Ireland's Bilateral Climate Finance Lesotho - 2013 Report

The mountain Kingdom of Lesotho is a landlocked country of 30,355 square kilometres with a population of almost 2.1 million. Climate change has already impacted the water sector in Lesotho whereby perennial springs have run dry and subsistence farming is in decline due to recurring droughts (MNR, 2007). Recent reports from the Ministry of Energy, Meteorology and Water Affairs (MEMWA), Lesotho indicate that there has been a 0.7ºC degrees increase in seasonal mean temperature and there is a projected increase of 1.78-2.2ºC degrees by 2060 in many areas of Lesotho (MEMWA, 2013). In 2013, Ireland provided a total of €500,000 in climate finance to Lesotho.

Lesotho

Country Statistics	
Population[1]	2,074,465
Income per capita[2]	$2,798
HDI Rank[3]	162nd
Vulnerability Rank[4]	37th
Extreme Events Rank[5]	127th

Map of Lesotho, Irish Aid

1 Population in 2013: World Bank (2014) http://data.worldbank.org/indicator/SP.POP.TOTL Available at 26th July 2014.

2 Gross National Income per capita in 2013, 2011$ PPP; UNDP (2014) International Human Development Indicators; http://hdr.undp.org/en/countries Available at 26th July 2014.

3 *Ibid*, Rank out of 187 countries.

4 ND GAIN (2013) http://index.gain.org/ranking Available at 20th June 2014. The rank quoted is an inversion of the ND GAIN vulnerability index which gives a higher rank to the least vulnerable. We have inverted so that 1st place is most vulnerable and 183rd place is least vulnerable.

5 Average over 1993-2012. Higher rank denotes greater losses from extreme events; Germanwatch (2014); Global Climate Risk Index 2014, http://germanwatch.org/en/download/8551.pdf Available at 20th June 2014

Woman working in her keyhole garden, Lesotho.
Matela Thabane, 2012

	Bilateral Programme 2013 EUR[6]
Climate Finance; Adaptation[7] (UNFCCC)	€500,000
Climate Finance; Mitigation[8] (UNFCCC)	€425,000
UN Convention on Biological Diversity (UNCBD)	€75,000
UN Combat Desertification and Degradation (UNCCD)	€75,000
Disaster Risk Reduction (DRR) (UNISDR)	0

6 These figures should not be aggregated as some disbursements have multiple co-benefits and are therefore marked for multiple environmental impacts. Total climate finance in 2013 is €500,000.

7 Climate relevant disbursements where the principal climate marker is applied are counted at 100% whereas climate relevant activities to which the significant marker is applied are discounted by a coefficient factor of 50%. The principal marker indicates that the specified cross-cutting theme, in this case, climate adaptation, was a main objective of the activity. It implies that the activity may not have gone ahead if not for the climate dimension. The significant marker indicates that the activity had other principle objectives which were the focus of the activity but that co-benefits were planned or mainstreamed into the activity. The application of the 50% coefficient to significant expenditures is a proxy representation of this lesser role of the environmental dimension in the disbursed amount

8 As above.

Lesotho, Climate Change and the UN Framework Convention on Climate Change (UNFCCC)

Lesotho is a member of the Least Developed Countries' Group. Lesotho holds a seat on the UNFCCC COP Bureau and is a member of the LDC Expert Group (LEG).

Recent Climate Trends

Though average annual temperature is highly variable year to year, a significant increasing trend is observable. Over the period 1970 to 2000 the total temperature increase is $0.7^{O}C$ (MEMWA, 2013). The National Adaptation Programme of Action (NAPA) of Lesotho also makes observations on recent climate change in Lesotho in 2007. Climate change had already impacted the water sector in Lesotho by 2007. Perennial springs have run dry and previously robust rivers have been greatly diminished and many dams remain dry for most of the year. Subsistence farming, a major source of living in rural areas, is in steady decline due to recurring droughts. This has lead to steep decline in production e.g. maize yields have fallen from 1,400kg per hectare to 450-500kg per hectare in 2007. Livestock farming has also been impacted with chronic drought limiting the carrying capacity of pastoral lands (MNR, 2007).

Projections of Future Climate

For the purposes of climate modelling, Lesotho was split into two regions, a northern and southern region with the northern region covering by far the larger area. Temperature was projected on an annual basis and rainfall on a seasonal basis. The average annual temperature for Lesotho is projected to increase by $1.78\text{-}2.2^{O}C$ by 2060. Most scenarios show that rainfall in northern region is projected to increase significantly in the March - May period up to 2100 with potentially noticeable changes already by 2050. A much smaller increase is projected by 2100 for the same season in the southern region. All the scenarios project decreases in rainfall for the Northern region over the June - August period by 2100 with changes potentially noticeable by 2040 (MEMWA, 2013).

