

IFAD/FAO Engagement with Pastoral Development (2003-2013)
Joint Evaluation Synthesis

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Preface [to be completed]

This report was jointly managed by Catrina Perch, Evaluation Officer in IFAD's Independent Office of Evaluation (IOE) and Tullia Aiazzi, former Senior Evaluation Officer, and later Arwa Khalid, Evaluation Officer in FAO's Office of Evaluation. They were ably supported by Saverio Krätli, Marie Monimart, Jeremy Swift (consultants) and Marina Izzo, Research analyst. Administrative support was provided by Laure Vidaud. The work benefited from feedback and advice provided by Ashwani Muthoo, Deputy Director, IOE, Pradeep Itty, Senior Evaluation Officer, IOE, Marta Bruno, Knowledge Management and Evaluation Officer, OED, and Cees de Haan (Senior Independent Advisor). Appreciation is due to several members of staff in both FAO and IFAD in particular Philippe Ankers, Chief, Animal Production and Health Division, FAO, Antonio Rota, Lead Technical Specialist, Policy and Technical Advisory Division, IFAD as well as other members of the “Core Learning Partnership” for their active engagement throughout the process.

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Executive summary

1. This joint evaluation synthesis report (JES) has been prepared by IFAD and FAO Evaluation Offices (IOE and OED) within the framework of the 'Statement of Intent' of 2 April 2013 for strengthening collaboration across the two Rome-based agencies. The main objective of the JES is to generate findings and recommendations that will inform the design and implementation of ongoing and future policies, strategies, and work in pastoral development of IFAD and FAO. This extensive, desk-review process can feed into future decision-making processes on pastoral development in situations where fully-fledged evaluations are not possible. The primary audience is the management and staff and the Governing Bodies in the two agencies. The period covered by the exercise is 2003 to 2013.
2. The JES is a synthesis of existing IFAD and FAO evaluation material, covering a core sample of 65 documents from the two agencies (half each, including evaluations at project, national and regional level, as well as project documents) and a comprehensive inventory of 'pastoral-oriented' projects identified by IOE and OED (31 for IFAD and 163 for FAO). Additional external content included some of the latest research on pastoral systems, as pastoral development theory has been fundamentally revised during the period covered by the JES and the definition of pastoralism itself has changed substantially. The relevant work of a selection of other donors was also reviewed for comparisons. IFAD and FAO have done important and useful work in the field of pastoralism for several decades. Just engaging with pastoral issues was a brave decision to take considering the huge challenges, from practical and institutional constraints, to the fact that the foundational knowledge in pastoral development has been fundamentally transformed and is still adjusting.
3. The report is structured to look firstly at the scientific understanding of pastoral systems and drylands, before turning to IFAD and FAO's engagement with pastoral development. The analysis of the sample projects focuses on seven themes (poverty reduction, risk and vulnerability, institutions, gender equality, natural resource management, advocacy, and knowledge management). The report then looks at the wider lessons in pastoral development, before concluding with a storyline of the findings, strategic implications and recommendations.
4. Drylands represent 40 percent of the planet's total land mass and are inhabited by some 2 billion people. The number of pastoralists is unknown with any precision. Estimates range from 50 to 200 million worldwide. The highest concentration of vulnerable rural people is believed to live in the drylands. Rural or urban, rich or poor, keeping livestock in pastoral systems is often the best investment option for drylands populations. A recent IFPRI study finds 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]'
5. Pastoral systems were looked at with the wrong lenses for most of the history of pastoral development. The foundational knowledge of pastoral development saw a U-turn some twenty years ago, following the revision of the main explanatory model in ecology. Decades of interventions based on incorrect assumptions have left a problematic legacy (albeit unintended) of distortions, misunderstanding and invisibility that needs to be acknowledged today when engaging with 'pastoral systems.' The key implication concerns the pastoralist use of mobility: In the drylands, variability in the spatial and temporal distribution of rains is reflected in the patterns in which nutrients accumulate and peak in the vegetation, a variability which is exploited by mobile herds. Research shows that mobility is also key to a multitude of forms of crop-livestock integration at regional and interregional scales, often discontinuous in space and time.

6. **Successful pastoralism embeds variability in the production system** in order to interface the variability of the environment. Food production in the drylands is a risky business but one on which millions of people have lived for centuries; managing to carve for themselves a niche where others could see no interest or did not dare to go, therefore turning risk into opportunity. Pastoralism is a specialisation that manages variability to create an advantage, making it highly relevant to work on resilience in food production in the face of increasing variability from climate change. Some dimensions of pastoral risk are now beyond the reach of pastoralists' risk management strategies; brought about by dynamic new correlations with governance, development, and market forces, and complicated by climate change. These new dimensions of pastoral risk now need to be managed at the respective scales.
7. **Pastoral systems produce substantial wealth at low opportunity cost**, despite the relative neglect of the drylands within development, and the crucial loss of pastoralist resources during the 20th century. For over 100 million people, pastoralism remains the livelihood option they are best equipped to pursue, even if in combination with other strategies, and even when they are effectively pushed out of it by unfavourable circumstances. For the nearly two billion people living in the drylands worldwide (whether rich or poor, rural or urban), keeping livestock in pastoral systems is often the best investment option. Work on the economic value of pastoral production and livelihood systems, and their development potential, shows that they usually make a substantial contribution to GDP, and in many countries supply most of livestock exports.
8. **Engagement in pastoral development is highly relevant** to IFAD and FAO's fundamental goals. IFAD and FAO strategy and policy documents make explicit reference to pastoralists as amongst the 'poorest' and 'most vulnerable groups'. IFAD's determination to also target people at risk of becoming poor, and FAO's Strategic Objective 5 on increasing resilience of livelihoods to threats and crises, cannot be achieved without engaging with pastoral systems. The studies on pastoral systems produced, or supported, by FAO over the last ten years consistently state these systems as being central to drylands livelihoods and economies. They also highlight the economic rational of supporting the conditions for their effective functioning (especially through mobility) and refraining from antagonistic interventions.
9. **A systemic approach is necessary according to both agencies**, for increasing agricultural production in contexts where sustainability and resilience are priorities. This is consistent with the new understanding of pastoralism and the drylands. FAO wants to exploit synergies between different dimensions of livelihoods and production systems; and Strategic Objective 4 shows concern for the potential correlation between economic growth based on global agribusiness and increasing poverty amongst local rural producers. IFAD emphasises that mere sectoral growth will not help excluded groups, and that it is necessary to intervene at the structural level and engage with counterproductive policy environments and investments. There is also a commitment to support cross-border and regional approaches. Both agencies see advocacy work as a necessary complement to their operations.
10. **The particular definition of comparative advantage drafted by FAO**, is useful to highlight and neutralise the possible dangers associated with the adoption of this notion as a driving logic, especially with regard to 'difficult' contexts of operation such as pastoral systems and the drylands: the danger of drifting away from the agency's fundamental goals when following a logic of maximizing impact; the danger of sacrificing learning and responsiveness to efficiency when meeting the current boundaries of capacity; and the danger of neglecting inclusiveness to converge with everyone else on the subset of activities that promise better returns to investments.

