium (2012).

allowing local stakeholders a central role in all decision-making processes that concern them, have made roots in their policies and programmes.

232. While innovative experiences have been carried out within this new perspective, offering valuable lessons, the process of embedding pastoral systems into a coherent vision of resilient and sustainable dryland development is still in the making. In this sense, the horizon is full of opportunities, although there is no need to tackle everything at once. As in the case of pastoral water development for AFD, any structural entry point—others could be animal health, cross-border mobility, livestock marketing, or risk management—allows for a systemic approach, as long as it is understood from the perspective of local stakeholders and in relation to the pastoral production strategies.
233. Finally, it is important to highlight that this selection has concentrated on examples of engagement with pastoral development that targeted small- and medium-scale producers in the pastoral systems, that is, using livestock mobility as the main strategy for managing variability and intensify productivity. These examples represent different ways of integrating the new understanding of pastoral systems and the drylands. They are relatively rare cases, albeit growing.⁹⁸ The most common forms of engagement with pastoral development today continue to facilitate ‘exit’ from pastoralism. While this used to be seen as the precondition of development from an inherently unsustainable way of life, today facilitating exit is sometimes argued for opposite reasons, as a way of offering relief to pastoral systems now understood as economically efficient and ecologically sustainable, but threatened by the ceaseless thinning of their resource basis (para 35-36). Whether exit is promoted in competition with pastoral resources, or not, is a telling indicator for distinguishing one position from the other.

Key points

- There is growing interest in pastoral systems at global level, including their potential role as a primary ally in the international struggle to secure remote and desert areas from the penetration by international organized crime and jihadists.
- The importance of securing pastoral mobility is emerging as a key priority, including supporting the system by facilitating exit at the edge of vulnerability while refraining from introducing alternative economic activities in competition for pastoral resources.

⁹⁸ For example, a programme recently launched by UK Aid in Africa and South Asia—BRACED ([Building Resilience and Adaptation to Climate Extremes and Disasters Programme](#))—includes several projects focusing on different dimensions of pastoral mobility.

VII. Storyline, conclusions, and recommendations

A. Storyline

234. IFAD and FAO have a history of engagement in pastoral development which is likely to continue as this sector is highly relevant to the fundamental goals and strategic frameworks of both agencies. New programmes just launched by other major players, such as the World Bank, suggest that demand in this area is increasing.
235. Pastoral development today is nested in a wider process of transformation, stretching from a fundamental revision of the main explanatory framework in ecology in the 1970s, to the recent adoption of resilience thinking at the core of development programmes and policies. The red line along this trajectory of change has been a growing awareness of the limits of representing the world in terms of closed and self-regulated systems, and of the necessity of shifting to a systemic approach capable of integrating variability as the rule rather than the exception.
236. This is where pastoralism's logic of interfacing variability in the environment by embedding variability in the production system becomes important. A specialization to manage variability to its own advantage makes pastoralism highly relevant to the broader work on resilience in food production, in times when natural, economic, and political dimensions interrelate in increasingly unpredictable patterns.
237. Engaging more systematically with pastoral development therefore can offer IFAD and FAO a good entry level for updating their institutional capacities vis-à-vis an increasingly instable global context of operation.
238. There are challenges. Development work based on incorrect assumptions in the past, has left a problematic legacy, including unintended consequences that need to be acknowledged and engaged with. The historical and new partners of IFAD's and FAO's work, governments and private sector, are at times active parties in the relationships that lead to the economic and/or socio-political exclusion of some groups. An unchecked focus on comparative advantage as a guiding principle might draw attention away from sparsely populated areas and geographically scattered groups, or from the complications of operating at the far edge of exclusion.
239. Over the last ten years, IFAD and FAO have carried out significant work in most sectors of pastoral development. Important achievements include the scaling-up of innovative solutions in community-based animal health and natural resource management. Overall though, the engagement with pastoral development has remained tangential to the pastoral systems. This was mostly linked to structural reasons, from the lingering hold of a sectoral approach, concealed in integrated-programme design, to the lack of a clearly focused and systematic strategy and theory of change, which produced uncertain project designs and targeting approaches. The result is a fragmented and mixed picture across the sample, although efforts are evident, especially in the most recent projects and in light of the considerable challenges at implementation.
240. The potential, on the other hand, is huge, especially in a perspective of collaboration between the two agencies and the other partners. Capacity-building and risk management are key areas requiring future investment. In both cases, accompanying external activities with a reflective dimension aimed at reviewing and strengthening the agencies' combined resources for engaging with variability-dominated contexts will be crucial to success.

B. Conclusions

241. Pastoral development has been characterized by significant turbulence over the years, from the tension between focusing on livestock/increasing supply versus investing in improving the living standards of people in pastoral systems, to the U-turn in the understanding of drylands' variability and pastoralists' adaptive strategies—from the classical equilibrium model that framed both in terms of

structural limitation, to the current one that emphasizes structural difference, sharing foundations with resilience thinking. (Paras 2, 3, 19-42, 113).

242. In the findings of this JES, IFAD's and FAO's engagement in pastoral development during the period 2003-2013 has been significant, but also reflected this legacy in the lack of a coherent conceptual framework and systematic direction. There has been and still is considerable confusion between pastoral development and livestock development, and no clear understanding of pastoral systems, including the specificity of pastoral poverty. This has led to a considerable degree of hit-and-miss in the results, although exceptions exist. (Paras 2, 3, 35-37, 117-213).
243. Efforts in poverty reduction have focused on increasing income and livestock sector growth, especially at post-production stages of the value chain, and/or facilitating exit from pastoralism. This has been done without clearly distinguishing between old and new reasons for facilitating exit, and in absence of the systemic approach necessary to ensure that alternative livelihood activities are effectively helping pastoral systems and not simply introduced at their expense (in competition for the same resources and in a logic of substitution rather than support). (Paras 35, 36, 132, 133).
244. Engagement with gender has been on the increase but relies on a rural-development blueprint that is largely inadequate in the pastoral context. Surprisingly little attention has been paid to the milk economy, especially informal, compared to the importance of its role in relation to women's status, child nutrition and food security in pastoral contexts (para 169-184).
245. An inadequate blueprint has been used in interventions concerned with risk management and resilience building, which by and large have failed to capture the economic role of risk-taking in livelihood and production systems such as pastoralism, which take advantage of structural variability (Paras 137-150).
246. Community-based participatory approaches to institution-building fostering pastoralists-farmers cooperation (IFAD) and the training of Community Animal Health Workers (FAO) are areas of most evident achievement. Other areas have great potential such as micro-finance, cross-border interventions, and innovation building on the new opportunities offered by the ICT revolution, but ways of binding them to pastoral systems have to be found, especially in relation to risk and the adaptive logic of taking advantage of variability. (para 133, 135-150, 161, 164).
247. There has been insufficient engagement with relationships of conflict. IFAD's recent attention to the political fragility resulting from the combination of persistent poverty, vulnerability, and poor governance is a promising step forward, but the scale of engagement at country level seems inadequate. Conditions of fragility can remain hidden to such an approach. The experience of Mali, a country that was not considered fragile until it collapsed, is telling in this regard. (Paras 37, 38, 39, 64, 95, 119, 122, 154, 159, 164, 205, 219).
248. Despite individuals' competence and dedication, monitoring and institutional learning appears weak at several levels and largely incapable of capturing the agencies' engagement in pastoral development as such. (Paras 10, 126, 165).

Overall, both agencies appear to have invested in pastoral development regularly over the last ten years but mostly relying on off-the-shelf packages with minimal adaptation and largely deferring the tackling of issues that are specific and fundamental to this context of engagement.

The case for a leap of quality

249. The drylands, where pastoral systems are often the most sustainable livelihood option and main economic drive, are typically regions with the poorest basic infrastructures and services, even by rural standards, and a history of

inappropriate policies and interventions. They are also remote areas suffering persistent poverty, vulnerability to processes of dispossession and poor governance and violent conflicts. An engagement with pastoral development (not just livestock development) is therefore at the core of a commitment to reduce 'vulnerability, powerlessness and exclusion' (i.e. poverty, in IFAD's definition) in rural and marginal areas, and directly relevant to several fundamental goals of both agencies. (Paras 44-75).

250. Pastoral systems are also key to the understanding of drylands economies and resilient food production under conditions of structural variability: an ideal entry point into the near future of development and poverty reduction, where variability is pervasive and unavoidable. That they continue to produce substantial economic value despite the lack of infrastructures and an often unhelpful policy environment, suggests high potential returns to investment in these contexts (para 135), and indeed, they are attracting considerable attention in the international arena. The opportunity cost of investing in pastoral systems includes reducing rural-urban migration and a range of services outside the livestock production, e.g. environmental services and 'risk-pooling' services (annex II para 24-29). Finally, vibrant pastoral systems with a large basis of small- and medium-scale mobile producers are increasingly seen as the most rational way of securing the predominance of legal economies and democratic governance in the drylands and protecting them from the penetration by organized crime and jihadists (para annex II para 24-29, 137).
251. For IFAD and FAO, the timing seems ideal for a leap of quality in pastoral development, catching up with the systemic understanding of these contexts and the need for a structured approach, and hinging a general institutional adjustment to operating in a world dominated by variability. The recommendations from the JES focus at this level.

C. Recommendations

252. The JES formulated four recommendations, addressed to the Senior Management in both organizations. The focus is on the bigger picture and the scope for collaboration between IFAD and FAO.

Recommendation 1. FAO and IFAD should equip themselves with a policy of engagement in pastoral development.

253. Supporting pastoral development is relevant to IFAD's and FAO's fundamental mandate and goals. They cannot achieve their strategic objectives without programmes of pastoral development and this is a good moment to draft such a policy or policies. The new understanding of pastoral systems has not yet been fully translated into development practice, from project design, to implementation, and evaluation. A policy would be a useful way to guide the adaptation of new concepts of pastoralism to realities on the ground. The first recommendation of the JES is therefore that FAO and IFAD both develop policies for their work in pastoral development. These policies should not be developed in isolation from one another and should stress coordination within and between the two agencies.
254. In developing these policies, the long-term economics of preventing and managing conflict and avoiding encouraging unsustainable rural to urban migration should be carefully considered. Exploring opportunities in this direction is likely to be a major area of demand in the future (para 243, 247, 249).

Recommendation 2. Build and adapt capacity in IFAD and FAO for systemic engagement in pastoral development.

255. Pastoral development interventions take place on the back of a problematic legacy. Misleading and counterproductive ideas from the past permeate the entire learning process. Thus 'reading the context' correctly, learning, and adapting, are crucial to

effectiveness and efficiency of impact. IFAD's and FAO's capacities to achieve their goals with regard to pastoral systems need to be expanded and adapted. This includes developing a better understanding of pastoral systems, their operational logic, and their relation to dryland economies generally. But it also includes capacity development of desk and project staff to systematically track engagement with pastoral development as well as conducting evaluations with the right composition of the evaluation team.

256. Building capacity means that staff should develop understanding about pastoral poverty, its shape, causes and remedies and how it differs from agricultural or urban poverty. It also means commissioning research to define, measure and reach pastoral poverty more accurately and effectively. Mobility and gender will be key concepts in theoretical discussions and practical application. A major goal should be that project and HQ staff understand better the concepts of resilience and variability. The links between fragility and conflict need to be identified and the practical conclusions drawn. Work needs to be done to enable both organizations to identify and draw conclusions about the outcomes of projects, not just outputs.
257. Comparative advantage suggests that IFAD and FAO should continue to specialize, FAO on the technical and policy side and IFAD on the development-programme side. IFAD is tied to work with individual governments while FAO has institutional capacity precisely for the kind of intergovernmental activity at regional level that is crucial to the next generation of pastoral development work (para 246, 250).

Recommendation 3. Manage, rather than avoid, key dimensions of risk.
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258. Structural to the pursuit of IFAD's and FAO's fundamental goals are dimensions of risk which need to be acknowledged and managed when engaging with drylands and pastoral development: (i) the risk inherent to environments where variability is structural; (para 28-29); (ii) the risk of operating with a problematic legacy of counterproductive policy environments; (para 40-42); (iii) the risk of increasing exclusion on technical bases, either by following an unchecked logic of comparative advantage (e.g. drifting away from thinly populated areas lacking infrastructures), or by implementing a technical approach in contexts with a history of neglect and misunderstanding, where technical packages are easily manipulated by national qualifications of problems and theories of change (para 40-42).
259. The main adaptive livelihood and production strategy consists in harnessing variability as distinct from avoiding it (para 29-30). While these categories of risk are different and concern different levels of operation, they are all structural. In engaging with pastoral development, IFAD and FAO should assume that such risks are the rule rather than the exception, and embed measures to manage them as standard practice at all levels of operation, starting from the corporate level, when developing the policy of engagement in pastoral development, but also down to the operational level and the learning process (for example project preparation, the design of evaluations, procedures, training, guidelines).
260. A contextual risk-management and resilience strategy should be prepared for every pastoral programme or project in pastoral development, and, by extension, in dryland areas. This should include a clear conceptual and operational distinction between risk management and risk reduction. The FAO Resilience Index Measurement and Analysis model provides a possible framework for such work. (Para. 247).

Recommendation 4. Support advocacy by and on behalf of pastoralists and people whose livelihoods depend on pastoral systems.
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261. IFAD's and FAO's significant influence in the international and national arenas represents an invaluable asset in the ongoing global effort to update the public perception of drylands and pastoral systems and come to terms with the legacy of

misunderstanding and technical exclusion that today represents perhaps the major obstacle to the development of resilient livelihood systems in the drylands. Work in this direction contributes to the long-standing strategic commitment to advocacy by both agencies (para 55, 60, 64, 67).

262. The relatively small amount of advocacy promoted by IFAD represents an important dimension to the agency's work in support of its technical projects. The new Pastoralist Knowledge Hub project, building on FAO's intergovernmental dimension, is a potential platform for stepping up evidence-based advocacy work.
263. Advocacy is a crucial complement to today's engagement with pastoral development, but steps should be taken to keep it within a systemic approach, subject to critical scrutiny and carefully targeted in light of the new understanding of drylands and pastoralism. (Paras 242, 243).

Core sample¹

Evaluations

3. IOE-IFAD 2003. République tunisienne. Évaluation du Programme de pays. Rapport No. 1422-TN, International Fund for Agricultural Development, Rome.
4. IOE-IFAD 2003. Kingdom of Nepal. Hills Leasehold Forestry and Forage Development Project. Interim Evaluation, International Fund for Agricultural Development, Rome.
5. IOE-IFAD 2004. République du Sénégal. Évaluation du programme de pays. Rapport No 1516-SN, International Fund for Agricultural Development, Rome.
6. IOE-IFAD 2004. République du Sénégal. Projet de développement agricole dans le département de Matam. Rapport d'évaluation intermédiaire. Rapport No. 1564-SN, International Fund for Agricultural Development, Rome.
7. IOE-IFAD 2004. The Republic of Lebanon. Smallholder Livestock Rehabilitation Programme. Completion Evaluation. Report No 1560-LB, International Fund for Agricultural Development, Rome. IOE-IFAD 2007.
8. République du Niger. Programme Spécial National phase II. Evaluation terminale, Rapport No. 1920-NE. Novembre 2007, International Fund for Agricultural Development, Rome.
9. IOE-IFAD 2007. Arhangai Rural Poverty Alleviation. Completion Evaluation. Report No 1889-MN, International Fund for Agricultural Development, Rome.
10. IOE-IFAD 2008. Royaume du Maroc. Évaluation du Programme de pays. Rapport No 1980-MA, International Fund for Agricultural Development, Rome.
11. IOE-IFAD 2009. Federal Democratic Republic of Ethiopia. Country Programme Evaluation. Report No 2045-ET, International Fund for Agricultural Development, Rome.
12. IOE-IFAD 2009. Republic of Sudan. Country Programme Evaluation. Report No 2060-SD, International Fund for Agricultural Development, Rome.
13. IOE-IFAD 2011. République du Niger. Evaluation du Programme de Pays. Rapport No 2350-NE, International Fund for Agricultural Development, Rome.
14. IOE-IFAD 2011. Federal Democratic Republic of Ethiopia. Pastoral Community Project (phase 1). Project Completion Report Validation, International Fund for Agricultural Development, Rome.
15. IOE-IFAD 2012. Hashemite Kingdom of Jordan. National Programme for Rangelands Rehabilitation and Development. Project Performance Assessment. Report No. 2525-JO, International Fund for Agricultural Development, Rome.
16. IOE-IFAD 2012. Syrian Arab Republic. Badia Rangelands Development Project. Project Completion Report Validation, International Fund for Agricultural Development, Rome.
17. IOE-IFAD 2012. Republic of Tunisia. Programme for Agropastoral Development and Promotion of Local Initiatives in the South East. Project Completion Report Validation, International Fund for Agricultural Development, Rome.
18. IOE-IFAD 2013. Rural Poverty-Reduction Programme Mongolia. Project Performance Assessment. Report No 2701, International Fund for Agricultural Development, Rome.

¹ For technical reasons, following the original spread sheet, numbering starts from 3.

19. IOE-IFAD 2013. République du Mali. Évaluation du Programme de pays. Rapport No 3011-ML, International Fund for Agricultural Development, Rome.
20. IOE-IFAD 2014. Royaume du Maroc. Développement Rural dans les Zones Montagneuses de la Province d'Al Haouz, International Fund for Agricultural Development, Rome.
21. IOE-IFAD 2014. République du Sénégal. Évaluation du programme de pays. Rapport No 3317-SN, International Fund for Agricultural Development, Rome.
22. IOE-IFAD 2014. Estado Plurinacional de Bolivia. Evaluación del Programa en el País, International Fund for Agricultural Development, Rome.
23. IOE-IFAD 2014. Kingdom of Lesotho. Sustainable Agriculture and Natural Resource Management Programme. Project Performance Assessment. Report No 3379-LS, International Fund for Agricultural Development, Rome.
24. IOE-IFAD 2013. Kingdom of Nepal. Country Programme Evaluation. Report No 3010-NP, International Fund for Agricultural Development, Rome.
25. FAO 2013. Evaluation of FAO's Cooperation in Somalia 2007-2012. Final Report, Food and Agriculture Organization, Rome.
26. FAO 2013. Independent Final Evaluation. Sudan Productive Capacity Recovery Programme (SRCP). Country: South Sudan. (OSRO/SUD/623/MUL). Final Report, Food and Agriculture Organization, Rome.
27. FAO 2013. Independent Final Evaluation. Sudan Productive Capacity Recovery Programme (SRCP). Country: The Sudan. (OSRO/SUD/622/MUL). Final Report, Food and Agriculture Organization, Rome.
28. FAO 2013. Sudan Productive Capacity Recovery Programme (SCRCP)-Capacity-building Component (SRCP) in Northern Sudan. OSRO/SUD/622-623 MUL. Management Response to the final evaluation report, Food and Agriculture Organization, Rome.
29. FAO 2012. Impact Evaluation of FAO's programme under the Common Humanitarian Fund Sudan, Food and Agriculture Organization, Rome.
30. FAO 2012. Support to Pastoral Livelihood Development (Phase II). Promoting an internationally competitive Somali meat industry.(OSRO/SOM/004/EC), Food and Agriculture Organization.
31. FAO 2012. Improve Livelihoods in Targeted Drought Affected Communities in Kenya. (OSRO/KEN/002/SWE), Food and Agriculture Organization.
32. FAO 2011. Independent Evaluation of the Programmes and the Cooperation in Ethiopia. Evaluation Report. Evaluation of FAO's Programmes and Cooperation in Ethiopia, Food and Agriculture Organization, Rome.
33. FAO 2011. Independent Project Impact Assessment. Final Report. Improving nutrition and household food security in North Shewa (Amhara Region) and Southern Tigray (Tigray Region). Ethiopia. GCP/ETH/060/BEL, Food and Agriculture Organization, Addis Ababa.
34. FAO 2010. Enhancing technical coordination and backstopping of the Food Security and Livelihood Sector in the restoration and sustaining of household food security of vulnerable conflict affected population in the Greater Darfur Region of Sudan.(OSRO/SUD/816/EC), Food and Agriculture Organization, Rome.
35. FAO 2010. Enhancing Technical Coordination and backstopping of the Food Security and Livelihoods sector in restoring and sustaining households' food security of vulnerable conflict affected populations in the Greater Darfur Region. (OSRO/SUD/917/EC), Food and Agriculture Organization.

36. FAO 2010. Strategic Objectives, Results and Core Functions 2010-2013 and 2014-2017, Food and Agriculture Organization, Rome.
 37. FAO 2010. Evaluation of FAO-Sudan Cooperation (2004-2009), Food and Agriculture Organization.
 38. FAO 2010. Management Response to the Evaluation of FAO's activities in Sudan (2004-2009), Food and Agriculture Organization.
 39. FAO 2009. Evaluation of the restoration and development of Essential Livestock Services in Iraq (OSRO/IRQ/407/UDG). Final report, Food and Agriculture Organization, Rome.
 40. FAO 2009. Evaluation of FAO Cooperation in Tajikistan, Food and Agriculture Organization, Rome.
 41. FAO 2009. Management Response to the evaluation of FAO Cooperation in Tajikistan, Food and Agriculture Organization, Rome.
 42. FAO 2009. Evaluation of Restoration of Veterinary Services in Iraq (OSRO/IRQ/406/UDG). Final Report, Food and Agriculture Organization, Rome.
 43. FAO 2008. Support to Pastoral Livelihood Development (Contract no 565-UNO-LI05-06, FAO ref. OSRO/SOM/608/EC). Mid-term Evaluation Report, Food and Agriculture Organization, Rome.
 44. FAO 2008. Support to Food Security Information Systems in Ethiopia. (SFSISE)-GCP/ETH/071/EC, Food and Agriculture Organization.
 45. FAO 2007. Evaluation of FAO's Emergency & Rehabilitation Assistance in the Greater Horn of Africa 2004-2007. Evaluation Report.25 October 2007. Final Report, Food and Agriculture Organization, Rome.
 46. FAO 2007. Management Response to the Evaluation of FAO's emergency and Rehabilitation work in the Horn of Africa, Food and Agriculture Organization, Rome.
 47. FAO 2005. Tripartite Evaluation Report. Support to Livestock Export from the Horn of Africa (EXCELEX) (GCP/INT/811/ITA). Final Report, Food and Agriculture Organization, Rome.
 48. FAO 2003. Support to the Food Security Unit Somalia (OSRO/SOM/002/EC), Food and Agriculture Organization, Rome.
 49. FAO 2003. Nutrition Surveillance in Somalia. (OSRO/SOM/003/USA), Food and Agriculture Organization, Rome.
- Ongoing projects
50. IFAD 2012. Project for Market and pasture management development (PMDP). Design Completion Report. Report No 2320-MN-REV1, International Fund for Agricultural Development, Rome.
 51. IFAD 2013. Project Appraisal Document on a proposed credit in the amount of SDR 71,8 (US\$110 million) to the Federal Democratic Republic of Ethiopia for a Pastoral Community Development Project III. Report No PAD568, International Fund for Agricultural Development, Rome.
 52. IFAD 2010. Republic of the Sudan. Supporting the small-scale traditional rainfed producers in Sinnair State (Sustain). Document No 2411-5D, International Fund for Agricultural Development, Rome.
 53. IFAD no date. Syrian Arab Republic. Integrated Livestock and Market Development Programme, International Fund for Agricultural Development, Rome.
 54. FIDA 2006. Informe del Presidente. Propuesta de préstamo a la Republica de Bolivia para el proyecto de Apoyo a la valorización de la Economía Campesina de Camélidos, Fondo Internacional para el Desarrollo Agrícola, Rome.

