



*This policy brief was written as a desk study and provides input to the cooperation strategy for Uganda. The ambition is to provide useful background information that can be used for the sectors chosen for Swedish development cooperation. The brief focus on an evaluation of the PEAP and pays specific attention to the health and energy sectors. On request from Jens Berggren, Kampala, we have also proposed tentative actions to fuel the discussion. The views expressed in this policy brief are those of the authors and do not necessarily represent the views of Sida.*

### **Poverty and environment in Uganda**

Uganda depends heavily on environment and natural resources. Over 90% of the population directly or indirectly depends on the products and services from agriculture, fisheries, forests, wetlands etc. Natural resources account for 85 % of export earnings and more than 80% of the workforce is active in agriculture.

The country is subject to several environment-related worrying trends which put economic, environmental and social development at risk. These include soil degradation, deforestation, drainage of wetlands, loss of biodiversity, pollution and unsanitary conditions.<sup>1</sup> Many of the problems are associated with poor management of water resources.

Ugandan authorities have identified the main causes of environmental degradation as: poor farming methods; unequal gender relations; demographic pressures leading to land scarcity, limited non-farm income generating opportunities; lack of efficient energy sources and armed conflicts.<sup>2</sup>

For Uganda, international cooperation with neighboring countries is necessary to arrive at sustainable management of natural resources such as fish, water for hydropower etc.<sup>3</sup>

### ***Perspectives of the poor***

About 96 per cent of those beyond the poverty line live in rural areas. According to the poor, the quality of natural resources is declining; soil fertility and productivity of land, depletion of fish stocks, wetland encroachment and reclamation and pollution of water resources. Common property resources for cultivation or grazing are declining. Limited access to land is the

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<sup>1</sup> National Environmental Action Plan for Uganda (1995)

<sup>2</sup> Ministry of Finance, Planning and Economic Development (2003) NEMA (2003).

<sup>3</sup> Nile Basin Initiative and Lake Victoria Environmental Management Project represent two initiatives to enhance cooperation in the region.

second most cited cause of poverty and the poor perceive that the wealthy are gaining more control over environmental resources.<sup>4</sup>

The human consequences of degraded natural resources include malnourishment, bad health and increased absence from educations due to more time spent collecting water and firewood. All of this contributes to make transition out of poverty more difficult, especially for women.

## **Poverty reduction strategy and the environment**

Partner country poverty reduction strategies are central to Swedish development cooperation. The PEAP 2004 is grouped around five pillars and environment has been mainstreamed under each one of them. Sustainable use of the natural resource base, particularly soil and forests, is seen as one of four key priorities for enhanced production, competitiveness and income.

The first two PEAPs stress that poverty is both the cause and the consequence of environmental degradation. PEAP 2004 also includes recognition that industrial processes, economic development and the elites are causing environmental degradation. Overall, environment and natural resources are well, and consistently integrated in the PEAP. However, the mobilization around environmental issues relies strongly on donor support and civil society.<sup>5</sup>

### ***Economic development***

Economic management and Enhancing production, competitiveness and incomes are the first two pillars in the PEAP. Uganda is growing at approximately 6% per year. However, the current energy crisis threatens to significantly reduce growth. The Ugandan economy is based on natural resources and agricultural growth is the top priority for poverty reduction. The PEAP recognize that the contribution of environmental services and natural resources are consistantly undervalued. For instance the contribution of fisheries, forests and wildlife to GDP is up to three times larger than what is currently recorded.<sup>6</sup>

Agricultural production per capita has been falling in recent years. This is mainly due to rapid population growth, fragmentation of farms, over cultivation, soil degradation, land tenure problems and political instability.<sup>7</sup> The value of soil nutrient loss in the country is about U.S. \$625 million per annum, equivalent to per capita debt of \$210 (2002 estimates).<sup>8</sup>

Fish exports have risen dramatically and account for 17 % of export income in 2002 and fisheries directly employs about 500 000 people. The relatively stable annual catch reported during the last decade masks serious concerns about the status of fish stocks in most major water bodies. There is widespread concern that substantial and rapid increases in fishing efforts are leading to overfishing and the use of illegal and harmful fishing methods/gears. The PEAP 2004 gives authority to Beach Management Units in order to reduce the pressure from overfishing.