11. **Analysis of the scale of engagement in pastoral development** between 2003-2013, as on record, amounted to 31 projects for IFAD (generally large and long term) and 163 projects for FAO (generally working with constellations of shorter and smaller projects). These sets include projects with small 'pastoral' components or simply 'livestock' relevance. The highest concentration of projects has been in Africa. IFAD and FAO engagement in pastoral development is inadequately tagged in their respective project classification systems. Expertise in pastoralism within the evaluation teams was also unbalanced, at less than 3 percent, against an average of 30 percent of projects in the sample being specifically focused on pastoralism (42 percent for IFAD and 20 percent for FAO).
12. **Allocations to pastoral development** activities within projects from 2003-2013 were reviewed. Within IFAD 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. From IFAD's overall allocations of approximately USD 7.4 billion for the 2003-2013 period, the proportion that concerned the 31 pastoral-oriented projects was about 11 percent. FAO's current financial reports do not allow extracting of information on the share of the amount within projects specifically allocated to pastoral-oriented activities. The largest category of investment has been 'access to services and markets' (53 percent for IFAD and 45 percent for FAO). Within or beside this category, IFAD has invested mainly in 'capacity building' (followed by 'institutional building', and 'rangeland management/animal health'), and FAO has invested in 'emergency interventions' (followed by 'policy arena' and 'veterinary services').
13. **Poverty reduction efforts** have focused on increasing income and sectoral growth (e.g. concentrating on post-production stages of the value chain). Overall the evaluations express moderate satisfaction in this regard, but are weak on evidence: The JES found it impossible to assess reduction in hunger or poverty based on the sample. Engagement with the structural causes of pastoral poverty, or unintended negative impact on pastoral systems from projects concerned with other areas of intervention, appears low. Targeting and monitoring were frequently found to be inappropriate, especially the focus on outputs rather than outcomes. On the positive side, community-based participatory approaches to institution building (IFAD), and the training of Community Animal Health Workers (FAO), are important exceptions that have evaluations praising the efforts in reaching 'pastoralists'. A shortfall in 'reading' the local context is sometimes highlighted, especially the lack of flexibility in the use of off-the-shelf technical packages. At times, interventions aimed at optimising value chains appear to lack a sound understanding of the relationship of the beneficiaries to the value chain, and are thus prone to increasing their vulnerability. There is a striking lack of reference to milk in the sample, especially its characteristically pastoral importance in household consumption and food security (the few references look at milk as a commodity in a value chain).
14. **Emphasis on enhancing resilience** in agricultural settings, especially through preparedness and early warning systems, has long been part of FAO and IFAD's strategic frameworks. The attention that needs to be paid to resilience has not yet worked its way through the project cycle however, and is not substantially represented in evaluations. Risk and vulnerability, or risk-management and risk-reduction, are treated as substantially overlapping. While consistent with the mainstream approach to risk, this fails to recognise the particularity of the pastoral context in this regard, where variability is both structural to the environment and functionally embedded in the production system. A focus on reducing risk can get in the way of pastoral strategies based on taking (and managing) risk. The lack of a risk management strategy is mentioned in several evaluations. A sound pastoral

risk management strategy would include an increase in the extension of rural finance interventions to pastoral communities.

15. **Building better-adapted institutions** has concentrated on the customary dimension, and on support to formal governance, but has neglected engaging reflectively with the institutional dimension of development itself (e.g. the internal organisation of projects, procedures of project design, monitoring and evaluations), in order to adapt to the particular circumstances and challenges of pastoral development. In FAO, the institutional dimension is often the weakest aspect, even within interventions that are evaluated very positively (e.g. CAHWs). The opposite is the case for some IFAD's projects, especially in natural-resource management.
16. **Specific attention to gender** was formalised within both agencies with its inclusion as a criterion of evaluation in 2010, and the adoption of policies on gender in 2012. So far, efforts have been largely in the form of applying a blueprint gender analysis for rural development rather than engaging with the particularity of pastoral settings. The evaluations are silent on the consequences of the sedentarisation of women (and children) with regard to their long-term status and capacity to operate in relevant roles as producers within the pastoral system; or the implications this has for their control over the means of production. The economic empowerment of women in pastoralism has rarely targeted them as livestock professionals. Projects have usually operated on the assumption that women keep livestock for subsistence, with a rigid dualism between subsistence and marketing. Promoting the commodification of milk in absence of a sound understanding of the gender dimension of the milk economy and the nuanced relationship with the value chain, can shift control of milk marketing to men while trying to empower women. A remarkable exception is the small initiative that supported an international gathering of 'pastoralist women' by IFAD in 2010, resulting in the Mera Declaration.
17. **The results on sustainable natural resource management** interventions are mixed, with data on projects' environmental impacts often found to be unsatisfactory. Interventions aimed at promoting the sustainable management of the rangelands, and conservation agriculture, were sometimes faced with policy contexts prioritising mechanization, large-scale irrigation, and the replacement of customary agreements with market-based forms of land use. The most successful projects introduced innovative 'participatory and partnership-based' approaches building on customary use-patterns, and fostering cooperation between pastoralists and farmers. Overall however, the projects operated within the old equilibrium model, representing the rangelands as self-regulated systems disturbed by uncontrolled grazing.
18. **Advocacy is particularly important** in the context of pastoral development. Some evaluations recorded significant efforts in advocacy and communication, others found them insufficient. Advocacy was identified as a top priority in the IFAD supported Mera Declaration of the global gathering of women pastoralists, and is now a core objective of the FAO Pastoralist Knowledge Hub project. In its current strategy, IFAD is to 'step up its advocacy work' and advocacy and communication are seen as one of FAO's core functions. Negative or misleading assumptions about pastoral systems have driven rural development for most of its history, often feeding on their own effects. These assumptions are still entrenched in public knowledge in many contexts. But advocacy strategies should not escape critical scrutiny in light of the new understanding of drylands and pastoralism.
19. **Opportunities for learning and knowledge management** in the field of pastoral development are scattered within the evaluations; they are rarely included in the highlights however. Over 65 percent of the evaluations in the sample make no reference to pastoralism in their executive summaries or in the recommendations. In the others, the most frequent recommendation concerns the

need to improve the understanding of pastoral systems, followed by an emphasis on 'productivity and marketing of livestock', and 'pastoral mobility'. In the sample of ongoing projects, a change with regard to the understanding of pastoral systems and support of pastoral mobility is emerging, but is fragmentary and limited, for example in the Pastoralist Knowledge Hub just launched by FAO, or in the support to the IUCN World Initiative for Sustainable Pastoralism (WISP) by both IFAD and FAO.

20. **Beyond IFAD and FAO**, the international interest for pastoral systems is on the increase, as evident from new large programmes by the World Bank in the Sahel and the Horn, and by DFID in Africa/South Asia. Multilateral and bilateral organisations, financial institutions, and NGOs are experimenting with ways of integrating the new understanding of pastoral systems and the drylands. Securing mobility has emerged a key priority, paying attention not to introduce new obstacles or alternative economic activities that compete with pastoral systems for the same resources. Vibrant, mobility-based pastoral economies are increasingly seen as the best ally in the international struggle to prevent remote and desert areas from becoming a breeding ground for organised crime and terrorists.

The JES recommendations are:

1. *Develop a policy of engagement in pastoral development.* 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. This is a good moment to draft such 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. These policies should not be developed in isolation from one another and should stress coordination within and between the two agencies. The long-term economics of preventing and managing conflict, and avoiding encouraging unsustainable rural to urban migration should be carefully considered.

2. *Build and adapt capacity in IFAD and FAO.* Pastoral development interventions take place on the back of a problematic legacy. Misleading and counterproductive ideas from the past permeate throughout the entire learning process. On the other hand, '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 more generally. But it also includes the development of the capacity of desk and project staff to systematically track engagement with pastoral development, and its management including to the format and conduct of evaluations, and the composition of evaluation teams.

3. *Manage key dimensions of risk.* Structural to the pursuit of IFAD's and FAO's fundamental goals when engaging with pastoral development are different dimensions of risks: i. the risk inherent to environments where variability is structural; ii. the risk inherent to operating with a problematic legacy of counterproductive policy environments and prejudicial mind-sets; iii. the risk of increasing exclusion on technical basis. 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 level of operation.

4. *Support advocacy by pastoralists, and on behalf of pastoralists and people whose livelihoods depend on pastoral systems.* IFAD's and FAO's significant influence in the international and national arenas represents a invaluable asset in the on-going 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. Advocacy is a crucial complement in today's engagement with pastoral development, but care should be taken to keep it within a systemic approach, subject to critical scrutiny carefully targeted in light of the new understanding of drylands and pastoralism.