55. FIDA 2006. República de Bolivia. Proyecto Vale. Apoyo a la valorización de la economía campesina de camélidos. Informe de evaluación ex ante, Fondo Internacional para el Desarrollo Agrícola, Rome.
56. IFAD 2012. Kyrgyz Republic. Livestock and Market Development Programme. Design Completion Report, International Fund for Agricultural Development, Rome.
57. IFAD 2010. Large Grant Agreement No 1175-IUCN, International Fund for Agricultural Development, Rome.
58. IFAD 2009. Grant Agreement No 1130, Maldhari Rural Action Group (MARAG), International Fund for Agricultural Development, Rome.
59. FAO 2013. OSRO/SOM/308/CHA. Livelihood Support to Pastoral and Agro-pastoral communities in southern Somalia through improvement of Animal Health. Project Proposal, Food and Agriculture Organization, Rome.
60. FAO 2013. OSRO/SOM/305/CHS. Integrated Assistance to sustainable reintegration of IDPs at their place of origin in South-Central Somalia. Project Document, Food and Agriculture Organization, Rome.
61. FAO 2012. GCP/SUD/069/CAN. Sudan: Integrated Food Security Project (IFSP) in Kassala. Final Project Document, Food and Agriculture Organization, Rome.
62. FAO 2012. GCP /SSD/002/SPA. Lakes State Agro-pastoral Community Resilience Programme. Project document, Food and Agriculture Organization, Rome.
63. FAO 2014. GCP /GLO/536/GER. Pastoralist Knowledge Hub - Part 2. Project document, Food and Agriculture Organization, Rome.
64. FAO 2012. OSRO/SOM/301/MUL -Baby 1,2,3. Resilience Programme. Project document final version, Food and Agriculture Organization, Rome.
65. FAO 2014. GCP /UGA/042/UK. Strengthening Resilience and Adaptive Capacity of Agro-Pastoral communities and the Local Government to Reduce Impacts of Climate Risk on Livelihoods in Karamoja, Uganda. Inception Report, Food and Agriculture Organization, Rome.
66. FAO 2014. GCP/UGA/042/UK. Strengthening Resilience and Adaptive Capacity of Agro-Pastoral communities and the Local Government to Reduce Impacts of Climate Risk on Livelihoods in Karamoja, Uganda. Project Document, Food and Agriculture Organization, Rome.
67. FAO 2013. OSRO/SSD/305/CHF. Improving food and livelihood security of vulnerable host community, returnee, IDP, refugee and pastoral households in South Sudan through increasing access to agricultural, fisheries and livestock inputs and services and strengthening purchasing power. Project proposal, Food and Agriculture Organization, Rome.

Pastoral systems¹

1. The scientific understanding of pastoral systems, and more generally of the complex of production and livelihood systems in the drylands,² underwent a paradigm shift more than twenty years ago.³ This historical discontinuity from a theoretical tradition that had lasted virtually unaltered for almost a century had profound implications. Above all, it opened up a new horizon for the understanding of food production potential under conditions dominated by discontinuous variability. Today, this places pastoral systems work in a particularly relevant position with regard to concerns about increasing weather volatility worldwide (IIED and SOS Sahel 2009; AU-IBAR 2010; Krätli et al 2013).
2. On the other hand, it also meant that, for the best part of its history, pastoral development had been operating with the wrong assumptions. Unavoidably, this has left a pervasive legacy both in the dryland socio-economic landscapes and in the toolbox of practitioners, from the language used to talk about drylands and pastoralism (for example the way degrees of mobility, or macro-economic zoning, are used in classifications), to the mechanisms of statistical appraisal and the procedures of monitoring and evaluation.
3. Today, any engagement in pastoral development needs to come to terms with its problematic history. On a practical level, this means to distinguish its own legacy of problematic impact (when looking at the drylands) from the fundamental dynamics of pastoral systems and their potential. On a conceptual level, this means to distinguish the knowledge generated by the new paradigm from the underlying assumptions of the former one.

Variability: from disturbance to asset

4. The 1990s paradigm shift in the understanding of drylands and pastoral systems has been described in detail in many scientific works.⁴ Over the years, as new empirical evidence was generated, the initial framework has been developed and refined, and increasingly taken on board by policy-makers at national and international level. Today, the relevance of this theoretical reflection for the design of interventions focused on poverty reduction and resilience in rural settings can be summed up in the idea that, the discontinuous variability (or discontinuity) that dominates dryland environments is not necessarily a problem for food production, but on the contrary can, under certain conditions, be turned into an asset.
5. For example, unpredictable patchy rainfall in drylands (i.e. variability in the spatial and temporal distribution of rains)⁵ can lead to drought conditions and green areas only a few miles away from each other. For static strategies of production, being

¹ Full references for this annex are integrated in annex 2.

² Cf. Koohafkan and Stewart (2008: 5, 6): 'FAO has defined drylands as those areas with a length of growing period (LGP) of 1–179 days (FAO, 2000a); this includes regions classified climatically as arid (Plate 1), semi-arid and dry subhumid. The United Nations Convention to Combat Desertification's (UNCCD) classification employs a ratio of annual precipitation to potential evapotranspiration (P/PET). This value indicates the maximum quantity of water capable of being lost, as water vapour, in a given climate, by a continuous stretch of vegetation covering the whole ground and well supplied with water. Thus, it includes evaporation from the soil and transpiration from the vegetation from a specific region in a given time interval (WMO, 1990). Under the UNCCD classification, drylands are characterized by a P/PET of between 0.05 and 0.65. [...] about 40 per cent of the world's total land area is considered to be drylands (according to the UNCCD classification system)'.

³ The seminal works leading to the paradigm shift are well known: Sandford (1983); Ellis and Swift (1988); Westoby et al (1989); Behnke et al (1993); Scoones (1994,) amongst others. Although the paradigm shift was formalized in the anglophone literature, a parallel reflection on the economic importance of pastoral mobility was also taking form in the francophone context, for example in the works of Benoit (1984); Bernus (1990); Digard et al (1992).

⁴ For example Niamir-Fuller 1999; Catley et al 2012.

⁵ Other forms of variability in the drylands include differences in the properties of soil (e.g. between sandy dunes and clay plains), the biodiversity of vegetation (pastoral herds in Niger have been observed to feed on more than sixty different species, cf Bonfiglioli 1981 and Schareika 2001), or the availability and quality of water (not only whether clean or dirty, but also the temperature relative to the season or the time of the day, which may affect the animals, cf PCI 2009).

unable to predict the spatial and temporal distribution of rains is a problem. On the other hand, strategies of production specialized to move with the rains and arrive on the pasture just at the time when nutrients peak,⁶ may take advantage of this variability in distribution. Mobile pastoral systems have been observed to use the discontinuous distribution in rainfall to stretch the availability of green pasture relative to their herds well beyond its length in each location they visit.⁷

6. During exceptionally long dry spells (expected to happen several times in the life of a pastoralist) the principle remains that of exploiting discontinuous availability of resources, but in order to track the relative concentration of nutrients, exceptionally long, fast, and risky migrations might be necessary. Historical evidence indicates that the pastoral groups who routinely operate a strategy of mobility during the most frequent environmental circumstances are more prepared for long distance migrations when conditions get bad over a very large area.⁸
7. Mobility is just the most evident way in which variability in the environment is interfaced with variability embedded in the production system. Another important way is through promoting feeding selectivity in livestock. Under conditions of discontinuous variability in the distribution of nutrients, animal nutrition is maximized when animals do not eat everything they can. Livestock capable of feeding selectively target only the most nutritious bites on the range, avoiding the rest.⁹ Overgrazing goes directly against this logic and therefore only happens out of incompetence or necessity. Mobility (not the size of the rangelands) distributes grazing pressure and helps tracking variability of nutrients at larger scales. Feeding selectivity does the same at the patch scale. Therefore the most economically successful strategy is also the most ecologically sustainable.
8. This reversed understanding of mobility-based strategies in pastoral production has nullified the economic argument that used to be associated with policies of sedentarisation. Once seen as the first step of pastoral development, sedentarisation of pastoralism is now clearly understood in scholarly works as well as in a growing number of policy documents, not only as critical to reducing pastoral productivity and ecological sustainability, but as being problematic for food security, land degradation and even gender.¹⁰

⁶ The nutritional value of a patch depends on the relationship of several variables, including not only the type of palatable species, but their combination (as feeding on some species can encourage ruminants to feed on others), and their stage of development (as nutrient content changes during the life-cycle of a plant). There are significant differences in nutritional value not only between stages in the life-cycle of the same plant, but in certain cases even between day and night (Kim 1995; Orr et al 1998; Maryland 2000). It is therefore the time of the arrival of livestock on a patch that determines its nutritional value (cf. Krätli and Schareika 2010).

⁷ Cf Schareika et al (2000). Data from perhaps the first longitudinal observation of pastoral herds during an annual cycle found that, because of mobility and selective feeding, the livestock enjoyed a diet that was significantly richer in nutrients than the average nutritional content of the range they grazed upon (Breman and De Wit 1983).

⁸ For example, the Wodaabe in Niger, whose low political profile kept them peripheral to the 'nomad problem' in the minds of the colonial administration, with the consequence of delaying their sedentarization. These groups suffered consistently smaller losses from droughts than other pastoral groups with similar or even higher resource entitlements but less mobility (for example, among the Tuareg). See Habou and Danguioua (1991) on the drought of 1984; Bernus (1977) and Mesnil (1978) on the drought of 1969–1973. Also FAO (2002: 5): 'In the droughts of the early 1980s, highly mobile camel people such as the Rashaida retained a much greater proportion of their herds than the neighbouring Beja because of the latter's attachment to set routes and pastures'.

⁹ Where nutrients are unevenly distributed on the range, the capacity to disregard the less nutritious fodder while grazing represents a key advantage, as ruminants cannot compensate poor pasture by increasing intake, on the contrary the experience of a poor diet abates intake, leading to rapid weight loss (Breman and De Wit 1983). On the use of feeding selectivity as a non-conventional form of intensification in pastoral production, see Krätli and Schareika (2010).

¹⁰ Pastoral mobility is protected as a crucial economic and ecological asset in the pastoral codes of Mauritania, Mali, Niger and Chad (République Islamique de Mauritanie 2000; République du Mali 2001; République du Niger 2010; République du Tchad 2014); the African Union *Policy Framework on Pastoralism* (African Union 2010); the *National Policy for the Sustainable Development of Northern Kenya and other Arid Lands* (Republic of Kenya 2012); the 2013 joint declaration of the Global Alliance for Resilience – AGIR - Sahel and West Africa (AGIR 2013); the *Déclaration de N'Djaména (2013) and Déclaration de Nouakchott (2013)*; and the IUCN *Minimum Standards and Good Practice on Supporting Sustainable Pastoral Livelihoods* (IUCN 2012, supported by IFAD). Securing pastoral mobility is a top recommendation of the *Mera Declaration* of pastoralist women (MARAG 2011, supported by IFAD).

9. The view of variability as systemic to drylands shares its foundations with resilience thinking. The reflection on resilience emphasized that 'resilience is not only about being persistent or robust to disturbance. It is also about the opportunities that disturbance opens' (Folke 2006: 259). Holling et al (1998) stress the need of 'moving [...] towards a science that is integrative [and] focuses on variability and uncertainty as absolutely fundamental, instead of as "noise" to be excluded from the analysis' (cited in Scoones 1999: 494).
10. Therefore interventions aimed at introducing stability can, themselves, be a disturbance: 'interventions aimed at achieving stability in non-equilibrium systems are likely to be irrelevant at best or disruptive and destructive at worst' (Ellis and Swift 1988: 451). Also Walker et al (1981: 473): 'Comparison of the dynamics of various savanna and other natural systems leads to a conclusion that the resilience of the systems decreases as their stability (usually induced) increases'.¹¹ In this perspective, understanding how variability can contribute to the resilience of the system, and investing in working with it rather than against it, is seen as a better option. In environments where discontinuous variability is negligible or easily neutralized through sustainable inputs, strategies that depend on stability and uniformity are better adapted. In environments where discontinuous variability is the operational baseline, interventions aimed at introducing stability may actually introduce disorder and decrease resilience in the system.

Definition of pastoral systems

11. Definitions (including, more broadly, classifications) are closely related to the theoretical framework they are designed to serve. Changing the theoretical framework therefore unsettles this system of relationships, until adjustments are made to integrate the changes at all the relevant levels. With regard to the paradigm shift in pastoral development, the process of updating the legacy of definitions is still ongoing.¹² As a consequence, engagement in pastoral development requires strong awareness of the underlying assumptions embedded in definitions and classifications (Krätli et al 2015).
12. Definitions of pastoralism are generally part of nested classifications of livestock systems and agricultural systems. In the legacy from the former pastoral development paradigm, classifications for different uses have hinged on parameters such as the degree of integration with crop production; animal-land relationship; relationship with agro-ecological zoning; intensity and type of production, size and value of livestock holdings; distance and duration of animal movement; types and breeds of animals kept; economic specialization and market integration of the livestock enterprise; and degree of household dependence on livestock (cf. Otte and Chilonda 2002).

¹¹ Cf. on pastoral systems, the description of pastoral production in Behnke and Scoones (1993: 14-15): 'The producer's strategy within non-equilibrium systems is to move livestock sequentially across a series of environments [...] exploiting optimal periods in each area they use [...] Herd management must aim at responding to alternate periods of high and low productivity, with an emphasis on exploiting environmental heterogeneity rather than attempting to manipulate the environment to maximize stability and uniformity'.

¹² For example, 'understanding the embedded in methodologies' and the ways they impact on resilient dryland development was the topic of the last annual [GrassNet](#) workshop (German Institute for Tropical and Subtropical Agriculture, DITSL, Witzenhausen, Germany, 10-12 December 2013).

Box 1A
Reviewing the legacy of classifications

Mobility. The understanding of mobility in traditional classifications has focused on intensity in time and space, reflecting the assumption of sedentary conditions as 'normality' as well as a general limitation in the specialization of the language. Pastoralists themselves, on the other hand, distinguish 'mobility' according to its function in relation to the strategies of production and people's livelihood, actually using different words to describe movements of livestock between pasture and water, movements of camps to new pasture, the particular kind of movement at the beginning of the rainy season, or the one triggered by a drought, etc.

Degree of household dependence on livestock. Originally, this classification was intended to look at total income, including for example the value of livestock products consumed by the household (Swift 1984). In practice, the analysis is usually limited to cash income. As a consequence, definitions based on this parameter usually miss out the value tied to informal and non-market transactions used in the building of social capital, an economic asset as critical as credit rating in national and international economic settings, and especially important for vulnerable households groups. Furthermore, livestock ownership and livestock management often do not overlap. Households predominantly dependent on the livestock they manage may only own a small part of it; vulnerable households, with relatively few animals, may be more dependent on livestock than households with larger holdings but access to alternative sources of cash income (for example a salary or a rent); the proportion of livestock which is managed in pastoral systems, but owned by urban investors, or impoverished pastoralists, goes unaccounted when this classification is used to estimate the magnitude of the pastoral economy (cf. Krätli and Swift 2014).

13. Types and breeds of animals. Classifications have focused on the combination of species and predominant breeds, reflecting the assumption of western modern breeding as 'normality' (e.g. with all breeds ranked in relation to improved 'high-performing' breeds). Observation of pastoral breeding systems have highlighted the strategic economic use of a variety of specialized 'types' even within apparently homogeneous breeding populations, and the attention for complex behavioural traits in breeding, at the level of the herd as an organized social group as well as at the level of the individual animal—e.g. capacity for learning, propensity to bond emotionally with the herders, propensity for feeding selectively, etc. (cf. Kaufmann 2007; Krätli 2007, also in FAO 2007: box 88).
14. The definitions of pastoralism from within the new paradigm have emphasized the use of mobility according to its purpose rather than its intensity, and its importance as a strategy for increasing livestock productivity (Behnke et al 2011).
15. A recent policy for the development of Kenya's arid and semi-arid lands defines pastoralism as follows: 'both an economic activity and a cultural identity, but the latter does not necessarily imply the former. As an economic activity, pastoralism is an animal production system which takes advantage of the characteristic instability of rangeland environments, where key resources such as nutrients and water for livestock become available in short-lived and largely unpredictable concentrations. Crucial aspects of pastoralist specialization are: 1. The interaction of people, animals and the environment, particularly strategic mobility of livestock and selective feeding; and 2. The development of flexible resource management systems, particularly communal land management institutions and non-exclusive entitlements to water resources' (Republic of Kenya 2012: iii).¹³

¹³ Cf. with the old descriptions of pastoralism in development and policy discourses in East Africa: 'In East Africa, governments consider pastoralists to be economically irrational: they accumulate cattle without regard to the economic benefits accruing from sale, are unwilling to sell, unresponsive to price incentives and are more interested in particular cattle colours or the shapes and sizes of horns [...] Among Tanzanian policy-makers there is a widely held notion that transhumant pastoralists move because they are footloose, have a "nomadic predilection and lack the perseverance to remain in one place" [...] Another type of argument for the irrationality and backwardness of pastoral herders ... is that herding was historically prior to cultivation and thus less advanced' (Raikes 1981: 23-30).

16. The African Union's first policy on pastoralism describes arid and semi-arid areas as 'characterized by marked rainfall variability, and associated uncertainties in the spatial and temporal distribution of water resources and grazing for animals', and describes pastoral mobility in terms of its proactive nature and economic advantage: 'Pastoralists have developed management systems based on strategic mobility, which are well-adapted to these difficult conditions [...] Such movements are not random or irrational, but highly strategic and draw on local information gathering and risk analysis, supported by extraordinary traditional systems of governance and decision-making. It is these technical and social aspects of pastoralism, developed and adapted over centuries, which enable pastoralists in many African countries to supply the bulk of livestock for domestic meat markets' (African Union 2010: 1, 5).
17. Between 2003 and 2010 the FAO's 'Pro-Poor Livestock Policy Initiative' produced over fifty working papers. The only paper focusing on pastoralism, defines it in the following terms: 'Pastoralism, the extensive, mobile grazing of livestock on communal rangelands, is the key production system practiced in the world's drylands' (Rass 2006: 68). Taking mobility as a proxy of the complex of strategies to take advantage of systemic variability in the drylands, this study also refers to pastoral systems as 'mobility-based livestock systems'. Today, such systems may not look like either the 'pure pastoralism' or the 'agro-pastoralism' of traditional definitions. They may include occasional or permanent crop-farming strategies, as well as a variety of supporting strategies of variable intensity, from trading, to charcoal burning or migrant work. However, as 'mobility-based livestock systems' they are not defined by using or not using crop farming or other alternative or complementary strategies, but by their strategy in livestock production, in particular by their specialization to take advantage of discontinuous variations.
- The magnitude of pastoral systems
18. Drylands represent 40 per cent of the planet's total land mass and are inhabited by some 2.5 billion people, including 40 per cent of Africans, 39 per cent of Asians and 30 per cent of South Americans.¹⁴ Although only a small fraction of these people are directly involved in running pastoral systems, many more—the majority, in regions like the Sahel-Sahara complex—have a stake in them (Koochafkan and Stewart 2008; Asner et al 2004).
19. The figure of 200 million pastoralists worldwide (UNDP-GDI 2003; USAID 2012) is sometimes used. The review for the 'Pro-Poor Livestock Policy Initiative' estimated the number of pastoralists/ agropastoralists at 120 million worldwide, 50 million of which in Sub-Saharan Africa (Rass 2006). In reality the number of pastoralists is unknown with any precision and would obviously depend on the definition—for example whether based on ethnic origins,¹⁵ on the production strategy, or the main source of income (cash income, total income, etc.).
20. Although networks of herding households remain the backbone of pastoral systems, the number of people in these households, or their livestock holdings, is not a linear function of the magnitude and economic significance of pastoral systems. Ownership and management of livestock do not overlap and a great number of activities in dryland economies depend upon on orbit around pastoral systems. An unknown, but certainly substantial and dynamic, proportion of the livestock managed in pastoral systems belongs to others. Impoverished pastoral households on a recovery trajectory move to town and leave livestock to be managed in the pastoral systems. Urban investors and sedentary farmers keep their livestock in the mobile systems if they can, because of the higher returns and lower costs—in the case of farmers, this also in order to keep the animals away

¹⁴ Cf IUCN 2009. A few facts about drylands

https://www.iucn.org/about/union/secretariat/offices/asia/asia_news/?3837/A-few.

¹⁵ In Sudan for example, the 2008 census defined 'nomads' on the basis of tribal affiliation.

from the fields during the farming season. Poor dryland farmers sell their failed crops to transhumant herders and take advantage of exceptionally fertile land along transhumant corridors and designated grazing areas; buy milk and trade livestock sold by transhumant herders, and sell them their grains. Small dairy operations keep lactating animals close to town but their sustainability depends on the main herd in the pastoral systems.¹⁶ On the other hand, poor pastoralists who would not have enough animals to remain in the system can continue to do so by herding other people's animals together with their own. All these activities are inherently risky, but can be highly rewarding when the economic and institutional infrastructure are such to allow them to go right.

