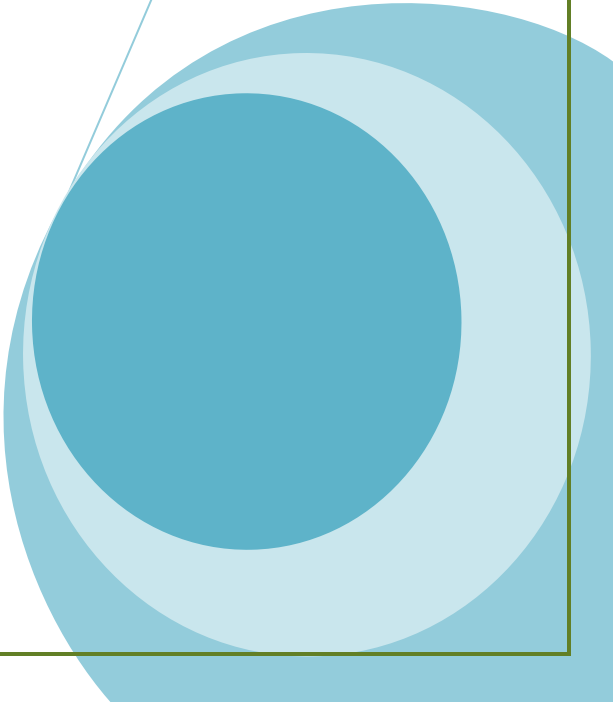




## **Ireland's Bilateral Climate Finance Liberia - 2013 Report**

Situated in West Africa, Liberia has a current population of over four million people. Liberia in 2014 is going through a period of immense change as it makes the transition towards stability and democracy. Liberia has already experienced climate change with an annual temperature increase of 0.8C degrees since 1960. Further increases in temperature between 0.9 to 2.6C degrees are projected by 2060 (McSweeney et al, 2010). Liberia's entire meteorological and hydrological capability was destroyed during the second civil war and the rebuilding of this capability is included in Liberia's National Adaptation Plan of Action. Ireland has supported Liberia through Concern with relevance to disaster risk reduction and climate adaptation in 2013.



# Liberia

## Country Statistics

Population<sup>1</sup> 4,294,077

Income per capita<sup>2</sup> \$752

HDI Rank<sup>3</sup> 175<sup>th</sup>

Vulnerability Rank<sup>4</sup> 7<sup>th</sup>

Extreme Events Rank<sup>5</sup> 170<sup>th</sup>



Political Map of Liberia, [www.nationsonline.org](http://www.nationsonline.org), 2014

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

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

<b>Bilateral Programme 2013 EUR</b>	
<b>Climate Finance; Adaptation (UNFCCC)<sup>6</sup></b>	0
<b>Climate Finance; Mitigation (UNFCCC)</b>	0
<b>UN Convention on Biological Diversity (UNCBD)</b>	0
<b>UN Combat Desertification and Degradation (UNCCD)</b>	0
<b>Disaster Risk Reduction (DRR) (UNISDR)</b>	0
<b>Irish Aid Support for Irish Civil Society Programme Partners in Liberia</b>	420,000



At a Farmer's Exchange Day in September 2013 in partnership with the Irish Embassy in Liberia, words for climate change in local dialects were created, All Africa, 2013

<sup>6</sup>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.

## **Liberia, Climate Change and the UN Framework Convention on Climate Change**

Liberia is a member of the Least Developed Countries Group in the UNFCCC.

### **Recent Climate Trends in Liberia**

Average annual temperature has increased by 0.8°C since 1960. Data is limited. Available data shows significantly increasing trends in the frequency of ‘hot’ nights but no increase in the number of ‘hot’ days. Average annual rainfall over Liberia has decreased since 1960 but it is difficult to determine whether this is part of a long term trend because of the variable nature of rainfall in this region. There are insufficient daily rainfall observations available from which to determine changes in extremes (or heavy rainfall events) of daily rainfall (McSweeney et al, 2010).

