



Environment and Natural Resources as a Core Asset in the IGAD Region for wealth creation, Poverty Reduction and Sustainable Development

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List of Acronyms

AAPAM	African Association for Public Administration and Management
AGOA	African Growth and Opportunity Act
ANS	Adjusted Net Savings
BMUs	Beach Management Units
BOU	Bank of Uganda
CEAs	Country Environmental Assessments
CDM	Clean Development Mechanism
COMESA	Common Market of East and Central Africa
CSOs	Civil Society Organisations
EIA	Environmental Impact Assessment
ENR	Environment and Natural Resource
ERP	Economic Recovery Programme
EU	European Union
FAO	Food and Agricultural Organisation
FDI	Foreign Direct Investment
FOODNET	Food borne Diseases Active Surveillance Network
GDP	Gross Domestic Product
GE	Genetic Engineering
GEF/SGP	Global Environmental Facility/Small Grants Programme
GMOs	Genetically Modified Organisms
GNI	Gross National Income
GVCs	Global Value Chains
IGAD	Inter-Governmental Authority on Development
SDC	Sustainable Development Centre
MEAs	Multilateral Environmental Agreements
MFPED	Ministry of Finance Planning and Economic Development
MDG	Millennium Development Goal
MWLE	Ministry of Water Lands and Environment
MUKUKUTA	(Mkakati wa Kukuza Uchumi na Kuondoa Umasikini Taifa) National Strategy for Growth and Reduction of Poverty of Tanzania
NEAP	National Environment Action Plan
NEMA	National Environment Management Authority
NGOs	Non-Governmental Organisations
NR	Natural Resource
PEAP	Poverty Eradication Action Plan
PER	Public Expenditure Reviews
PROFOR	World Bank Programme on Forests
PRS	Poverty Reduction Strategies
SEA	Strategic Environmental Assessment
TOR	Terms of Reference
UBOS	Uganda Bureau of Statistics
UIA	Uganda Investment Authority
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organisation
UPTOP	Uganda Programme for Trade Opportunities and Policy
UWA	Uganda Wild Life Authority
WCMC	World Conservation Monitoring Centre
WRI	World Resource Institute

Executive summary

This report has been made as a contribution to the knowledge base on the linkage between environment and natural resource base as a core asset in the wealth creation, poverty reduction and sustainable development in Uganda. The importance of natural resources is reflected in the choice of the motto used to rebuild and market the image of Uganda abroad, namely: *Gifted by Nature*. The findings will form the basis for a regional conference for senior decision makers from Ministries and agencies responsible for macroeconomic planning and from those responsible for conservation as well as the civil society.

Economically, Uganda achieved strong economic growth and macroeconomic stability since the mid 1980s, largely the result of an ambitious programme of macroeconomic adjustment and structural reforms. Overall, the economy expanded at 6.0% per annum on average. The strong growth helped to reduce the proportion of Ugandans living in absolute poverty from 56% in 1992 to 35% in 2000 but with a slight rise to 38% in 2004, and a decline to 31% in 2007.

However, despite the reduction in the headcount poverty, Uganda remains one of the poorest countries in the world. Moreover, the distribution of welfare gains has varied across regions, sectors and social/economic groups. For example, 63% of the population in Northern Uganda lives below the poverty line.

Nonetheless, accompanying the economic transformation has been a shift in the contribution of agriculture to GDP falling from 54% in 1990 to 31% in 2007. These shifts constitute the beginning of the process of structural transformation in the economy, whereby production slowly moves away from subsistence-based agricultural to a mix of commercial agriculture, services and industry as a result of shifts in demand and labour patterns in the economy. It is not expected that Uganda will move away from agricultural production altogether, but that it is orientating its agricultural output towards regional and international export markets. Most of this production is carried out by households and small and medium enterprises. By implication the government has to put in place a package of measures to build the resilience of these institutions in propelling the economy, more so that it is pursuing a private sector led strategy in its poverty reduction efforts.