21. Farmers can rarely afford to keep enough animals to satisfy their need for manure. For centuries, the fertility of the fields has been secured by the movement of large numbers of pastoral livestock into the farming regions, during the dry season, although in many places those institutionalized connections have been jeopardized or disrupted. These seasonal movements in and out of the farmlands represent a non-conventional (discontinuous) form of crop-livestock integration and one that, not being at the farm scale, does not sacrifice specialization. The scale of integration, enabled by mobility-based pastoral systems (economic, but also social and ecological), is subject to temporal dynamics, can involve entire regions (certain annual migrations span over 1000 kilometres), and connect distant places without necessarily all the areas in between.¹⁷
22. This has important implications for the notion of 'local' in development interventions, which obviously changes with the scale of reference and therefore is different if based on a village perspective or embracing the full scale of the unconventional integration enabled by pastoral systems.¹⁸
23. Mobility-based livestock systems therefore play a key role in connecting production/livelihood strategies in the drylands, both integrating specialist livestock keeping with specialist crop-farming and integrating rural and urban realities. This is further enhanced by a changing macro-economic environment in which pastoral livelihoods are adapting to new markets created by rapid urbanization in and around all pastoral areas, and the rapid growth of urban demand for milk and meat.
24. In estimating the magnitude of pastoral systems today, the long history of interventions driven by the wrong assumptions needs to be taken into consideration. Neglected or antagonized by development for the best part of the last century, these systems are still producing substantial wealth but all the indicators would suggest that they are nowhere near to their full potential.

The economic value of pastoral systems

25. Work on the economic value of pastoral production and livelihood systems and their development potential shows that they make a substantial contribution to GDP, and in many countries supply most of livestock exports. For example, in Mongolia pastoral livestock accounts for one third of GDP and represents the second largest source of foreign exchange earnings (32 per cent) after minerals (41 per cent) (National Statistical Office of Mongolia, 2010). In Niger, the livestock sector is the second source of export revenue after uranium (République du Niger 2011), with pastoral/agropastoral systems representing 81 per cent of production (Rass 2006). In Chad, pastoral livestock make up 40 per cent of agricultural

¹⁶ Lactating animals are sent back to the main herd at the end of lactation, or when they are weakening, and replaced with new ones (Abdullahi et al 2012).

¹⁷ The notion of 'connectivity' is core to the most recent approach in the study of desert regions, especially the Sahara, used in alternative to the traditional views of deserts as barriers. For a reflection on pastoralism and connectivity perspective, cf Krätli, Swift and Powell (2014).

¹⁸ The attention to this difference across scales has led to a reflection on the implications, for pastoral systems, of processes of centralization in absence of a sound understanding of these dynamics (cf. IIED 2006; Morris 2009).

- production, 18 per cent of GDP, and 30 per cent of exports (Alfaroukh et al., 2011). In Sudan, with an estimated 90 per cent of the national herd in pastoral systems, the 2009 offtake was worth US\$1.8 billion (Behnke and Osman, 2011).
26. According to the African Union: 'pastoralism contributes 10 to 44 per cent of the GDP of African countries [...] Official statistics tend to overlook many important economic benefits of pastoral livestock. These benefits include household consumption of livestock products, especially, milk, which is a particularly valuable food for children, and pregnant or nursing mothers. Livestock are also used for transport and ploughing, and work animals can be hired out to traders or farmers. Manure improves soil fertility and can be dried and used as fuel. Livestock skins have a variety of domestic uses. Livestock are also the basis for traditional social support systems in many pastoral communities, providing a form of traditional insurance system in the face of shocks' (African Union 2010: 9).
 27. Mobile pastoral systems have been found to be significantly more productive, per hectare, than ranches and more sustainable and resilient than mixed farming under the same conditions (for example, in Uganda, the return per hectare has been found 6.8 times higher in pastoral systems than in the ranching systems, cf. Ocaido et al. 2009).¹⁹ They are also associated with important net gains in human edible proteins compared to industrial livestock systems. For example, the production of human-edible proteins in pastoral milk and meat was calculated to be up to 100 times more efficient than in US pork industry (Gliessman 2007, cf also Steinfeld 2012).
 28. Pastoralism can prosper in landscapes where other livelihood systems either are at their limit (dryland farming) or require large investments (irrigated cropping). The opportunity cost of pastoralism is low; the resources it uses are not, in general, of high value to other livelihood systems (wetlands in drylands are an exception).
 29. Finally, mobility-based livestock systems also operate, or have the potential to, as a financial institution providing a range of services to rural poor: not only investment (access to higher returns than keeping few animals themselves); but also insurance; and access to the means of production as retribution in exchange for labour (as waged herders are still frequently paid in productive livestock).
 30. A recent series of studies for the Intergovernmental Authority on Development (IGAD) developed methods to calculate the monetary value of informal financial services provided by livestock, such as savings, sources of credit and insurance. The total value of these services in Kenya was estimated (in 2009) at more than 400 million USD, with at least 90 per cent in pastoral systems. In Ethiopia, the figure was 1.1 billion USD, with about 40 per cent in pastoral systems, and US\$200 million in risk-pooling services only from pastoral herds. In Sudan the figure was US\$1.9 billion, with an estimated 90 per cent in pastoral systems (Behnke 2010, Behnke and Muthami 2011; Behnke and Metaferia 2011; Behnke and Osman 2011).
 31. According to a recent IFPRI study on the Horn of Africa 'pastoralism is still the dominant source of income and employment [and] undoubtedly a sector of comparative advantage in the semiarid lowland regions of the Horn'. The study points out that 'in the worse example of forced sedentarisation, some argue that a double tragedy has occurred: pastoralists are pushed off vital lands while farmers are settled on lands with very low crop potential. Such interventions are clearly ignoring the principle of comparative advantage' (Headey 2012: 3, 1, 17).

¹⁹ Studies comparing the performance of dryland livestock systems (cattle) with different degrees of mobility in East and West Africa found a positive correlation between mobility and productivity for all key parameters, with fertility and milk production increasing and calf mortality decreasing in relation to increasing mobility (e.g. Colin de Verdière 1998; Wilson and Clarke 1976). Twenty- six independent studies in nine countries in East, West and Southern Africa found returns per unit area several times higher in pastoralism than in ranching (Scoones 1995).

The ecological efficiency of pastoral systems

32. The reflection on food security has traditionally focused on production, paying relatively little attention to the successive stages of value chains, but this tendency is changing. The FAO [Food Wastage Footprint](#) project²⁰ sets new standards of quality in this direction (e.g. FAO-FWF 2014). On a closely related path, IFAD is supporting the 'Change Initiative on Food consumption, urbanization and rural transformation' (launched by the International Institute for Environment and Development during an international meeting in London on 3-5 December 2014). Food waste at consumer level in industrialized countries (222 million ton) is almost as high as the total net food production in sub-Saharan Africa (230 million ton). The largest proportion of losses in industrialized countries (over 40 per cent) occurs at retail and consumer levels (Gustavsson et al 2011). On the other hand, the production of human-edible proteins in livestock systems where pastoralism is predominant has been calculated to be between up to 100 times more efficient (Gliessman 2007; Steinfeld 2012).
33. Studies on the opportunities for mitigating GHG emissions are concerned with the ecological efficiency of different animal production systems as a parameter for prioritizing areas and strategies of intervention. The publication of the *Livestock's Long Shadow* (Steinfeld et al 2006) raised concerns for the carbon footprint of extensive grazing systems. This was largely a consequence of unclear distinction of pastoral systems within the category of extensive grazing systems. A later study eliminated this ambiguity (cf. Steinfeld et al. 2010).²¹

Pastoralism and poverty

34. The FAO Pro-Poor Livestock Policy Initiative found that 'Worldwide, pastoralists constitute one of the poorest population sub-groups. Among African pastoralists, for example, the incidence of extreme poverty ranges from 25 to 55 per cent', and concluded that '[In Sub-Saharan Africa] any attempt to achieve the Millennium Development Goal of halving extreme poverty needs to include pastoral people' (Rass 2006: 68). While during the XX century pastoral systems have, overall, probably lost more resources than they have gained,²² today's pastoralists are of course neither all rich nor all poor.²³ As in the case of 'mobility' (see box 1A), from a local perspective, 'poverty' is understood as a range of different conditions requiring different concepts to describe them, only simplified and reduced to one meaning by the translation into a European language (see box 2A).
35. There is growing differentiation in wealth (Catley and Aklilu 2012; Mongolian Society for Range Management 2010; Breuer and Kreuer 2011), with a minority of wealthy owners and a large majority of small enterprises—even micro enterprises with a handful of animals, nested into the bigger ones as many poor pastoralists herd their livestock together with other people's livestock.²⁴ Big herds are also

²⁰ <http://www.fcrn.org.uk/research-library/statistics/food-consumption/fao-food-wastage-footprint>.

²¹ Examining a 1990s comparative study of greenhouse gas emissions associated with beef production in an extensive Sahelian pastoral system of West Africa and in an intensive U.S. feedlot the authors of chapter 8 of *Livestock in a Changing Landscape* conclude that 'for greenhouse gas emissions [...] the extensive Sahelian system is more efficient than the intensive American feedlot, and thus the intensive production is more environmentally damaging' (Reid et al. 2010: 117).

²² The Karimojong in Uganda, for example, have lost over 50 per cent of their pastureland to wildlife conservation (Rugadya et al 2010). In Sudan, 'the last generation of pastoralists has seen rangelands shrink by approximately 20 to 50 per cent on a national scale, with total losses in some areas' (UNEP 2007: 186); the Beja pastoralists in East Sudan lost key dry-season grazing reserves to the Tokar, Gash and New Halfa irrigation schemes, becoming much more exposed to the incidence of drought-related disasters (Pantuliano 2005).

²³ That 'All pastoralists are rich; alternatively, all pastoralists are poor and food insecure' was one of the pastoral development 'myths' identified and disproved in UNDP-GDI 2003.

²⁴ For example, an analysis of available data for Kenya has estimated that about 50 per cent of the households whose main source of livelihood is herding are described as 'very poor' (by community-based local parameters), some 40 per cent as 'poor' and 'middle', and only about 1 per cent as 'rich' (Krätli and Swift 2014). A synthesis by FAO and the World Bank ranked the incidence of poverty among various cropping systems, and ranked poverty in pastoral and agro pastoral systems as 'extensive' compared to 'moderate' in maize systems, and 'limited' in cereal root crop systems (Dixon et al 2011).

sometimes made up of the animals of a number of kinsmen put together and managed as a single unit. Poor households of the same kin group may attach themselves to such an economic unit and benefit from the activities created by such an enterprise, and the small size of their own herds may be masked by this. Pastoralists such as the Boran of the Kenya/Ethiopia border, for example, have systematic procedures for attaching impoverished households to large enterprises in this way, providing such units with both higher returns from the same livestock and more resilience than they would have on their own. It would therefore not be helpful to such households to be removed from their network, as would be likely to happen if a project targeted them for assistance.

Box 2A

Different concepts for 'poverty' amongst Turkana pastoralists, Kenya

Category	Explanation
Ekechodon	A person without livestock because of bad luck; a potentially temporary condition if the person has been correct with his social circle in the past (i.e. has sufficient social capital).
Elongait	A person who has lost his family (thus his pool of labour) due to raid or disease, but who has livestock and can recover by using it to marry and build a partnership.
Emetut	A person with few animals and without family, surviving on other people's charity.
Ekebotonit	A person who, because of mean and deviant social behaviour, never managed to make 'paths'; someone who could handle neither people nor animals in ways that would create wealth and a supportive following.

Source: adapted from Anderson and Broch-Due 1999.

36. Targeting the ekechodon or elongait poor is likely to be the most effective way of ensuring project resources reach the best people to impact on pastoral poverty. It would still be important to gain awareness of the relationships of these people with their wider social networks, so as not to jeopardise them or put them at risk. The most common practice in targeting, however, is more likely to concentrate on the emetut or ekebotonit poor, the destitute, and therefore people who although in need, are no longer in the pastoral system. At least in the case of emetut poor, singling out by a project with a rigid and pre-determined targeting of 'poor' is still likely to trigger exclusion from customary safety-net mechanisms, possibly making project beneficiaries more vulnerable, not less, by further divorcing them from their social context on which they will have to rely when project assistance ceases.
37. Marketing strategies, with related production and management strategies, are substantially different for households with a viable herd and for those poor households trying to increase their herds to a viable size. For example, wealthier households are likely to respond to higher livestock prices (with better terms of trade with cereals) by increasing offtake, while producers trying to rebuild their herds are likely to respond by selling less.²⁵ Similarly, poor producers committed to increasing herd size may be selling at very competitive prices on the domestic markets (again out of necessity) but are unlikely to engage in producing the kind of animals required for export markets—involving a higher risk at the production stage, as they are usually more costly to keep and less capable of enduring difficult conditions (cf Aklilu and Catley 2010). In parallel with these new perceptions about the nature of pastoralism, there is a growing understanding that poverty in a

²⁵ Poor producers sell usually more than they should, out of necessity (e.g. 1-2 years old animals). With better terms of trade they are able to optimize their marketing strategy in view of rebuilding the herd (for example by waiting until animals are 3-4 years old before selling, and by exchanging some male animals with reproductive females, from friends and relatives, rather than selling them).

pastoral economy may take different forms from poverty in an agricultural economy. Because of their ownership and management of livestock, valuable assets for any rural household, pastoralists may appear richer than farmers in the same area and poverty rates correspondingly lower. However, the herd includes the means of production, and therefore it is the equivalent of both land and harvest in crop-farming terms. Even impoverished pastoralists on a trajectory of herd reconstruction, may have livestock holdings that, if cashed, would make them look relatively wealthy, and still experience food insecurity and great vulnerability.

38. The strategies to take advantage of variability require a minimum viable herd size and set of resources, which is also the poverty threshold below which pastoralists cease to be independent producers. However, such a threshold is not a clear-cut standard, but 'thick' and flexible, depending on a number of variables, which are context specific—including not just where (e.g. African savannah or Mongolian steppes) but also when and who as variability means that different years offer different levels of challenges and opportunities (including not only recent rainfall history, but also market and service conditions), and different households have access to different combinations of resources (including competent labour, social capital, differences in herd composition).
39. In household-based surveys, for example, definitions of 'household' that result in representing the sub-units of a pastoral polygamous structure as discrete households, tend to artificially increase, on paper, the number of livestock-poor women headed households (Pica-Ciamarra et al 2014; Krätli and Swift 2014).
40. In part, this threshold may be stretched, vis-à-vis an ongoing process of impoverishment, by keeping the herd to a viable size through herding a proportion of animals from other people. Therefore poverty in pastoral systems is also differentiated along the line of being able to take advantage of variability, with some poor remaining active within the system despite less-than-viable livestock holdings, and others on the outside. The shift from inside to outside the system is not a linear function of the level of poverty. It also depends on social capital, personal inclination, and skills. Poor who have moved out of the pastoral system may have more animals in the system than some of those directly involved with running it. Similarly, although rarely, people directly involved with herding may have substantial assets outside the pastoral system, such as for example a shop and houses in town. Poor pastoralists outside the system but with animals inside, are also likely to keep a few lactating animals with them. Although these animals are more visible to targeting mechanisms, they are often less important in the long-term, and for resilience, than the others.
41. Two general principals arise from these considerations. First, household herd size is only useful as a targeting measure if it is seen as part of an assessment of the position of the potential beneficiary within his or her social and economic networks and economic prospects. This would be an impossible task for project designers, although easy for members of that society, and argues for self-selection methods, perhaps using participatory methods to judge a person's overall position in the group, not just his credit worthiness in a narrow economic sense. The answer, in areas where there is a tradition of contract writing, may lie in making assistance to a particular area subject to a written contract, signed by the customary authorities of the area. Such contracts are widely recognized in several parts of Africa (e.g. Somalia and Eritrea).
42. The second principal is that, perhaps not surprisingly, pastoral 'poverty' is itself characterized by significant variability. The lesson from pastoralism is that structural variability in the context of operation is best targeted by embedding variability in the production system. Applying the same approach to targeting poverty would lead to increasing the proportion of real-time management over prediction and design, and the variety and flexibility of targeting procedures over

standardization. In other words, where variability makes sufficient knowledge a non-attainable goal, investing in keeping options open offers higher returns than investing in trying to attain sufficient knowledge. This is discussed in more detail in the next section.

Vulnerability and risk

43. As in all risk-taking enterprises, the rewards in pastoral systems are highest when risk is harnessed and managed, not when it is avoided.²⁶ In conditions dominated by variability, systematic risk-avoidance is not possible and therefore is a failing strategy that leads to poverty traps.²⁷ Systems that specialize in managing risk need risk to manage. Their aim is not to eliminate risk but to manage it, i.e. to have the highest possible level of risk (highest returns) with the lowest possible incidence of disasters.²⁸ By making prediction impossible, variability is closely linked to risk. One way to manage the risk associated with variability is by keeping options open.²⁹ For example, keeping a herd capable of moving fast in the right direction when empirical evidence of green pasture is finally gathered; building social capital in large geographic networks (i.e. avoiding making enemies if possible), in order to gain some level of negotiable entitlement to many different areas and prepare for long-distance migrations at times of a drought; keeping a variety of animals rather than concentrating on single traits like productivity or hardiness (i.e. not only keeping different species, but even different 'types' within the same breed), in order to have a herd always capable of responding to a variety of situations (see box 1A).
44. Systems adapted to take advantage of variability relate to risk in a different way from conventional rural economies, and may need a different form of targeting. The common approach to risk, which frames it as an absolute problem and aims at reducing it, may be unhelpful or even disruptive. When addressing vulnerability in pastoralism, it is crucial to distinguish between the 'baseline vulnerability' which is constitutive to the functioning of the system and the vulnerability that arises from the sudden or cumulative incapacity to operate the system, either originated from external forces, internal adjustments, or disasters. For pastoralist households, this kind of vulnerability increases as their capacity to operate pastoral production strategies decreases (Little et al. 2001).³⁰
45. Poor households with livestock and/or working in the pastoral system, will benefit from interventions directed to support its characteristic production logic (e.g. supporting mobility and flexibility for real-time management, and the strategic

²⁶ In this light, pastoralism has been described as a high-reliability system, in analogy with air-traffic control or electrical grid systems: systems where reliability cannot be traded for money as reducing reliability in order to reduce costs leads to incalculable costs at the first system failure (Roe et al 1998). High-reliability systems are largely real-time operations that depend chiefly on management. Consequently, interventions aimed at regulating all areas of the system effectively undermine its capacity to work: 'successful reliability management focuses less on safeguarding single-factor performance than on maintaining a set of key organizational processes within acceptable bandwidths' (Roe and Schulman, 2008: 159).

²⁷ Cf. McPeak and Barret (2001: 68): 'as more near-stockless pastoralists get driven toward towns, stocking densities there increase, reducing range and thus animal productivity. Moreover, herders in town face difficulties obtaining good information on current conditions in open range areas, and reduced protein and energy intake limit boys' strength to undertake arduous treks necessary to reach good pasture and water'.

²⁸ Familiar examples of systems of this kind are air-traffic control (maximum number of planes in the air—hence risk—with minimum number of incidents) and edge-funds (where risk is explicitly linked to returns and managing it—not zeroing it—is the rewarding strategy).

²⁹ In contexts dominated by variability (or discontinuity), where sufficient knowledge for prediction cannot be secured, *optionality is a substitute for knowledge*. If I cannot predict what is my best option, my best option is to keep my options open until a decision can be made in real time. With optionality, prior assessment leading to a specific choice is not necessary, therefore the strategy is adapted to situations dominated by discontinuous variability where prior assessment (for prediction) is not possible. Under these conditions, 'optionality offers higher returns than knowledge would warrant' (Taleb 2012). The relevance of this reflection for the debate on pastoral livelihood and resilience is presented in Krätli, Swift and Powell (2014).

³⁰ A study of pastoral poverty in East Africa concludes that 'what is not needed is another development label (stereotype) that equates pastoralism with poverty, thereby empowering outside interests to transform rather than strengthen pastoral livelihoods' (Little et al 2008).

embedding of variability in the production system) and may be negatively affected by interventions aimed at introducing stable and uniform conditions or ignoring the peculiarity of their strategies (e.g. promoting a reduction in mobility, streamlining the system around the performance of a single trait, or focussing on marketing).³¹ On the other hand, pastoralists who have left the system and have no interest in rebuilding a herd are likely to be urban or peri-urban poor and may therefore be better targeted as such.

Political exclusion and technical exclusion

46. The drylands in most parts the world have received substantially less attention from development initiatives compared to more central regions. Pastoral regions are commonly described as marginalized and excluded from development (neglected). In Africa, this perception is now common currency in regional policy making. The African Union's policy framework on pastoralism claims that 'pastoralists are among the most politically and economically marginalized communities' and links the poor track record of development interventions in pastoral areas to the failure to recognize pastoralism as a working model and a tendency to attribute shortcomings to a mythical traditional life-style: 'Many past attempts to support pastoral development failed to recognize the strengths of pastoralism' [...] There is also a tendency to overlook the suffering of pastoralists under the misconception that their hardships are self-inflicted by an apparent choice for a traditional life style which inhibits their ability for innovations and adaptation to change (African Union 2010: 2, 5).
47. The exclusion of pastoral communities has, at times, had political origins, as for example in the case of the nomadic societies of the former USSR destroyed by Stalin in the 1920s (Olcott 1995), or the Barabaig pastoralists of Tanzania cleared from their land in the 1980s and 1990s to allow the creation of a donor-funded wheat farm (Lane 1994).
48. However, perhaps more often, exclusion happens on technical basis, embedded in bureaucratic procedures, mechanisms of appraisal or the systems of statistical representation. For example, the value of pastoral systems is largely invisible in official records, either missing or impossible to disaggregate. A recent study following the Global Strategy to Improve Agricultural and Rural Statistics (World Bank 2010) found that 'all sources of livestock data and statistics—such as agricultural censuses, livestock censuses, periodical and ad hoc agricultural sample surveys, household income or expenditure surveys—rarely if ever generate comprehensive information on pastoral production systems' (Pica-Ciamarra et al 2014: 1).³²
49. Similarly, technical exclusion begins with definitions and classification. The conventional distinction between pastoralists and agro-pastoralists is based on the assumption that, of all the activities that may characterize the systems of production and livelihood behind these labels, whether they practice some crop farming, or they are sedentary,³³ is what matters most. Many of the communities singled-out as 'agro-pastoralists' make use of exactly the same approach (taking

³¹ Already in the aftermath of the 1970s Sahelian drought, analysts were recommending to build on local specialization (real-time management) rather than imposing stabilizing solutions centred on single-factor performance: 'As a consequence of international response to the drought, there has been an enormous mobilization of funds and personnel in the Sahel. Most "development" programs are conceived from above, and emphasize sedentarization, controlled grazing, and a shift from subsistence dairying to commercial beef production. The programs are deficient in involving herdsmen in their planning and implementation, and fail to demonstrate how the herdsmen are to be the prime beneficiaries of the changes' (Horowitz 1977: 221).