IFAD/FAO Engagement with Pastoral Development (2003-2013)

Joint Evaluation Synthesis

I. Introduction

1. A synthesis of evaluations on IFAD's interventions in pastoral development was included into 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 WFP to strengthen collaboration across the Rome-based agencies (RBAs), as requested by the respective Governing Bodies.
2. Pastoral development is still sometimes used as synonymous of 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 of 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 sometimes 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 to the above, 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 latest research and the work of other donors. It is meant to allow evaluation evidence to be fed into the decision-making process in an effective way, especially when neither adequate time nor resources are available to undertake a full-fledged evaluation.
7. **The audience** for this report is the management and staff, as well as the 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 rangeland management; and vi. strengthening advocacy on behalf of rural poor in pastoral settings³. 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, although not exclusively 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 worldwide⁴; a sample of pastoral-development related on-going projects; and strategically selected literature from other agencies in order to identify wider lessons of relevance to the focus of the JES. The review of documents was combined with interviews with FAO and IFAD headquarters at the early stages of the exercise⁵.
10. **Overall process.** The evaluation was carried out jointly by OED and IOE. A team of consultants worked closely with OED and IOE, who also supported the exercise with research-assistant time and the production of a number 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 the start to channel views and feedback from each agency

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

into the synthesis process. This report has benefitted from the active collaboration and peer review that this group has provided. 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 42 evaluation documents covering project, country, and regional levels⁸; 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 projects¹⁰, about 10% 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 1.¹¹ 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 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, Mongolia), East Africa (Ethiopia), Asia and Pacific (global grant – First global gathering of women pastoralists)—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

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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).

sample against the background of academic work on drylands and pastoral systems. A selective analysis of a few other agencies' work in pastoral development was also carried out to broaden the context of IFAD and FAO work. The analysis of the comprehensive inventory allowed defining 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 focus 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. First of all, 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 falls short of doing 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. The documents 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 only 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 but 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

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.

processes that have contributed to the problems afflicting dryland regions today¹⁵. 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 tangentially but not properly addressed. This is perhaps the most important gap in this exercise.

18. **Structure of the report.** The report is organised in seven chapters. Chapter 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 the aspects that are 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 over this period, 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 Synthesis Evaluation 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, and 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.
- 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 Systems¹⁶

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 coping 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 today's engagement in pastoral development needs to acknowledge and address.
20. This fundamental change of understanding has now come a long way, accumulating a substantial body of studies and reaching international donors and policy-making

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).

¹⁶ For reasons of space, this section has been kept to a minimum. More details and sources can be found in Annex 3.

circles. However, by and large it is still in the process of 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 is still being developed (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 3.

A. The U-turn in the foundational knowledge

21. Since its early days, pastoral development had been characterised 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' with 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 (Bremen 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 specialisation to make use of environments characterised by structural variability, with its 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 a large one (Mortimore and Adams 1999). Pastoralism's specialisation to manage variability makes it highly relevant to the work on resilience in food production in the face of increasing weather volatility from climate change¹⁷.

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).¹⁸ There are many variations resulting from local differences and development, for example the promotion of chemical fertilizers and the commercialisation of crop-residues (Scoones and Wolmer 2000; Mortimore and Adams 1999). Increasingly, integration concerns also 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 for themselves a niche where others could see no interest or did not dare to 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 manage it with the appropriate resources (including specialist strategies and the option to use them)¹⁹. 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 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 traps²⁰. 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. Pastoralism specialises in

¹⁷ For accessible presentation of the case for valuing variability in drylands development, see IIED 2015.

¹⁸ 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).

¹⁹ 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).

²⁰ 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'.

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 organisation, 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 organisations)²¹.

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 in these terms: '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 specialisation 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 percent of the planet's total land mass and are inhabited by some 2 billion people; while only a fraction of these people are directly involved in running pastoral systems, many more have a stake in them (Koohafkan 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 in Sub-Saharan Africa (Rass 2006). In reality the number of pastoralists is unknown with any precision and would obviously depend on the definition used²². 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 IFPRI study finds that 'pastoralism is still the dominant

²¹ On pastoralism and risk, see for example Scones 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.

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.

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 polarised 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 viable alternatives²³. When pastoralists are seen as all rich, development efforts concerned with poverty reduction should concentrate 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 synthesised 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 season [...] Diversification of livelihoods by the pastoral population as a whole, but specialisation 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).
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-medium enterprises—even micro enterprises nested into the 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 understand why. Even when pastoralists are relatively rich in assets, they are usually 'poor' in terms of services, and this poverty too induces exit strategies, in the hope of increasing access to services only available in settlements, 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

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](#), Future Agricultures website, <http://www.future-agricultures.org/publications/e-debate/pastoralism-in-crisis/7646-too-many-people-too-few-livestock>

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 pastoral 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 restrictions, when present, cannot be explained from pastoralism as such. 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, but by settling women lose access to the bulk of the herd. This has significant costs both in terms of women's 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 localised conflict, in the drylands as elsewhere, are often interwoven with processes of redistribution of assets and competition over the same resources. Common explanatory frameworks emphasise 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, therefore needing 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 generalised 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 interest²⁷.
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 organised crime and radical jihadist groups penetrated these relatively 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 Sahara²⁸. 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,

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).

²⁸ Cf. AGIR (2013); Declaration de N'Djaména (2013); De Haan et al (2014); Krättli, 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. Krättli 2014).

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 3, 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 percent of the county's share of the primary school-age population' (Elmi and Birch 2013: 13).
42. According to a recent study published by 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 modernisation 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.

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 specialises in taking and managing risk. 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.
- Pastoralist's 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.

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).

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 organisation 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 USD 1.25 a day used to define extreme poverty and hunger in UN 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 amongst 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 a key role 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 the 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 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 on office in January 2012.
50. IFAD also produced a series of thematic policies on targeting (IFAD 2006), engagement on indigenous peoples (IFAD 2009); improving access to land and tenure security (IFAD 2008); gender equality and women's empowerment (IFAD

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 marginalisation. 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).

2012a); and engagement with the private sector (IFAD 2012b). FAO has had a policy on gender since 2012 (FAO 2013b) and 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-CGIAR³¹. 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 the engagement with pastoral development. However, both agencies emphasise their commitment to target the 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' amongst the vulnerable, marginalised, excluded, or poorest groups.
54. The 2002-2006 framework (IFAD 2002) lists 'nomadic pastoralists' amongst 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 contextualised 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 modernisation with pastoral systems is a dimension of pastoral development virtually still to be explored, see Annex 3, 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'. 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 emphasises 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

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

with the condition of virtually all the people who are directly operating the pastoral systems. Third, it emphasises 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 on 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 pastoralist. 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 on the private-sector takes a more prominent role, now clearly identified together with governments as desirable partners in interventions³². 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 characterised 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 organisations; pastoralist risk management; and, IFAD supporting pastoralism³³.

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 an altogether new strategy for the 2010-2019 period. This new document was then reviewed 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 advantages of the potential synergies between farming, fishing, forestry and animal husbandry' as a way of strengthening rural

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](#).

livelihoods. There is also emphasis on the importance of preparedness for agricultural emergencies, especially with regard to early warning systems and enhancing resilience (SO-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 of them.

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 somehow outdated with regard to the understanding of their role in the national economies and especially in the export of livestock to large urban markets (Annex 3, 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 marginalisation' (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 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 resilience³⁸. 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 systems³⁹. 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 virtually all mentioning of violent conflict.

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.

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).

However, Strategic Objective 3 (reducing rural poverty) starts with 'give poor 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 4⁴⁰, 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 from these premises, 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 was 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 rational 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 UK, led to a substantial study on new patterns of agricultural investment and international land deals in Africa. The study drew attention to the risks following from unclear or ill-informed definitions of 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). Beside 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 UN General Assembly provided a framework for better division of labour and synergy (cooperation, collaboration, and coordination) within the UN development system and with the Bretton Woods institutions (UN General Assembly 2007). Following the

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

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 UN 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, as shown below, 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 organisation's goals and objectives. There is acknowledgement here of the risk of drifting away from the fundamental goals in the effort of maximising 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 often the case with minorities and marginalised groups. Following a plain logic of comparative advantage in development investments, the rural drylands have usually the lowest rate of infrastructures and basic services (para 41-42). Processes of active exclusion or even plain dispossession of pastoral groups have a long history and in some cases are ongoing, both intended and unintended (see Annex 3, para 44-49).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, tied to the organisations' 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 organisations' comparative advantage to match all aspects of their fundamental goals can and should be acquired. Pastoral systems have just recently been open to sophisticated avenues of understanding. For institutions committed to learning about agricultural production and livelihoods, and to support them in remote and marginalised areas, this is an extraordinary opportunity.
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 UN agencies, is bound to pose serious challenges. For a start, there are so many rural poor, marginalised and vulnerable groups worldwide, which are easier to work with, geographically more concentrated, and seemingly allowing '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 governments, at governments' demand, and in line with national development policies. These are rarely interested in pastoral systems, and sometimes they are interested in them for the wrong reasons. Even in

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](#)).