Natural resources are a core component of people's livelihoods in many ways. First, they put Uganda in a relative good food security position because of good climate and soils that favour agriculture. Some families also harvest directly e.g. fish, wild game, and vegetables, mushrooms, bamboos, fuel wood e.t.c. Current annual fish consumption is estimated to be 10kg per capita. It is often argued that Ugandans would have found it difficult to cope with scarcity of essential commodities during the 1971-1980 Idi Amin era of bad governance had it not been for the households' capacity to produce their own food.

Secondly, 72% of Uganda's labour forces derive their livelihood from agriculture-based farming [UBOS 2006]. It is by no wonder that the government accepts that in the medium term, poverty reduction depends on expanding incomes from smallholder agriculture. This is because the incomes of the poor depend directly on agriculture, and secondly, farmers spend part of the income generated from cash sales on non- agricultural goods and services [MFPED, 2004]. It is the nature-based resources that contribute 80% of the inputs into the emerging agro-processing industry and support the service sector (transport, banking, trade and commerce, e.t.c) (UBOS, 2006 pg 35). The contribution of ENR sectors is also reflected in foreign exchange generation amounting to \$682million in 2005/6 or 77% of all exports (MFPED [2007]). Government accepts that the contribution of the sector would even be much higher if progress was made in improving climate for value-addition.

The improvements made by ENR sectors to livelihoods, GDP, industrialization, foreign exchange, MDGs and economic transformation are traced to a number of reforms that collectively provided incentives to make this happen. The relative political stability enjoyed since 1986, continuity of government and restoration of law and order to protect both human population and its property top the list. The 1987 Economic Recovery Programme (ERP) which was aimed at addressing deficiencies in Uganda's export competitiveness, introducing market reforms into its agriculture

policy, attracting more foreign investment, and improving the effectiveness of fiscal and monetary policies.

Further, government pursued a policy to attract foreign investment, through enactment of Uganda Investment Code, and establishment of Uganda Investment Authority. The government also had to deal with one of the market failures related to macroeconomic instability by controlling inflation in order to create enabling environment for private sector investment.

However, effort is also needed to improve the monetary policy. Much of commercial bank lending does not favour agriculture and natural resources. The interest rates which average 20% at a time when inflation is controlled to less than 5 % is another disincentive. Yet many studies have recommended among others that Uganda needs to avail long-term financing at lower cost vis-à-vis favourable tax regime to stimulate domestic industrial productivity [BoU, UIA, UBOS, 2004].

Further, sustaining high economic growth and low inflation in an environment of ever increasing international oil prices amidst persistent power shortage on the domestic scene is a big challenge. Industrialisation and value addition for increased overall competitiveness of the economy will be frustrated. Needless to mention, it calls for urgent steps to address this disincentive. Short of which many of the MDG targets may not be met [BoU 2006, UNDP 2005]. It cannot be expected that the recent discovery of oil will soon be translated into real gains, including addressing the energy shortage.

Incomplete markets failure is another source of disincentive. It occurs when markets fail to produce goods and services that are desired by the public but where the competitive market cannot emerge because of missing prices, ignorance, lack of information, weak property rights and high transaction costs of looking after the resource. Under the circumstances the government is expected to be the leader in environmental management. It has to address the high levels of land degradation accompanying the rapid economic growth too.

It has been highlighted that abundant natural resources do not necessarily translate into prosperity for all. The State of the Environment Report 1994 underscored the importance of one factor of good governance if a fundamental change has to be noticed. Making governance more friendly to the poor means tackling issues of property rights, access to information and decision-making, adequate representation, institutional transparency, and fairness in sharing the costs and benefits of resource management.

Uganda's history has evidence that bad governance not only negatively affected natural resource management but equally undermined the rule of law and human rights. This was particularly true during the Idi Amin era, 1971-1979, and Obote II era of 1980 -1985. The macro-economic instability was a source of disincentive to investment and instead it promoted speculation in short-term investments like trade.

Although more resource specific studies need to be conducted to capture the level of wealth created by natural systems, the evidence to date strongly suggests that the livelihoods of the poor are built around access and tenure rights. For example, the key variable explaining income levels for rural households in Uganda is access to land and livestock.

Families owning cattle are four times more likely to come out of poverty than those solely dependent on crops. In villages near Lake Victoria, the key variable explaining wealth is access to fishing boats and gear.