Lack of energy causes strain on growth and threatens the forest cover. In 2004 biomass (firewood, charcoal etc) contributed with 93% of energy supply, oil products with 6 % and electricity 1%. The deficit in forest fuel supply amounts to 3,8 million tones per year and the

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<sup>4</sup> Ill health and disease is the most cited cause of poverty (UPAP 2002)

<sup>5</sup> IDS (2005)

<sup>6</sup> PEAP (2004)

<sup>7</sup> UNEP and IISD (2005)

<sup>8</sup> UNDP (2005)

demand for wood is expected to triple by 2025 which threatens to severely diminish the resource base and biodiversity. High tariffs imposed on other sources of energy like electricity and petroleum and rising energy prices suggests that wood will continue to dominate as a source of energy. This will make the governments ambition to increase forest cover<sup>9</sup> more difficult to achieve.

Current electricity shortage is attributed to the fall in the water levels of Lake Victoria and growing domestic and commercial demand. The power crisis has led to increase in the price of electricity, petrol and gas (Feb 2006)<sup>10</sup>. A treaty with Egypt that regulates the flow of water into the Victoria Nile<sup>11</sup> demands that Uganda reduce current outtake levels. To increase power generation plans are made for diesel powered plants. This will result in significantly increased emissions of carbon dioxide, nitrogen oxides and particulate matters as well as increased transport needs.

The projected construction of the Karuma falls (200 MW) and Bujigali falls (250 MW) in the Victoria Nile is expected to substantially increase electricity supply. The World Bank supported Bujigali project has been criticised for lacking thorough analysis of environmental and social impacts, for being overoptimistic about the power generation capacity, for not benefiting the poor and for causing hydrological risks associated with increased outtake of water from Lake Victoria.<sup>12</sup>

Wetlands are valuable assets for the poor. Wetlands are essential for water purification as well as a resource for food, fodder and products for the export market etc. The annual direct production value of wetlands is estimated at \$ 300-600 per hectare.<sup>13</sup> However, wetlands are degraded or converted to other uses thus constraining water purification services and losses of livelihoods for the poor. Central Uganda has lost 40% of its original wetland area.

### ***Impact of conflict, climate change and disasters on vulnerability***

Security, conflict resolution and disaster management is the third pillar of the PEAP. Uganda is severely affected by natural and man-made disasters and conflicts. Drought, landslides and hailstorms annually destroy 800 000 hectares of crop and in 1999 3,5 million people were affected by the drought. Uganda depends heavily on rain fed agriculture and improved rain water management is a priority. Climate change increases vulnerability. Major impacts of adverse effects of climate change for Uganda include<sup>14</sup>:

- Food insecurity arising from occurrences of droughts and floods
- Outbreak of diseases such as malaria, dengue fever, water borne diseases (such as cholera, dysentery) associated with floods and respiratory diseases associated with droughts
- Heavy rainfalls which tend to accelerate land degradation
- Damage to communication infrastructure by floods

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<sup>9</sup> PEAP (2004) PEAP Outcome indicator: Land under forest cover will rise from 24-27 % to year 2007/08

<sup>10</sup> The Monitor, Feb 11<sup>th</sup> 2006

<sup>11</sup> The Nile water agreement “agreed curve” set a maximum flow of between 300 and 1700 cubic metres per second, depending on the water level in the lake. According to a report written by a UN hydrologist on behalf of the International Rivers Network (2006) the flow has been more than 55% higher than the agreed curve during the past two years. There are fears that the Nalubaale and Kiira dams might have to be closed in a few years if the current outtake levels and drought continues.

<sup>12</sup> International Rivers Network (2006)

<sup>13</sup> PEAP (2004)

<sup>14</sup> Min of Water, Lands and the Environment (2002)

The armed conflict in northern Uganda and regional instability in the great lake region can in part be explained by imbalances in access to economic opportunities and natural resources.<sup>15</sup> Cattle rustling in pastoralist communities is a repeated cause of conflict. Over 1, 4 million people have been displaced as a result of insecurity causing increased poverty, sanitary problems and pressure on land and forests. As a consequence soil degraded and the forest cover is further reduced. Thus natural resources are a cause for conflict and degraded natural resources are an effect of conflicts.