Adaptation

As a Least Developed Country, Lesotho produced a National Adaptation Plan of Action (NAPA) in 2007 (MNR, 2007). The NAPA documents national circumstances, vulnerabilities, and expected impacts from climate change in Lesotho. The NAPA also outlines the consultation, resources and information that were used to prioritise adaptation interventions. Lesotho produced its Second National Communication (SNC) to the UNFCCC in November 2013. It includes country circumstances, greenhouse gas inventory, impacts and vulnerability and national climate policies for mitigation, adaptation, research and observations, and public education (MEMWA, 2013).

The Lesotho economy is largely dependent on climate with water being a key economic sector both as an energy source and as an export to South Africa. Agriculture, though only 10% of GDP, provides subsistence for the majority of households. More than 95% of electricity consumed in Lesotho is from hydro-power (MEMWA, 2013). Climate change in Lesotho is expected to exacerbate existing environmental stresses such as drought, land degradation and loss of biodiversity and thus undermine sustainable development efforts. Lesotho can be divided into four distinct geographical regions with associated variation in typical livelihoods; the lowlands (17% of land area), foothills (15%), mountains (59%) and the Senqu river valley (9%). The Senqu river valley lowlands are the most vulnerable to climate change with a population of mostly peasant subsistence farmers, livestock farmers and destitute households with no means (MNR, 2007).

In agriculture, projected changes in rainfall by mid-century are expected to impact positively on yields of maize, sorghum and wheat, though increased incidence of fungal disease may offset this. The changes are expected to impact negatively on yields of crops such as beans, cucurbits and winter wheat. Increases in temperature in the southern region are expected to impact negatively on agricultural productivity. Soil quality and livestock productivity is expected to be negatively impacted through changes in the hydrological cycle causing dry spells, droughts and flash floods. This will lead to reduced grass and vegetation cover due to a shortened growing season, thus also affecting soil moisture content and increasing soil erosion (MEMWA, 2013).

As part of the process to develop its NAPA, Lesotho conducted participatory vulnerability assessments and stakeholder consultations to identify, screen and prioritise adaptation options. Eleven adaptation projects for Lesotho were identified by the NAPA and ranked in order of priority as follows;

1. Improve Resilience of Livestock Production Systems Under Extreme Climatic Conditions in Various Livelihood Zones in Lesotho
2. Promoting Sustainable Crop Based Livelihood Systems in Foothills, Lowlands and Senqu River Valley
3. Capacity Building and Policy Reform to Integrate Climate Change in Sectoral Development Plans
4. Improvement of an Early Warning System Against Climate Induced Disasters and Hazards
5. Securing Village Water Supply for Communities in the Southern Lowlands
6. Management and Reclamation of Degraded and Eroded Land in the Flood Prone Areas (Pilot Project for Western Lowlands)

7. Conservation and Rehabilitation of Degraded Wetlands in the Mountain Areas of Lesotho
8. Improvement of Community Food Security Through the Promotion of Food Processing and Preservation Technologies
9. Strengthening and stabilizing eco-tourism based rural livelihoods
10. Promote Wind, Solar and Biogas Energy Use as a Supplement to Hydropower Energy
11. Stabilizing Community Livelihoods which are Adversely Affected by Climate Change Through Improvement of Small Scale Industries (MNR, 2007)

At time of publication of the SNC in 2013, priorities (3) and (4) were under implementation through a project entitled "Improvement of Early Warning System to Reduce Impacts of Climate Change and Capacity Building to Integrate Climate Change into Development Plans (IEWS)" which started in 2011.

Resources:

IPCC 5th Assessment Report (2014); Working Group II Impacts, Adaptation and Vulnerability: http://ipcc-wg2.gov/AR5/ [Accessed 18 July 2014].

McSweeney, C., New, M. & Lizcano, G. (2010); UNDP Climate Change Country Profiles: South Africa. http://country-profiles.geog.ox.ac.uk [Accessed 18 July 2014].

Ministry of Energy, Meteorology and Water Affairs, Lesotho (2013); Second National Communication of Lesotho to the UNFCCC; http://unfccc.int/resource/docs/natc/lsonc2.pdf [Accessed 18 July 2014].

Ministry of Natural Resources, Lesotho (2007); National Adaptation Programme of Action (NAPA); http://unfccc.int/resource/docs/napa/lso01.pdf [Accessed 18 July 2014].