³² The invisibility of pastoral economic contribution in the mechanisms of appraisal is a long-recognized problem. The consequent impression that such a contribution is negligible was listed as one of the 'myths' of pastorals development (UNDP-GDI 2003). Hesse and MacGregor (2006) proposed to utilize a 'Total Economic Valuation' approach. This led to a series of studies and is now being revived (for a recent overview from a methodological perspective, see Krätli 2014).

³³ The glossaries of the recent collection of studies on *Livestock in a Changing Landscape*, define agropastoralism as 'A production system where all of the family and livestock are sedentary' (Steinfeld et al 2010; Gerber et al 2010).

advantage of variability) as those described as 'pastoralists' as far as herd management is concerned. In many cases, crop-farming in the drylands is intermittent, associated with favourable years or affected by high rates of failure (e.g. one harvest every 2-3 years); or even a practice undertaken as part of a pastoral strategy of recovery after severe losses.³⁴ The pastoral groups in Karamoja are usually classified as 'agro-pastoralists'. While technically this is not entirely incorrect (as some household members within this groups do usually practice opportunistic dryland farming) it can be misleading. By emphasising crop-farming as the characterising trait, the classification effectively excludes from view the substantial overlapping of the approach to animal production in these communities (mobility-based, aimed at taking advantage of variability) with the approach in any pastoral group elsewhere, and therefore ends on a false trajectory with regard to where their main economic interest lies. Political and technical exclusion can reinforce each other, but even when the former is eliminated the latter lingers on unless it is addressed directly.

50. A particularly penalising example of technical exclusion concerns the conventional classification of pastoral systems as 'traditional' (disregarding the history of development), therefore by definition excluding these systems from the end result of any scenario of modernization. The effect of this technical framing, today as in the 1930s, is that several countries continue to uphold a theory of change in pastoral development in which the route to modernization is intensification, and the route to intensification is sedentarisation, thus the abandonment of pastoralism.³⁵
51. On the other hand, the new perspective on pastoralism unlocks this technical loop and opens up a view of modernization inclusive of pastoralism, where scientific and technological development are put to work to serve innovation within the logic of specialized pastoral production strategies—a genuine modernization of pastoral production rather than modernization instead of pastoralism (cf. IIED and SOS Sahel 2009; Krätli et al 2013).

Gender in pastoralism

52. The gender dimension within pastoral development is subject to a double mechanism of invisibility, not only as 'gender' but also as 'pastoralism'. The progress observed with regard to issues of gender in development over the last couple of decades, does not generally stretch to capture the specific forms these issues take in pastoral development. As in all engagement with pastoral development, even with regard to gender, distinguishing between the effects of 'tradition' and the effects of 'development' is critical.
53. Scholarly work on gender and pastoralism has highlighted the influence of male-dominated settings (colonial administrations, development programmes, and even research) in preferring men as channels of communication and authoritative routes into the communities, therefore actively promoting a male perspective while establishing new privileges and formalising entitlements once subject to negotiation (cf. Hodgson, 2000).
54. The introduction of gender-sensitive methodologies in development has reflected the mainstream focus on sedentary conditions and crop-farming. In practice, these blue-print gender frameworks in development may have ambivalent or adverse

³⁴ A recent historical study on Mali points out that the categories of 'sedentary' and 'nomadic', introduced by the colonial administration and used interchangeably with those of 'agriculturalists' and 'pastoralists', had no equivalent in the local languages: 'Censuses, tax records, and other administrative paperwork systematically opposed the "sedentary" inhabitants of "villages" and "districts" with the "nomads" living in "fractions" and "tribes". These categories also justified the ascription of an exclusive space of reference to both sides: the river valley to the villagers, and the desert to the nomads' (Grémont 2012: 136).

³⁵ For example, the ongoing works for a policy framework in Burkina Faso on agro-sylvo-pastoral systems, fisheries and wildlife: 'The State [...] creates the necessary conditions for a gradual transition from extensive pastoral systems to intensive systems through the means of sedentarization' (SARL 2013: Art 98).

effects for pastoral women, especially when blended with 'old school' pastoral development measures. Trying to minimize gender disparities on these grounds does not address the issue of how gender-specific rights and responsibilities within pastoral societies interact with external interventions to produce unexpected outputs.

55. A case in point is ownerships of the means of production. The long history of women's legal exclusion from the ownership of land in many countries (including where they play the main role in crop-farming),³⁶ still contributes to feed the prejudice that, if today women struggle to own livestock in pastoral societies, it must be a matter of tradition. However, pastoral societies considered amongst the most 'traditional', such as for example the Peul Wodaabe in Africa, have no customary restrictions on women's ownership of livestock and therefore their exclusion from livestock ownership, where present, requires deeper analysis.
56. Sedentarisation is another case in point. Albeit one of the oldest 'solutions' in pastoral development, sedentarisation is now sometimes argued on gender basis, as a way of allowing pastoralist women better access to services and even more independence. In practice, while access to services increase in settlements if these services are exclusively provided within settlements, sedentarisation of pastoralist women excludes them from the management of the family herd (especially the bulk of the milking animals), with important consequences not only for their negotiating power within the household but also for the welfare of young children, as regular access to milk is reduced (for a recent overview, cf. Flintan 2008).
57. Research in Niger highlighted pastoral women's attachment to mobility on gender basis, in reason of their sovereignty in mobile settings, where they own most of the material goods used by the household, have access to the family herd for milk, and the living conditions mean that they can move around freely. By contrast, in settlements the dwellings are usually owned by men, women's freedom of movement is greatly restricted, and the bulk of the herd (and the milk) is away in the bush (Monimart and Diarra 2010). Similarly, the MERA Declaration by pastoralist women (MARAG 2011) starts with emphasizing the importance of securing pastoral mobility and clearly suggests that women in pastoral settings (at least those at the gathering) perceive themselves as specialist pastoralists on the same level as men.³⁷

Insecurity and conflict

58. Where pastoral systems recede, for example in cases of large-scale sedentarisation, vast and remote spaces that were populated with civil society become 'empty' and ungoverned. The changes accelerated in the early 2000s, when radical jihadist groups began to penetrate more remote areas, especially in Saharan/Sahelian Africa. The intensification of insecurity in the mid 2010s, with conflict breaking open in Mali and several other Saharan countries, had important consequences for land use and for the ability of states to manage their land. Large spaces that had been governed through customary rules suddenly became the ungoverned spaces that political analysts like to talk about, where there is no effective system of governance over vast areas. These 'empty' and 'ungoverned' spaces replaced the previous loose system of civil society governance, with negative consequences.
59. A new interest in the development of resilient drylands is now increasingly associated with international concerns for the state of security of these spaces,

³⁶ For example, the resistance met in Uganda by the proposal for the amendment of Clause 40 of the Land Act, to deal with the question of married women's rights to ownership of land. At the Cabinet meeting debating the amendment in June 1999, the President has been reported to have 'advised women that their demands might destabilize society and the economy' (McAuslan 2003: 10).

³⁷ The [Mera Declaration](#) (MARAG 2011) was produced during a global gathering of over 200 pastoralist women, men and children in Mera, India, in November 2010 (sponsored by IFAD).

especially desert areas. The desert frontier of most Saharan states run for thousands of kilometres (in Mali, almost 4,000) and managing them in a conventional manner has so far proved impossible. New technologies can help (e.g. satellite systems and drones) but work on the ground remains critical.

60. Increasingly, international interest is drawn to the positive role that vibrant pastoral production and livelihood systems could play in securing the presence of ordinary people throughout the entire Sahel-Sahara regions (not just in town), so that there are no empty spaces easily penetrable by undesirable players.³⁸

³⁸ Cf. AGIR (2013); Declaration de N'Djaména (2013); De Haan et al (2014); Krätli, Swift and Powell (2014). An attempt to cost the potential use of mobile pastoralism compared to traditional forms of military estimated that about nine million euros could pay for one year of surveillance of two thirds of Niger while securing more than 3500 jobs. This should be compared to the cost of surveillance by drone: more than 55 million euros for a single device, excluding the cost of operating it (cf. Krätli 2014).

Visibility of pastoralism in the project management system

1. Between 2012 and 2014, the 'types' of IFAD projects and components were defined in the Reference Manual for the Project and Portfolio Management System (PPMS).¹³⁸ During 2014 the PPMS was replaced by the Grants and Investments Project System (GRIPS)¹³⁹ (IFAD 2015).
2. In the PPMS there were 9 'project types' (with 1 dedicated to livestock) and 132 'component types' (4 dedicated to livestock). There are no project or component types dedicated to pastoral systems. The term 'pastoral' appears once in the document, referred to 'pastoral institutions' in the definition of the component type 'Rangelands/pastures' (project type: Livestock): 'Distinct from "Land Improvement". Rangeland is used to graze sheep, cattle, goats, etc. Activities could include formation of user groups, fencing, promotion of the role of pastoral institutions and recognition of tenure rights and customary grazing lands and maybe conservation'. On the other hand, one project type (with two component types) is dedicated to 'Settlement' and defined as 'Projects that take place in areas previously uncultivated or uninhabited. Activities include many under Rural Development; difference is that these are usually new villages/towns. Egypt has several of these types of projects'. The only reference to pastoral systems in the PPMS, is in a passage explaining that 'The Settlement projects refer to those that have, as the major objective, settling displaced or nomadic populations or support to government in opening new lands/areas to productive activities. Much of the investment in these projects is in support of infrastructure' (IFAD 2012: 17).
3. In 2014, IFAD has replaced PPMS with GRIPS. In this new system, the component types have been reduced to 67, and a new category of themes, 64 including one dedicated to 'Pastoralism', has been added. The reference to 'pastoral institutions' under component type 'Rangelands/pastures' is maintained. Although the reference manual does not provide a definition, from the way the category is addressed it is possible to deduce that 'themes' are intended to contribute to the description of the project (it is recommended not to choose more than ten). The inclusion of 'pastoralism' in this new list of themes is a step forward compared to the PPMS. However, this improvement should not conceal the fact that engagement in pastoral development is still not part of the typology of IFAD's project components (which includes forestry, crop-farming, horticulture, fruit trees/orchards, industrial/cash crops, irrigation infrastructure, irrigation management, seed production/multiplication, fishing, aquaculture, fisheries infrastructures, etc.).
4. The project classification system is perhaps the most structural instrument an agency like IFAD has to represent its activities to itself. The GRIPS reference manual describes the system as 'the corporate vehicle for the collection and dissemination of information related to IFAD grant and loan financed projects [...] as well as those funds which IFAD directly administers'. The invisibility of pastoralism in the typology of project components is a good example of the 'technical exclusion' discussed in chapter 3 of the JES (para 40-42).

¹³⁸ IFAD 2012. Reference Manual, Project and Portfolio Management System, International Fund for Agricultural Development, Rome.

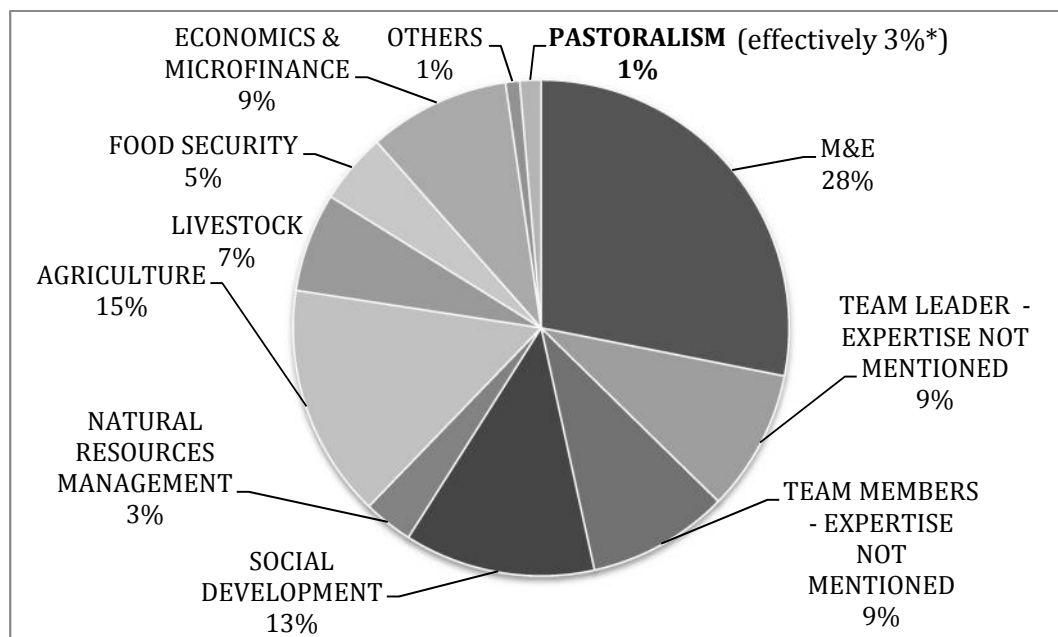
¹³⁹ IFAD 2015. Reference Manual. Grants and Investments Project System, IFAD, Rome.

Average rating of pastoral-oriented projects in IFAD

1. This table summarizes the analysis carried out by IOE for the JES, looking at the rating of projects for the period 2002-2013. The category 'pastoral projects' includes all the evaluated projects in the JES 'comprehensive inventory' for which ratings were available in the IFAD database at the time of the analysis (16 projects in total). The category 'all other projects' includes all the projects for which ratings were available at the time of the analysis, excluding those in the category 'pastoral-oriented projects'.

<i>Evaluation criteria</i>	<i>Pastoral-oriented projects</i>	<i>All other projects</i>
Relevance	4.5	4.6
Effectiveness	3.8	4.0
Efficiency	3.4	3.7
Project performance	3.9	4.1
Rural poverty impact	4.0	4.1
Sustainability	3.5	3.6
Innovation and scaling up	3.8	4.0
Gender equality and women's empowerment	4.2	4.2
IFAD performance	3.9	4.0
Gov performance	3.7	3.9
Overall project achievement	3.9	4.0
Household income and assets	3.8	4.3
Human and social capital and empowerment	4.1	4.2
Food security and agricultural productivity	4.2	4.1
Environment	3.7	3.7
Institutions and Policies	3.7	3.9
Average over the 16 criteria	3.88	4.02

Specialist expertise in the evaluations of the core sample



* Breakdown of the expertise in the evaluations within the core sample (217 consultants over 40 teams). The categories correspond to the titles of the experts as reported in the documents of evaluation. Based on these titles, the expertise in pastoralism is around 1 per cent (two consultants hired as 'pastoralism expert'), however, four others known pastoralism specialists were identified by the JES under different categories (with two team leaders), bringing the actual proportion of pastoral expertise to about 3 per cent, or 10 per cent of the evaluation (6 consultants in 4 evaluations).

Total number of projects in the core sample

<i>Evaluation</i>	<i>Number of projects</i>		<i>Total</i>
	<i>Country</i>	<i>Regional</i>	
Evaluation of FAO's cooperation in Ethiopia (2005-2010)	104		104
Evaluation of FAO's cooperation in Sudan (2004-2009)	140		140
Evaluation of FAO's cooperation in Somalia (2007-212)	58	8	62
Evaluation of FAO's cooperation in Tajikistan (2004-2009)	30	12	42
Impact Evaluation of FAO's intervention funded by Common Humanitarian Fund Sudan (2007-20011)	45		40
Evaluation of FAO's emergency & Rehabilitation assistance in the Greater Horn of Africa (2004-2007)	114	14	128
Total			516
Project evaluations			21
Grand Total			537

<i>Evaluation</i>	<i>Number of projects</i>		<i>Total</i>
	<i>Country</i>	<i>Regional</i>	
République tunisienne. Evaluation du programme de pays	9		9
Senegal Evaluation du programme de pays	9		9
Maroc Evaluation du programme de pays	6		6
Ethiopia Country Programme Evaluation	7		7
Sudan Country Programme Evaluation	10		10
Niger Country Programme Evaluation	7		7
République du Mali Evaluation du programme de pays	7		7
République du Senegal Evaluation du programme de pays	6		6
Estado Plurinacional de Bolivia. Evaluación del Programa en el País	5		5
République du Mali Evaluation du programme de pays	5		5
Kingdom of Nepal Country Programme Evaluation	6		6
Total			77
Project evaluations			11
Grand total			88

Joint evaluation synthesis comprehensive inventory

1. FAO, Project d' Appui à la Formulation d' un Programme d' Aménagement, de Sécurisation et de Valorisation des Espaces et Aménagements Pastoraux, Burkina Faso, TCP/BKF/3302.
2. FAO, Amélioration de la Gestion des Ressources Pastorales, Chad, TCP/CHD/3202.
3. FAO, Appui à la Formulation d'un Projet d'Élaboration des Textes D'application du Code pastoral au Tchad, Chad, TCP/CHD/3501 BABY03.
4. FAO, Appui à l' Amélioration de la Gestion des Ressources Pastorales, Cameroun, République of, TCP/CMR/3302.
5. FAO, Emergency Assistance in Pastoral Areas of Djibouti, Djibouti, TCP/DJI/3304.
6. FAO, Strengthening of Forage-Based Smallholder Dairy Production for Enhanced Resilience of Drought-Affected Pastoral and Agro-Pastoral Communities of Djibouti, Djibouti, TCP/DJI/3502.
7. FAO, Horn of Africa Food Security Initiative - Support for Pastoral Community Development Project, Ethiopia, TCP/ETH/2903.
8. FAO, Desarrollo de Capacidades para la Planificación, Establecimiento y Manejo de Sistemas Silbo Pastorales Sostenibles en Honduras, Honduras, TCP/HON/3401 BABY01.
9. FAO, Développement Pastoral, Niger, TCP/NER/3402 BABY01.
10. FAO, Campaign to Promote Better Nutrition Among Pastoralist Communities in Karamoja Sub-Region, Uganda, GCP /UGA/038/GOR.
11. FAO, Appui à la Résilience des Populations Rurales Affectées par la Crise Alimentaire des Régions du Nord, Centre Nord, Centre Ouest et Boucle du Mouhoun à Travers la Construction de Puits Pastoraux et Maraîchers, de Forages et Boules, Burkina Faso, OSRO/BKF/208/AUS.
12. FAO, Pastoral Resources Improvement for Malian Refugees and their Host Communities in the Sahel Region of Burkina Faso, Burkina Faso, OSRO/BKF/301/SWE.
13. FAO, Emergency Supply of Animal Feed to Vulnerable Pastoralist Households Affected by Drought in Bahr El Gazal Region, Chad, OSRO/CHD/001/CHA.
14. FAO, Strengthening the Food Security Coordination and Building the Resilience of Agro-Pastoral Communities in the Semi-Arid Areas of Bahr el Gazal and in the Conflict Affected Areas of Southern Chad, Chad, OSRO/CHD/406/USA.
15. FAO, Emergency Livelihood Support to Drought Affected Communities in Pastoral Areas-10- FAO-031, Djibouti, OSRO/DJI/001/CHA.
16. FAO, Assistance d'Urgence Pour la Sauvegarde des Moyens de Subsistances des Populations Pastorales Affectées par l'Impact de la Sécheresse en Milieu rural à Djibouti, Djibouti, OSRO/DJI/002/EC.
17. FAO, Interventions Coordonnées et Informées pour la Réduction des Risques de Catastrophes (DRR) des Communautés Agro-Pastorales à Djibouti, Djibouti, OSRO/DJI/101/EC.
18. FAO, Emergency Support to Sustain Pastoralist Livelihoods Affected by the Drought in Rural Areas in Djibouti, Djibouti, OSRO/DJI/102/CHA.
19. FAO, Strengthening Rural Food Security through Urgent Access to Water for Nomadic and Agro-Pastoral Communities to Promote Food Security and Safeguard Livelihood Assets in Response to the Drought Crisis, Djibouti, OSRO/DJI/201/CHA.

20. FAO, Emergency Assistance in Pastoral Areas of Djibouti, Djibouti, OSRO/DJI/202/JPN.
21. FAO, Coping With Water Scarcity: Increasing Water Access for Pastoralist and Agro Pastoral Communities, Djibouti, OSRO/DJI/301/CHA.
22. FAO, Appui d'urgence aux Populations Agro-Pastorales et Péri-Urbaines Djiboutiennes Souffrant de Malnutrition et Menacées de Perdre leurs Moyens de Subsistance dans un Environnement de Sécheresse Récurrente et Nécessitant des Alternatives d'Adaptation, Djibouti, OSRO/DJI/902/CHA.
23. FAO, Appui à la Relance de la Production Agro-Pastorale de 3100 Ménages Vulnérables dans les Villages Iyolo (Kinkondja), Mulongo, Tuta (Ankoro), Province du Katanga, Democratic Republic of Congo, OSRO/DRC/912/UNJ.
24. FAO, Emergency Livelihood Support to la Niña Affected Pastoral Communities in Eastern and Southern Ethiopia, Ethiopia, OSRO/ETH/101/CHA.
25. FAO, Emergency Support to Drought Affected Pastoral Agro-Pastoral Communities in Borena Zone, Oromiya Region, Ethiopia, Ethiopia, OSRO/ETH/108/CHA.
26. FAO, Improvement of the Resilience of Pastoralist and Farming Communities through Livelihood- Based Interventions in Selected Areas of Ethiopia, Ethiopia, OSRO/ETH/208/EC.
27. FAO, Urgent Support to Pastoral Communities and Farmers as a Drought Response, Ethiopia, OSRO/ETH/603/NOR.
28. FAO, Urgent Provision of Seeds to Flood Affected Agro-Pastoralists and Farmers in Somali Regional State of Ethiopia, Ethiopia, OSRO/ETH/609/CHA.
29. FAO, Enhancing the Capacity for Emergency Response in Pastoralist Systems of Ethiopia, Ethiopia, OSRO/ETH/610/EC.
30. FAO, Strengthening the Livelihoods of Pastoralists and Agro-Pastoralists and Technical Support for the Coordination of Emergency and Rehabilitation Activities in Ethiopian's Agricultural Sector, Ethiopia, OSRO/ETH/807/ITA.
31. FAO, Improvement of Pastoralists Livelihoods of Somali Region through Strengthening a Comprehensive Livestock Disease Surveillance, Monitoring and Reporting System, Ethiopia, OSRO/ETH/906/USA.
32. FAO, Safeguarding the Livelihoods of Pastoralist and Agro-Pastoralist Communities of Gelana, Abaya and Bulehora Woredas of Borena Zone, Oromiya Region, Ethiopia, OSRO/ETH/910/SWI.
33. FAO, Emergency Support to Protect Agriculture-based Livelihoods in the Pastoral Areas of the West Bank, West Bank and Gaza Strip, OSRO/GAZ/008/ITA.
34. FAO, Emergency Support to Pastoral and Agro-Pastoral Households Affected by Extreme Climatic Conditions, Kenya, OSRO/KEN/001/CHA.
35. FAO, Support to Pastoral and Agro-Pastoral Communities Affected by the La-nina Phenomenon, Kenya, OSRO/KEN/101/CHA.
36. FAO, Support to Pastoral and Agro-Pastoral Communities Affected by the Effect of Drought, Kenya, OSRO/KEN/105/CHA.
37. FAO, Saving Lives through Sustaining Pastoral Economies, Kenya, OSRO/KEN/202/CHA.
38. FAO, Emergency Agricultural Support to Alleviate the Impact of Soaring Food Prices on the Most Affected Vulnerable Rural, Peri-Urban and Pastoralist Populations of Kenya, Kenya, OSRO/KEN/802/CHA.