### ***Capacity development, institutions, legislation and the environment***

Good governance is the fourth pillar of the PEAP 2004. Generally justice, law and order are beneficial for environmental resources. Supported by donors, Uganda has devoted a lot of resources to deal with environmental issues. In 1995 a National Action plan was set up including a legislative and institutional framework and requirements on Environmental Impact Assessments for all development projects and activities expected to have environmental impact.<sup>16</sup> New policies have been launched for instance for forests (2001); wetlands (2001); and soil (2003). Responsibility for environmental management has been formally devolved to district and lower governments. At present there is limited capacity to implement, monitor and enforce policies at the primary level.<sup>17</sup> Implementation of national land policy and land use policy has been delayed preventing the distribution of land and hindering efforts for environmental protection. The delays impact significantly on women that are not given rights to own land. It is a weakness that donors fund 90 % of NEMA, the implementing body of the national environmental action plan. The World Bank plans to withdraw this support to NEMA in June 2006.

Corruption is a key challenge for implementing the PEAP. According to the World Bank (2005) the government needs to clarify its commitment on governance reforms and strengthen the specific implementation details lacking in the PEAP 2004.

Uganda is party to all but one of the eight international environmental conventions that Sida are giving specific attention to. Uganda is not party to the Rotterdam convention that relates to hazardous chemicals and pesticides in international trade.

### ***Health and the environment***

Human development is the fifth pillar of the PEAP and a healthy and well educated population is seen as both a mean for development and an end in itself. In 1995 about 35% of the burden of disease in Uganda was attributable to malaria, diarrheal diseases and respiratory infections largely caused by polluted water or air.<sup>18</sup>

Insufficient food security causes malnourishment. Twenty five percent of the population cannot meet their daily food needs and more than two-thirds of children 0-5 in western Uganda are stunted or severely stunted.<sup>19</sup>

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<sup>15</sup> PEAP (2004) and Sida (2004)

<sup>16</sup> The number of EIAs have grown from 10 in 1996 to 200 in 2003. A survey identifies needs to maintain political support for use of EIAs at both central and local level and measures to improve public consultation. NEMA (2004)

<sup>17</sup> World Bank (2005)

<sup>18</sup> National Health Policy

<sup>19</sup> Uganda Bureau of Statistics (2001)

Approximately 55 % of rural residents have access to potable water and for more than 20 % of the total population the distance to water exceeds 1 km. Investments in water and sanitation are largely biased towards urban areas.<sup>20</sup> Uganda is likely to reach the MDG on access to water.

Increased urban population with unplanned sanitation and use of agro-chemicals is affecting the water quality. Rural access to sanitation is 56% compared to 65% of the urban population.<sup>21</sup>

Water and air pollution from domestic and industry constitute a risk for human health. Approximately 5 % of households have regular access to electricity. For the rest, charcoal, firewood and dung are used for cooking causing high indoor emission levels of air pollution.

About 80 per cent of the population in Uganda depend on traditional plant medicines derived from at least 300 plant species.<sup>22</sup> Preventive health care such as education on hygiene are often more cost efficient than infrastructure investments such as tube wells. Direct environmental impact of the health sector relate to; health care waste, construction of health clinics, water and sanitation facilities. Management of hazardous waste, including possible infection of HIV/Aids trough used needles or blood waste is a priority.<sup>23</sup>

**Ugandan Joint Assistance Strategy**

UJAS recognize the importance of a sustainable, integrated approach to natural resource management, cutting across sectors. UJAS partners have a broad range of programs where these issues need to be integrated including agriculture, infrastructure, water and sanitation, health etc. Given the strong focus UJAS places on natural resource based export promotion (flowers, fish etc) it is key that long term sustainability aspects are considered (maintained fish stocks etc). UJAS partners highlight the need for strong and financed regulatory agencies, policies and frameworks. With the World Bank financial withdrawal from NEMA this is an urgent matter that calls for donor attention. Below is an excerpt from the UJAS table “Current and planned partnerships in implementing the PEAP”.