Lesotho & the UN Convention on Biological Diversity (UNCBD)

The collection of data on wild biodiversity and wild species has been largely dependent on international support as government efforts concentrate on agricultural biodiversity. As of 2009 and on publication of the Fourth National Report by Lesotho to the UNCBD, available data does not allow an accurate understanding of the status or trends of wild flora and fauna species populations.

Lesotho has three natural habitat zones; highveld, afromontane and afroalpine grasslands with some wetland areas and limited patches of forestry across these habitat zones. Vegetation generally has suffered decline due to over-grazing, over-harvesting, uncontrolled fire, encroachment by settlements and cultivation, invasive species and pollution. Siltation and drying up of rivers, increased aridity and disappearance of wetlands and marshlands, soil erosion, land degradation and diminished vegetation all impact on habitat quality. This decline in habitat quality has effected birds species, including vultures. However, afforestation, driven by demand for timber and wood, has had a co-benefit of providing new habitat for some bird populations. Lesotho historically had large mammals. Establishment of protected areas, particularly on the eastern border with South Africa has allowed some species of antelope such as eland and oribi, extinct in Lesotho since 2005, to occasionally migrate into the country. However, permanent breeding populations have not been established. Mammal biodiversity is generally in decline. Reptiles and fish species are also experiencing decline.

Since becoming a Party to the UNCBD, Lesotho has initiated protected areas networks as a conservation strategy with some degree of success but only in slowing the rate of decline (DoE, 2009). The National Biodiversity Strategy and Action Plan (NBSAP) set the following goals for Lesotho;

- Conserve the diversity of landscapes, ecosystems, habitat, populations, species and genes in Lesotho,
- Attain sustainable use of Lesotho's biological resources and minimize adverse impacts.
- Attain a fair and equitable sharing of benefits arising from the use of genetic resources.
- Expand Lesotho's capacity to conserve and manage biodiversity.
- Create conditions and incentives for biodiversity conservation and sustainable use
- Manage biodiversity through international linkages

The NBSAP also identified the following priority activities for Lesotho to further the achievement of its goals;

1. Identification of biological diversity components through research and compile inventories to improve biodiversity conservation.
2. Identification of processes likely to threaten Lesotho's biodiversity.
3. Identify and implement strategies that ensure sustainable conservation of biodiversity components (PAs, RMAs, ERMAs, Botanical gardens, Maboella).
4. Strengthening of legal measures.
5. Develop human resources and improve the skills required for biodiversity management.

6. Increase participation of rural households in forest activities through their own initiatives, for their own purposes and under their own control.
7. Identify and enhance management of Lesotho's unique wetland systems.
8. Reform agricultural practices in Lesotho, manage and constrain human activities that are responsible for destruction of biodiversity.
9. Perform Environmental Impact Studies prior to implementation of activities that are likely to affect biological diversity adversely.
10. Establish measures of benefit sharing.
11. Develop material incentive program to change peoples' behavior so that future land title holders make appropriate conservation decisions.
12. Engage in international strategies that facilitate security of national and regional biodiversity components

Resources:

UNCBD Country Profile: http://www.cbd.int/countries/?country=ls (Accessed July 18th, 2014)

Dept. of Environment, Lesotho (2009); 4th National Report to the UNCBD; http://www.cbd.int/doc/world/zm/zm-nr-04-en.pdf (Accessed July 18th, 2014)

National Environment Secretariat, Lesotho (2000); National Biodiversity Strategy and Action Plan; http://www.cbd.int/doc/world/ls/ls-nbsap-01-en.pdf (Accessed July 18th, 2014)

Mothunyane Motsoteng demonstrating how the keyhole gardens work, S Mclean 2013

Lesotho & the UN Convention to Combat Desertification (UNCCD)

In Lesotho, desertification is understood as a bio-physical land degradation phenomenon which manifests as loss of biological productivity resulting from *inter alia* over-exploitation and mismanagement of the natural resource base of e.g. water, soil, or land, and land degradation resulting from excessive soil loss, depletion of pastures, loss of soil fertility, and loss of water holding capacity of soils (Pomela, 2000). The FAO described Lesotho farmland as suffering acute soil depletion and erosion (FAO, 2014). Dry winters with no vegetation growth favour conditions for erosive early spring rains. Over-cultivation and over-grazing are common. Lesotho submitted its National Action Programme under the UNCCD in 2000. It was developed through a process of research and national and district level consultations. The NAP identified the following programme areas for Lesotho with associated objectives and activities;

1. Equity, Poverty Alleviation, Solidarity & Participation
2. Technical Measures to Alleviate the Pressures on the Natural Resources Base
3. Institutions, Organisation and Instrumentation
4. Knowledge Support, Learning and Communication
5. Drought Preparedness and Drought Relief Schemes.