39. FAO, Rétablissement d' Urgence de la Capacité d' Auto Prise en Charge des Populations Déplacées du Mali par la Restauration de leur Productivité Agro-Pastorale - RR 12-FAO-025, Mali, OSRO/MLI/204/CHA.
40. FAO, Renforcement de la Résilience des Populations Déplacées et Hôtes de la Région de Mopti au Mali par la Restauration de leur Productivité Pastorale et l' Amélioration de la Sécurité Alimentaire et Nutritionnelle, Mali, OSRO/MLI/303/SPA.
41. FAO, Rétablissement d' Urgence de la Capacité d' Auto Prise en Charge des Populations d' Éleveurs Déplacées du Mali par la Restauration de leur Productivité Pastorale, Mali, OSRO/MLI/304/BEL.
42. FAO, Rétablissement d' urgence de la Capacité d' auto Prise en Charge des Populations Déplacées du Mali par la Restauration de leur Productivité Agro-Pastorale, Mali, OSRO/MLI/401/BEL.
43. FAO, Building Livelihoods Resilience for Farmers and Agro-Pastoralists Households Affected by the Security Crisis and Climate Change, Mali, OSRO/MLI/405/SWE.
44. FAO, Assistance D'urgence aux Ménages Vulnérables Situés dans les Zones à Déficit Agro-Pastoral au Niger, Niger, OSRO/NER/001/CHA.
45. FAO, Appui D'urgence à la Sauvegarde des Moyens de Subsistance des Populations Vulnérables Situées dans les Zones à Déficit Pastoral au Niger, Niger OSRO/NER/002/BEL.
46. FAO, Assistance d'Urgence à la Sauvegarde des Moyens de Subsistance des Populations Vulnérables Situées dans les Zones à Déficit Agro-Pastoral au Niger, Niger, OSRO/NER/005/SPA.
47. FAO, Assistance d' Urgence aux Ménages Vulnérable Situés dans les Zones a Déficit Agro-Pastoral au Niger, Niger, OSRO/NER/007/CHA.
48. FAO, Appui à la Coordination des Interventions D'urgence et de Réhabilitation Agricole et Pastorale au Niger, Niger, OSRO/NER/101/AUS.
49. FAO, Assistance for Vulnerable Pastoralist Household Livelihood Rehabilitation in Niger, Niger, OSRO/NER/105/CHA.
50. FAO, Emergency Assistance to Vulnerable Pastoralist Households Livelihood Affected by the Fodder Deficit and Emergency Assistance to Agricultural Households Victims of the 2011 Food Crisis, Niger, OSRO/NER/202/CHA.
51. FAO, Emergency Assistance to Farmers and Herders Households Affected by the 2011 Agro-Pastoral Crisis in Niger, Niger, OSRO/NER/203/USA.
52. FAO, Renforcement de la Résilience des Ménages Vulnérables Affectés par les Déficits Céréalière et Pastoral au Niger, Niger, OSRO/NER/305/NOR.
53. FAO, Contribution to Resilience Capacity Development for Pastoralists and Agro-Pastoralists in Niger-13-UF-FAO-029, Niger, OSRO/NER/307/CHA.
54. FAO, Renforcement des Moyens d'Existence des Ménages Vulnérables Affectés par la Crise Alimentaire et Pastorale de 2010 au Sahel, Régional Afrique, OSRO/RAF/009/BEL.
55. FAO, Regional Initiative in Support of Vulnerable Pastoralists and Agro-Pastoralists in the Horn of Africa, Regional Africa, OSRO/RAF/011/EC.
56. FAO, Regional Initiative in Support of Vulnerable Pastoralists and Agro-Pastoralists in the Horn of Africa, Regional Africa, OSRO/RAF/011/EC BABY01.
57. FAO, Regional Initiative in Support of Vulnerable Pastoralists and Agro-Pastoralists in the Horn of Africa, Regional Africa, OSRO/RAF/011/EC BABY02.

58. FAO, Regional Initiative in Support of Vulnerable Pastoralists and Agro-Pastoralists in the Horn of Africa, Regional Africa, OSRO/RAF/011/EC BABY03.
59. FAO, Improved Food Security, Livelihoods and Resilience of Vulnerable Pastoral Communities in the Greater Horn of Africa through the Pastoral Field School approach, Regional Africa, OSRO/RAF/103/SWI.
60. FAO, Improved Food Security, Livelihoods and Resilience of Vulnerable Pastoral Communities in the Greater Horn of Africa through the Pastoral Field School Approach, Regional Africa, OSRO/RAF/103/SWI BABY01.
61. FAO, Disaster Risk Reduction/Management to Support Agro-Pastoral Communities Affected by Recurrent Droughts and Other Natural Disasters in Southern Angola and Northern Namibia, Regional Africa, OSRO/RAF/404/USA.
62. FAO, Immediate Support to Agro-Pastoral Communities as a Drought Mitigation Response, Regional Africa, OSRO/RAF/606/NET.
63. FAO, Immediate Support to Pastoral Communities as a Drought Mitigation Response, Regional Africa, OSRO/RAF/608/CHA.
64. FAO, Immediate Support to Agro-Pastoral Communities as a Drought Mitigation Response & Strengthening Emergency Preparedness and Response Information Systems Phase II, Regional Africa, OSRO/RAF/614/SWE.
65. FAO, Support to Pastoral Livelihood Development (Phase II). Promoting an Internationally Competitive Somali Meat Industry, Somalia, OSRO/SOM/004/EC.
66. FAO, Improving Food Security in Agro-Pastoral Areas of Hiraan Region in Somalia, Somalia, OSRO/SOM/009/ITA.
67. FAO, Livelihood Support for Agro-Pastoral Communities in Humanitarian Emergency and Acute Food and Livelihood Crises in South Central Somalia, Somalia, OSRO/SOM/106/CHS.
68. FAO, Livelihood Support for Agro-Pastoral Communities in Humanitarian Emergency and Acute Food and Livelihood Crises in South Central Somalia, Somalia, OSRO/SOM/111/CHA.
69. FAO, Livelihood Support to Pastoral and Agro-Pastoral Households in Southern Somalia, Somalia, OSRO/SOM/114/SPA.
70. FAO, Livelihood Support to Pastoral, Agro-Pastoral and Riverine Households in Southern Somalia, Somalia, OSRO/SOM/124/USA.
71. FAO, Livelihood Support to Pastoral and Agro-Pastoral Communities in Southern Somalia through Improvement of Animal Health, Somalia, OSRO/SOM/308/CHA.
72. FAO, Support to Pastoral Livelihood Development, Somalia, OSRO/SOM/608/EC.
73. FAO, Support to Pastoralist and Agro-Pastoralist Communities in Gedo Region, Somalia, OSRO/SOM/610/CHA.
74. FAO, Emergency Livestock Disease Surveillance and Vaccination/Treatment in Support of Pastoralist Livelihoods in Flood-Affected Areas of Southern Somalia, Somalia, OSRO/SOM/701/NOR.
75. FAO, Support to Pastoral Communities on Livelihoods Risk Reduction, Somalia, OSRO/SOM/706/ITA.
76. FAO, Support to Pastoral Communities on Livelihood Risk Reduction in the Bay, Hiraan, Middle and Lower Shebelle Regions, Somalia, OSRO/SOM/803/ITA.
77. FAO, Support to Pastoral Communities on Livelihood Risk Reduction in the Gedo and Lower Juba Regions of Somalia, Somalia, OSRO/SOM/905/SPA.

78. FAO, Time-Critical Emergency Livestock Vaccination and Treatment Project for the Protection of Productive Livestock Assets of Primary Importance to the Survival of Pastoralist Populations in Crisis in Gedo and Lower Juba Regions of Southern Somalia, Somalia, OSRO/SOM/909/CHA.
79. FAO, Pastoralists Emergency Response (PER), Somalia, OSRO/SOM/910/CHA.
80. FAO, Improving Food and Livelihood Security of Vulnerable Host Community, Returnee, IDP, Refugee and Pastoral Households in South Sudan Through Increasing Access to Agricultural, Fisheries and Livestock Inputs and Services and Strengthening Purchasing Power, Somalia, OSRO/SSD/305/CHF.
81. FAO, Improving Food and Livelihood Security of Vulnerable Host Community, Returnee, IDP, Refugee and Pastoral Households in South Sudan Through Increasing Access to Agricultural, Fisheries and Livestock Inputs and Services and Strengthening Purchasing Power, South Sudan, OSRO/SSD/309/CHF.
82. FAO, Safeguarding the Livelihood Assets and Restoring Food Security of IDPs, Returnees, Host Communities, Agro-Pastoralists and Pastoralists Households in Transitional Areas, Eastern and Northern States of North Sudan, Sudan, OSRO/SUD/101/CHF.
83. FAO, Safeguarding the Livelihood Assets and Restoring Food Security of IDPs, Returnees, Host Communities, Agro-Pastoralists and Pastoralists Households in Greater Darfur, North Sudan, Sudan, OSRO/SUD/102/CHF.
84. FAO, Improving Food Security and Livelihoods of Vulnerable Farming and Agro-Pastoralist Households in Darfur, Sudan, Sudan, OSRO/SUD/301/CHA.
85. FAO, Restoring and Improving Food Security and Livelihoods of Vulnerable Farming and Pastoralist Households in Darfur region, Sudan, Sudan, OSRO/SUD/303/CHF.
86. FAO, Restoring Food Security and Livelihoods of Vulnerable Pastoralist and Agro-Pastoralist Households in Darfur, Sudan, Sudan, OSRO/SUD/307/CHA.
87. FAO, Emergency Assistance for the Enhancement of Household Food Security for Marginalized Pastoralist Groups in Abyei and Unity States and Fishing Communities, Sudan, OSRO/SUD/311/EC.
88. FAO, Restoring the Food and Livelihoods Security of New IDPs and Extremely Vulnerable Farming and Pastoralist Households in Darfur, South and North Kordofan States, Sudan, Sudan, OSRO/SUD/404/CHA.
89. FAO, Karamoja Livelihood Agro-Pastoralist Opportunities - KALAPASO, Uganda, OSRO/UGA/002/BEL.
90. FAO, Emergency Agricultural Assistance to Congolese Refugees and Food Insecure Pastoralist Community in Karamoja Sub-Region in Southwest, Northwest, Midwest and Northeast Uganda, Uganda, OSRO/UGA/402/CHA.
91. FAO, Livelihoods Support for Pastoralists and Agro-Pastoralists in the Karamoja Region, Uganda, OSRO/UGA/803/ITA.
92. FAO, Support to Drought Affected Agro-Pastoralists in Karamoja Region and Flood Affected Households in Teso Sub Region of North-Eastern Uganda, Uganda, OSRO/UGA/804/SPA.
93. FAO, Karamoja Livelihood Agro-Pastoralist Opportunities - KALAPASO, Uganda, OSRO/UGA/906/SPA.
94. FAO, Karamoja Livelihood Agro-Pastoralist Opportunities - KALAPASO, Uganda, OSRO/UGA/908/SWI.
95. FAO, Land Rehabilitation and Rangelands Management in Small Holders Agro-Pastoral Production Systems in South-western Angola (FSP), Angola, GCP /ANG/048/GFF.

96. FAO, Land Rehabilitation and Rangelands Management in Small Holders Agro-Pastoral Production Systems in South-Western Angola (PPG), Angola, GCP /ANG/049/GFF.
97. FAO, Integrating Climate Resilience Into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas Through the Farmers Field School Approach (PPG), Burkina Faso, GCP /BKF/077/LDF.
98. FAO, Supporting Horn of Africa's Resilience Projet de Sécurisation des Systèmes Pastoraux (PSSP) à Djibouti, Djibouti, GCP /DJI/004/EC.
99. FAO, Pursuing Pastoral Resilience (PPR) Through Improved Animal Health service Delivery in Pastoral Areas of Ethiopia, Ethiopia, GCP /ETH/083/EC.
100. FAO, Participatory Assessment of Land Degradation and Sustainable Land Management in Grassland and Pastoral Areas Systems (FSP), Global, GCP /GLO/530/GFF.
101. FAO, Pastoralist Knowledge Hub - Part 1, Global, GCP /GLO/536/GER.
102. FAO, Strengthening Resilience to Climate Change Through Integrated Agricultural and Pastoral Management in the Sahelian Zone in the Framework of the Sustainable Land Management Approach (PPG), Mali, GCP /MLI/039/LDF.
103. FAO, Integrating Climate Resilience into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas Through the Farmers Field School Approach in Niger (FSP), Niger, GCP /NER/043/LDF.
104. FAO, Integrating Climate Resilience into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas Through the Farmers Field School Approach in Niger (PPG), Niger, GCP /NER/055/LDF.
105. FAO, Improve Livelihoods of the Fishing, Pastoral and Agro-Pastoral Communities, Women Groups and Association Members in Iskushuban District, Bari Region of Puntland, Somalia, GCP /SOM/043/SPA.
106. FAO, Lakes State Agro-Pastoral Community Resilience Programme, South Sudan, GCP /SSD/002/SPA.
107. FAO, Improved Food Security and Livelihood Development for Agro-Pastoralist Communities in Northern Bahr el Ghazal and Warrap States, South Sudan, GCP /SSD/006/SWI.
108. FAO, Special Programme for Food Security Phase I: Support to Traditional Farmers and agro- Pastoral Livelihoods in Western Parts of White Nile State, Sudan, GCP /SUD/055/SPA.
109. FAO, Strengthening Resilience and Adaptive Capacity of Agro-Pastoral Communities and the Local Government to Reduce Impacts of Climate Risk on Livelihoods in Karamoja, Uganda, Uganda, GCP /UGA/042/UK.
110. FAO, Appui à la Mise en Ouvre des Activités Génératrices de Revenus et D'auto-Emploi Dans le Secteur Agro-Pastoral des Zones de Conflits, Central African Republic, UNJP/CAF/001/PBF.
111. FAO, Enabling Pastoral Communities to Adapt to Climate Change and Restoring Rangeland Environments (MDGF-1679), Ethiopia, UNJP/ETH/075/SPA.
112. FAO, Assistance Technique dans le Repeuplement du Cheptel au Projet de Développement Agro-Pastoral du Bututsi, Burundi, UTF /BDI/026/BDI.
113. FAO, Assistance Technique à L'Ajustement et Renforcement Organisationnel de l'Office Développement Sylvopastoral du Nord-Ouest, Tunisie, UTF /TUN/031/TUN.
114. FAO, Révision des Méthodologies de la Direction Générale des Forêts en Matière D'Aménagement Forestier, D'Organisation de la Population Forestière et L'édition

- d'un Atlas de Récolte des Semences Forestières et Pastorales et Formation, Tunisie, UTF /TUN/035/TUN.
115. FAO, Afar Pastoral Future: Innovative Food Security and Livelihood Development for Afar Pastoral, Agro-Pastoral and Peri-Urban Communities- Afar Region, Ethiopia, OSRO/RAF/120/NOR.
 116. FAO, Support for the Development of a FMD Progressive Control Strategy, Ethiopia, TCP/ETH/3401.
 117. FAO, Managing the Rain: Making Improved Use of One of ETHIOPIA' s Most Valuable Natural Resources, Ethiopia, OSRO/ETH/205/SWE
 118. FAO, Livelihood Support to Pastoral and Agro-Pastoral Communities in Southern Somalia Through Improvement of Animal Health, Somalia, OSRO/SOM/308/CHA
 119. FAO, Public Sector Support and Capacity-building for the Meat Sub Sector, Somalia, TCP/SOM/3402.
 120. FAO, Integrated Assistance to Sustainable Reintegration of IDPs at their Place of Origin in South- Central Somalia, Somalia, OSRO/SOM/305/CHS
 121. FAO, Resilience Programme, Somalia, OSRO/SOM/301/MUL–Baby 1,2,3 .
 122. FAO, Somalia Animal Health Services - SAHSP Phase II, Somalia, OSRO/SOM/710/EC.
 123. FAO, Improve the Level of Preparedness in Somalia for Rift Valley Fever (RVF) and other Climate Related Diseases, Somalia, OSRO/SOM/806/USA
 124. FAO, Somali Livestock Survey - Pilot Study, Somalia, OSRO/SOM/805/EC.
 125. FAO, Livelihood Support to Pastoral and Agro-Pastoral Households in Southern Somalia, Somalia, OSRO/SOM/114/SPA.
 126. FAO, Emergency Support to Animal Health and Production in Drought Stricken Areas of Somalia, Somalia, TCP/SOM/3301.
 127. FAO, Technical Assistance to the Somali Livestock Certification Project (SOLICEP), Somalia, MTF/INT/084/AU.
 128. FAO, Somali Ecosystem Rinderpest Eradication Coordination Unit (SERECU) Project II, Somalia, MTF/INT/074/AU.
 129. FAO, Rift Valley Fever and Climate Related Diseases Control in Eastern Africa, Regional Africa, OSRO/RAF/706/USA.
 130. FAO, Regional Support Programme for the Coordination and Capacity Strengthening for Disaster and Drought Preparedness in the Horn of Africa, Regional Africa, OSRO/RAF/801/EC.
 131. FAO, Emergency Drought Response, Regional Africa, OSRO/RAF/113/FRA.
 132. FAO, Emergency Drought Response in the Horn of Africa, Regional Africa, OSRO/RAF/112/BEL.
 133. FAO, Integrated Food Security Project (IFSP) in Kassala, Sudan
 134. (Former - Sustainable Food Security Through Community-Based Livelihood Development Project, South Kordofan, Sudan), Sudan, GCP/SUD/069/CAN.
 135. FAO, Restoring and Improving Food Security and Livelihoods of the Affected Communities in Darfur, Sudan, OSRO/SUD/305/USA.
 136. FAO, Surveillance and Diagnosis of Foot and Mouth Disease (FMD), Sudan, TCP/SUD/3401.

137. FAO, Strengthening Capability of Risk Management of the Animal Husbandry Sector and Promoting Sustainable Development in the Grazing Area of Qinghai Province, China, TCP/CPR/2902.
138. FAO, Improving Nutrition and Household Food Security in Northern Shoa & Southern Zone of Tigray (Phase II GCP/ETH/056/BEL), Ethiopia, GCP /ETH/060/BEL.
139. FAO, Support to Food Security Information System in Ethiopia, Ethiopia, GCP /ETH/071/EC.
140. FAO, Restoration of Veterinary Services in Iraq, Iraq, OSRO/IRQ/406/UDG.
141. FAO, Restoration and Development of Essential Livestock Services in Iraq, Iraq, OSRO/IRQ/407/UDG.
142. FAO, Support to Livestock Exports in the Horn of Africa (EXCELEX), Int, GCP /INT/811/ITA.
143. FAO, Improve Livelihoods in Targeted Drought Affected Communities in Kenya, Kenya, OSRO/KEN/002/SWE.
144. FAO, Support to the Food Security Assessment Unit, Somalia, OSRO/SOM/002/EC.
145. FAO, Nutrition Surveillance in Somalia, Somalia, OSRO/SOM/003/USA.
146. FAO, Support to Pastoral Livelihood Development (Phase II). Promoting an Internationally Competitive Somali Meat Industry, Somalia, OSRO/SOM/004/EC.
147. FAO, Support to the Food Security Analysis Unit in Somalia - FSAU Phase IV, Somalia, OSRO/SOM/306/EC.
148. FAO, ARDOPIS -Agricultural Rehabilitation and Diversification of High Potential Irrigation Schemes in Southern Somalia in Lower Juba and Shabelle River Basin (Jamama, Agfoi and Balad Districts), Somalia, OSRO/SOM/510/EC.
149. FAO, ARDOPIS -Agricultural Rehabilitation and Diversification of High Potential Irrigation Schemes in Southern Somalia (ARDOPIS) in Merka and Qoryooley Districts (Somalia - Lower Shebelle), Somalia, OSRO/SOM/511/EC.
150. FAO, Support to the Food Security Analysis Unit - Understanding Livelihoods in Somalia - FSAU Phase V, Somalia, OSRO/SOM/604/EC.
151. FAO, Nutrition Information Project, Food Security Analysis Unit, Somalia (Year 2007), Somalia, OSRO/SOM/702/USA.
152. FAO, Agricultural Rehabilitation and Diversification of High Potential Irrigation Schemes in Southern Somalia, Somalia, OSRO/SOM/810/EC.
153. FAO, Support to Pastoral Livelihood Development, Somalia, OSRO/SOM/608/EC.
154. FAO, Sudan Productive Capacity Recovery Programme (SPCRP) – Capacity-building Component (SPCRP) in Northern Sudan, Sudan, OSRO/SUD/622/MUL.
155. FAO, Sudan Productive Capacity Recovery Programme (SPCRP) – Capacity-building Component (SPCRP) in Southern Sudan, Sudan, OSRO/SUD/623/MUL.
156. FAO, Enhancing Technical Coordination and Backstopping of the Food Security and Livelihoods Sector in Restoring and Sustaining Households Food Security of Vulnerable Conflict Affected Populations in the Greater Darfur region, Sudan, OSRO/SUD/816/EC.
157. FAO, Enhancing Technical Coordination and Backstopping of the Food Security and Livelihoods Sector in Restoring and Sustaining Households Food Security of

Vulnerable Conflict Affected Populations in the Greater Darfur Region, Sudan,
OSRO/SUD/917/EC.