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 the eyes of policy makers and is 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 quite a short time). 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, financed through grants. FAO projects are, overall, relatively small and short-term, often technical-assistance packages in animal health, but with important exceptions⁴². 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 of 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, and the evaluation document about 120 occurrences of the word 'livestock', 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 percent and 21 percent respectively of IFAD and FAO inventories. This category includes large projects such the FAO Somalia Resilience (USD 13 million) and the IFAD loan on Pastoral Community Development Programme in Ethiopia Phase 2 (USD 39 million⁴⁵), 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 USD 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 percent and 42 percent 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 (USD 360 million over nine years, with a 'pastoral' component close to a negligible size), and FAO project on 'Livelihood Support to Pastoral, Agro-

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).

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

pastoral, and Riverine Households in Southern Somalia' (USD 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 People's in drylands areas or including also 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 percent (IFAD) and 37 percent (FAO) of the comprehensive inventories, reflects a weakness of the record systems, faced in 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 4).
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

Analysis of the inventories by project focus & budget*

1

		<i>IFAD</i>		<i>FAO</i>
Pastoral relevance	# of	Allocation	# of	Allocation
	projects	(USD M)	projects	(USD M)
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).

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, microfinance, 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 percent or more of the project's costs, excluding Project Management and M&E. If no component represents more than 50 percent of the costs, the project is by default classified 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.

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 USD 50 million.

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

85. IFAD's and FAO's focus during 2003-2013 is summarised in Table 2 (including only projects with a recorded pastoral focus or pastoral-oriented component, para 79-80). The activities repeated more 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*

<i>Domain</i>	<i>FAO</i> <i>(103 projects)</i>	<i>rank</i>	<i>IFAD</i> <i>(28 projects)</i>	<i>rank</i>
Commercialization	5	11	16	2
NRM / 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.

C. Allocations

86. IFAD uses two main forms of funding: loans and grants⁴⁸. 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 percent 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 percent of which, regional and global) for a sum of USD 480 million or 6.4 percent of the total budget for operations. Seven of these grants were allocated to pastoral-oriented activities, for a total of USD 2.5 million (0.5 percent of all grants).

⁴⁸ IFAD also uses DSF (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 JSE treats them as loans.

88. IFAD policy for the allocation of grants focuses on two areas: i. pro-poor research & innovations; and ii. capacity building. Overall, the profile of recipients is diverse, ranging from research institutions (31 percent, with 22 percent to CGIAR⁴⁹); civil society organizations (26 percent); inter-governmental organizations (24 percent, with 13 percent to the UN); member states (17 percent). FAO is the largest recipient of IFAD grants, with almost 10 percent number-wise or over 5 percent of the grant budget (USD 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 USD 7.4 billion for the 2003-2013 period, the proportion that concerned the 31 pastoral-oriented projects in our comprehensive inventory was about 11 percent.
90. IFAD's system allows an approximate breakdown of project expenditure by intervention. Out of USD 847.5 million estimated to have been allocated to the 31 pastoral-oriented interventions in our comprehensive inventory, about USD 380 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 percent.

Table 3

IFAD allocations 2003-2013 (USD 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.

91. The FAO budget comes from assessed contributions (General Fund) paid by Members as set at the biennial FAO Conference, and voluntary contributions from Members and other partners. Governments are the main contributors to FAO's voluntary resources. Other UN 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 unearmarked 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 direct support to FAO's Programme of Work and Budget. Since the 1990s, pastoral intervention in FAO were/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 USD 7.8 billion allocated to 7,142 initiatives. Of these, USD 380 million was allocated for the 163 projects in the comprehensive inventory, corresponding to 5% of the total allocated resources. FAO's current financial reports do not allow extracting information on the share of

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

this amount that, within projects, was specifically allocated to pastoral-oriented activities. With 26% of these funds (USD 60 million) allocated to emergency activities spread over 80% of the projects (see tables 4 and 2), the average amount per activity seems modest (USD 0.5 million).

94. IFAD and FAO group domains of interventions in slightly different ways, as shown in the two diagrammes below. However, IFAD's categories of commercialization, animal health, human health, education, capacity building, and microfinance can be seen as corresponding, together, to the FAO category of 'access to service and markets'. When the classification is reorganised 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

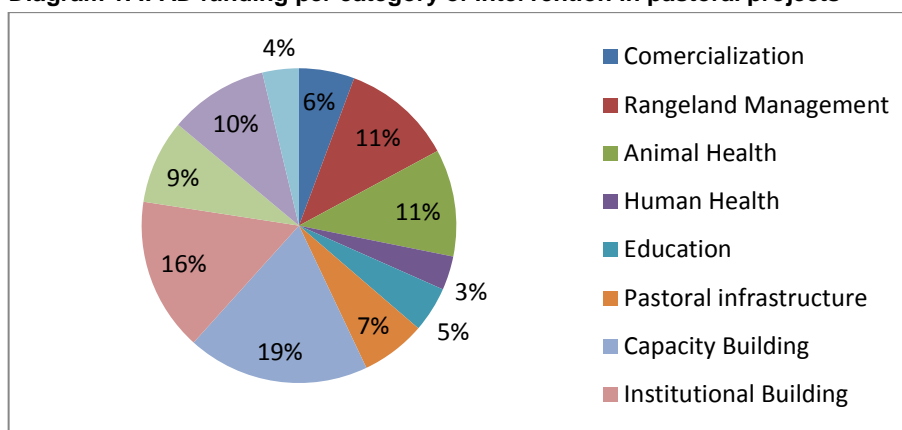


Diagram 2. FAO funding per category of intervention in pastoral projects

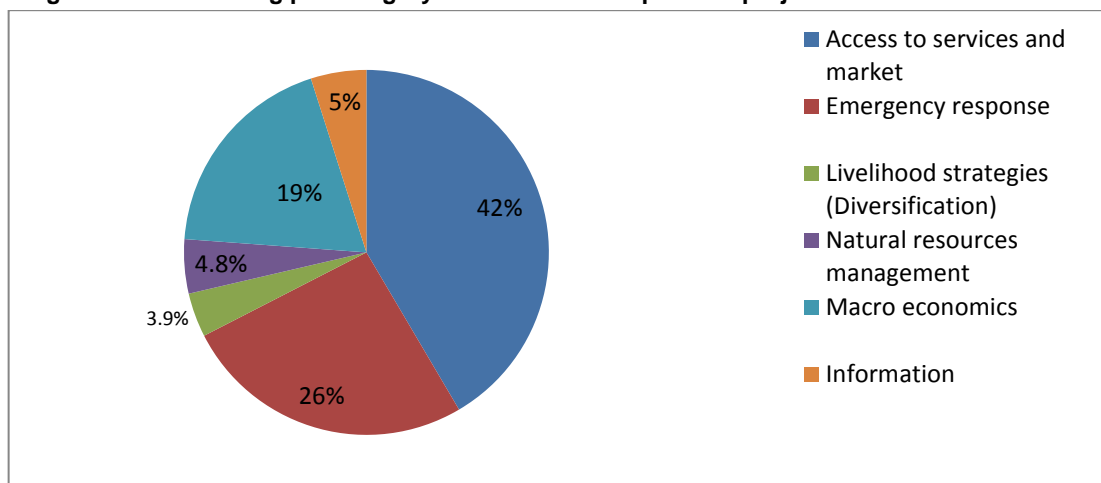


Table 4*

Distribution of allocation (merged domains)

