



PROJECT IDENTIFICATION FORM (PIF)¹

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: LDCF

PART I: PROJECT IDENTIFICATION

Project Title:	Strengthening capacity for climate change adaptation through support to Integrated Watershed Management		
Country(ies):	Lesotho	GEF Project ID:²	5124
GEF Agency(ies):	FAO	GEF Agency Project ID:	618527
Other Executing Partner(s):	The Ministry of Forestry and Land Reclamation (MFLR), Ministry of Agriculture and Food Security (MAFS), Ministry of Natural Resources (MNR), Ministry of Local Government and Department of Environment (DOE) and National University of Lesotho (NUL)	Submission Date:	December 20,2012 January 22,2013
GEF Focal Area (s):	Climate Change – LDCF	Project Duration (months):	48
Name of parent program (if applicable): • For SFM <input type="checkbox"/>	NA	Agency Fee: US\$	341,306

A. FOCAL AREA STRATEGY FRAMEWORK³:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-Financing (\$)
CCA-1:	1.2. Reduced vulnerability to climate change in development sectors	Output 1.2.1. Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability	LDCF	500,000	1,920,790
	Outcome 1.3. Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Output 1.3.1. Targeted individual and community livelihood strategies strengthened in relation to climate impacts including variability		965,553	1,979,934
CCA-2:	Outcome 2.1. Increased knowledge and understanding of climate variability and change-induced threats at country level and in targeted vulnerable areas	Output 2.1.1. Risk and vulnerability assessments conducted and updated	LDCF	500,000	1,603,614
	Outcome 2.2. Strengthened adaptive capacity to reduce risks to climate-induced economic losses	Output 2.2.1. Adaptive capacity of national and regional centers and networks strengthened to rapidly		456,060	1,017,322

¹ It is very important to consult the PIF preparation guidelines when completing this template.

² Project ID number will be assigned by GEFSEC.

³ Refer to the reference attached on the Focal Area Results Framework when filling up the table in item A.

		respond to extreme weather events			
CCA-3:	Outcome 3.1: Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas	Output 3.1.1. Relevant adaptation technology transferred to targeted groups	LDCF	1,000,000	871,673
Sub-Total				3,421,613	7,393,333
Project management cost ⁴				171,081	369,667
Total project costs				3,592,694	7,763,000

B. PROJECT FRAMEWORK

Project Objective:

- (1) to implement sustainable land and water management practices (SLM/W) and resource conservation measures in selected watersheds to reduce vulnerability and enhance adaptive capacity at community level
- (2) to strengthen diversified livelihood strategies focusing on crop, livestock and agro-forestry systems at community level in selected watersheds in three most vulnerable livelihood zones

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
Component 1: Strengthening technical capacity of national and district level staff and institutions on sustainable land and water management and climate-resilient livelihood strategies	TA	1.1 Strengthened technical capacity in The Ministry of Forestry and Land Reclamation (MFLR), Ministry of Agriculture and Food Security (MAFS), Ministry of Natural Resources (MNR), Ministry of Local Government, National University of Lesotho (NUL) and district and community representatives on sustainable land and water management	<p>1.1.1 National level MFLR, MAFS, MNR, and National University of Lesotho (NUL) staff trained on climate change adaptation focusing on watersheds (Training provided to 60 staff from 3 most vulnerable districts covering low lands, foot hills and mountains).</p> <p>1.1.2 District level forestry and natural resources staff trained on community mobilization and integrated watershed management (diversified livelihood strategies and sustainable land and water management - At least 100 staff trained to effectively implement the components of integrated watershed management programme)</p> <p>1.1.3 Training to the local representatives from community based organizations (CBOs) on good practice examples of sustainable land and water management, water harvesting, diversified livelihood strategies (crops, livestock, agro-forestry, horticulture) (At least 24</p>	LDCF	400,000	1,046,157

⁴ GEF will finance management cost that is solely linked to GEF financing of the project.

			<p>farmer groups (1200 farm households) in 3 livelihood zones will be trained).</p> <p>1.1.4 Training on decentralized decision making on crop land and rangeland to reduce land degradation (at least 20 representatives in each selected watersheds).</p>			
Component 2: Assessing vulnerability of livelihoods and impacts of climate change on land suitability and use at watershed scale	TA	2.1 Improved data, tools and methods for assessment of livelihood vulnerability and impact of climate change on land suitability and land use at the national and district level focusing on most vulnerable watersheds	<p>2.1.1 Livelihood and land use (crop, livestock, agro-forestry) data base developed for most vulnerable watersheds (database will be established in Ministry of Forestry and Land Reclamation and linked to potential users at the national level)</p> <p>2.1.2 At least 50 core staff at MFLR, MAFS, MNR, Ministry of Local Government and NUL at the national level trained on updated and use of the new data base on land use and its suitability under scenarios of climate change</p> <p>2.2.1 Vulnerabilities and risks (current and future) assessed for the selected watersheds in 3 livelihood zones and spatial information on vulnerability available to facilitate adaptation planning by the Government</p> <p>2.2.2 The district level forestry, local government and natural resources staff trained on use of spatial information products for decision making.</p>	LDCF	500,000	975,920

Component 3: Promoting tested Sustainable Land and Water Management (SLM/W) practices to build resilience to climate risks in vulnerable sub-catchments and watersheds	TA	3.1 Sustainable land and water management (SLM/W) practices (soil erosion control, soil and water conservation, water harvesting, run-off reduction, vegetative cover, range resource management) successfully adopted in selected watershed and catchments	3.1.1 Adaptive land use and sustainable land and water management practices implemented in at least 24 communities in 3 livelihood zones. The crops and cropping systems will be selected based on the detailed land suitability analysis to be conducted under component 2. 3.1.2 Improved water harvesting structures at the household level implemented in 3 livelihood zones (At least 150 households possess water harvesting structures) 3.1.3 Improved vegetative cover and range resource management measures adopted in 12 communities to improve productive use of marginal lands .	LDCF	1,356,060	2,859,002
Component 4: Strengthening diversified livelihood strategies and implementation of improved income generating activities at the community level	TA	4.1 Diversified livelihood strategies and small scale and household level income generating activities successfully demonstrated and adopted by target communities	4.1.1 Community participation ensured in 24 community groups in selected watersheds of 3 livelihood zones and introductory sessions conducted and small-scale household level income generating activities (e.g. . horticulture, small ruminants, multiple use agroforestry practices, beekeeping) introduced. 4.1.2 Integrated crop and livestock systems and management practices implemented in 12 communities and training provided to over 100 farmer groups in 3 livelihood zones 4.1.3 A replication strategy designed.	LDCF	1,015,553	2,164,029