158. IFAD, Community Livestock and Agriculture Project, Afghanistan.
159. IFAD, Pastoral Community Development Project (phase 1), Ethiopia.
160. IFAD, Pastoral Community Development Project (phase 2), Ethiopia.
161. IFAD, Pastoral Community Development Project (phase 3), Ethiopia.
162. IFAD, Gash Barka Livestock and Agricultural Development Project, Eritrea.
163. IFAD, National Agriculture Project, Eritrea.
164. IFAD, Sustainable Agriculture and Natural Management Programme (SANREMP), Lesotho.
165. IFAD, Project for Market and Pasture Management Development (PMPMD), Mongolia.
166. IFAD, The Rural Poverty Reduction Programme, Mongolia.
167. IFAD, Projet D'Hydraulique Pastorale en Zone Sahelienne (PROHYPA), Chad.
168. IFAD, Programme D'Investissement et de Développement Rural des Régions du Nord Mali (PDRN), Mali.
169. IFAD, Programme Intégré de Développement Rural de la Région de Kidal (PIDRK), Mali.
170. IFAD, Programme Fonds de Développement en Zone Sahélienne (FODESA) Phase 3, Mali.
171. IFAD, Projet de Développement des Parcours et de l'Élevage dans l'Orient (PDPEO) Phase 2, Morocco.
172. IFAD, Western Sudan Resources Management Programme, Sudan.
173. IFAD, Butana Integrated Rural Development Project, Sudan.
174. IFAD, Supporting Small-Scale Traditional Rainfed Producers in the Sinnar-State, South Sudan.
175. IFAD, Integrated Livestock Development projects, Syria.
176. IFAD, Enabling Sustainable Land Management, Resilient Pastoral Livelihoods and Poverty Reduction in Africa, Algeria, Bolivia, Chad, Eritrea, Ethiopia, Kenya, Mali, Somalia, Sudan, Tanzania.
177. IFAD, Building and Scaling up Knowledge on High Andean Livestock (Fundación Biodiversidad), Bolivia.
178. IFAD, Apoyo a la Valorización de la Economía Campesina de Camélidos (Proyecto Vale), Bolivia.
179. IFAD, Programme de Développement Agro-Pastoral et Promotion des Initiatives Locales (PRODESUD) phase1, Tunisie.
180. IFAD, Alternative Uses of Prosopis Fulifilosa for Animal Feed in Eastern Sudan and Somalia, Sudan, Somaliland.
181. IFAD, Assessment and improving Camel Milk Production and Marketing in some Arab Countries, Algeria, Morocco, Sudan.
182. IFAD, First Asia Regional Gathering of Pastoralists Women in Gujarat, India, Kyrgyzstan, Kazakhstan, Uzbekistan, Mongolia, China, Nepal, Bhutan, Pakistan, Georgia, Afghanistan, Russia, Turkey, Syria, Jordan, Israel, Yemen, Oman, Saudi Arabia, United Arab Emirates.

183. IFAD, Projet de Développement Agricole de Matam –Phase II, Sénégal.
184. IFAD, Kivulini Trust, Kenya.
185. IFAD, Manyata Pastoral Livestock Production and Marketing Support Marketing, Kenya.
186. IFAD, Agricultural Investments and Services Project, Kirgizstan.
187. IFAD, Livestock and Market Development Programme, Kyrgystan.
188. IFAD, Agricultural Sector Development Programme-Livestock, Tanzania.
189. IFAD, Arhangai Rural Poverty Alleviation. Completion Evaluation. Report No 1889-MN.

Senior independent advisers' report

Introduction

1. The terms of reference for the evaluation synthesis of a joint IFAD/FAO evaluation of their involvement in pastoral development principally are to assess, and eventually to suggest, improvements regarding the soundness of the analysis, the key emerging issues and the recommendations. In particular, the TOR prescribed an assessment whether the evaluation synthesis (i) was logically sound, with a coherent structure, correct emphasis on main issues and a clear and consistent storyline; (ii) duly took into consideration the overall context; (iii) provided a sound analysis and identified the right key issues emerging from the analysis; and (iv) presents conclusions and main recommendations that flow from evaluation synthesis findings; are actionable and non-trivial; and would be expected to contribute to enhancing IFAD/FAO engagement in pastoral development. My involvement covered suggestions on the initial draft, interaction with the responsible evaluation officer IFAD/IOE, and a review of the final draft. The detailed audit trail, describing how the team addressed the comments on the initial draft, was greatly appreciated.
2. The evaluation takes place in the context of a growing interest in the donor community for the future of the rural drylands, as they encompass several areas with emerging and increasing criminality, religious extremism, irredentism and conflicts and its population belongs to the poorest groups of the society, in part almost continuously emergency aid dependent. As such, this evaluation is highly opportune.

Overall framework and approach

3. The evaluation consisted of a desk study of a large set of documents (about 60 synthesis documents, a portfolio analysis of about 200 projects and a small sample of ongoing projects), and interaction with staff, in particular a FAO/IFAD learning group. The analysis sought to be both quantitative and qualitative, and assessed the findings against current understanding of pastoral systems and development and the main strategic objectives of FAO and IFAD as applied to pastoralism, namely (a) reducing poverty and hunger in and around pastoral settings; (b) increasing resilience and strengthening pastoral risk management; (c) building new and better adapted institutions in pastoral development; (d) promoting gender equality and women's empowerment in pastoral settings; (e) promoting sustainable natural resource management; (f) advocating on behalf of rural poor in pastoral settings; and (g) knowledge management. As such, this approach is sound.
4. As acknowledged in the synthesis report, however, this evaluation presented a particular challenge, as (a) the identification of the cohort to be evaluated was extremely difficult, as pastoral development activities, with few exceptions, consisted in (small) components submerged in larger agricultural or rural development projects or policy papers; (b) limited availability of proven good practice in pastoral development constrained an exact definition of the criteria for success and failure; (c) the project's monitoring and evaluation systems generally performed inadequately, at best focusing on outputs rather than outcomes, making an assessment against the above mentioned outcome focused strategic objectives particularly difficult; and (d) project completion documentation was prepared with negligible inputs by pastoral development expertise. Within this context, and with the qualifiers described below, the evaluation team has done a quite remarkable job.

The report structure

5. The report's flow from an introduction with the objectives, methodology and process to a summary of current understanding of pastoral systems and development to the assessment of the achievement against the strategic objectives (bringing in also experiences from other donors), ending with conclusions and recommendations, is logical. The overall story line is clear, but while strong (although somewhat repetitive on a perceived anti-pastoralist bias) on the theoretical framework of pastoral development (the why), the analysis would have benefitted from more insights regarding the operational consequences of the findings (the how to address). For example, the analysis does focus on major issues confronting pastoral livelihoods and systems (being marginalized in spite of being highly efficient users of scarce natural resources), but seems to give less attention in the projects under review to what is being, and can be done, to promote mobility, which is one of the key preconditions to enable this efficient use of those scarce natural resources.

The context

6. The report is strong in presenting the findings in the context of the current understanding of pastoral systems, acknowledging that this understanding is not (yet) fully internalized by national authorities, brought up in a world of defining and enforcing carrying capacity limits (Central Asia) and promoting and even forcing sedentarisation (sub-Saharan Africa).
7. My view of the future context for pastoralism is somewhat less optimistic than the synthesis report, which argues, "a substantial amount of wealth can still be produced despite the reduced resource base".¹⁴⁰ While appropriate policies and investments undoubtedly can improve productivity and enhance livelihoods, countervailing forces such as population growth, crop expansion and growing inequity in herd ownership most likely will impose limits to the growth and the potential to increase the wellbeing of pastoral populations, in particular of the poor. Alternative sources of income have to be sought inside and outside the pastoral area, enabling the remaining population to produce that substantial amount of wealth.

Quality of the analysis

8. As mentioned in the introduction, within the data and expertise constraints, the analysis is sound, although unfortunately it had to be mostly qualitative. The way the analysis is presented, namely starting with an analytical statement, backed-up by one or two cases that clearly demonstrate the findings, seems the best what can be done within those data constraints. Where possible, quantitative data are provided, such as on the budget allocations by focus and intervention domain, the comparison of the overall ratings (practically at par with the rest of IFAD's portfolio) and the (very limited) skills available and deployed. Those findings are useful to inform management.
9. The analysis of the project / policy performance in relation to the respective strategic objectives remains rather general. Considering the rich and broad experience of the team and the consultants, adding key currently considered good practices would, in my opinion, have enriched the usefulness of the report. Some of my thoughts on each of the each strategic objective:
 - The poverty reduction effort analysis highlights lack of quantitative evidence and inadequate targeting as the main issues. In my experience, project designers often propose too many outcome indicators, which are also too complex to measure. Some more thoughts on what would be a good proxy to get a quantitative handle on poverty reduction and/or malnutrition in pastoral

¹⁴⁰ Team reaction to earlier SIA comment.

settings would have been welcome. On the targeting, the need to pay particular attention to women and youth has been stressed in the synthesis report. With increasing inequity in the pastoral society the risk of benefit capturing by the wealthy deserves a similar emphasis.

- Emphasis on enhancing resilience acknowledges the important role of FAO and IFAD. In my experience emphasis often is on early warning, rather than on earlier response mechanisms. More recent interventions, for example by facilitating destocking and restocking, management of strategic feed reserves, etc. could have been mentioned, in addition to the role that financial institutions could play in risk management already noted in the synthesis report.
- Institution building focuses correctly on customary or customary-formal hybrid pastoral organizations as the main avenues to resource management and eventually conflict resolution. In my experience, the more formal service (animal health) organizations can be an entry point to the resource management hybrids. A key issue is longer-term sustainability of these pastoral associations, which is not addressed in the analysis.
- Gender equality promotion has had limited results according to the analysis. In my experience, IFAD's current design documentation is certainly adequate in the analysis, but a detailed analysis not always leads automatically to appropriate interventions. The lack of attention in the documentation to milk is revealing. Supporting marketing of dairy products by and from women is not mentioned in the synthesis, but might be as important.
- Sustainable resource management is a key element of pastoral development, but in addition to what is being said in the synthesis report, sequencing the activities in particular in Central Asia (institution building, legal framework for access, type of investments, etc.) is not always clearly understood. Enhancing mobility of herds is the main tool; more information on what has been done and what is successful would have been useful. Following-up on what has been said in the context paragraph (#6), facilitating outmigration of poor pastoralists through skill development and vocational training, micro-finance and infrastructure support might be as important for the future sustainability of pastoral systems, as seeking enhanced access to grazing and water.
- Advocacy is certainly important; the dilemma concerns the FAO and IFAD'S obligation to work through governments, whereas the priorities of pastoral organizations are often outside or go against government's interests.
- Knowledge management in institutions such as IFAD with very limited in-house pastoralist development experience is difficult. An in-house champion and effective dissemination of these lessons learned is needed.

Conclusions and recommendations

10. The four recommendations follow the analysis, fit into the story line, and are, in my opinion, correct. They appear all directed at the strategic level, and one wonders whether restricting the recommendations to this higher level is appropriate in view of the serious gaps in pastoral project design and implementation noted in the analysis. A more operational analysis might have made them more consequential. My comments by respective recommendation are:

- FAO and IFAD to equip themselves with a policy of engagement in pastoral development clearly deserves support. While pastoral development might not fully fit with recent emerging recommendation in IFAD of focusing on areas with the highest concentration of poor (paragraph 95), the total number of poor in pastoral production (although spatially disperse), and the substantial danger of these areas becoming hotbeds of illegal behaviour which spills into

the areas with higher concentrations of poor, are strong reasons for an expanded involvement. If a policy would be prepared, close collaboration with the other major investors (World Bank, African Development Bank) is needed. One would hope that such policy would also be rich in proven good practice examples to convince policy makes on the justification of such investments.

- IFAD and FAO to built and adapt capacity for systemic engagement in pastoral development obviously follows from the first recommendation. One could wonder about the how: permanent positions, twinning with a R&D institution with experience in this sector, developing a stronger and permanent basis for the FAO Pastoral Knowledge Hub, etc. In any case, it has to be a long-term engagement.
- Focus on risk management rather than risk reduction is the key message of the current understanding of pastoral development. It could also be seen as part of the desired shift from the current emergency aid mode to a sustainable livelihood mode.
- Advocacy has been treated in paragraph 8. In my opinion, NGOs rather than international and intergovernmental organizations have a comparative advantage in this area.

Summary

11. In summary, within the data constraints and the apparent focus on the strategic level, the team has done a laudable job in documenting the performance of the two institutions in pastoral development, and will hopefully make pastoral development more visible on the agenda of the two institutions. A follow-up on the "how" is an important next step.

List of key persons met

IFAD staff

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Learning event on joint FAO/IFAD evaluation synthesis report on pastoral development

Discussion Group 1: FAO/IFAD engagement

Overall question: What are the key elements of pastoral development that IFAD/FAO should support and what critical issues should be kept in mind?

The discussion opened with an analysis of FAO's and IFAD's current position in relation to pastoralists.

The two main areas include:

1. Work on policy - Over the past 10 years, both organizations have spent money on pastoralist-related projects but progress has been minimal, as interventions have been mainly connected to emergencies. There were proposals to engage in developing a joint policy, however, it was deemed impossible due to time constraints.
2. Processes for intervening in pastoral areas exist. In FAO, the launch of the Pastoralist Knowledge Hub provides a means to centralize knowledge, coordinate activities, identify issues and propose actions.

The group then proposed 3 main concrete points on ways forward as outlined below:

1. Interpretation of existing data - Some data currently exist that need to be interpreted, for example, that on social, economic and environmental aspects of pastoralism used to guide interventions in these areas. This action will also help in identifying areas where data are still lacking.
2. Generation of better data - Data are notoriously absent on elements such as numbers of pastoralists and livestock and ecosystem services provided by pastoral areas. Lessons learned can be drawn from the International Year of Family Farming where data were amassed in one year. Such information can then be uploaded on a shared database for core learning. This should also include documenting lessons learned from projects and programmes. At FAO, pastoralism should be covered as a Major Area of Work by the organization for the next biennium, while at IFAD, more visibility of this area is needed in the work programmes.
3. Joint process analysis of the situation - Whereas a joint policy by the two organizations is unfeasible, process analysis for interventions is needed that fits into wider frameworks such as the Sustainable Development Goals. In addition, platforms for this engagement are available through IFAD's upcoming guidelines on: on Pastoralism and FAO's Technical Guide on Governance of Tenure in Pastoral Rangelands.

In conclusion:

- Interpretation of existing data (including highlighting of absent data);
- Generation of better data; and
- Joint process analysis of the situation.

Discussion Group 2: IFAD/FAO engagement and cooperation

Overall question: How can IFAD/FAO increase their capacity for systemic engagement and co-operation in pastoral development, taking into account the respective mandates and specializations of the two organizations?

The moderator (Vincent Briac-Warnon) opened the session by introducing members and their positions in the respective organizations. The question was reformulated in concrete terms based on elements from the case study of the Project on Pastoral and Agro Pastoral communities in the Central African Republic where FAO used a more holistic approach to engage with other organizations and operate beyond emergency livestock needs.

Points raised and discussed:

- In order to fulfill their fundamental goals with regard to pastoral systems, should FAO and IFAD do more to expand their capacity?

In principle, the group responded positively. The distinction between the two different mandates (IFAD = financing agency and FAO = technical agency) was clearly flagged up as were their complementary aspects.

- What kind of mechanisms should be put in place? Benefits versus constraints?

The group stressed the belief that pastoralism is not only about livestock therefore many different competencies and skills are required to handle development issues. The group proposed a step-by-step approach:

- 1- Developing a joint strategy and? a How-to guide for dealing with pastoralism development (or adapting existing guides)
 - 2- Mapping the human capacities of both agencies, bearing in mind numerous cross-cutting issues such as natural resource management, land tenure, gender, etc.
 - 3- Establishing and sustaining a practical collaboration for improved coordination and the sharing of tools and information. A roster on pastoralism development expertise was mentioned. Some members of the groups stressed the importance of making the best of existing mechanisms like the FAO Pastoral Knowledge Hub rather than creating a new one.
 - 4- If further work is undertaken together it is important to agree on the Monitoring and Evaluation plan.
 - What type of capacity should be built and reinforced to ensure a better and sustainable understanding of pastoral systems?
- 1- Collaborating staff should be trained in the new 'reading of the pastoralism context' to achieve the most efficient and effective impact of activities.
 - 2- Tracking current engagement with pastoral development in both agencies may help to further knowledge management and sharing about funding opportunities, projects implementations, evaluations and human resources.

In conclusion:

- Building and increasing the capacity of both IFAD/FAO agencies for systemic engagement and co-operation in pastoral development would be an important and positive step forward.
- The mandates and specializations of both agencies must be respected and viewed as complementary.
- Building and adapting a collaboration on pastoralism development (How-to guide) can be achieved using skilled and competent staff from both agencies as a core group dealing with pastoralism issues beyond the livestock lens.

Discussion Group 3: Risk management

Overall question: how can IFAD/FAO best support risk management strategies of pastoralists and how should mobility be considered?

The moderator (P. Itty) opened the session by formulating the question in concrete terms based on the initial findings of the case study of PCDP II project in Ethiopia. The following question was posed:

In which sense can risk reduction be considered counterproductive to managing risks?

Points raised and discussed:

- Providing water points can be seen as a risk reduction measure and can be justified in certain conditions. On the other hand provision of water points might increase risk e.g. by attracting settlements on wet season rangelands, or generating conflict in absence of appropriate management, or triggering land degradation and the spread of tick-borne diseases.
- Everyone is invested in reducing risk but the nature of risk is subjective. Reducing a risk for one pastoralist may increase it for another.
- A herder planning a migration is taking a risk (will information about the presence of good pasturing in a certain area prove to be true?); Will he arrive at the pasture before other herders use it? Will the pasture be such that his animals will fatten from it? Will there be raiders in the areas? Risk can only be minimized and managed to a certain extent.
- Pastoralists have to take risks because risks bring returns. They operate in highly variable environments where their capacity to adapt and be flexible is vital.
- If you introduce stabilizing measures the system may suffer over time. If one reduces risk by reducing variability (this does not only apply to sedentary, production strategies which make use of the same variability (e.g. adaptive local production systems) may be undermined.
- Mobility is often represented as triggered by scarcity: moving away from a crisis or pushed away from exhausted pasture. In practice, with the exception of severe droughts, pastoral mobility peaks in intensity during the wet season when pasture is most abundant. It is, therefore, not triggered by scarcity but by opportunity: in healthy systems herders do not move away because of the lack of pasture, but rather they are drawn to the prospect (usually based on information about options) of better pasture conditions elsewhere. In the Sahel, for instance, pastoralists move during the rainy season when resources are more abundant for selective grazing.
- Policy-makers should remain flexible on the question of mobility. Giving the option to the pastoralists should translate into giving them the means to have better lives with or without mobility. Others in the discussion group argued that in order to represent an advantage over other forms of livestock-keeping in the drylands, pastoralism needs mobility. For pastoral producers, living better lives without mobility is therefore equal to living better lives without pastoralism.
- We often consider people going in and out of poverty and the same thing holds true for pastoralists: some may be mobile, then settle, only to return to a mobile way of life.
- We talk about individual choices, but most of the time decisions are intertwined with the needs of the community.
- Mobility should be considered as one of the building blocks in the identity of pastoralists.

- The opportunistic approach underlying mobility of pastoralists should be seen in a broader context: some opportunities which arise today may not be valid tomorrow, so individuals will resettle and move again the next year.
- We should engage in a regional debate about mobility – how can pastoralists move in a region affected by droughts? Not everyone will be able to survive in the future as a pastoralist, but mobility is key to the system.
- There are cases where women are sedentary while their husbands move with large herds of livestock to greener pastures.
- How do we support people that choose to stay in a pastoralist system? How do governments support pastoralists who want to continue being mobile?
- What comes first? Risk reduction or management?
- Some felt that if there was grazing and water available people would not move. Others argued that everybody moves in some degree. So-called settled ex-pastoralists in Morocco, move more than when they were pastoralists as migrant labourers.

In conclusion:

- Risk reduction contributes to pastoral risk management when the measures undertaken follow from a sound understanding of the overall risk-taking approach and use of variability in pastoral systems—this means embracing the fact that large part of pastoral risk management is actually based on introducing variability in the production system (to interface the variability in the natural environment).