Domains (merged IFAD-FAO)	FAO (163 projects) % of funding over the set	IFAD (31 projects) % of funding over the set
Policy arena	19% Macroeconomics, LEGS, private sector, livestock trading, health certification, strategic animal production	4% Policy dialogue
Institutions /governance herders & communities	- (aggregated with 'access to services', 'policy arena', and 'NRM')	16% Institutional building
Risk management Information, CCA, EWS	5%	10%
NRM Water management, land tenure, pasture management or improvement, mediation for peace	5%	18% Pastoral infrastructures (7%) Rangeland management (11%)
Access to services and markets	42 % (includes: veterinary services, public-health infrastructures, extension services, animal services infrastructures, capacity building, education, water & sanitation, milk & dairy products)	53% 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 recently 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, but the issue is being discussed also 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), as well as fuelling the feeling of neglect and abandon by the state amongst the youths (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 to mobile populations, FAO is engaging in an innovative approach of cooperation and co-financing with WFP and UNICEF Somalia, plus an NGO consortium. The three UN 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, WFP and UNICEF. The agencies will also lead in depth community consultations (qualitative). As this programme shows attention to pastoral mobile populations, especially relating to 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, both in the context of 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 households incomes and assets' (3.8 vs 4.3). The difference in rating for 'efficiency' is 0.3 (see Annex 5).
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 4 evaluations (10 percent) included in their team consultants with expertise in pastoralism (six individuals in total, including two team leaders [08; 025]) (Annex VI)⁵⁰ Considering that the projects officially focussing on pastoralism in 2003-2013 were an average of about 30 percent (45 percent for IFAD and 20 percent for FAO, see para 79 and Table 1), 3 percent of pastoral expertise in the evaluation teams, or even 10 percent of evaluations, seems out of balance.
102. It is evident that the existence of pastoralism expertise in the evaluation teams—an expertise that is well distinct from conventional expertise in livestock development or range management, and often using 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 is necessary to embed specific expertise and dedicated parameters in the process of evaluation⁵¹. 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

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 percent for pastoralism expertise was obtained by counting the team members recorded in the evaluations as pastoralism experts (1 percent) plus a few more recognised 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 focussing at post-production stages of the value chain (meat commercialisation), while 'gender has been badly neglected in monitoring so far', in spite of the new corporate strategy on gender.

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 exceptions⁵².

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.

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 percent 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.
- Few experts on pastoralism (3 per cent of evaluators) were part of the evaluation teams for projects officially focusing on pastoralism (30 percent 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 done important and useful work in the field of pastoralism for several decades. Just engaging with pastoral issues was a brave decision to take considering the huge challenges, 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, all along 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 than 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 on different terms. Much IFAD work on pastoral organizations and pasture tenure has reflected the changing perceptions of pastoralism and IFAD has taken some, still 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

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.

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 document of evaluation.

109. The chapter starts with an overview of the sample, based on a simple quantitative analysis, 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 rangeland 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 percent and sometimes as small as 5 percent, 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 unbalance with the limited expertise in pastoralism in the teams.
111. Some 10 percent of the documents 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 percent 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 more than relationships, and embedding the notion that any degree of crop-farming distinguishes in a stable and clear-cut way some dryland livelihoods from others.
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,

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 Spécial pour le Niger (PSN). The PSN II and II had one component focusing on pastoralism, corresponding to respectively 17 percent of the cost of phase I (4.37 percent of IFAD's investment in the six projects) and 31 percent of the cost of phase II [013: 99; 08: 4].

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 unbalance 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 Rangeland 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 WSRMP, thanks to the presence among the supervision team of an international range management expert. The UNOPS missions have often included a gender and community expert and the community component has always been highlighted' [012: 43].
116. Some evaluations do offer valuable insights on the ways the projects engaged or did not engage with pastoral systems. However, with pastoralism being just one 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 appraisal⁵⁵. 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 emphasise their role as to enabling excluded people to exercise their full potential (Ch. 3.1).
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) almost always found inadequate; and ii. monitoring 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 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.

⁵⁴ United Nations Office for Project Services (UNOPS).

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

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 organised 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; 015⁵⁷], 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).
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. One longs for a reflection on management, e.g. potential conflict over access, entitlements, or sustainability, as in 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 slate 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 capturing 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

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].

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]].

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 mechanised 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, facilitating and supporting processes of organisation amongst 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 Community Animal Resource Development Associate (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 production⁶⁰.
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 percent 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 USD 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 to the pastoralists a distribution of seeds [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, with more than two years delay, although the emergency it was supposed to address had disappeared [047].

⁶⁰ An FAO study in Northern Kenya ranked qualities expected from 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).

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, which 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 marginalised 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: '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 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 of 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 (DPA⁶²) found that during the period of the project the wealth gap between large livestock owners and small producers increased by over 150 percent, 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' to 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 cost⁶³.
133. The poor contextualisation of design and implementation also means missing opportunities to build on ongoing processes of spontaneous modernisation. For example, there is little mention, in the evaluations, of the new technologies that are already transforming pastoral livelihoods: motorbikes, portable motor-pumps, bladders⁶⁴, phone banking, markets information or paying medical and veterinary services over smart phones, resource mapping using google earth.

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.

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).

134. Weak targeting is of particular relevance to pastoral development, where conditions are atypical, interventions take place on the back of a legacy of ill-oriented efforts, and 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.⁶⁵ A recent study commissioned by the UK Department for International Development (DFID), 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 emphasise self-regulation and a capacity not to change (absorbing, withstanding, recovering, bouncing back); definitions developed from the new resilience thinking in ecology include or emphasise a capacity to change (transformation, reorganization, adaptation). The latter is a 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.⁶⁶ 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 (LEGS)⁶⁷.
140. In 2007, FAO published a retrospective analysis of over a decade of work on pastoral risk management, resulting from collaboration between technical divisions

⁶⁵ Virtually every organization has developed its own definition of resilience (a box in FAO 2014 lists six). The main distinction is on the approach to change: definitions within the legacy of equilibrium thinking emphasise self-regulation and a capacity not to change (absorbing, withstanding, recovering); definitions developed from the new resilience thinking in ecology include or emphasise the capacity to change (transformation, reorganization, adaptation). 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'.

⁶⁶ Seven of these projects are actually phases 1 to 4 and 1 to 3 of two projects.

⁶⁷ <http://www.livestock-emergency.net/about-legs/management-and-funding-of-legs/>

of FAO and the Institute of Development Studies at the University of Sussex (IDS) (Swift 2007). There is only one reference to this document in our core sample⁶⁸.

141. The lack of a risk management strategy is mentioned in several evaluations, especially of IFAD projects [09; 018]⁶⁹. 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 focussed on the highlands and on crop-farming⁷⁰.
142. In Mali [019] the PIDR project 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.⁷¹ 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 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 organise Agro-Pastoral Field Schools adapted from the Farmer Field School model but only by adding a module on basic

⁶⁸ 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 UNDP.

⁶⁹ A brief description of the components of a comprehensive pastoral risk management strategy is in [018: annex 14].

⁷⁰ 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].

⁷¹ When deep snow, severe cold or ice cover (or other conditions) prevent livestock from accessing the pasture, resulting in disastrously high livestock mortality.

animal husbandry in sedentary conditions to what remains a curriculum focused on agro-forestry and cultivation⁷² [065; 066].

146. Three general issues emerge from the analysis. First, 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 scale [e.g. 05], or the household scale. A national resilience strategy produced by FAO Somalia, in collaboration with UNICEF and WFP) focused at household and community level (FAO, UNICEF and WFP 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, the need to distinguish between risk reduction and risk management. Work on risk and vulnerability in pastoral development appears to treat 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 options), may get in the way of strategies aimed at taking and managing risk associated with structural variability.⁷³
148. Third, the need to consider that there are winners and losers from resilience, and that reducing risk in a part of the system may increase in another (risk is always for someone and under certain conditions, and whether it is a problem or an opportunity depends on the terms of the relationship⁷⁴). 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 rationalised 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)⁷⁵. 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

⁷² 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].

⁷³ 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).

⁷⁴ 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).

⁷⁵ 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/>

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 3, 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 amongst 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 section 3.1). 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 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]⁷⁶). 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 only little attention given to the third one.
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 organisations often combine aspects of customary and aspects of formal organisations, and a crucial question concerns the relationship between the two. Often, governments and funders create a hybrid partner organisation 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

⁷⁶ 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].