	TA	4.2 Communities aware of improved livelihood diversification and small-scale and household level income generation practices through wide dissemination at the community level	4.1.1 A communication strategy established in close collaboration with the MOFLR, MAFS, MNR, Ministry of Local Government and NUL and implemented 4.1.2 Communication materials developed and disseminated through existing activities of the focal ministries to ensure sustainability			
5. Dissemination of best practices, project monitoring and evaluation	TA	5.1 Project implementation based on results based management and dissemination of of best practices and lessons learned for future operations.	5.1.1 Systematic collection of field based data to monitor project outcome indicators at all levels 5.1.2 Midterm and final evaluations conducted 5.1.3 Project-related good-practices and lessons-learned disseminated via publications and other channels to facilitate scale-up by the Government and non-government organizations.	LDCF	150,000	348,226
Sub-Total					3,421,613	7,393,333
Project management Cost					171,081	369,667
Total project costs ⁴					3,592,694	7,763,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	FAO (Through TCP and other projects)	Grant	2,163,000
GEF Agency	FAO	In-kind	100,000
	Wetlands Conservation and Rehabilitation	Grant	4,000,000
National Government	Ministry of Forestry and Land Reclamation	In-kind	1,500,000
Total Co-financing			7,763,000

D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY (IES), FOCAL AREA(S) AND COUNTRY¹

GEF Agency	Type of Trust Funds	Focal Area	Country Name/ Global	(in \$)		
				Project amount (a)	Agency Fee (b)	Total c=a+b
FAO	LDCF	Climate change	Lesotho	3,592,694	341,306	3,934,000
Total Grant Resources				3,592,694	341,306	3,934,000

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1. THE GEF FOCAL AREA STRATEGIES:

A.1.2. FOR PROJECTS FUNDED FROM LDCF/SCCF: THE LDCF/SCCF ELIGIBILITY CRITERIA AND PRIORITIES:

The project will contribute to the three GEF LDCF/SCCF objectives: CCA-1: Reducing vulnerability to adverse impacts of climate change, including variability; CCA-2: Increasing adaptive capacity to respond to the impacts of climate change; and CCA-3: promote transfer and adoption of adaptation technology. The overall goal is to promote sustainable natural resources management and to support crop, livestock and agro-forestry systems to reduce vulnerability and enhance climate resilience.

The proposed project will promote both immediate and longer-term risk reduction and adaptation measures. Specific adaptation activities will be implemented to improve the sustainable natural resources management and climate resilience of the defined baseline activities. The LDCF proposal targets a number of priorities of the NAPA (2007) and is directly related to the two priorities:

- Improve resilience of livestock production systems under extreme climatic conditions in various livelihood zones in Lesotho
- Promoting sustainable crop-based livelihood systems in foothills, lowlands and the Senqu River Valley

The major focus of the project is to implement climate change adaptation measures at local level to reduce vulnerability of local communities and improve their livelihoods and adaptive capacity. Scaling-up and transfer of climate resilient measures will be considered. All major ongoing and pipeline initiatives of the Government, development partners are taken into consideration to enhance synergies and to avoid potential duplications.

A.2 NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSMENTS UNDER RELEVANT CONVENTIONS, IF APPLICABLE, I.E. NAPAS, NAPS, NBSAPS, NATIONAL COMMUNICATIONS, TNAS, NIPS, PRSPS, NPFE, ETC.:

The main existing framework for implementing climate change adaptation in Lesotho is the **National Adaptation Programme of Action (NAPA)** which identifies regions and communities vulnerable to climate change and has listed 11 adaptation priorities. The NAPA presents a foundation for integrating climate change considerations into National Strategic Development Plan (NSDP 2011)⁵. The LDCF will address key and urgent issues prioritized in the first two priorities/options (Table 1) and some of the interventions will also cover option 4, 5 6 and 11.

Table 1. List of prioritized adaptation projects for implementation in the vulnerable zones

Options	Title
Option 1	Improve resilience of livestock production systems under extreme climatic conditions in various livelihood zones in Lesotho
Option 2	Promoting sustainable crop-based livelihood systems in foothills, lowlands and the Senqu River Valley
Option 3	Capacity building and policy reform to integrate climate change in sectoral development plans
Option 4	Improvement of an early warning system against climate induced disasters and hazards
Option 5	Securing village water supply for communities in the southern lowlands
Option 6	Management and reclamation of degraded and eroded land in the flood-prone areas (Pilot project for western lowlands)
Option 7	Conservation and rehabilitation of degraded wetlands in the mountain areas of Lesotho
Option 8	Improvement of community food security through the promotion of food processing and preservation technologies
Option 9	Strengthening and stabilizing ecotourism-based rural livelihoods
Option 10	Promote wind, solar and biogas energy use as a supplement to hydropower energy
Option 11	Stabilizing community livelihoods which are adversely affected by climate change through improvement of small-scale industries

The proposed LDCF project is consistent with Lesotho's development priorities outlined in the **National Vision 2020** (2001-03), the **Poverty Reduction Strategy** (PRS, 2003), the Agriculture Sector Strategy of 2003, the Food Security Policy of 2005, the **National Action Plan for Food Security** (NAPFS, 2006) and the National Strategic Development Plan (NSDP, 2011). The Government policies and strategies have in all cases emphasized the statement of food security, employment generation, combating environmental and natural resources degradation in order to meet the World Food Summit target of reducing the number of hungry people

⁵ National Strategic Development Plan. 2011. Ministry of Finance and Economic Planning. Government of Lesotho.

by half by 2015 which is consistent with MDG-1 and attaining environmental sustainability (MDG-7). The LDCF also targets sustainable natural resources management with a view to reduce the vulnerability and enhance resilience.