References

- Abdullahi A., Mohammed S., and Eid A. 2012. Town camels and milk villages: the growth of camel milk marketing in the Somali Region of Ethiopia. In: Catley A., Lind J. and Scoones I. (eds) *Pastoralism and Development in Africa. Dynamic Change at the Margins*, Routledge, Routledge, New York and Oxford.
- African Union. 2010. *Policy Framework for Pastoralism in Africa: Securing, Protecting and Improving the Lives, Livelihoods and Rights of Pastoralist Communities*, Department of Rural Economy and Agriculture, African Union, Addis Ababa, Ethiopia.
- African Union-IBAR. 2010. *The Contribution of Animal Resources to Food Security in the Context of Climate Change Challenge in the EAC Region*, Background paper to the EAC Heads of State Retreat on Climate Change and Food Security on 2nd December 2010, Ngurdoto Mountain Lodge, Arusha, Tanzania, Interafrican Bureau for Animal Resources of African Union (AU-IBAR).
- Agan Kizito, Akongo Mary Lilly, Angiroi Thomas, Emai Joyce, Logira Naputaria, Lokuda Xavier, Lokut Paul, Lolepo Lotimo, Lomongin Michael Jackson, Marczela Sire, Napokol John Gaston, Nakong Christine, Otiang Christine. 2012. *Strength, Creativity and Livelihoods of Karimojong Youth, PCI and Restless Development Uganda*, Kampala.
- AGIR. 2013. *AGIR- Sahel and West Africa. Regional Roadmap*. Adopted on 9 April 2013, Global Alliance for Resilience, Paris.
- Aklilu Y. and Catley A. 2010. *Livestock Exports from the Horn of Africa- An Analysis of Benefits by Pastoralist Wealth Group and Policy Implications*, Feinstein International Center Tufts University, Medford, MA, <http://fic.tufts.edu/assets/LivestockExports.pdf>
- Aklilu, Y., Little, P.D., Mahmoud, H., and McPeak, J. 2013. *Market access and trade issues affecting the drylands in the Horn of Africa*. Brief prepared by a Technical Consortium hosted by CGIAR in partnership with the FAO Investment Centre. Technical Consortium Brief 2, International Livestock Research Institute, Nairobi.
- Alfaroukh I. O., Avella N. and Grimaud P. (eds). 2011. *Actes du colloque national: 'La politique sectorielle du pastoralisme au Tchad. Quelles orientations?' 01-03 mars 2011*, République du Tchad, Ministère de l'Élevage et des Ressources Animales, N'Djaména, Tchad.
- Anderson D. M. and Broch-Due V. (eds). 1999. *The Poor Are Not Us. Poverty and Pastoralism*, James Currey, London.
- Asner, G. P., A. J. Elmore, L. P. Olander, R. E. Martin, and A. T. Harris. 2004. *Grazing systems, ecosystem responses, and global change*. *Annu. Rev. Environ. Resour.* 29: 261–299.
- Bai Z. G., de Jong R., van Lynden G. W. J. 2011. *An Update of GLADA - Global Assessment of Land Degradation and Improvement*. ISRIC Report 2010/08, ISRIC, Wageningen.
- Barrow, E., Davies J., Berhe, S., Matiru, V., Mohamed, N., Olenasha, W. and Rugadya, M. 2007. *Pastoralists as Shrewd Managers of Risk and Resilience in the Horn of Africa*, IUCN Eastern Africa regional Office, Policy Brief no.1, Nairobi.
- Behnke R. 2010. *The Contribution of Livestock to the Economies of IGAD Member States. Study Findings, Application of the Methodology in Ethiopia and Recommendations for Further Work*, IGAD LPI Working Paper No. 02 - 10, Djibouti.
- _____. 2012. *Pastoral Land Rights and Resource Governance. Overview and Recommendations for Managing Conflicts and Strengthening Pastoralists' Rights*,

- Property Rights and Resource Governance Briefing Paper no 10, USAID, Washington.
- Behnke, R., Fernandez-Gimenez, M. E., Turner M. and Stammier F. 2011. Pastoral migration: mobile systems of livestock husbandry. In: Milner-Gulland E.J., Fryxell J. and A.R.E. Sinclair (eds) *Animal Migration – A Synthesis*, Oxford University Press, Oxford.
- Behnke, R. and Metaferia, F. 2011. The Contribution of Livestock to the Ethiopian Economy - Part II, IGAD LPI Working Paper No. 2-11, Djibouti. Behnke R. and Muthami D. 2011. The Contribution of Livestock to the Kenyan Economy, IGAD LPI Working Paper No. 3-11, Djibouti.
- Behnke, R. and Muthami, D. 2011. The Contribution of Livestock to the Kenyan Economy, IGAD LPI Working Paper No. 3-11, Djibouti.
- Behnke, R. and Osman, H.M. 2011. The Contribution of Livestock to the Sudanese Economy, IGAD LPI Working Paper No 01-12, Djibouti.
- Behnke, R.H. and Scoones, I. 1993. Rethinking range ecology: implications for rangeland management in Africa. In: Behnke R.H., Scoones I. and Kerven C. (eds), *Range Ecology at Disequilibrium: New Models of Natural Variability and Pastoral Adaptation in African Savannas*, Overseas Development Institute, London.
- Behnke R.H., Scoones, I. and Kerven C. (eds). 1993. *Range Ecology at Disequilibrium: New Models of Natural Variability and Pastoral Adaptation in African Savannas*, Overseas Development Institute, London.
- Benjaminsen, T.A. and Ba, B. 2009. Farmer–herder conflicts, pastoral marginalization and corruption: a case study from the inland Niger delta of Mali. *The Geographical Journal* 175(1): 71–81.
- Benoit, M. 1984. *Le Séno-Mango ne doit pas mourir. Pastoralisme, vie sauvage et protection au Sahel*, ORSTOM, Paris.
- Berkes, F. and Folke, C. (eds). 1998. *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*, Cambridge Univ. Press, Cambridge, UK.
- Bernus, E. 1977. "Les tactiques des éleveurs face à la sécheresse: le cas du sud-ouest de l'Aïr, Niger." In *Stratégies pastorales et agricoles des sahéliens durant la sécheresse 1969–1974*, ed. J. Gallais. Bordeaux: CEGET/CNRS.
- _____. 1990. En guise de conclusion: les pasteurs nomades africains, du mythe éternel aux réalités présente. *Cah. Sci. Hum.* 26(7-2): 267-280.
- Bollig, M. (ed). 2006. *Risk Management in a Hazardous Environment. A Comparative Study of Two Pastoral Societies*. *Studies in Human Ecology and Adaptation* 2, Special Issue.
- _____. 2010. *Risk Management in a Hazardous Environment. A Comparative Study of Two Pastoral Societies*, Springer, New York.
- Bonfiglioli, Maliki A. 1981. *Ngaynaaka. Herding According to the WoDaaBe*. Niger Range and Livestock Project, Discussion Paper n. 2, Republic of Niger, Ministry of Rural Development and USAID/Niger, Tahoua.
- Bonnet, B. and Hérault, D. 2011. Governance of Pastoral Tenure and Climate Change in the Sahel. Reinforce capacities of actors to secure mobility and fair access to pastoral resources. *Land Tenure Journal* 2: 157-189.
- Breman, H. and De Wit, C. T. 1983. Rangeland Productivity and Exploitation in the Sahel. *Science, New Series*, 221(4618): 1341-1347.
- Breuer, I. and Kreuer, D. 2011. Market Spaces in a Globalizing Periphery: Livestock Trade, Borders, and Liberalization in Eastern Morocco. In: Gertel, Jörg & R. Le

- Heron (eds), *Economic Spaces of Pastoral Production and Commodity Systems: Markets and Livelihoods*, Ashgate Publishing Ltd, Farnham, UK.
- Buchanan-Smith, M. and Fadul, A.J.A., with Tahir A.R and Aklilu Y. 2012. *On the Hoof Livestock Trade in Darfur*, United Nations Environment Programme, Nairobi, http://www.un.org/en/events/environmentconflictday/pdf/UNEP_Sudan_Tufts_Darfur_Livestock_2012.pdf
- Bureau de la Coopération Suisse au Niger. 2009. Programme d'Appui au secteur de l'élevage (PASEL). Phase VI. 09.2009-08.2012 PRODOC, Ambassade de Suisse, Niamey.
- Catley, A. and Aklilu, Y. 2012. Moving Up or Moving Out? Commercialization, growth and destitution in pastoralists areas. In: Catley A., Lind J. and Scoones I. *Pastoralism and Development in Africa. Dynamic Change at the Margins*, Routledge, New York and Oxford.
- Catley, A., Lind, J. and Scoones, I. (eds). 2012. *Pastoralism and Development in Africa. Dynamic Change at the Margins*, Routledge, New York and Oxford.
- Colin de Verdière, P. 1998. Conséquences de la sédentarisation de l'élevage pastoral au Sahel. Étude comparée de trois systèmes agropastoraux dans la région de Filingué (Niger). Document de travail du Cirad-emvt n. 2, Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD), Montpellier.
- Corniaux, C., Thébaud, B. and Gautier, D. 2012. La mobilité commerciale du bétail entre le Sahel et les pays côtiers: l'avenir du convoi à pied. *Nomadic Peoples* 16(2): 5-31. Davies J. and Hatfield R. 2007. *The Economics of Mobile Pastoralism: A Global Summary*. *Nomadic Peoples* Volume 11(1): 91–116.
- Dames, T. 1964. Reconnaissance of the agricultural Potential of the Turkana District. FAO Report no. 1852, FAO, Rome.
- de Haan, C. 1994. An Overview of the World Bank's Involvement in Pastoral Development, Pastoral Development Network Papers Issue 36b, ODI, London.
- De Haan, C., Dubern, E., Garancher, B., and Quintero, C. 2014. *Pastoralism Development in the Sahel: A Road to Stability?*, Global Center on Conflict, Security and Development, The World Bank, Washington DC.
- Declaration de N'Djaména. 2013. Elevage Pastoral: une contribution durable au développement et à la Sécurité des espaces Saharo-Sahéliens. N'Djaména 29 mai 2013, Colloque Régional et Conférence Ministérielle, 27-29 mai 2013, <http://www.afd.fr/webdav/site/afd/shared/PORTAILS/PAYS/TCHAD/PDF/Déclaration%20de%20N'djamena%20vf%20MenP.pdf>
- Déclaration de Nouakchott sur le Pastoralisme. Mobilisons ensemble un effort ambitieux pour un pastoralisme sans frontières. 29 Octobre 2013 2013, http://www.cilss.bf/IMG/pdf/DECLARATION_VERSION FINALE FRENCH adoptee_29_octobre_2013.pdf
- Digard, J. P., Landais, E., Lhoste, Ph. 1992. La crise des sociétés pastorales. Un regard pluridisciplinaire. *Rev. Elev. Méd. Vét. Pays Trop.* 46(4): 683-692.
- Distefano, F. 2013. Understanding and Integrating Gender Issues into Livestock Projects and programmes. A checklist for practitioners, Food and Agriculture Organization of the United Nations, Rome.
- Dixon, J., Gulliver, A. and Gibbon, D. 2011. *Farming Systems and Poverty*, FAO and World Bank, Rome and Washington.
- Easdale, M. H. and Domptail, S. E. 2014. Fate can be changed! Arid rangelands in a globalizing world. A complementary co-evolutionary perspective on the current 'desert syndrome'. *Journal of Arid Environments* 100-101: 52-62.

- Eswaran, H., Lal, R., and Reich, P. 2001. 'Land Degradation: An Overview'. In: E. Bridges, I. Hannam, L. Oldeman, F. Penning de Vries, S. Scherr, and S. Sompatpanit (eds), Responses to Land Degradation. Proc. 2nd International Conference on Land Degradation and Desertification, Oxford Press, Khon Kaen (Thailand) and New Delhi.
- Eastern and Central Africa Programme for Agricultural Policy Analysis (ECAPAPA). 2005. Managing conflicts over pasture and water resources in semi-arid areas: Beyond misleading myths and ethnic stereotypes, Policy Brief No. 8. Eastern and Central Africa Programme for Agricultural Policy Analysis. ECAPAPA, Entebbe, Uganda.
- Elmi, M. and Birch, I. 2013. Creating Policy Space for Pastoralism in Kenya, FAC Working Paper 068, Institute of Development Studies, Brighton, http://www.future-agricultures.org/publications/research-and-analysis/doc_download/1747-creating-policy-space-for-pastoralism-in-kenya
- Ellis, J.E. and Swift, D.M. 1988. Stability of African ecosystems: alternate paradigms and implications for development. *Journal of Range Management* 41 (6): 450-459.
- Ericksen, P., de Leeuw, J., Thornton, P., Said, M., Herrero, M. and Notenbaert, A., 2013. Climate change in Sub-Saharan Africa. What consequences for pastoralism? In Catley A., Lind J. and Scoones I., (eds). *Pastoralism and development in Africa. Dynamic Change at the Margins*. London: Routledge.
- Food and Agriculture Organization of the United Nations (FAO). 1977. Les systèmes pastoraux sahéliens. Données socio-démographiques de base en vue de la conservation et de la mise en valeur des parcours arides et semi-arides, FAO, Rome.
- _____. 1997. Livestock–Environment Interactions: Issues and options, coordinated by H. Steinfeld, C. de Haan and H. Blackburn, Food and Agricultural Organization of the United Nations, The World Bank, USAID, Rome.
- _____. 1999. The Strategic Framework for FAO 2000-2015, Food and Agriculture Organization of the United Nations, Rome.
- _____. 2002. Pastoralism in the New Millennium, FAO Animal Production and Health Papers no. 150. Food and Agriculture Organization of the United Nations, Rome.
- _____. 2007. The State of the World's Animal Genetic Resources for Food and Agriculture, Food and Agricultural Organization of the United Nations, Rome.
- _____. 2009. Conference. Rome, 18 - 23 November 2009 Strategic Framework 2010-2019, Food and Agriculture Organization of the United Nations, Rome.
- _____. 2010. Strategic Objectives, Results and Core Functions 2010-2013 and 2014-2017, Food and Agriculture Organization, Rome.
- _____. 2012. Voluntary Guidelines on the responsible Governance of tenure of land, fisheries and forests in the Context of national food security, Food and Agricultural Organization of the United Nations, Rome.
- _____. 2013. Conference. Thirty-eighth Session, Rome, 15 - 22 June 2013: Reviewed Strategic Framework, Food and Agriculture Organization of the United Nations, Rome.
- _____. 2013b. FAO Policy on Gender Equality. Attaining Food Security Goals in Agriculture and Rural Development, FAO, Rome.
- _____. 2014. Strengthening the links between resilience and nutrition in food and agriculture. A discussion paper, Food and Agriculture Organization of the United Nations, Rome.

- FAO Somalia, UNICEF Somalia, and World Food Programme Somalia. 2012. 'Somalia. A Resilience Strategy', FAO, UNICEF and World Food Programme, Istanbul.
- FAO-Food Wastage Footprint (FWF). 2014. Food Wastage Footprint. Full-cost Accounting. Final Report, FAO, Rome.
- FAO-International Year of Family Farming (IYFF). 2014. Deep Roots, Food and Agriculture Organization of the United Nations, Rome.
- Fitzgibbon, C. and Crosskey, A. 2013. Disaster risk reduction management in the drylands in the Horn of Africa. Brief prepared by a Technical Consortium hosted by CGIAR in partnership with the FAO Investment Centre. Technical Consortium. Brief 4., International Livestock Research Institute, Nairobi.
- Flintan F. 2008. Women's Empowerment in Pastoral Societies, World Initiative for Sustainable Pastoralism-IUCN, Nairobi.
- _____. 2011. The changing nature of gender roles in the drylands of the Horn and East Africa: implications for DRR programming, REGLAP, Nairobi.
- Flintan, F., Behnke, R. and Neely, C. 2013. Natural resource management in the drylands in the Horn of Africa. Brief prepared by a Technical Consortium hosted by CGIAR in partnership with the FAO Investment Centre. Technical Consortium Brief 1, International Livestock Research Institute, Nairobi.
- Folke, C. 2006. Resilience: The emergence of a perspective for social–ecological systems analyses . *Global Environmental Change* 16: 253-267.
- Gerber, P., Mooney, H.A., Dijkman, J., Tarawali, S., and de Haan, C. (eds). 2010. *Livestock in a Changing Landscape: Experiences and regional Perspectives (Volume 2)*, Scientific Committee on Problems of the Environment (SCOPE), Island Press, Washington D.C.
- Gertel, J. and Le Heron, R. (eds). 2011. *Economic Spaces of Pastoral Production and Commodity Systems*, Ashgate Publishing Ltd, Farnham, UK.
- Gilles, J. L. and de Haan, C. 1993. Recent trends in World Bank Pastoral Development Projects: a review of 13 Bank projects in light of the new pastoral ecology. In Behnke R.H., Scoones I. and Kerven C. (eds), *Range Ecology at Disequilibrium: New Models of Natural Variability and Pastoral Adaptation in Africa Savannas*. London: Overseas Development Institute.
- Gliessman S. 2000. *Agroecology: The Ecology of Sustainable Food-Systems*, second edition, CRC Press, Boca Raton, FL.
- Grémont, C. 2012. Villages and Crossroads. Changing Territorialities among the Tuareg of Northern Mali. In: McDougal J. and Scheele J. (eds) *Saharan Frontiers. Space and Mobility in Northwest Africa*, Indiana University Press, Bloomington, Indiana.
- Gustavsson, J., Cederberg, C., Sonesson, U., van Otterdijk, and R, Meybeck, A. 2011. *Global Food Losses and Food Waste. Extent, Causes and Prevention*, Study conducted for the International Congress SAVE FOOD! at Interpack2011 Dusseldorf, Germany, Rome.
- Habou, A., and Danguioua, A. (supervised by P. Bloch and M. Keïta). 1991. *Transfert du Capital-Bétail au Niger (des Pasteurs aux autres Catégories Socio-Professionnelles). Illusion ou Réalité. Rapport Préliminaire de mission (21.12.90/26-01.91)*, University of Wisconsin - Secretariat Permanent du Comité National du Code Rural, Niamey.
- Halstead, P. and O'Shea, J. 1989. Introduction: cultural responses to risk and uncertainty. In: Halstead P. and O'Shea J. (eds) 1989. *Bad Year Economics. Cultural response to risk and uncertainty*, Cambridge University press, Cambridge UK and New York.

- Haughton, J. and Khander, S. R. 2009. Handbook on Poverty and Inequality, The World Bank, Washington DC.
- Headey, D., Taffesse A. S., You, L. 2012. Enhancing Resilience in the Horn of Africa: An Exploration into Alternative Investment Options, IFPRI Discussion Paper 01176, Washington.
- Hesse, C. and MacGregor, J. 2006. Pastoralism: drylands' invisible asset? Developing a framework for assessing the value of pastoralism in East Africa, IIED Dossier n. 142, London.
- Hodgson, D. (ed.). 2000. Rethinking Pastoralism in Africa, James Currey, London, Kampala, Nairobi, Athens (OH).
- Holling, C. S. 1973. Resilience and stability of ecological systems. *Ann. Rev. Ecol. Syst.* 4: 1-23.
- Holling, C. S., Berkes, F. and Folke, C. 1998. Science, sustainability and resource management. In: Berkes F. and Folke C. (eds) *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*, Cambridge Univ. Press, Cambridge, UK.
- Holling, C. S., Schindler, D., Walker, B. and Roughgarden, J. 1995. Biodiversity in the functioning of ecosystems: an ecological synthesis. In: Perrings C., Maler K.-G., Folke C., Holling C.S. and Jansson B.-O., *Biodiversity Loss: Economic and Social Issues*, Cambridge University Press, Cambridge, UK.
- Homewood, K. 2008. *Ecology of African Pastoralist Societies*, James Currey, Ohio University Press, Unisa Press, Oxford UK, Athens OH, Pretoria South Africa.
- Homewood, K, Coast, E., Kiruswa, S., Serneels, S., Thompson, M., Trench, P. 2006. *Maasai Pastoralists: Diversification and Poverty* [online], LSE Research Online. Available at: <http://eprints.lse.ac.uk/archive/00000821>, London.
- Horowitz, M.M. 1977. Les stratégies adaptatives au Sahel avant et après la sécheresse. In: Gallais J. (ed) *Stratégies pastorales et agricoles des Sahéliens durant la Sécheresse 1969-1974*. Travaux et Documents de Géographies Tropicales No. 30P, CEGET, Paris.
- International Fund for Agricultural Development (IFAD). 1987. "Pastoral credit", document de travail no. 7, Niger programme special national rapport d'évaluation, Vol. 3, IFAD, Rome.
- _____. 2002. Strategic Framework for IFAD 2002-2006, Enabling the rural poor to overcome their poverty. International Fund for Agricultural Development, Rome.
- _____. 2006. Strategic Framework for IFAD 2007-2010. Enabling the rural poor to overcome poverty, International Fund for Agricultural Development, Rome.
- _____. 2008. Improving access to land and tenure security policy, IFAD, Rome.
- _____. 2009. Engagement with Indigenous Peoples Policy, IFAD, Rome.
- _____. 2011. Strategic Framework for IFAD 2011-2015. Enabling poor rural people to overcome poverty, International Fund for Agricultural Development, Rome.
- _____. 2012a. Gender equality and women's empowerment policy, IFAD, Rome.
- _____. 2012b. Private Sector Strategy. Deepening IFAD's engagement with the private sector, IFAD, Rome.
- _____. 2012c. Project and Portfolio Management System. Reference Manual, International Fund for Agricultural Development, Rome.
- _____. 2015. Grants and Investments Project System. Reference Manual, International Fund for Agricultural Development, Rome.

- IFAD-Independent Office of Evaluation (IOE). 2013. Rural Differentiation and Smallholder Development. Evaluation Synthesis. Report n. 3042, Independent Office of Evaluation, International Fund for Agricultural Development, Rome.
- _____. 2013. Rural Differentiation and Smallholder Development. Evaluation Synthesis. Report n. 3042, Independent Office of Evaluation, International Fund for Agricultural Development, Rome.
- Intergovernmental Authority on Development (IGAD). 2013, The Contribution of Livestock to the Ethiopian Economy, IGAD Policy Brief Series.
- International Institute for Environment and Development (IIED). 2006. Making Decentralization Work for Sustainable Natural Resource Management in the Sahel. Lessons from a programme of action-research, policy debate and citizen empowerment, International Institute for Environment and Development, London.
- _____. 2015. Valuing Variability. New perspectives on climate resilient drylands development, IIED, London.
- IIED and SOS Sahel. 2009. Modern and Mobile. The future of livestock production in Africa's drylands. Edited by Helen de Jode, International Institute for Environment and Development, and SOS Sahel International UK, London.
- International Union for Conservation of Nature (IUCN). 2012. Supporting Sustainable Pastoral Livelihoods: A Global Perspective on Minimum Standards and Good Practice. Second Edition, IUCN ESARO office, Nairobi, http://cmsdata.iucn.org/downloads/manual_for_min_standards_low_resolution_may_2012.pdf
- Kaufmann, B. A. 2007. Cybernetic Analysis of Socio-biological Systems: The Case of Livestock Management in Resource-Poor Environments, Margraf Publishers GmbH, Weikersheim.
- Kerven, C. 1992. Customary Commerce: A historical reassessment of pastoralist livestock marketing in Africa, Agriculture Series N. 15, Overseas Development Institute, London.
- Kim D. 1995. Effect of plant maturity, cutting, growth stage, and harvesting time on forage quality, Ph.D. Dissertation. USU, Logan, UT.
- King-Okumu C. 2015. Rapid assessment of investments in natural resource stewardship in comparison to the value of returns, IIED Working Paper, London.
- Koohafkan P. and Stewart B. A. 2008. Water and Cereals in Drylands, FAO and Earthscan, London and Sterling VA.
- Krätli, S. 2008. Cattle breeding, Complexity and Mobility in a Structurally Unpredictable Environment: the WoDaaBe herders of Niger. *Nomadic Peoples* 12(1): 11-41.
- _____. 2014. If Not Counted Does Not Count? A programmatic reflection on methodology options and gaps in Total Economic Valuation studies of pastoral systems, International Institute for Environment and Development, London.
- Krätli S. and Dyer C. 2009. [Mobile Pastoralists and Education: Strategic Options](#), International Institute of Environment and Development. Education for Nomads Working Paper 1, London.
- Krätli S. and Schareika N. 2010. Living off Uncertainty. The Intelligent Animal Production of Dryland Pastoralists. *European Journal of Development Research* 22(5): 605-622.
- Krätli S. and Swift J. 2014. 'Counting Pastoralists' in Kenya, REGLAP/DLCI, Nairobi.
- Krätli, S., Dirani, O.H. El, Young, H. 2013. [Standing Wealth. Pastoralist Livestock Production and Local Livelihood in Sudan](#), United Nations Environment Programme (UNEP) and Feinstein International Centre, Tufts University, Khartoum.