Further detail on these programme areas and their associated objectives and activities is available in the NAP (Pomela, 1999).

More recently, the Second National Communication (SNC) of Lesotho to the UNFCCC also addressed soil degradation. Soil degradation is both negatively impacted by climate change and also itself contributes to climate change. Increased temperatures leading to reduced vegetation growth leave soil vulnerable to erosion. Increased extreme rainfall events will also contribute to soil erosion. The SNC recommends that adaptation to potential impact of soil to erosion should include programmes that improve land cover such as afforestation and re-grassing, conservation agriculture, resting of arable land and rotation of cereal crops with fodder. There will be a need to improve breeds of livestock and to introduce breeds that are adapted to the new climatic conditions. Appropriate numbers of stocking rates should also be maintained.

Resources:

UNCCD (2014); Lesotho Country Profile Online: http://www.unccd.int/en/regional-access/Pages/countries.aspx?place=125 Accessed July 18th, 2014.

Pomela, Emmanuel Motebang (1999); National Action Program under the UNCCD; National Environment Secretariat, Lesotho; http://www.unccd.int/en/regional-access/Pages/countrydetail.aspx?place=125&ctx=nap&reportType=national Accessed July 18th, 2014.

FAO (2014); ISFP Country Profile; Lesotho: [Online] http://www.fao.org/isfp/country-information/lesotho/en/

Farmers standing with their crops, Jeff Barbee, 2009

Key Partner Country's Bilateral Projects and Programmes

Food Security and Livelihoods Sector, Catholic Relief Services

This aims to improve food production and nutrition awareness, as well as resilience to future food crises, at the household and community level. It includes the provision of agricultural inputs and training in conservation agriculture, as well as vouchers for work activities such as construction or rehabilitation of community infrastructure. In supporting conservation agriculture this programme supports climate mitigation. Its support for resilience to future food crises and for work to rehabilitate community infrastructure contributes to adaptation to climate change. The programme is marked as significant for both adaptation and mitigation and is thus counted at 50% towards climate finance.

Programme Support, Outcome 2, Objective C

Outcome 2 is described as "improved health and livelihoods for people affected and infected by HIV and AIDS". Outcome 2 includes an objective C "to enhance communities' capacity [for] climate change adaption and undertake sustainable agricultural practices". Activities supported under this objective include Lesotho Food Security Relief and Resilience Programme (LFSRP) implemented by the Catholic Relief Services, and Families Unite for Livelihoods in Lesotho Programme (FULL). These supported conservation agriculture, distributed seed to vulnerable families and invested in community assets to protect natural resources. As activities under objective C are aimed primarily at climate change adaptation with sustainable agriculture, this is programme is marked as 'principal' for climate adaptation and is counted at 100% towards climate finance. In promotion of conservation agriculture and in protecting natural resources this activity is marked as 'significant' in its contribution to the objectives of the UN Convention on Biological Diversity. It is thus counted at 50% towards mitigation and biodiversity finance respectively.

Irish Aid Funding of Relevant CSO Activities in Lesotho

Irish Aid programme partner civil society organisations did not support environment relevant activities in Lesotho in 2013.

Mapping of Bilateral Expenditure

	Description	2013 Actual	2014	ENV	CBD	CC Mit	CC Ad	CCD	Agri	DRR	CB	TT	REDD
1	Food Security and Livelihoods Sector, Catholic Relief Services	700,000	350,000	1	0	1	1	0	1	0	0	0	0
2	Programme support - Outcome 2	150,000	150,000	0	0	1	2	0	1	0	0	0	0

Significant versus Principle Markers

The OECD DAC Rio Markers and the anticipated Disaster Risk Management Rio Markers work on a three-score system. Activities can be identified with;

- Principal marker of 2
- Significant marker of 1
- Or not targeted; 0.

The choice of principle, significant or not-targeted relates to hierarchy of objectives, goals and intended outcomes in the programme or project design. A principle marker is applied if the marker policy is one of the principle objectives of the activity and has a profound impact on the design of the activity. A significant marker is applied if the marker policy is a secondary objective, or a planned co-benefit, in the programme or project design. The zero marker is applied to show that the marker policy was not targeted in the programme or project design. If this is unknown, the marker is left blank.