Income-wise, these are found to be even more important than other wealth-associated factors such as access to education. By implication therefore, improving governance systems for common property resources like water, rangelands, fisheries, wetlands, and communal forests is going to remain an important factor.

Further, an area of interest in the market chain of different natural resource products is that there is a fairly level playing field so that the communities are gainers in the chain, and can therefore have

incentives to sustainably use the natural resource base. An illustrative example of the long standing cash crop of coffee in Uganda shows that farmers globally on average obtain only 15% in its value-chain. In Uganda this proportion is about only 5%. Benefits to resource users are broadened where there is information about the product specifications, standards and markets, good infrastructure, appropriate and affordable technology and strong resource user institutions. Providing a clear policy framework is yet another example of creating a leveled playing field for allowing natural resource based products to integrate in the local and international market, let alone to have the benefits equitably shared. An example has been its policy for encouraging public-private partnerships for resource management and investment. It is starting to pay off in the forestry, fisheries, tourism, energy and water sectors to mention but a few.

Energy is a vital input into small-scale agro-processing (e.g. milling of cereals, cooling of milk, secondary timber-processing, fish storage e.t.c, e.t.c). As has been reported by UBOS the current policy on alternative energy sources and rural electrification needs to examine the cost of using alternative forms of energy [UBOS 2007]. Failure to deliver on energy is going to remain a barrier to the attainment of MDGs.

An emerging recognition is that it is more environmentally sustainable to manage the resources at the appropriate scale that also takes into account the socio-cultural factors. While decentralization is good in encouraging public participation and service delivery, its demarcation around administrative boundaries does not in most cases match with ecological boundaries. The mis-match of the two reduces the chances of cost effectiveness and harmonization in the management of the ecosystems. Within the constitution provision for local governments to cooperate on matters of development including conservation, Uganda should define criteria to guide management of shared resources by local governments and put in place support systems to ensure same standards and joint planning and management for those resources.

As the country prepares itself to evaluate PEAP and develop a new one, it must make choice on a few indicators that demonstrate a very powerful linkage between environment and development, and in turn rally political support. Beyond that, an institutionalized system to periodically carry out joint assessment of ENR sector must be put in place to measure progress. Such assessments are for example now a common feature of the sectors of Health, Local Government and Water and Sanitation.

By virtue of high dependence on agriculture and natural resources, Uganda faces numerous stresses and shocks, some potentially catastrophic. The Uganda National Household Survey 2005/2006 (Agriculture Module) revealed that 43% of all national crop plots suffered from damage, mainly due to rain shortage (19%), followed by crop disease (10%). The level of risk facing poor rural households has risen with increased market exposure linked to globalization matched by the withdrawal of the state for the direct provision of services such as those provided through state marketing boards, subsidies and price controls.

Households lost out when they responded to government call to plant vanilla whose prices subsequently fell on the world market. Climate change too is increasing vulnerability. Domestic shocks, such as the HIV/AIDS pandemic, have further weakened the position of many poor households.

Reducing levels of risk, where possible, and provision of instruments to reduce vulnerability has to be a central element of prop-poor development policy in Uganda. This not only provides social protection for poor people, but enables them to undertake new, viable but more risky livelihoods, increase their participation in markets and generate pro-poor economic growth. Once farmers cannot cope with risk and vulnerability, it is the whole economy to suffer. A challenge therefore is to mainstream risk and vulnerability in development.

Based on this study, the following questions are proposed for policy level discussions:

- (i) What aspects of governance need to be improved for creating enabling environment for a natural resource base led economy?

- (ii) What package of measures should government put in place to build the capacities of SMEs in sustainable natural resource management and value-addition?
- (iii) What criteria should government put in place to guide future decisions to inform the scale at which interventions will be more cost-effective and environmentally sustainable?
- (iv) What package of policies, incentives and other measures should government put in place to promote and sustain strategic private-public partnerships for ENR management, processing and marketing?
- (v) What are the major emerging risk and vulnerability issues for which government support is necessary to maintain the participation of households in natural resource based production?
- (vi) Should the government consider the establishment of Oil Trust Fund, and if yes, how should it be managed?
- (vii) What is the total environmental income generated in the economy and how is its use distributed?