The proposed LDCF links to regional programmes such as the **Comprehensive Africa Agriculture Development Programme** (CAADP) investment pillar on land and water management and increasing food supply and reducing hunger, as well as with the Africa Adaptation Programme. The UN Common Country Assessment (CCA) exercise in 2004 confirmed the long-term vision pursued by key Medium-Term National Planning Process such as the Poverty Reduction Strategy, the Agriculture Sector Strategy, the National Food Security Policy and the National HIV/AIDS Strategic Plan. It has been recognized that the country's food crisis has resulted from the nexus of poverty and natural resources degradation.

B. PROJECT OVERVIEW:

B.1. DESCRIBE THE BASELINE PROJECT AND THE PROBLEM THAT IT SEEKS TO ADDRESS:

Watersheds in Lesotho are severely affected by increasing climate variability. Watersheds in most vulnerable livelihood zones face threats of land degradation and declines in agricultural production. The major livelihood activities of the watersheds are dominated by the crop and livestock production sub-sectors. The agriculture sector contribution to the Gross Domestic Product (GDP) has declined from over 20 percent in the 1980s to the current 8 percent. This is partly attributed to recurring droughts and weather extremes, poor crop, livestock and rangeland management practices in watersheds. Approximately 90 percent of the farmers are subsistence growers, producing mainly for domestic consumption with little surplus for the market while well over half of the rural population, extremely dependent on subsistence agriculture, lives below the poverty line.

The livestock sector is crucial for income generation, farm operations and food security of the rural population depending especially in the foothills and mountain watersheds. This sector is a major contributor to the country's GDP through production of wool, mohair, meat and milk but is entirely dependent on communal grazing. About 70 percent of Lesotho's land area is rangelands. The annual soil loss from rangelands is estimated at 18 tonnes per hectare per year compared to 20 tonnes per hectare per year of soil lost from cropland.⁶ Overgrazing and the recurring droughts have reduced the regenerative capacity of grasslands and range resources negatively affecting the carrying capacity as well as the number and quality of livestock. The impacts are likely to worsen under projected climate change scenarios.

Chronic food insecurity is a defining feature of poverty in the watersheds of Lesotho. The root causes of the problem are linked to the low levels of agricultural productivity and crop failures attributed to climate variability and extreme events and associated issues: land degradation and soil erosion, inefficient water control and management. In the decade 1995/96 to 2004/05, on average 33,414 ha of planted area (\approx 30-50%) failed each year: in the lowlands (17 069 ha), in the mountains (9 248 ha), in the foothills (5 180 ha) and in the Senqu River Valley (1 915 ha). Consequently, Lesotho is currently heavily dependent on imported food, estimated at 60 percent of its annual cereal demand. The 2006/07 growing season recorded one of the most severe droughts in the recent past. While the 2010/11 season was characterized by the worst floods in recent memory, the 2011/12 season started with a drought extending from the spring into the mid-summer of 2011 and has seriously threatened the staple food production outlook for 2011/12. An analysis of crop yield time series from 1973/74 to 2009/10 indicated that yield levels are even less in recent years compared to the late 1970s owing to increased vulnerability to climate risks. The major reasons could be attributable to poor crop, livestock and appropriate natural resources management, added to inefficient use of agricultural inputs.

The underlying climate related causes of the watershed degradation and loss of livelihoods would be further fuelled by the projected **climate change** impacts on major livelihood zones of Lesotho supporting arable farming and livestock production. For example, according to the Lesotho Meteorological Services, models predict a temperature increase of 1.0 to 1.5 °C in 2030 and 2050. In the Second National Communication (currently in draft), climate change scenarios for annual temperature and seasonal precipitation for 100 years from the year 2010 through to 2100 were modeled. Temperature predictions anticipate a gradual increase in annual mean temperature change ranging from 0.4-4.7°C in the north and variations from 1.6-3.8°C in the south by the year 2100. Overall, summer precipitation in the north will be slightly above normal for all scenarios while the southern region precipitation will be below normal. Autumn will experience an above normal

⁶ National Resource Inventory of Lesotho. Ministry of Agriculture. 1988.

precipitation in both northern and southern regions of the country. On the other hand, below normal winter precipitation for both the north and the southern region are predicted with the northern region showing a significant drop below normal.⁷

As indicated in the most recent FAO studies, regardless of the various scenarios on climatic variability, frequency and intensity of extreme events, the majority of households in Lesotho are vulnerable to the slightest change in climate and it is crucial to create more awareness and action amongst policy-makers about the implication of changes in temperature and rainfall to the country's food security and well-being in the coming decades. The precipitation projections for Lesotho are significant and likely to have severe impacts on water resources, rangeland management and agriculture as the growing season is pushed forward and perhaps shortened. Furthermore, climate change might threaten the already declining staple grain production and further degrade rangelands in lowland, foothills and mountain areas.⁸

Climate change will also have detrimental impacts on the watersheds in the country already ravaged by recurrent droughts. This will in particular affect the wetland resources in the alpine zones of the mountain watersheds which sustain the perennial flow of the rivers and supply water to the Lesotho water development projects both in the highlands and lowlands. Moreover, high temperatures, reduced precipitation and climate variability could exacerbate incidences of soil erosion, land degradation and loss of valuable natural resources at watershed scale. The latter would also affect the lifespan and sustainability of the water development infrastructure. However, smallholder and subsistence farmers are even more highly vulnerable to a slight shift in climate variability. Hence building resilience at watershed scale is the first step towards national food security.

There are a number of institutional and systemic barriers to dealing with climate change risks in Lesotho. The NAPA listed inadequate capacity of national and local institutions and communities, and shortage of human resources with requisite skills as some of the major barriers to the implementation of climate change adaptation programmes and practices. Thus there is an urgent need for the strengthening of technical expertise of national and local institutions and communities on climate change adaptation options to effectively respond to climate impacts as well as for evaluating and prioritizing best practices in areas of sustainable land and water management, water harvesting, crop-livestock interactions, agro-forestry and rangeland management.