### **Projections of Future Climate in Liberia**

The average annual temperature is projected to increase by 0.9 to 2.6°C by the 2060s. The projected rate of warming is more rapid in northern inland regions than the coastal regions. All projections indicate substantial increases in the frequency of days and nights that are considered ‘hot’ in the current climate. Projections of average annual rainfall vary over different models but tend towards overall increases particularly in the latter half of the year (McSweeney et al, 2010). Regional model studies suggest an increase in the number of extreme rainfall days over West Africa. Seasonally this varies between tendencies for decrease in January to March and for increase in the latter half of the year.

Coastal countries of West Africa will experience a significant negative impact from climate change. In coastal West African countries, the frequency and duration of cholera outbreaks are associated with heavy rainfall. Thus climate change could possibly lead to more frequent cholera outbreaks in the sub-regions affected. However, further research is needed to quantify the climatic impacts (IPCC, 2014). West African fisheries mainly depend on coastal upwelling. These ecosystems will be affected by climate change through ocean acidification, a rise in sea surface temperatures, and changes in upwelling. For some scenarios, the IPCC notes projections of a 21% decline in the annual landed value for fish by 2050 resulting in a nearly 50% decline in fisheries-related employment and a total annual loss of US\$ 311 million to the region’s economy (IPCC, 2014).

### **Adaptation**

Liberia produced a National Adaptation Plan of Action (NAPA) in 2008. The NAPA National Steering Committee was chaired by the Ministry for Lands, Mines and Energy and the report was produced by the Environmental Protection Agency. The NAPA explicitly accounts for synergies with the National Reconstruction and Development Plan and the National Biodiversity and Strategy Action Plan. The process to develop the NAPA included inter alia engagement with Civil Society Organisations, women’s groups, indigenous peoples and national and international NGOs.

The NAPA identifies a number of developmental challenges for Liberia from climate change including; degradation of agricultural lands and the loss of biodiversity, putting smallholder households at risk; the absence of an effective early warning system (i.e. a system of meteorological stations) that could allow farmers and other stakeholders to make informed decisions; and coastal erosion mainly in low-lying areas such as the urban centres of Robertsport, Monrovia, Buchanan and Cestos. It notes that already in 2008 the economic sectors of agriculture, fisheries, forestry, energy health and meteorology/hydrology had experienced reduced productivity linked to changing climatic patterns. Changes in rainfall patterns increased the vulnerability of farmers due to difficulties in identifying optimal times for planting. Rainfall changes have also resulted in more pests, weeds and animal diseases. In forestry, longer periods of rain lead to slower tree growth and have resulted in the death of certain tree species. Higher temperatures also impede tree growth. Over 20,000 workers earn their livelihoods from fishing and fish represents the main source of animal protein in the typical Liberian diet. The limited data available suggests negative impacts of climate change on fish stocks. Changes in temperature and rainfall patterns are expected to lead to increased levels of water-borne diseases including dysentery, typhoid and malaria. During the civil war, Liberia's entire meteorological and hydrological monitoring capability was destroyed. This included 47 hydrometric stations. The NAPA recognises that improving the meteorological infrastructure is a vital component of the identified priorities. Several initiatives at the policy level were identified as being of the highest priority;

- Capacity building to integrate climate change in development planning, designing infrastructure, land and coastal zone management planning and institutions
- Raising awareness by dissemination of climate change and adaptation information, particularly to vulnerable communities such as farmers and coastal settlements
- Mainstreaming adaptation to climate change into policies through programs in agriculture, forestry, fisheries, energy, health, gender and meteorology/hydrology.