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 mobilise 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 for covering the costs of technical assistance directly to local organisations of small producers, who are in charge of deciding how to invest them. In Lebanon [07], the model of women's self-help cooperatives developed by the Rural Women Unit (RWU) was innovative, and is probably replicable.
157. In Sudan [012], the Western Sudan Rangeland Management Project (WSRMP) 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 institutions⁷⁷.
158. A project-induced proliferation of community organisations 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 each with different powers and funding. Existing organisational 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 organisations 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, 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 is included amongst 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 antiparasites 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 Community Animal Health Worker 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 recognised 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

⁷⁷ 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).

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 mobilised 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 context 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 interest 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 (MoA) was replaced by the new Ministry of Federal Affairs (MoFA) as the implementing agency for the project. While the MoA was 'more decentralized [...] experienced on pastoral development issues, and [...] committed to participatory efforts', the 'MoFA's 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, where 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. UN 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 percent 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.⁷⁸
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 pastoralists women, 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 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'.⁷⁹
170. In the case of IFAD, the review of 20 evaluations produced by IOE⁸⁰ 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

⁷⁸ IFAD policy on gender has a paragraph on the global gathering of women pastoralists in Mera (in the annex, box 8).

⁷⁹ FAO-OED 2014, *Pastoral Women in FAO's projects: evidence from evaluations*. FAO, Rome.

⁸⁰ IFAD-IOE 2014, *Pastoral women in IFAD's projects: evidence from evaluations*. IFAD, Rome

'inadequate' or 'moderately unsatisfactory'.⁸¹ 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, 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 benefitted from the projects through services, income generating activities, training, microcredit, but often this is simply deduced from aggregated percentages of women, pastoralist and not, amongst 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. Assess 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 a 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].
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 organisations 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 underrepresented 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 CARDAs (Community Animal Resource Development Associates), the 'upgrading' from CAHWs (Community Animal Health Workers) [027]: while CAHWs experienced a proportion of women up to 60 percent [e.g. 035], and Farmer Field Schools up to 30 percent, the proportion of women in CARDAs was as low as 0-5 percent.
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 voice heard, and opened 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].

⁸¹ In the definition of FAO, gender criterion, rate 3: 'Gender equality perspective is only superficially integrated in an explicit way in the initiative'.

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 works [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 include 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 overlooked⁸². 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 motorised 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

⁸² On this issue, cf. Flintan 2011.

at young people as pastoralists⁸³. A few documents mention the need to pay more attention to involve 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 the youths, 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 some contribution to the objective of promoting gender equality and women's empowerment, but very limited. With 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—starting from their invisibility to the eyes of development—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 of pastoral settings.

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 objective⁸⁴. 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 percent for IFAD and less than 5 percent 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 section 3.3, diagrams 1 and 2; para 224-226 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. The infrastructure were chiefly water points used to facilitate settlement [014; 016]. In Syria, the water infrastructure accomplished through the project is prized 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 section 3.3, diagrams 1 and 2; para 224-226 on issues concerning pastoral water interventions).
187. Both organisations 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,

⁸³ 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 DFID.

⁸⁴ 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'.

sometimes have 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 also 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)⁸⁵. On these data-poor grounds, when 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 WSRMP 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

⁸⁵ 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 calculation implies that the areas where the three strategies were carried out did not overlap, but the evaluation is silent in this respect.

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 degraded⁸⁶, and the underlying assumption that degradation is caused by an unbalance 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 approach⁸⁷. 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.
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)⁸⁸, 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 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 3, para 43-48). While political and technical exclusion cannot be addressed by advocacy alone, they cannot be addressed without it.

⁸⁶ 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).

⁸⁷ 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.

⁸⁸ 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).

198. Advocacy was identified as a top priority during the global gathering of pastoralists women in Mera in 2010, together with representation, communication and networking [058]. For being 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 a support at the moments when the voice of small producers was not given much attention 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 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 marginalised 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 underutilised.
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 raise awareness of pastoral issues among politicians, researchers and extension workers.

H. Lessons learning 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 percent) concern pastoral development, concentrated in 15 evaluations. Some 66 percent 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 conflict [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 related 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 emphasise 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 to secure 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' contribute 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 to take 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 organisations [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. Exception in this scenario, is that many evaluations effectively point at an inadequate understanding of pastoral systems as the bottleneck to the improvement of 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 (WISP) by IFAD and FAO (including an IFAD's grant to IUCN of USD 950,000 over 4 years, ended in 2014), and FAO launch of the Pastoralist Knowledge Hub (USD 800,000 for Part 1 over 16 months, ending in 2015⁸⁹). Support to IUCN has been fruitful in the past, for example through the organisation of the Mera global 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 expansion of the knowledge base required if the engagement in pastoral development has to become more effective.
213. At project level, change is slower. The resilience programme in Somalia is unequivocal about the economic importance of mobile pastoralism⁹⁰. 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 Organisation or the Uganda Land Alliance⁹¹), nor reference to recent and ongoing scholarly work in the region (e.g. the several studies published by the Feinstein International Center at Tufts University⁹²). 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 phases⁹³. However, the understanding of pastoral systems remains old fashion and unstructured⁹⁴. Across the sample, we could not find a single reference to the 'internal' literature on pastoral systems (FAO 1997; FAO 2002; Rass 2006).

⁸⁹ 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.

⁹⁰ 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].

⁹¹ Cf. <http://www.copacso.org> ; <http://ulauug.org>

⁹² Cf. <http://fic.tufts.edu/?s=karamoja>

⁹³ For example, the project document [052] lists as key challenges 'weak government institutions', 'limited public participation in decision-making processes' (e.g. political marginalisation), 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.

⁹⁴ In a 2013 technical document on pastoral development, the section on 'targeting', we were surprised to find pastoralists described 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 ambivalent.

VI. Wider pastoral development context

214. This section provides a brief overview of the pastoral development context, seeing 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 years to come. 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 Development Cooperation (SDC) and the French Development Agency, as bilateral institutions with a long involvement in pastoral development; and two NGOs, Oxfam International and Vétérinaires Sans Frontières (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 organisations 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 transboundary nature of pastoral risk management and resilience characterises 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 stabilisation. 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. In 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 transboundary mobility (people, animals, services); ii. establishing effective mechanism of disease control; iii. facilitating livestock trade; iv. including pastoral communities into 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 Development Cooperation (SDC)** 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 SDC'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. SDC 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)⁹⁵ 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 percent 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

⁹⁵ See http://www.sdc.admin.ch/en/Home/Countries/East_Asia/Mongolia

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 for working 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, did not lend themselves to be turned to other uses, and especially 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.⁹⁶

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 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 lobbying organisations claiming 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 Africa⁹⁷, Oxfam warns against seeing livelihood diversification as solution '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 Frontieres (VSF)**⁹⁸ works mainly with pastoral organisations in several countries in the Horn and East Africa. So far, emergency relief has outweighed development aid in the VSF programme. VSF recognises 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

⁹⁶ 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).

⁹⁷ The Pastoralist Risk Management Project, funded by USAID and carried out by Cornell University, http://dyson.cornell.edu/faculty_sites/cbb2/Parima/

⁹⁸ Based on position paper published by VSF Germany (2011) and a statement about pastoralism published by VSF Belgium (2012).

appropriate. The programme includes education and training, identifying economic alternatives for those who want to leave pastoralism, help in resolving conflicts, 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 organised 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 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.⁹⁹ 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.

⁹⁹ 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.

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 organised crime and jihadists.
- The importance of securing pastoral mobility is emerging as a key priority, including supporting the system by facilitating exit of at the edge of vulnerability while refraining from introducing alternative economic activities in competition for pastoral resources.