PEAP Area	UJAS partners	Non UJAS partners	Increasing harmonization	Increasing selectivity
<b>Pillar 2 Enhancing production, competitiveness and incomes</b>				
Strengthened environment and natural resources management	World Bank, AfDB	Belgium, Arab Bank for Economic Development, Denmark, EC, US	A SWAp for environment and natural resources is planned	DFID, Germany, Netherlands have disengaged from environmental programs

Source: UJAS

It is promising that a new SWAp for environment and natural resources is planned. A concern is the lack of clarity regarding the division of labour between donors for work on environment and natural resources.

**Implications for Swedish development cooperation**

<sup>20</sup> World Bank (2005)  
<sup>21</sup> PEAP (2004)  
<sup>22</sup> Kanabahita (2001) Naluswa (1993)  
<sup>23</sup> World Bank (2004)

Environment is not a sector. The question for Sida is: What does it mean to integrate the environment and sustainable use of natural resources in the sectors of Swedish priority? Or put differently. What can be done within these sector programmes to maximize positive impacts on ecosystem services and natural resource assets and to minimize the negative impacts? On request we have made some proposals to fuel further discussion.

#### *General issues*

Have impacts on ecosystems and natural resources been considered/integrated in different sector strategies and plans? If not, could donors facilitate such action? Possibilities for coordination with other cross cutting issues should be investigated.

What does the division of labour within the donor group look like when it comes to environment sector and for mainstreaming environment in all sectors?

*Proposal:* Plan how you can support the work of the ENR sector leads (towards the leads directly, towards the government, within the “Swedish” sectors).

Could removal of subsidies, better pricing on royalties and fiscal reforms contribute to create better resource efficiency and improved protection of the assets of the poor?

*Proposal:* Sida could contribute to studies on ENR royalties (% of central and local government revenue)

#### *Sector specific issues for consideration*

##### *Health care*

*Proposal:* Sida could support Min of Health and preventive health care by consistently using data on burden of disease related to environmental health when engaging with sectors that a) contribute to the problems causing environmental health or b) could mitigate or provide solutions to the problems. This would also contribute to putting people’s health rather than environmental protection at the centre of the debate.

*Proposal:* Develop a comprehensive environmental health strategy/plan

This request was made by the Environmental and Natural Resources PEAP revision sub committee in 2003

For information about the environmental health division within the ministry of health, see

<http://www.health.go.ug/docs/ENV%20HEALTH.doc>

For info about training and research on environmental health, see

[http://www.iph.ac.ug/dept\\_dcch.htm](http://www.iph.ac.ug/dept_dcch.htm)

##### *Energy*

The current energy crisis puts pressure on immediate action.

*Proposal:* Sida could contribute to an SEA (strategic environmental assessment) for the plan of expansion of the energy sector. This would not be an ad hoc piece of consultancy work but an integrated approach involving Ministries for Energy and Minerals, Finance and Planning and Water, Land and the Environment. Current project based environmental impacts assessment have limited scope for contributing to sustainable outcomes.

*Proposal:* Sida could support cost benefit studies and implementation related to renewable energy in rural areas.