- Krätli, S., Hülsebusch, C., Brooks, S. and Kaufmann, B. 2013. Pastoralism: A critical asset for food security under global climate change. *Animal Frontiers* 2(5): 42-50.
- Krätli, S., Kaufmann, B., Roba, H., Hiernaux, P., Li, W., Easdale, M. C., Hülsebusch, C. 2015. A House Full of Trap Doors. Barriers to resilient drylands in the toolbox of researchers?, Issue Paper, International Institute for Environment and Development, Edinburgh.
- Krätli, S., Swift, J. and Powell, A. 2014. *Saharan Livelihoods: Development and Conflict*, The World Bank, Washington.
- Kristjanson, P., Waters-Bayer, A., Johnson, N., Tipilda, A., Njuki, J., Baltenweck, I., Grace, D., and MacMillan, S. *Livestock and Women's Livelihoods: A Review of the Recent Evidence*. ILRI Discussion Paper No. 20, ILRI, Nairobi.
- Lane, C. 1994. Pastures Lost: Barabaig Economy, Resource Tenure, and the Alienation of their Land in Tanzania. *Nomadic Peoples* 34/35: 81-94.
- Levine, S. with J. Ondoga, P. Opio, A. Atyang, P. Nyeko, R. Ofwono, K. Igbokwe, S. Ssengendo, B. Onzima, A. Hakuza, and P. Komujuni. 2010. "What to do about the Karamoja?" Why pastoralism is not the problem but the solution. A food security analysis of Karamoja, Food and Agriculture Organization of the United Nations (FAO) and European Commission Humanitarian Aid and Civil Protection (ECHO), Rome and Geneva.
- Little, P. D. 2009. Hidden value on the hoof: cross-border livestock trade in Eastern Africa, Policy Brief 2, COMESA, Addis Ababa.
- Little, P. D., McPeack, J., Barret, C. B. and Kristjanson, P. 2008. *Challenging Orthodoxies: Understanding Poverty in Pastoral Areas of East Africa*.
- Little, P.D., Smith, K., Cellarius, B. A., Coppock, D. L. and Barrett, C. B. 2001. Avoiding disaster: Diversification and risk management among East African herders. *Dev. Change* 32: 401–433.
- Ministry of State for Development of Northern Kenya and other Arid Lands (MDNKOAL). 2010. *Getting to the Hardest to Reach: A strategy to provide education to nomadic communities in Kenya through distance learning*, Minister of State for Development of Northern Kenya and Other Arid Lands (Office of the Prime Minister) and Education for Nomads programme, Nairobi.
- Maldhari Rural Action Group (MARAG). 2011. *Summary Report and Global Action Plan: Women Pastoralists 2011-2013. Outcomes and Next Steps from the Global Gathering of Women Pastoralists, Mera, India November 21-26, 2010*.
- Mayland, H. F. 2000. Diurnal Variation in Forage Quality Affects Preference and Production. Available at <http://www.uwex.edu/ces/forage/wfc/proceedings2000/mayland.htm>
- McAuslan, P. 2003. A Narrative on Land Law Reform in Uganda. In: Gareth A.J. ed. *Urban Land Markets in Transition*, Lincoln Institute Product Code: CP98A03, Lincoln Institute of Land Policy Conference Paper.
- McGahey, D., Davies, J., Hagelberg, N., and Ouedraogo, R. 2014. *Pastoralism and the Green Economy – a natural nexus?*, International Union for Conservation of Nature and United Nations Environment Programme, Nairobi.
- McPeak, J. G. and Barrett, C. B. 2001. Differential Risk Exposure and Stochastic Poverty Traps among East African Pastoralists. *American Journal of Agricultural Economics* 83(3): 674-679.
- McPeak, J. G. and Little, P. D. 2006. *Pastoral Livestock Marketing in Easter Africa. Research and Policy Challenges*, Intermediate Technology publications, Rugby, United Kingdom.

- Mesnil, J. G. 1978. "Rapport Succinte d'Activité. Zootechnie – Agrostologie." Report, République du Niger, Service de l'Élevage, Niamey.
- Mohamed Salih, M.A. 1991. Livestock development or pastoral development?. In: Baxter P.T.W. (ed.) *When the Grass is Gone*, The Scandinavian Institute of African Studies, Uppsala, Sweden.
- Mongolian Society for Range Management. 2010. *Livelihood Study of Herders in Mongolia*, Ulaanbaatar.
- Monimart, M. and Diarra M. 2010. Gender Analyses in the pastoral zone, the Diffa Region of Eastern Niger. CARE Denmark, Niamey.
- Moritz, M. 2010. Understanding Herder-Farmer Conflicts in West Africa: Outline of a Processual approach. *Human Organization* 69(2): 138-148.
- Moritz, M. et al. 2011. Social Risk-Management Strategies in Pastoral Systems: A Qualitative Comparative Analysis. *Cross-Cultural Research* 20(10): 1–32.
- Morris, N. A. 2009. Breeding Fragmentation? Issues in the Policy and Practice of Decentralization in Uganda, Issue Paper No. 1, Beyond Juba, Building Consensus on Sustainable Peace in Uganda, Kampala.
- Mortimore, M. 1998. *Roots in the African Dust. Sustaining the Drylands*, Cambridge University Press, Cambridge.
- Mortimore, M. and Adams, W.M. 1999. *Working the Sahel: environment and society in northern Nigeria*, Routledge, London.
- Morton, J. and Kerven, C. 2013. *Livelihoods and basic service support in the drylands of the Horn of Africa*. Brief prepared by a Technical Consortium hosted by CGIAR in partnership with the FAO Investment Centre. Technical Consortium Brief 3., International Livestock Research Institute, Nairobi.
- National Statistical Office of Mongolia. 2010, *Mongolia Statistical Yearbook, 2012*. Ulanbaatar.
- Neely, C., Bunning, S. and Wilkes, A. 2009. Review of evidence on drylands pastoral systems and climate change. Implications and opportunities for mitigation and adaptation, FAO Land Tenure and Management Unit (NRLA), Rome.
- Niamir-Fuller, M. (ed.). 1999. *Managing Mobility in African Drylands. The Legitimation of Transhumance*, IT Publications, London.
- North, D. 1990. *Institutions and Institutional Change and Economic Performances*, Cambridge.
- Organization for African Unity/Interafrican Bureau for Animal Resources (OAU/IBAR). 2003. *Pastoralism and Conflict: Getting Policies Right*. Policy Briefing Paper n. 10, The Organization for African Unity/Interafrican Bureau for Animal Resources, Nairobi.
- Oba, G., Stenseth, N. C. and Lusigi, W. J. 2000. New perspectives on sustainable grazing management in arid zones of sub-Saharan Africa. *BioScience* 50: 35-51.
- Ocaido, M., Muwazi, R.T. and Opuda-Asibo, J. 2009. Financial analysis of livestock production systems around Lake Mburo National Park, in South Western Uganda. *Livestock Research for Rural Development* 21(5), <http://www.lrrd.org/lrrd21/5/ocai21070.htm>.
- Olcott, M. 1995. *The Kazakhs*. Second edition, Hoover Institution Press, Stanford CA.
- Orr, R. J., Rutter, S. M., Penning, P. D., Yarrow, H. H., Atkinson, L. D. and Champion, R. A. 1998. Matching grass supply to grazing patterns for dairy cows under strip-grazing management, Report of Instit. Grassld. Environ. Res., North Wyke, Okehampton, Devon, EX20 2SB, UK.

- Ostrom, E. 1990 - 2008. *Governing the Commons. The Evolution of Institutions for Collective Action*, Cambridge University Press, Cambridge.
- Otte, M. J. and Chilonda, P. 2002. *Cattle and small ruminant production systems in sub-Saharan Africa. A systematic review*, Livestock Information Sector Analysis and Policy Branch, FAO Agriculture Department, Rome.
- Oxfam, (n/d). *Kotido Pastoral Development Programme. An overview of Oxfam GB's work in North-Eastern Uganda*. Available from:
http://www1.chr.up.ac.za/chr_old/indigenous/documents/Uganda/Report/OXFAM%20Kotido%20Pastoral%20Development%20Programme.pdf
- Oxfam. 2008. *The survival of the fittest. Pastoralism and climate change in East Africa*. Oxfam Briefing Paper, n.116.
- Pantuliano, S. 2005. *Comprehensive Peace? Causes and Consequences of Underdevelopment and Instability in Eastern Sudan*, International Rescue Committee.
- Pavanello, S. and Scott-Villiers, P. 2013. *Conflict resolution and peace building in the drylands in the Greater Horn of Africa*. Brief prepared by a Technical Consortium hosted by CGIAR in partnership with the FAO Investment Centre. Technical Consortium. Brief 6., International Livestock Research Institute, Nairobi.
- Pastoralist Consultants International (PCI). 2010. *Notes from the University of the Bush: Kinna, Garbatulla District, Kenya 22nd - 24th November 2010, Pastoralist Shade Initiative and Pastoralist Consultants International, in collaboration with the Future Agricultures Consortium (Institute of Development Studies), Brighton*,
<http://www.future-agricultures.org/UoB.html>
- Perrin, B. 2006. *Moving from Outputs to Outcomes: Practical Advice from Governments Around the World*, The World Bank and IBM Business Centre for The Business of Government, Washington DC.
- Pica-Ciamarra, U. et al. 2014. *Investing in the Livestock Sector. Why Good Numbers Matter. A Sourcebook for Decision Makers on How to Improve Livestock Data*, World Bank Report Number 85732-GLB, The World Bank and FAO, Washington.
- Raikes, P. L. 1981. *Livestock Policy and Development in East Africa*, Scandinavian Institute of African Studies, Uppsala, Sweden.
- Rass, N. 2006. *Policies and Strategies to Address the Vulnerability of Pastoralists in Sub-Saharan Africa*, PPLPI Working Paper No. 37, Pro-Poor Livestock Policy Initiative, FAO, Rome.
- REGLAP. 2011. *Disaster Risk Reduction in the Drylands of the Horn of Africa (2nd ed.). Good practice examples from the ECHO drought cycle management partners and beyond*, Regional Learning & Advocacy Programme (REGLAP) for Vulnerable Dryland Communities, Nairobi.
- Reid, R. S., Bedelian, C., Said, M. Y., Kruska, R. L., Mauricio, R. M., Castel, V., Olson, J., and Thornton, P.K. 2010. *Global Livestock Impacts on Biodiversity*. In: Steinfeld H., Mooney H.A., Schneider F. and Neville L.E. (eds) 2010. *Livestock in a changing landscape: Drivers, consequences, and responses (Volume 1)*, Scientific Committee on Problems of the Environment (SCOPE), Island Press, Washington DC.
- Republic of Kenya. 2012. *Sessional Paper No. 8 of 2012, on National Policy for the Sustainable Development of Northern Kenya and other Arid Lands, 'Releasing Our Full Potential'*, Ministry of State for Development of Northern Kenya and Other Arid Lands, Republic of Kenya, Nairobi.
- République du Mali. 2001. *Portant Charte Pastorale du Mali, Loi n. 01-004 du 27 Feb 2001*.
- République du Niger. 2010. *Ordonnance 2010-029 Relative au pastoralisme, Présidence*

- de la République, Ministère de l'Agriculture et de l'Élevage, Niamey.
- République du Niger. 2011. Initiative "3N" pour la Sécurité Alimentaire et le Développement Agricole Durable "Les Nigériens Nourrissent les Nigériens", République du Niger, Présidence de la République, Haut Commissariat à l'Initiative 3N, Niamey.
- République du Tchad. 2014. Projet de Loi n. --/PR/2014. Portant Code Pastoral, République du Tchad, Présidence de la République, N'Djaména.
- République Islamique de Mauritanie. 2000. Loi n. 2000-044 Portant Code Pastoral en Mauritanie, 26.07.2000. Journal Officiel de la République Islamique de Mauritanie.
- Ridgewell, A. G. M. and Flintan, F. 2007. Gender & Pastoralism: Rangeland & Resource Management in Ethiopia, Volume 1, SOS Sahel Ethiopia, Addis Ababa.
- _____. 2007. Gender and Pastoralism: Livelihoods and Income Development in Ethiopia, Volume 2, SOS Sahel Ethiopia, Addis Ababa.
- Riviere-Cinnamond, A. and Eregae, M. 2003. Community Based Animal Health Workers (CAWHs) in Pastoralist Areas of Kenya. A Study on Selection, Process, Impact and Sustainability. West Pokot, Wajir and Marsabit, Pro-Poor Livestock Policy Initiative, FAO, Rome.
- Robinson, T. and Conchedda, G. 2014, Livestock and livestock production systems in the African Drylands, background paper to De Haan C. (ed.) Africa Drylands Study: The Economics of Resilience of Livestock in the African Drylands, World Bank, Washington.
- Roe, E. and Schulman, P.R. 2008. High Reliability Management. Operating on the edge, Stanford Business Books, Stanford University Press, Stanford, CA.
- Roe, E., Huntsinger, L. and Labnow, K. 1998. High-Reliability Pastoralism Versus Risk-Averse Pastoralism. *Journal of Environment and Development* 7(4): 387-421.
- Rota, A. and Sperandini, S., 2009. Gender and Livestock: tools for design. Communities of Practice for pro-poor livestock and fisheries/aquaculture development, IFAD, Rome.
- Rota, A., Chakrabati, S. and Sperandini, S. 2012. Women and Pastoralism. Livestock Thematic Papers. Tools for project design, IFAD, Rome.
- Rugadya, M., Kamusiime, H. and Nsamba-Gayiiya, E. 2010. Tenure in Mystery. Status of Land under Wildlife, Forestry and Mining Concessions in Karamoja Region, Uganda, Associates Research Uganda, with support from TROCAIRE Uganda and Oxfam GB, Kampala.
- Sadler, K., Kerven, C., Calo, M., Manske, M. and Catley, A. 2009. Milk Matters. A literature review of pastoral nutrition and programming responses, Feinstein International Center, Tufts University and Save the Children, Addis Ababa.
- Sandford, S. 1983. Management of Pastoral Development in the Third World, John Wiley & Sons, Chichester, England.
- SARL, 2013. Etude sur l'élaboration d'une loi d'orientation agro-sylvo-pastorale, halieutique et faunique (LOASPHF) au Burkina Faso. Rapport provisoire, Ministère de l'Agriculture et de la Sécurité Alimentaire,
- Schareika, N. 2001. Westlich der Kälberleine. Nomadische Tiehaltung und naturkundliches Wissen bei den WoDaaBe Südostnigers, Lit Verlag, Münster, Hamburg, London.
- Schareika, N., Graef F., Moser M. and Becker K. 2000. Pastoral Migration as a Method of Goal-oriented and Site-specific Animal Nutrition among the Wodaabe of South-eastern Niger. *Die Erde* 131: 312-329.

- Schiere, H. (JB), Baumhardt, R. L., Van Keulen, H., Whitbread H.M., Bruinsma A.S., Goodchild, T (AV), Gregorini, P., Slingerland, M(MA) and Wiedemann-Hartwell, B. 2006. Mixed Crop-Livestock Systems in Semi-Arid Regions. In: G.A. Peterson (ed.), *Dryland Agriculture*, 2nd ed. Agron. Monogr. 23, American Society of Agronomy Inc., Crop Science Society of America, Inc., Soil Science Society of America, Inc., Madison, WI.
- Scoones, I. (ed.). 1994. *Living with Uncertainty: New Directions in Pastoral Development in Africa*, Intermediate Technology Publications Ltd, London.
- Scoones, I. 1999. New ecology and the social sciences: what prospects for a fruitful engagement?. *Annual Review of Anthropology*, 28: 479-507.
- Swiss Agency for Development and Cooperation (SDC). 2006. *Pastoralism. Tip Sheet*. SDC: Bern.
- Steinfeld, H. 2012. *Global Environmental Challenges*. Presentation for the ILRI-World Bank Consultation on the Global Livestock Agenda by 2020, Nairobi March 2012, FAO, Rome.
- Steinfeld, H., Mooney, H.A., Schneider, F. and Neville, L.E. (eds). 2010. *Livestock in a Changing Landscape: Drivers, consequences, and responses (Volume 1)*, Scientific Committee on Problems of the Environment (SCOPE), Island Press, Washington D.C.
- Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M. and de Haan, C. 2006. *Livestock's Long Shadow. Environmental issues and options*, Livestock, Environment and Development (LEAD) and Food and Agriculture Organization of the United Nations (FAO), Rome.
- Steinfeld, H., De Haan, C. & Blackburn, H. 1997. *Livestock and the environment: issues and options*, European Commission, FAO, World Bank, Brussels.
- Stites, E., Marshak, A., Nohner, E., Richards, S., Akabwai, D. 2014. *Engaging Male Youth in Karamoja, Uganda*, LOGiCA Study Series No.3, World Bank, Washington D.C.
- Swift, J. 1984. *West African Pastoral Production Systems*, ILCA, Bamako.
- _____. 1988a. *Major Issues in Pastoral Development with Special Emphasis on Selected African Countries*. FAO Report, Food and Agriculture Organization of the United Nations, Rome.
- _____. 1988b. *Mali Republic. Kidal development project identification report*. IFAD, Rome.
- _____. 1996. *Desertification Narratives, Winners & Losers*. In: Leach M. and Mearns R. (eds) *The Lie of the Land. Challenging received wisdom on the African environment*, The International African Institute with James Currey Ltd, London and Oxford.
- _____. 2007. *Institutionalizing Pastoral Risk Management in Mongolia: Lessons Learned*, FAO, Rome.
- Taleb, N. N. 2012. *Antifragile: things that gain from disorder*, Random House, New York.
- Tilstone, V., Ericksen, P., Neely, C., Davies, J. and Downie, K. 2013. *Knowledge management and research for resilience in the Drylands of the Horn of Africa*. Technical brief prepared by the Technical Consortium for Building Resilience to Drought in the Horn of Africa hosted by the CGIAR Consortium in partnership with the FAO Investment Centre. Brief 5, International Livestock Research Institute, Nairobi.
- Toure, I., Ickowicz, A., Wane, A., Garba, I. et Gerber, P. (eds). 2012. *Système d'information sur le pastoralisme au Sahel. Atlas des évolutions des systèmes pastoraux au Sahel 1970-2012*, CIRAD, l'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO), Rome.

- Turner, M. D. 2011. The New Pastoral Development Paradigm: Engaging the Realities of Property Institutions and Livestock Mobility in Dryland Africa. *Society & Natural Resources: An International Journal* 24(5): 469-484.
- Turner, M. D., McPeack, J. G. and Ayantunde, A. 2014. The Role of Livestock Mobility in the Livelihood Strategies of Rural Peoples in Semi-Arid West Africa. *Human Ecology* 42: 231-247.
- United Nations Environment Programme (UNEP). 2007. Sudan Post-Conflict Environmental Assessment, UNEP: Nairobi.
- United Nations Development Programme (UNDP)-GDI. 2003. [Pastoralism and Mobility in the Drylands](#). GDI Challenge Paper Series, The Global Drylands Imperative (GDI), United Nations Development Programme, Drylands Development Centre, Nairobi, Kenya.
- _____. 2003. Pastoralism and Mobility in the Drylands. GDI Challenge Paper Series, The Global Drylands Imperative (GDI), United Nations Development Programme, Drylands Development Centre, Nairobi, Kenya.
- United Nations General Assembly. 2007. Triennial comprehensive policy review of operational activities of the United Nations development system: conclusions and recommendations. Report of the Secretary-General. Sixty-second session Item 61 (b) of the provisional agenda. A/62/253, United Nations.
- United Republic of Tanzania. 2006. National Livestock Policy, United Republic of Tanzania, Ministry of Livestock Development, Dar Es Salaam.
- United States Agency for International Development (USAID). 2012. Pastoral Land Rights and Resource Governance. Overview and Recommendations for Managing Conflicts and Strengthening Pastoralists' Rights, Property Rights and Resource Governance Briefing Paper no 10, USAID, Washington.
- van den Brink, R., Thomas, G., Binswanger, H., Bruce, J. and Byamugisha, K. 2005. Consensus, Confusion, and Controversy. Selected Land Reform Issues in Sub-Saharan Africa, World Bank Working Paper n 71, Washington.
- Venton, C. C., Fitzgibbon, C., Shitarek, T., Coulter, L. and Dooley, O. 2012. The Economics of Early Response and Disaster Resilience: Lessons from Kenya and Ethiopia, London.
- Vétérinaires sans Frontières-Belgium. 2012. Bill Gates' seeds alone will not end poverty'. A reaction of Vétérinaires Sans Frontières Belgium to Bill Gates' statements in 'The truth about foreign aid', New York Times online (26/01/2012) and The International Herald Tribune (27/02/2012), <http://www.dierenartsenzondergrenzen.be/english/newsitems/view/94>.
- Vétérinaires sans Frontières-Germany 2011. Is there a future for pastoralism? Position of VSF Germany on pastoral animal husbandry in East Africa, Vétérinaires Sans Frontières, Germany, Hannover, Nairobi, Berlin.
- Walker, B. H., Ludwig, D., Holling, C. S. and Peterman, R. M. 1981. Stability of semi-arid savanna grazing systems. *Journal of Ecology* 69(2): 473-498.
- Westoby, M., Walker, B. and Noy-Meir, I. 1989. Opportunistic management of rangelands not at equilibrium. *Journal of Range Management* 42: 266–274.
- Wilson, R. T. and Clarke, S. E. 1976. Studies on the Livestock of Southern Darfour, Sudan. II. Production Traits in Cattle. *Tropical Animal Health Production* 8: 47-51.
- World Bank. 2009. Implementation Completion and Results Report (IDA Grant No. H038-ET, IFAD Loan No. 4500) on a credit in the amount of SDR 22.0 million (US\$30 million equivalent) to the Federal Democratic Republic of Ethiopia for the Pastoral Community Development Project Phase I, The World Bank, Washington.

- _____. 2010. Global Strategy to Improve Agricultural and Rural Statistics. Report of the Friends of the Chair on Agricultural Statistics United Nations. Economic and Social Council Statistical Commission Forty - first session 23 - 26 February 2010, The World Bank, Washington DC.
- _____. 2012. Implementation Completion and Results Report on a credit in the amount of SDR 83,9 million (US\$120 million) for an Arid Lands Resources Management Project –Phase Two. Report n. ICR00001937.
- _____. 2013a. High Level Forum on Pastoralism in the Sahel. Nouakchott (Mauritania), 29 October 2013. Outline Document. Available from: <http://documents.worldbank.org/curated/en/2014/01/18811790/high-level-forum-pastoralism-sahel-nouakchott-mauritania-29th-october-2013-vol-1-2-outline-document>.
- _____. 2013b. The Sahel: New Push to transforming Agriculture with more support for Pastoralism and Irrigation. Available from: <http://www.worldbank.org/en/news/press-release/2013/10/27/the-sahel-new-push-to-transform-agriculture-with-more-support-for-pastoralism-and-irrigation>.
- _____. 2014. World Bank boosts for pastoralists in the Horn of Africa, March the 18th 2014. Available from: <http://www.worldbank.org/en/news/press-release/2014/03/18/world-bank-pastoralists-horn-africa>.