VII. Storyline, conclusions, and recommendations

A. Storyline

234. IFAD and FAO have a history of engagement in pastoral development. This 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 specialisation 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 needs 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 guiding principle might pull the 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. There have been important achievements, including 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 on 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 of a fragmented and mixed picture across the sample, although efforts are evident, especially in the most recent projects, also 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 characterised 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 emphasises structural difference, sharing foundations with resilience thinking. (para 2, 3, 20-43, 114).
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. (para 2, 3, 35-37, 115-215).
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 clarity of distinction between old and new reasons for facilitating exit, and in absence of the systemic approach that would be necessary for ensuring that alternative livelihood activities are effectively helping the pastoral systems, and not simply introduced at its expenses (in competition for the same resources and in a logic of substitution rather than support). (para 35, 36, 132, 133).
244. Engagement with gender has been on the increase but relying on a rural-development blueprint that is largely inadequate to work in the pastoral context. Surprisingly little attention has been paid to the milk economy, especially informal, compared to its importance in child nutrition and generally in food security in pastoral contexts, as well as in relation to women's status within the household. (para 169-186).
245. An inadequate blueprint has also 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, that specialise in taking advantage of structural variability. (para 137-152).
246. Community-based participatory approaches to institution building fostering pastoralists-farmers cooperation (IFAD) and the training of Community Animal Health Workers (FAO) are the 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 ongoing ICT revolution, but ways of tightly gearing them to pastoral systems have to be found, especially in relation to risk and the adaptive logic of taking advantage of variability. (para 163-247).
247. There has been insufficient engagement with relationships of conflict. IFAD's recent attention for 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 by the very processes of marginalization that have led to them, for example when limited to remote or cross-border regions, as in the case of most dryland areas. The experience of Mali, a country that was

not considered fragile until it collapsed, is telling in this regard. (para 37, 38, 39, 64, 98, 121, 124, 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. (para 10, 126, 165).

Overall, both agencies appear to have invested in pastoral development regularly over the last ten years, adding to past experience, but mostly relying on off-the-shelf packages with minimal adaptation, and largely deferring tackling the 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 usually affected by conditions of persistent poverty, vulnerability to processes of dispossession and poor governance, and increasingly theatre of 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. (para 45-76).
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 137), and indeed, they are again attracting considerable attention in the international arena. The opportunity cost of investing in pastoral systems includes also reducing rural-urban migration and a range services outside the livestock production, e.g. environmental services and 'risk-pooling' services (Annex 3 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 protect them from the penetration by organised crime and jihadists (para Annex 3 para 24-29, 137).
251. For IFAD and FAO, 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 on the process for 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.
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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. 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 247, 243, 249).

<p>Recommendation 2. Build and adapt capacity in IFAD and FAO for systemic engagement in pastoral development.</p>

255. Pastoral development interventions take place on the back of a problematic legacy. Misleading and counterproductive ideas from the past permeate throughout the entire learning process. On the other hand, '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 more generally. But it also includes the development of the capacity of desk and project staff to systematically track engagement with pastoral development, and its management including to the format and conduct of evaluations, and the composition of evaluation teams.
256. Building capacity means that staff should develop skills and understanding about pastoral poverty, its shape, causes and remedies and how it differs from poverty in agricultural or urban areas. It also means commissioning research to define, measure, and reach pastoral poverty more accurately and effectively. The role of mobility will be a key concept in theoretical discussions and practical application, as will gender. 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 identify and draw conclusions about the outcomes of projects, not just outputs.
257. Comparative advantage suggests that IFAD and FAO should continue to specialise, 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 243, 245, 246, 250).

<p>Recommendation 3. Manage, rather than avoid, key dimensions of risk.</p>
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258. Structural to the pursuit of IFAD's and FAO's fundamental goals when engaging with pastoral development are inevitable risks which need to be acknowledged and managed: i. the risk inherent to environments where variability is structural (para 28-29); ii. the risk inherent to operating with a problematic legacy of counterproductive policy environments and prejudicial mind-sets, or even face straightforward mechanism of political exclusion and disempowerment embedded at various levels of governance (para 41-43); iii. the risk of increasing exclusion on technical basis, either by following an unchecked logic of comparative advantage (e.g. drifting away from thinly populated areas lacking infrastructures), or by merely extending 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 70-75).
259. 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. In particular with regard to the first category, the response to risk where variability is the chief structural characteristic of the natural, economic and security environments, consists in interfacing variability with variability. As this approach to risk management follows an opposite logic to risk aversion (para 29-30), it is important that field and HQ staff in both agencies are fully confident in these new ideas. A contextual risk-management and resilience strategy should be prepared for every programme or project in pastoral development, and by extension in dryland areas. This should engage with the new aspects of pastoral risk that are beyond the reach of the producers (para 29) and include a clear conceptual and operational distinction between risk management and risk reduction. This should be part of project preparation. The FAO Resilience Index Measurement and Analysis model provides a possible framework for such work. (para 247).

<p>Recommendation 4. Support advocacy by pastoralists and on behalf of pastoralists and people whose livelihoods depend on pastoral systems.</p>

261. IFAD's and FAO's significant influence in the international and national arenas represents an invaluable asset in the on-going 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 in today's engagement with pastoral development, but care should be taken to keep it within a systemic approach, subject to critical scrutiny carefully targeted in light of the new understanding of drylands and pastoralism. (para 243, 244).

Core sample¹⁰⁰

Evaluations

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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.
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10. IOE-IFAD 2008. Royaume du Maroc. Évaluation du Programme de pays. Rapport No 1980-MA, International Fund for Agricultural Development, Rome.
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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.
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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.

¹⁰⁰ For technical reasons, following the original spread sheet, numbering starts from 3.

21. IOE-IFAD 2014. République du Sénégal. Évaluation du programme de pays. Rapport No 3317-SN, International Fund for Agricultural Development, Rome.
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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.
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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.
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Pastoral systems¹⁰¹

1. The scientific understanding of pastoral systems, and more generally of the complex of production and livelihood systems in the drylands¹⁰², underwent a U-turn (a paradigm shift), more than twenty years ago¹⁰³. This historical discontinuity with 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, still embedded in its legacy of definitions and analytical tools.

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 works¹⁰⁴. 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, 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 rains¹⁰⁵) can lead to drought conditions and green areas only a few miles away from each other. For static strategies of production, being unable to predict the spatial and temporal distribution of rains is a problem.

¹⁰¹ Full references for this annex are integrated in Annex 2.

¹⁰² 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 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 percent of the world's total land area is considered to be drylands (according to the UNCCD classification system)'.

¹⁰³ 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 formalised 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).

¹⁰⁴ For example Niamir-Fuller 1999; Catley et al 2012.

¹⁰⁵ 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).

On the other hand, strategies of production specialised to move with the rains and arrive on the pasture just at the time when nutrients peak¹⁰⁶, 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 visit¹⁰⁷.

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 area¹⁰⁸.
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 maximised when the animals *do not* eat everything they can. Livestock capable of feeding selectively target only the most nutritious bites on the range, avoiding the rest¹⁰⁹. Overgrazing goes directly against this logic and therefore only happens out of incompetence or out of 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 also problematic for food security and land degradation, and even gender¹¹⁰.
9. The view of variability as systemic to drylands shares its foundations with resilience thinking. The reflection on resilience emphasised that 'resilience is not only about

¹⁰⁶ 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).

¹⁰⁷ 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 (Bremner and De Wit 1983).

¹⁰⁸ 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'.

¹⁰⁹ 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 (Bremner 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).

¹¹⁰ 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).

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'.¹¹¹ 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 neutralised 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 ongoing¹¹². As a consequence, engagement in pastoral development requires, more than it would normally be necessary, 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).

¹¹¹ 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 maximise stability and uniformity'.

¹¹² 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 focussed on intensity in time and space, reflecting the assumption of sedentary conditions as 'normality' as well as a general limitation in the specialisation 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 specialised 'types' even within apparently homogeneous breeding populations, and the attention for complex behavioural traits in breeding, at the level of the herd as an organised 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 emphasised 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 specialisation 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).¹¹³
16. The African Union's first policy on pastoralism describes arid and semi-arid areas as 'characterised by marked rainfall variability, and associated uncertainties in the

¹¹³ 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).

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 specialisation to take advantage of discontinuous variations.