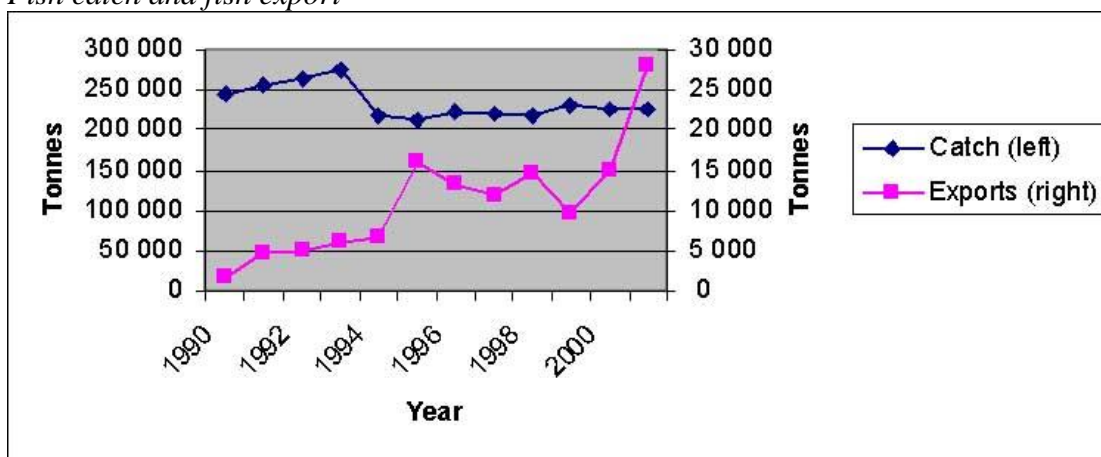
## Annex

### Indicators and graphs

Indicators - MDG 7 Ensuring Environmental Sustainability	2002/3
Access to an improved water source (% of rural population)	55
Access to an improved water source (% of urban population)	65
Access to improved sanitation (% of rural population)	56
Access to improved sanitation (% of urban population)	65

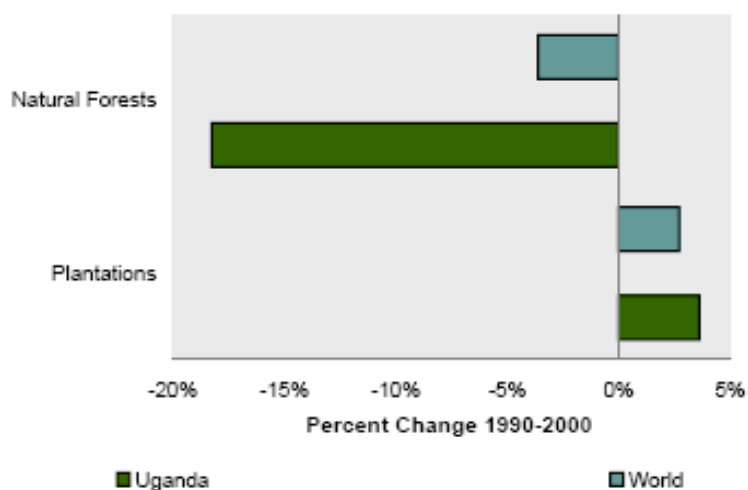
Source: PEAP

### Fish catch and fish export



Source: FAO

Percent Change in Forest Area by Type, 1990-2000



## Forests, Grasslands, and Drylands-- Uganda

Forest Area and Change	Uganda	Sub-	World
		Saharan Africa	
Total forest area, 2000 (000 ha)	4,190	486,571	3,869,455
Natural forest area, 2000 (000 ha)	4,147	478,576	3,682,722
Plantations area, 2000 (000 ha)	43	6,210	186,733
Total dryland area, 1950-1981 (000 ha) {a}	3,934	1,120,649	5,059,984
Change in forest area:			
Total, 1990-2000	-18%	-9%	-2%
Natural, 1990-2000	-18%	X	-4%
Plantations, 1990-2000	4%	X	3%
Original forest {b} as a percent of total land area {c}	70%	X	48%
Forest area in 2000 as a percent of total land area {c}	17%	20%	29%

Source: World Resource Institute

### Energy data

Supply Pattern	
Biomass	83.2%
Oil products	8.0%
Electricity	0.8%
<b>TOTAL</b>	<b>100.0%</b>

Demand:	Energy	Electricity
Residential	71.2%	41.7%
Commercial	14.0%	18.4%
Industrial	10.0%	41.8%
Transport	4.4%	0.0%

Energy Consumption per capita (kgOE):	326.7
Commercial Energy Cons. per capita (kgOE):	22.2
Total number of households	5511735
National Grid Electrification Rate (%)	4.0

NS: The Energy Balance does not include the energy produced by renewable energy technologies (Solar PV, biogas) which is estimated to sum up to a minor amount.

Source: Annual report 2004, Ministry of Energy and Minerals

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