In an effort to contribute to addressing these technical shortcomings cited in the NAPA and make progress on implementing priority adaptation needs, FAO and the Government of Lesotho have piloted the Technical Cooperation Programme (TCP) "*Strengthening capacity for climate change adaptation in the agriculture sector*" from 2009 to 2011. The overall development goal of the project was to contribute to the reduction of risks associated with climate change and variability among smallholder and subsistence farmers in three selected watersheds covering three livelihood zones in Lesotho. The TCP promoted an integrated and community-based approach in addressing climate change risks through strengthening of technical and institutional capacity at national, district and local levels. The emphasis was mainly on identifying, evaluating, prioritizing and testing locally relevant adaptation practices, focusing on selected areas of crops, livestock and forest-based livelihood systems, to stabilize and improve yields. The TCP, through targeted training strengthened the technical capacity of staff at district and community levels to address these issues.

The TCP was implemented in three districts (Thaba Tseka, Mafeteng and Mohale's Hoek) identified in the NAPA as the most vulnerable to climate change and variability. Rantsimane, a sub-catchment of the Senqu River in Thaba Tseka, represents the vulnerable areas of the mountain ecological and livelihood zones. Thaba-Tšoeu Ha Mafa, a sub-catchment of the Tsoaing River in Mafeteng, is on the transition zone, between the foothills and the mountains. Mabalane, a sub-catchment of the Kolo-La-Pere River in Mohale's Hoek, is in one of the drought prone parts of the southern lowlands of Lesotho. The two lowland sub-catchments also represent the densely populated rural areas of the country. Taken together, these three catchments represent a major

⁷ Personal Communication with Prof. M.V. Marake, National University of Lesotho, 2012.

⁸ Dejene A., S. Midgely, M.V. Marake and S. Ramasamy. 2011. <http://www.fao.org/docrep/014/i2228e/i2228e00.pdf>. FAO Blue Book Series. Rome, Italy.

transect of vulnerability ranging from the southwestern lowlands to the mountain zones of Lesotho, via a transitional site between the southern lowlands and the foothills.

The Programme was structured in three well-defined phases, with planned transitions from one phase to the next. The first phase involved the assessment of climate change related impacts and vulnerabilities on crop, livestock and forest-based livelihood systems in the sub-catchments. Furthermore, baseline studies on local climate-related vulnerabilities and coping and adaptation strategies were conducted, validated at national and local levels, and documented. During the second phase, an inventory of potential suitable adaptation practices (i.e. crops, livestock, crop-livestock interaction and agroforestry) relevant to southern lowland and mountain ecosystems was undertaken, drawing from various sources, with particular focus on the pilot sub-catchments in view of their specific vulnerabilities. These adaptation practices were screened using key criteria, notably: (i) comparison with the list of potential adaptation measures options suggested in the NAPA document; (ii) enhancement of both productivity and ecosystem services, and (iii) capacity to address drought risk management. Finally, field demonstrations were conducted on key potential adaptation practices identified above, for farm level application. All these practices are very well received by the local communities and have a very good potential for up-scaling in the three identified most vulnerable livelihood zones with a holistic perspective of Integrated Watershed Management Programme.

Baseline Programme (co-financing projects). The baseline consists of projects that contribute to broad programmes under the National Action Plan for Food Security (NAPFS) in particular Programme 1 on commercial and household food security which focuses on food production at household level and by commercial farmers; and Programme 2 on natural resource management which focuses on the sustainable use and management of natural resources on which food production depends.

1. The first baseline project is the **Wetlands Restoration and Conservation Project (WRCP)** which is part of a USD 362.5 million Millennium Challenge Account (MCA) Compact. WRCP aims to address, through integrated watershed management, severe degradation of Lesotho's alpine wetlands and enhance rural livelihoods. The wetlands degradation has important impacts on local, national and regional ecological and economic benefits provided by these ecosystems (benefits which include livestock pasture, wild vegetables, biodiversity habitats). The wetlands are major reservoirs of water resources for both the highland and the lowland areas of Lesotho. They support and sustain the flow of rivers including the Senqu-Orange River basin which is shared between Lesotho, Botswana, Namibia and South Africa. Lesotho's revenues from export of water resources to South Africa depend on the conservation of these resources.

WRCP is being implemented in two components: (i) development and implementation of physical wetland restoration designs for selected watersheds in three pilot areas; and (ii) promoting sustainable rural livelihoods with the intention to divert communities' attention from depending solely on livestock rearing, thus addressing widespread overgrazing in pilot sites and enhancing economic wellbeing. In conjunction with these activities in the pilot areas, a broad assessment of Lesotho's wetlands will be done to characterize the environmental, social and economic implications of current land management practices. Results from the pilots and the assessment will inform the development of a nation-wide watershed management and wetlands conservation program.

Climate change and variability have not been taken into consideration in WRCP. As mentioned, climate change will have detrimental impacts on the watersheds in the country already ravaged by recurrent droughts. The programme would not successfully address the wetlands degradation without taking into account the implications of current climate variability and predicted climate change and incorporating measures that build the resilience of both the ecosystems and vulnerable communities that depend on them. Proposed additional activities (see next section) to complement WRCP include: (i) assessment of watersheds vulnerability to climate change; (ii) selection and promotion of climate resilient livelihood strategies and sustainable land and water management practices; (iii) building the capacity of various stakeholders for climate change adaptation.

2. **FAO-supported programme** which at the moment includes emergency projects responding to floods in 2010/2011 and drought in 2011/2012 cropping seasons ("Provision of winter cropping inputs and vegetable seeds in support of vulnerable households affected by excessive rains" and "Strengthening rural livelihoods severely affected by drought in Lesotho") The projects aim to help restore the productive capacity of affected vulnerable households through provision of quality agricultural inputs, and training to extension service staff and affected communities on crop and livestock management practices. These address the immediate needs of the communities to re-start their livelihood activities but do not focus on strengthening the capacity to better plan and respond to future threats. The proposed LDCF activities will target strengthening the capacity to

integrate climate risks considerations into planning and promote the adoption of improved adaptation technology at the community level. The total funding for these projects is USD 1.8 million.