With input from stakeholders, several initiatives at project level were identified as the highest priority for each vulnerable sector. The activities identified as the highest priority in order of 1st priority to 3rd;

1. Agriculture: Enhancing resilience to increasing rainfall variability through the diversification of crop cultivation and small ruminants rearing;
2. Meteorological: Enhance adaptive capacity through the rebuilding of the national hydro-meteorological monitoring system and improved networking for the measurement of climatic parameters
3. Coastal zones: Reducing the vulnerability of coastal urban areas (Monrovia and Buchanan) to erosion, floods, siltation and degraded landscapes

The NAPA notes that the underlying need for rebuilding the meteorological monitoring and forecasting capability underpins all the other options. Further priorities were also identified in other vulnerable sectors as follows;

- Forestry and wetlands: switching from fossil fuel based to biomass based energy products;
- Fisheries: promoting sustainable fishing practices;
- Energy: Promoting energy efficiency and conservation;



Global Witness continue doing research and lobbying around the use of natural resources, in particular forestry concessions in Liberia. Global Witness, 2013

### Resources:

IPCC 5th Assessment Report (2014), Working Group II Impacts, Adaptation and Vulnerability: <http://ipcc-wg2.gov/AR5/>

UNDP climate change profile for Liberia:

<http://www.geog.ox.ac.uk/research/climate/projects/undp-cp/index.html?country=Liberia&d1=Reports> Ministry of Transport and Aviation, National Adaptation Programme of Action Liberia (2008): <http://unfccc.int/resource/docs/napa/lbr01.pdf>

Ministry of Economy and Planning (2012): Agenda for Transformation; Steps Towards Liberia RISING 2030: <http://mof.gov.lr/doc/AfT%20document-%20April%2015,%202013.pdf>

- Water: Awareness and sensitization about the importance of water resource management;
- Public health: use of insecticide treated materials (ITMs), ranked first under the health sector.

### Mitigation

The national development plan of Liberia, ‘Agenda for Transformation’, in the cross cutting issues section includes a strategic objective for environment; to “develop and implement clear environmental policies and quality standards to guide environmental management including a National Plan for a Low Carbon and Climate Resilient Economy.

## **Liberia & the UN Convention on Biological Diversity (UNCBD)**

Liberia submitted a Fifth National Report to the UNCBD in 2014. This outlines the riches of, but also the pressures and risks to biodiversity in Liberia. The National Report describes the national strategy to build a strong economy based on natural resource extraction and exploitation, as set out in the national development plan, 'Agenda for Transformation'. Liberia is one of fourteen centres of global plant biodiversity. The role of biodiversity in Liberian culture and in traditional remedies is important but has not yet been sufficiently documented.

The Liberian government is cognisant of the importance of biological and natural resources. Aquatic ecosystems support fish that are a source of protein for almost 70% of the population. Approximately 700,000 households depend directly on forest resources and agricultural biodiversity for their livelihoods. Agriculture accounted for 42% of GDP in 2008. However, up to half the population is food-insecure due largely to low agricultural productivity. The continued absence of a functioning national electricity grid or cost-effective alternatives for the majority of both urban and rural people means a high dependency on fuel-wood and charcoal. Non-wood forest products often fulfil vital safety net functions in rural communities. The abundant natural resources of Liberia have supported the population's subsistence needs, e.g. fruits, seeds, plants, vegetables, wild animals and livestock. Natural resources have also been exported e.g. rubber, palm oil, and cocoa. However, processing, manufacturing and other means of adding value has not occurred in Liberia. The potential for tourism linked to biodiversity and intact ecosystems has not been assessed. Mining, shifting agriculture, commercial logging, commercial hunting and uncontrolled burning are all recent threats to biodiversity that had flourished up to 1950s.

Liberia is situated in the fragmented band of forest known as the "Upper Guinean Ecosystem" which stretches from Guinea down to Cameroon at its most easterly extent. Forestry covers about 40% of the land mass of Liberia. Just over a fifth or 20% of this forestry is classified as degraded. Approximately 4.5% of forestry are in exclusive conservation areas; Sapo National Park, Lake Piso and the East Nimba Strict Nature Reserve. The East Nimba Strict Nature Reserve, in the north of Liberia, is contiguous with the Mount Nimba Strict Nature Reserve, a UNESCO World Heritage site shared between Guinea and Cote d'Ivoire. The East Nimba Nature Reserve is a stronghold for many threatened species but is under threat from on-going commercial iron extraction and extraction of natural resources such as bushmeat for both subsistence and commercial use. Liberia's first national park, Sapo National Park, was established in 1983 and is one of the most intact forest ecosystems in Liberia. Species in Sapo National Park include the endangered pygmy hippopotamus, western chimpanzees and elephants. Liberia's marine ecosystems are also exceptionally biodiverse and include coastal lagoons and mangrove marshlands.