The magnitude of pastoral systems

18. Drylands represent 40 percent of the planet's total land mass and are inhabited by some 2 billion people. 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 (Koohafkan 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 origins¹¹⁴, 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, are 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 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 depend on

¹¹⁴ In Sudan for example, the 2008 census defined 'nomads' on the basis of tribal affiliation.

the main herd in the pastoral systems¹¹⁵. 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 institutionalised connections have been jeopardised 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 specialisation. 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 kilometers), and connect distant places without necessarily all the areas in between¹¹⁶.
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 systems¹¹⁷.
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 urbanisation 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 antagonised 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 percent) after minerals (41 percent) (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 percent of production (Rass 2006). In Chad, pastoral livestock make up 40 percent of agricultural production, 18 percent of GDP, and 30 percent of exports (Alfaroukh et al., 2011). In Sudan, with an estimated 90 percent of the national herd in pastoral systems, the 2009 offtake was worth USD 1.8 billion (Behnke and Osman, 2011).
26. According to the African Union: 'pastoralism contributes 10 to 44 percent of the GDP of African countries [...] Official statistics tend to overlook many important

¹¹⁵ 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).

¹¹⁶ 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).

¹¹⁷ 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).

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)¹¹⁸. 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 labor (as waged herders are still frequently paid in productive livestock).
30. A recent series of studies for 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 percent in pastoral systems. In Ethiopia, the figure was 1.1 billion USD, with about 40 percent in pastoral systems, and 200 million USD in risk-pooling services only from pastoral herds. In Sudan the figure was 1.9 billion USD, with an estimated 90 percent 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).

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](#) project 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, urbanisation and rural transformation' (launched by IIED during an international meeting in London on

¹¹⁸ 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).

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 percent) 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 foot print 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)¹¹⁹.

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 percent', 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 gained¹²⁰, today's pastoralists are of course neither all rich nor all poor¹²¹. 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.¹²² Big herds are also 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

¹¹⁹ 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).

¹²⁰ The Karimojong in Uganda, for example, have lost over 50 percent 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 percent 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).

¹²¹ 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.

¹²² For example, an analysis of available data for Kenya has estimated that about 50 percent of the households whose main source of livelihood is herding are described as 'very poor' (by community-based local parameters), some 40 percent as 'poor' and 'middle', and only about 1 percent 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).

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
<i>Ekechodon</i>	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).
<i>Elongait</i>	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.
<i>Emetut</i>	A person with few animals and without family, surviving on other people's charity.
<i>Ekebotonit</i>	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 less¹²³. 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 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

¹²³ 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 optimise 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).

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 recognised in several parts of Africa (e.g. Somalia and Eritrea).
42. The second principal is that, perhaps not surprisingly, pastoral 'poverty' is itself characterised 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 avoided¹²⁴. In conditions dominated

¹²⁴ 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

by variability, systematic risk-avoidance is not possible and therefore is a failing strategy that leads to poverty traps¹²⁵. Systems that specialise 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 disasters¹²⁶. By making prediction impossible, variability is closely linked to risk. One way to manage the risk associated with variability is by keeping options open¹²⁷. 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)¹²⁸.
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 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)¹²⁹.

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).

¹²⁵ 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'.

¹²⁶ 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).

¹²⁷ 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).

¹²⁸ 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).

¹²⁹ Already in the aftermath of the 1970s Sahelian drought, analysts were recommending to build on local specialisation (real-time management) rather than imposing stabilizing solutions centered 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 herdsman in their planning and implementation, and fail to demonstrate how the herdsman are to be the prime beneficiaries of the changes' (Horowitz 1977: 221).

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 marginalised 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 recognise 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 recognise 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)¹³⁰.
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 characterise the systems of production and livelihood behind these labels, whether they practice some crop farming, or they are sedentary¹³¹, is what matters most. Many of the communities singled-out as 'agro-pastoralists' make use of exactly the same approach (taking 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 losses¹³². The pastoral groups in

¹³⁰ The invisibility of pastoral economic contribution in the mechanisms of appraisal is a long-recognised problem. The consequent impression that such a contribution is negligible was listed as one of the 'myths' of pastoral 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).

¹³¹ 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).

¹³² 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).

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 modernisation. 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 modernisation is intensification, and the route to intensification is sedentarisation, thus the abandonment of pastoralism¹³³.
51. On the other hand, the new perspective on pastoralism unlocks this technical loop and opens up a view of modernisation *inclusive* of pastoralism, where scientific and technological development are put to work to serve innovation *within* the logic of specialised pastoral production strategies—a genuine modernisation of pastoral production rather than modernisation *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 effects for pastoral women, especially when blended with 'old school' pastoral development measures. Trying to minimise 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-farming¹³⁴), still contributes to feed the

¹³³ 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 sedentarisation' (SARL 2013: Art 98).

¹³⁴ 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

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 men¹³⁵.

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, 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

June 1999, the President has been reported to have 'advised women that their demands might destabilise society and the economy' (McAuslan 2003: 10).

¹³⁵ 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).

ordinary people throughout the entire Sahel-Sahara regions (not just in town), so that there are no empty spaces easily penetrable by undesirable players¹³⁶

¹³⁶ 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)¹³⁷. During 2014 the PPMS was replaced by the Grants and Investments Project System (GRIPS)¹³⁸ (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 41-43).

¹³⁷ IFAD 2012. *Reference Manual*, Project and Portfolio Management System, International Fund for Agricultural Development, Rome.

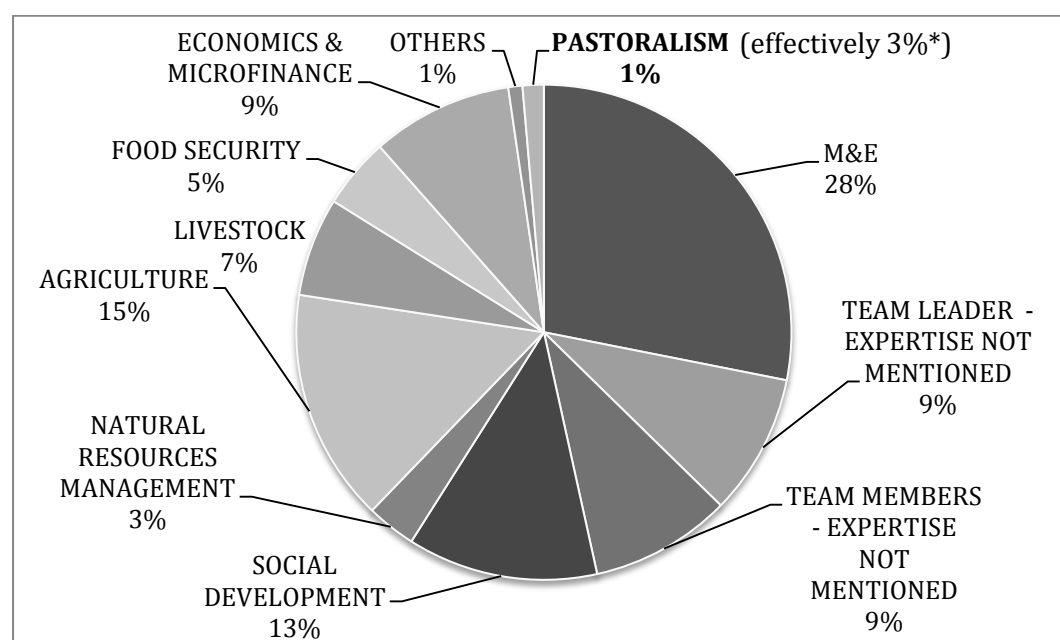
¹³⁸ IFAD 2015. *Reference Manual*. Grants and Investments Project System, IFAD, Rome.

Average rating of pastoral-oriented projects in IFAD

This table summarises 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 agric. 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 percent (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 percent, or 10 percent of the evaluation (6 consultants in 4 evaluations).

Total number of projects in the core sample

Evaluation	Number of projects		Total
	Country	Regional	
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

Evaluation	Number of projects		Total
	Country	Regional	
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. Evaluacion del programa en el Pais	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

JES 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 Pastoriles Sostenibles en Honduras, Honduras, TCP/HON/3401 BABY01.
9. FAO, Développement Pastorale, 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 Bouis, 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.
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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.
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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.
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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.
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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.
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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.
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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.
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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.
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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.
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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.
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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.
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91. FAO, Livelihoods Support for Pastoralists and Agro-Pastoralists in the Karamoja Region, Uganda, OSRO/UGA/803/ITA.
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 121. FAO, Resilience Programme, Somalia, OSRO/SOM/301/MUL -Baby1,2,3 .
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