In addition to the emergency projects, FAO is supporting an initiative “Capacity building in agribusiness development” that aims to enhance the capacity of Lesotho National Farmers Union (LENAFU) and the entrepreneurial skills of farmers organizations at national, district and field level in agribusiness management and marketing to enable them to better respond to market opportunities. It also aims to strengthen farmer-to-farmer cooperation and exchange of innovative practices and technologies. This will involve: providing training in leadership management, financial management, group promotion and other critical skills, ensuring active participation of women and other social groups in decision making roles and bodies; training farmer leaders and farmers in agribusiness development and management and to use, manage and adapt improved techniques, technologies and methods, including those related to conservation of natural resources, integrated pest management and appropriate post harvest technologies, storage, processing and marketing. This project presents a very good opportunity to complement the agribusiness training with capacity building on climate resilient practices targeting this important group of stakeholders. Total funding for this project is USD 363 000.

B. 2.: DESCRIBE THE INCREMENTAL/ADDITIONAL COST REASONING: DESCRIBE THE INCREMENTAL (GEF TRUST FUND) OR ADDITIONAL (LDCF/SCCF) ACTIVITIES REQUESTED FOR GEF/LDCF/SCCF FINANCING AND THE ASSOCIATED GLOBAL ENVIRONMENTAL BENEFITS (GEF TRUST FUND) OR ASSOCIATED ADAPTATION BENEFITS (LDCF/SCCF) TO BE DELIVERED BY THE PROJECT:

The country, in particular vulnerable communities dependent on agriculture for their livelihoods are already experiencing the adverse impacts of climate variability and associated extremes – which will be exacerbated by climate change. The proposed additional activities will build the necessary technical capacity for integrating climate change adaptation into programmes and for climate resilient land and water management practices and livelihood strategies. Although the project will target all levels (national, district and community) emphasis will be given to addressing issues at the community level. The project will be implemented in 4 most vulnerable districts following the livelihood-zone approach. The component wise additional LDCF activities and associated adaptation benefits are described below:

Component 1: Strengthening technical capacity of national and district level staff and institutions on sustainable land and water management and diversified livelihoods in selected vulnerable livelihood zones

Baseline: Despite the growing interest by policy makers on issues of climate change, and recognition of the impacts of climate variability and change in some of the new policies, there is still very weak integration of climate risks considerations into the design of programmes and their actual implementation. A good example of this is the baseline wetlands restoration and conservation project (WRCP) which although dealing with ecosystems and communities vulnerable to climate variability and change, has not factored in CC in its design. One of the main reasons is that there is lack of technical knowledge and experience within relevant institutions on how to do this. So, the objective of component 1 is to address this weakness.

Additional Activities: The proposed project will improve technical expertise of national and district level Ministry of Forestry and Land Reclamation, Ministry of Natural Resources, Ministry of Local Government staff and National University of Lesotho on climate change adaptation (CCA) especially focusing on sustainable resource management and conservation and household level livelihood diversification. At national level, at least 160 government staff in relevant line ministries will be trained to strengthen their capacity on CCA, specifically on how to include climate change considerations in decision-making processes and in programmes. At district level, the LDCF project will strengthen the capacities of key government institutions working on CCA issues (directly related to forestry, agriculture, livestock, crops, water resources management, land and rangeland management). The LDCF project will also upgrade development agents’ skills and knowledge on CCA practices through targeted training. In addition, the LDCF resources will be used to train the local representatives from community based organizations (CBOs), Lesotho National Farmers Union (LENAFU) and farmers organizations on adaptation practices and climate-resilient livelihood strategies focusing on crops, livestock and agro-forestry and sustainable land and water management in selected watersheds in three livelihood zones.

Component 2: Assessing vulnerability of livelihoods and impacts of climate change on land suitability and use at watershed scale

Baseline: Lesotho continues to seek innovative ways of assessing and communicating risk information to vulnerable communities in order to meet increasing complexities of the climate system. There are no systematic assessment methods and tools employed to conduct a comprehensive vulnerability and risk assessment at the moment. Current vulnerability and risk information are still too complex to use and are not available in a useful format and content to meet the needs for natural resources management and promoting improved adaptation technologies. For example, prediction of a climate risks and its impacts on livelihoods and natural resources especially land water are rarely linked to direct response mechanism. The knowledge and experience on how to translate climate predictions to specific adaptation actions is missing.

Additional Activities: Risk assessment in different time scales (from seasonal to inter-annual to long-term) may be used to decide on cultivating a specific crop for which the demand is expected to grow following an adverse climatic event. Thus updated vulnerability and risk assessment is critical for making both strategic and tactical decision responses. The LDCF project will focus on improvement of databases, tools and methods for assessment of vulnerability and risks. The assessment will focus on livelihood diversification and land suitability and use. The project will provide training to at least 50 core staff at Ministry of Forestry and Land Reclamation, Ministry of Natural Resources and the Ministry of Agriculture and Food Security which should lead to better interpretation of risk information and translation into adaptation actions. In addition, a comprehensive risk and vulnerability assessment for current and future period will be conducted for the 3 livelihood zones. The LDCF project will build on the FAO Technical Cooperation Programme (TCP) pilot project with a more robust quantitative analysis. The TCP used generalized existing assessments from Lesotho's First National Communication (2000) and NAPA. These assessments were preliminary and indicative, since there had not been comprehensive databases developed in any of the predecessor initiatives. In addition, the LDCF project will carry out a land use and land suitability assessment which was not carried out during the TCP, to bridge a very important gap in Lesotho.

Component 3: Promoting tested Sustainable Land and Water Management (SLM/W) practices to build resilience to climate risks in vulnerable sub-catchments and watersheds

Baseline: Reducing vulnerability and enhancing resilience to climate change in development sectors should consider sustainable management and conservation of natural resources so as to improve access of natural assets by the vulnerable communities. In the baseline interventions there is very little or no emphasis given to climate change and variability impacts. The baseline efforts are not covering climate resilient natural asset management to reduce vulnerability. The objective of this component is to integrate climate-resilient land and water management practices into the baseline initiatives and scale-up best practices.