The aim of the forestry policy of Liberia is to conserve and sustainably manage all forest areas, so that they will continue to produce a complete range of goods and services for the benefit of all Liberians and contribute to poverty alleviation in the nation, while maintaining environmental stability and fulfilling Liberia's commitments under international agreements and conventions. The government has committed to establishing a biologically representative network of protected areas covering at least 30% of the existing forest area, but up to 2012, only the Lake Piso Multiple Nature Reserve, which has unique marine biodiversity and mangroves, was added in 2008, bringing to 3 the number of protected areas in Liberia. The World Bank with the Global Environment Facility (GEF) is supporting an increase in the protected areas, adding a further 2 areas; Gola Forest

and Wonegizi Forest. Despite protective national status, some nature reserves are still under threat from mining interests. The National Forest Policy includes a strategy for community forestry focussed on the production of bush-meat, wood energy and other non-wood forest products as well as the management of forests by local communities to meet a variety of needs. Appropriate management can allow use both as a sustainable source of forest products and as areas protected for important social and cultural uses. However, although partially addressed by the work of the Land Commission, community forests have never been adequately addressed by government due to low capacity. Insecure land tenure discourages investment in forest management, encourages over-exploitation and can lead to conflicts over access. Inadequate land-use planning in Liberia has led to environmental degradation and conflicts over land-use. Commercial hunting of bushmeat has accelerated rapidly. It is estimated that up to 35% of bushmeat sales are from fully protected or prohibited wildlife species and another 40-50% from partially protected species.

The National Biodiversity Strategy and Action Plan (NBSAP) which was launched in 2012 set the following goals;

1. To take appropriate measures to protect critical ecosystems against harmful effects or destructive practices for conservation of biological diversity;
2. To create biodiversity awareness among sectors of the society and promote international cooperation;
3. To commit the people to the sound and sustainable use of biological diversity to bring about socio-economic development;
4. To promote rational utilization and conservation of biological diversity;
5. To promote access to genetic resources and the fair and equitable sharing of benefits arising from their utilization
6. To contribute to the fulfilment of the Millennium Development Goals through poverty alleviation, food security, and women empowerment in biodiversity conservation by 2015.

It also identified the following priority actions;

- Land Rehabilitation,
- Forestry Sector Reform,
- Timber Management,
- Poverty Alleviation,
- Food Security,
- Addressing Bushmeat Crisis
- Restoration of Electricity,
- Environmental Impact Assessment,
- Addressing Coastal Erosion
- Mangrove Destruction
- Providing alternative sources of Protein



**Resources:**

UNCBD Country Profile: <http://www.cbd.int/countries/default.shtml?country=lr>

National Report: <http://www.cbd.int/doc/world/lr/lr-nr-05-en.pdf>

NBSAP: <http://www.cbd.int/doc/world/lr/lr-nbsap-01-p1-en.pdf>

**Liberia & the UN Convention to Combat Desertification (UNCCD)**

Liberia ratified the UNCBD in 1998. The focal point to the convention is based in the Environmental Protection Agency. Liberia has not produced a National Action Programme or a National Report to the UNCBD.

**Resources:**

UNCCD Country Profile: <http://www.unccd.int/en/regional-access/Pages/countries.aspx?place=120>

**Key Partner Country's Projects and Programmes**

The embassy in Liberia did not have any Rio-marked expenditures in 2013.

**Irish Aid funding to Irish Civil Society Programme Partners in Liberia**

The following disbursements by Irish Aid were identified as relevant to climate change, environment and/or disaster risk reduction by the beneficiary CSOs but are not included in Ireland Climate finance reports;

In 2013 Irish Aid supported Concern activities with relevance to disaster risk reduction and climate adaptation;

- Improving the resilience to shocks of the extreme poor (€420,000)