Additional Activities: The proposed project will introduce and transfer Sustainable Land and Water Management (SLM/W), conservation measures and climate-resilient practices at the community level to enhance adaptation benefits in 24 communities in three livelihood zones. SLM constitutes an effective approach to reduce the need for often costly ex-post coping measures by increasing resilience to the impacts of climate risks, in particular droughts at the plot, farm or even landscape levels. Water conservation techniques, soil management and sustainable range management practices to control soil erosion and enhance resource conservation (e.g. conservation agriculture, zero tillage and other minimum disturbance techniques) will be promoted based on the existing and future climate risks. The project will analyse and propose adjustments to cropping practices and systems applicable at different temporal and spatial scales. Short-term adjustment will explore practices to optimise production without major system changes. These include changes in planting dates and cultivars, changes in external inputs, water conservation and land use management practices. The long-term adjustments or major structural changes may include changes in land allocation, enhancement of irrigation efficiency and changes in farming systems and land use due to farmer's response to the differential crop suitability under climate change.

The proposed LDCF project will also introduce crop varieties tolerant to heat and water stress and better compatibility to new agricultural technologies e.g. crop varieties with higher "harvest index" will help maintain irrigation efficiency under conditions of reduced water supplies or enhanced demands. Crop substitution may be useful also for the conservation of soil moisture e.g. some crops use less water and are more water and heat resistant, so that they tolerate dry weather better than others.

Component 4: Strengthening diversified livelihood strategies and dissemination of improved income generating activities at the community level

Baseline: As mentioned, one of the two main components of the wetlands restoration and conservation project (WRCP) focuses on promoting sustainable rural livelihoods with the intention to divert communities' attention from depending solely on livestock rearing. But, taking into account that livestock rearing is seen by communities as a hedge against recurrent crop failures, agriculture-based livelihood strategies have to be viewed also in the context of current climate variability and anticipated change, in order to determine their viability (e.g. what is their capacity to address drought risk?). Under the TCP pilot a number of options including agro-forestry, horticulture systems etc were successfully demonstrated at a limited scale. These have shown success in enhancing food security at household level. One of the lessons learned during the pilot project is that options such as agroforestry are still poorly understood therefore for successful adoption there has to be extensive training of farmers and extension staff. This is where the emphasis of this component will be – training through field demonstrations.

Additional Activities: The proposed LDCF project will scale-up and disseminate best adaptation practices which have been tested through the TCP pilot through the baseline initiatives and other programmes. These will include: i) agroforestry systems (fodder trees, fruit trees, woodlots etc), irrigated vegetable and horticulture production, iv) beekeeping and v) poultry, pig and small ruminants. These practices provide the heavily agriculture-dependent communities vulnerable to crop failure with better coping capacities to sustain their livelihoods by improving the economic productivity and long-term viability of the local landscape. Alternative livelihood options change the proportion of household income and buffer the impacts of climate change.

With regard to replication and sustainability of results, a strategy will be developed. Also mentioned earlier is that WRCP is embedded within a water resources component of a large investment programme. WRCP is expected to lead to a nation-wide watershed management and wetlands conservation programme. Integrating climate change adaptation into the current project will facilitate incorporation of CC in the future programme and contribute to significant and sustainable adaptation benefits. Replication will also be supported through dissemination of best practices – as part of component 5 below.

Component 5: Dissemination of Best Practices, Project monitoring and evaluation

This component will cover dissemination of best practices, establishment of a monitoring and evaluation system to monitor impact and outcome indicators, including Adaptation Monitoring and Assessment Tool (AMAT) indicators. It will include mid-term and final evaluations.

Adaptation benefits. These include: (i) comprehensive risk and vulnerability information available and institutions have capacities to integrate climate change adaptation into planning, programmes and activities (at least 160 staff from key institutions trained); (ii) target communities are aware of adverse impacts of climate change, and at least 1200 farm households have been trained on and are adopting climate resilient SLMW practices and livelihood strategies; (iii) increased food production in target communities. Precise indicators and targets (including AMAT indicators) will be defined during project preparation.

B.3. DESCRIBE THE SOCIOECONOMIC BENEFITS TO BE DELIVERED BY THE PROJECT AT THE NATIONAL AND LOCAL LEVELS, INCLUDING CONSIDERATION OF GENDER DIMENSIONS, AND HOW THESE WILL SUPPORT THE ACHIEVEMENT OF GLOBAL ENVIRONMENT BENEFITS (GEF TRUST FUND) OR ADAPTATION BENEFITS (LDCF/SCCF). AS A BACKGROUND INFORMATION, READ “MAINSTREAMING GENDER AT THE GEF”:

At the village level, community-based participatory approaches employed through this LDCF will improve the gender equality, social inclusion, equity and empowerment through increased participation of women and socially disadvantaged groups such as poor communities (men and women) towards adoption of climate-resilient practices. The over-burdening and drudgery of works for women with respect to fetching of water for household needs and fodder for livestock will be improved by the project interventions.

The LDCF project will lead to socio-economic empowerment of women and socially disadvantaged communities on climate change adaptation. It will increase ownership of men and women in the project activities through their equal participation. The expected socio-economic and adaptation benefits from the

project will be the reduction in huge recurrent economic damages or losses in disaster-prone areas and the changes in the socio-economic status of the vulnerable communities. The ultimate improvement of farm outputs and productivity will improve the economic condition of the local communities that will ultimately lead to vulnerability reduction and achievement of adaptation benefits. At the national level, the project funding will enable the Ministry of Forestry and Land Reclamation, Ministry of Agriculture and Food Security and Ministry of Natural Resources to upscale the national priorities on climate change adaptation through its departments at district level.

B.4 INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS THAT MIGHT PREVENT THE PROJECT OBJECTIVES FROM BEING ACHIEVED, AND IF POSSIBLE, PROPOSE MEASURES THAT ADDRESS THESE RISKS TO BE FURTHER DEVELOPED DURING THE PROJECT DESIGN:

Risks anticipated during the project implementation and critical mitigation actions have been considered to facilitate effective planning and reduce any adverse impact on the performance of the project. In this project, there are four major potential risks identified. These are outlined in the matrix below:

Risk	Impact	Probability	Mitigation
Institutional conflicts over ownership of the project	Slow down of project implementation and jeopardize integration of relevant experiences into national programmes	L	The project formulation process has secured the understanding and commitment to establish a Steering Committee of key relevant line Ministries (i.e. MFLR and MAFS and local government), Meteorological Services, Disaster Management Authority at both national and district levels in order to ensure effective coordination and participatory decision-making.
Political interference in selection of project site and beneficiaries	Alienating sections of the community resulting in low participation	L	Intensive consultation with all relevant Ministries and agencies at the national level in the prioritization of the most vulnerable zones to climate change. Further consultation and consensus with all the relevant stakeholders at the district level, the District Administrator and local government structures for the identification of pilot sites at watershed and catchment level.
Highly fragile environment for intensifying crop and livestock production	High-risk aversion to innovations among subsistence farmers and herders and high vulnerability to climate-related hazard	M	Building resilience of local ecosystem and ensuring stability in yields with little or no expansion on cropland or pasture land and optimal use of chemicals and fertilizer. Reducing vulnerability through reliance on improved farming practices, improved natural resources management including erosion control, micro-scale water control, pasture and fodder management, agroforestry and diversification of livelihood options.
Conflicts in the management of communally owned resources	Could lead to low interest in participation and failure of communally implemented innovations/practice.	M	Participatory approach in decision-making and building community consensus at the initial stage including some training on conflict management of common resources.

B.5 IDENTIFY KEY STAKEHOLDERS INVOLVED IN THE PROJECT INCLUDING THE PRIVATE SECTOR, NGOS, CIVIL SOCIETY ORGANIZATIONS, LOCAL AND INDIGENOUS COMMUNITIES, AND THEIR RESPECTIVE ROLES, AS APPLICABLE:

The MFLR will be the National Focal Point in facilitating the implementation of the Project. In this capacity it will work closely with the relevant departments of the Ministry of Agriculture and Food Security (MAFS), Ministry of Energy, Water and Meteorology and Department of Environment and the Disaster Management

Authority (DMA) and the National University of Lesotho. The National Project Steering Committee (NPSC) constituted as part of the Technical Cooperation Project (TCP) funded by FAO with representatives of the above-mentioned line ministries chaired by the Principal Secretary of MFLR will be sustained through the proposed LDCF. The collaborating ministries and/or departments shall be represented in the NPSC by ranking officers of at least a director-level position to expedite consultation and authoritative decision-making. The NPSC will be responsible for reviewing overall progress of the Project and provide the administrative decision-making to overcome constraints during implementation.

The district level protocols for implementation will be made in consultation with the district authorities and community based organizations at the local level. The district structures will oversee the day-to-day activities of the project and provide overall guidance on the implementation of the project activities. The key stakeholders and beneficiaries of the LDCF include:

- the direct beneficiaries will be approximately 3 000 rural households living in three selected catchments covering lowland, mountain and foothills livelihood zones identified as highly vulnerable by the NAPA process. An additional 1 500 to 2 000 rural households could be indirect beneficiaries;
- a team of technical staff drawn from the Ministry of Forestry and Land Reclamation, the Ministry of Agriculture and Food Security, the Ministry of Energy, Water and Meteorology, Department of Crops, Department of Livestock, Lesotho Meteorological Services, Department of Rural Water Supply, Department of Water Affairs, Agricultural Research Department and the Disaster Management authority will be trained and will play a catalytic role to implement the project and scale-up the activities to the similar areas in the country and ensure sustainability;
- the relevant government agencies in the three selected districts (Mohale's Hoek, Mafeteng and Thaba-Tseka) will benefit from enhanced capacity in addressing location-specific climate change risks and development of alternative adaptation options. In these districts, local authorities and communities will be trained;
- National University of Lesotho will be engaged to provide improved risk reduction and adaptation practices. This will facilitate effective research and development linkages.
- bilateral and multilateral agencies and NGOs (E.g. OXFAM) working in agriculture and food security and natural resources management would have access to evaluated tools and methods including the information and knowledge on impacts, vulnerabilities and adaptation practices.

B.6. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

The project will build on the lessons learned from FAO-supported TCP pilot project "Strengthening capacity for climate change adaptation in the agricultural sector" that focused on building the capacity of farmers to better respond to climate change impacts and increase food security. The project focused on subsistence farmers and has fostered the linkages between Government and Non Governmental Organizations. Several successfully tested adaptation practices will be scaled-up through this LDCF project.

The proposed project will closely work with the UNDP/LDCF and IFAD/LDCF projects as this is important for exchanging lessons and avoiding any duplication. These include the IFAD-managed *"Adaptation of Small-scale Agriculture Production (ASAP)"* which is under preparation and *"Reducing vulnerability from climate change in the Foothills, Lowlands and the lower Senqu River Basin"* proposal recently submitted by UNDP.

The IFAD LDCF project will incorporate adaptation into the Smallholder Agriculture Development Programme which supports commercialization of Lesotho's agriculture. The programme will focus on smallholder farmers who are already engaged in market-oriented production or have good potential to become commercially active. The nature of the agricultural sector in Lesotho at the moment is such that the majority of farmers/households are subsistence farmers (about 90% as mentioned in earlier sections) producing mainly for household consumption with little surplus for the market. And this group of stakeholders will be the main target of the proposed LDCF project. The projects will be complementary, one contributing to the commercial agriculture sub-programme of the National Action Plan for Food Security and the other to the 'household' food security sub-programme.

The focus of the UNDP-led proposal (which builds on the land rehabilitation programme of the Ministry of Forestry and Land Reclamation – MFLR) is on strengthening the tools and capacity of MFLR (at national and constituency/district level) for mainstreaming climate change adaptation into land rehabilitation (the main tool

being a geo-based agro-ecological and hydrological information system), implementation of climate-smart land rehabilitation pilots and mainstreaming CCA into national land management strategies.

These projects will be implemented or involve more or less the same Ministries and departments which provides an opportunity for coordination but also a risk of duplication. So an inter-institutional coordination arrangement will have to be agreed between the concerned Ministries, FAO, UNDP and IFAD. This will be established during project preparation. There will have to be strong interaction particularly between FAO and UNDP supported teams during preparation of these projects.

The project will build on lessons learned from other past and ongoing projects, including: the IFAD-supported SANREMP project that strongly focuses on natural resource management and economic agricultural activities; and the "Health, Economic and Agriculture Livelihood training for Households in the Senqu River Valley-HEALTH SRV Project" that aimed to improve the capacity of vulnerable rural households to cope with recurrent drought through improved agricultural production systems.

Coordination arrangement will be established with the activities supported by the Government of Lesotho under the Disaster Risk reduction funds provided by the Government of Japan. Specific collaboration arrangement will be established with programmes and projects under UNDP's Environment and Energy unit. These include GEF funded projects on Sustainable Land Management and Lesotho Renewable Energy-Based Rural Electrification, and Japanese funded Africa Adaptation Programme. The two projects are implemented through the Ministry of Forestry and Land Reclamation and the Ministry of Natural Resources. The project will also explore the merits and will look at the possible lessons learnt from the African Monitoring of Environment for Sustainable Development (AMESD) Programme - a partnership pan- African programme between the African Union Commission (AUC) and the European Union (EU).

C. DESCRIBE YOUR AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

FAO has been implementing several projects in Lesotho in the field of agriculture, food security, disaster preparedness and emergency response. FAO's comparative advantage for the proposed project lies in its long-standing experiences working with the Ministry of Agriculture and Food Security and Ministry of Forestry and Land Reclamation on issues related to climate variability and climate change.

The project draws on lessons learned from a project on "Strengthening Capacity for Climate Change Adaptation in Agriculture" technically assisted by FAO to the Government of Lesotho⁹. Through this project, FAO has supported identification of viable adaptation options in agriculture. The project included development of technical and institutional capacity, and adaptation practices in three districts. Several FAO's ongoing and pipeline programmes are complementary to the proposed project and will build on already established institutional systems.

FAO's activities are guided by a clear targeting policy which ensures that they reach poor rural women and men, who are usually the most vulnerable to climate change. FAO's operations are consistent with the national priorities especially on sustainable agriculture and food security. The proposed project matches with the FAO's comparative advantage in capacity development in agriculture sector. FAO has been supporting Lesotho's efforts to develop more resilient agriculture systems and national food security strategies. Technical support will be provided locally from the national level expertise and also from the decentralized offices in the region and from the headquarters.

C.1 INDICATE THE CO-FINANCING AMOUNT THE AGENCY IS BRINGING TO THE PROJECT:

The GEF agency aims to bring co-financing through the on-going and pipeline projects. The indicative co-financing by the GEF agency to the proposed project in terms of budget is as follows:

⁹ Dejene A., S. Midgely, M.V. Marake and S. Ramasamy. 2011. Strengthening Capacity for Climate Change Adaptation in Agriculture: Experience and Lessons from Lesotho. FAO Blue Book Series. Rome, Italy. Weblink: <http://www.fao.org/docrep/014/i2228e/i2228e00.pdf>

- Strengthening Rural Livelihoods Severely Affected by Climate Change-Induced Drought in Lesotho. Co-financing - USD 633,226.
- Provision of winter cropping inputs and vegetable seeds in support of the vulnerable household affected by last year's excessive rains – Sources of funding, Belgium . Co-financing USD 1,200,000.
- Technical support for strengthening Lesotho National Farmers Union – source of funding, FAO Technical Cooperation Programme. Co-Financing USD 200,000

C.2 HOW DOES THE PROJECT FIT INTO THE GEF AGENCY'S PROGRAM (REFLECTED IN DOCUMENTS SUCH AS UNDAF, CAS, ETC.) AND STAFF CAPACITY IN THE COUNTRY TO FOLLOW UP PROJECT IMPLEMENTATION:

The project is directly related to FAO's strategic objective F (sustainable management of land, water and genetic resources and improved response to global environmental challenges affecting food and agriculture) and organizational results F5 (countries have strengthened capacities to address emerging environmental challenges such as climate change and bioenergy). The project integrates FAO's core functions encompassing elements such as monitoring, assessments, knowledge and information, policy advice, capacity building, communication, interdisciplinary approach and partnerships. The proposed project also contributes to strategic objectives A (reducing food insecurity and rural poverty), D (conserving and enhancing sustainable use of the natural resources base) and E (improving decision making through provision of information and assessments).

The UNDAF (2008-2012)¹⁰ identified four MDG-based outcomes for Lesotho. One of the UNDAF outcomes for which FAO has been actively involved is "increased employment, household food security and enhanced natural resources management". The proposed LDCF project will directly contribute to this outcome.

From the FAO perspective, food security is considered as a necessary pillar of climate change adaptation. FAO is best placed to provide the relevant multidisciplinary approach and divergent technical guidance necessary to analyze different vulnerable food systems to impacts of climate variability and change that enables designing adaptation practices. FAO is able to provide normative and field level support to this project through technical staff in headquarters and decentralized offices.

FAO possesses demonstrated experience and capability to provide technical assistance to the Government especially in agriculture sector focusing on climate change adaptation. This includes technical assistance, data analysis, and demonstration of adaptation practices, community mobilization, project management, monitoring, evaluation and follow-up of the project. The Lesotho is staffed with 4 technical staff working on various programmes linked to the proposed project. Two of these staff are under the FAO regular programme while the other are employed under the Emergency and Rehabilitation programme with special focus on disaster risk reduction. In addition to the staff in the country office, the proposed project will be supported and technically advised by the Climate, Energy and Tenure Division (NRC), from FAO Headquarters.

¹⁰ United Nations Development Assistance Framework for Lesotho 2008-2012, UNDP 2007.

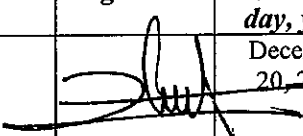
PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY (IES)

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the country endorsement letter(s) or regional endorsement letter(s) with this template).

NAME	POSITION	MINISTRY	DATE (Month, day, year)
Mr. Stanley M. Damane	Director, National Environment Secretariat	MINISTRY OF TOURISM, ENVIRONMENT AND CULTURE	JULY, 2, 2012

B. GEF AGENCY (IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.

Agency Coordinator, Agency name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
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