1. Introduction to the country and study

1.1 Introduction to the study

1. This national report has been made as a contribution to the knowledge base on the linkage between environment and natural resource base as a core asset in the wealth creation, poverty reduction and sustainable development in Uganda. It is based on the TOR in Annex 1. A review of literature (Annex 2) and validation interviews with key respondents (Annex 3) were the methods used in gathering information. Similar studies have been carried out in Sudan, Eritrea, Djibouti, Ethiopia, Kenya and Somalia as a step towards establishing the importance of the above resources in the IGAD Region. The findings will form the basis for a regional conference for senior decision makers from Ministries and agencies responsible for macroeconomic planning and from those responsible for conservation as well as the civil society. The study was carried out in the months of July and August 2007.

1.2 Introduction to the country

2. A British Premier, Sir Winston Churchill named Uganda “*The Pearl of Africa*” after his many journeys across Africa. He found the country with diverse physical features, hospitable people and good climate. Ugandans too treasure their natural heritage so much that they reflected that in Vision 2025: *Prosperous People, Harmonious Nation, Beautiful Country* (Republic of Uganda, 1998). Further, the importance of natural resources is reflected in the choice of the motto used to rebuild and market the image of Uganda abroad, namely: *Gifted by Nature*.
3. Lying astride the equator, Uganda is landlocked country in East Africa bordered to the North by Sudan, to the East by Kenya, to the South by Tanzania, to the Southwest by Rwanda and to the West by the Democratic Republic of Congo. It lies between latitude 1° 30’ South and 4° North, and longitude 29° 30’ East and 35° East, covering 241,138km².

Table 1.1: Land cover in Uganda

Cover type	Percent
Forests	3.8%
Woodlands	16.7%
Bushes and grasslands	27.0%
Swamps	2.0%
Farmland	35.0%
Built-up areas	0.2%
Open water	15.3%

Of the above size, 18% is covered by water including major and minor lakes, rivers, and swamps. Major water bodies include Lakes Victoria (the second largest fresh water lake), Kyoga, Albert, George and Edward. While major rivers include the Nile. The land area is 199,768km² apportioned as in Table 1.1.

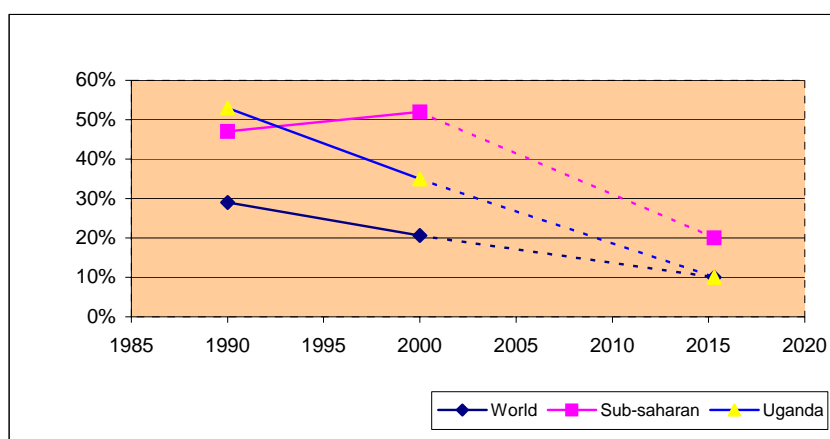
Source: MWLE

4. Administratively, Uganda is divided into 80 districts. The system of local government revolves around the district as a unit; below which are lower local governments and administrative unit councils. Councils are corporate bodies having both legislative and executive powers. They have powers to make bylaws and enforce them, including environmental ordinances and bylaws. On the other hand, administrative unit councils serve as political units to advice on planning and implementation of services.
5. The Local Governments Act 1997 devolves functions, powers and services to all levels of local government. The aim is to enhance good governance and democratic participation and control of decision-making. Local Governments have powers to make policy and regulate delivery of services. They may also formulate development plans based on the locally determined priorities; receive, raise, manage and allocate revenues through approval and execution of own budgets.
6. On the other hand, the Central Government is responsible for the formulation of national policies and standards; and monitoring the implementation of policies and services to ensure compliance

with standards and regulations. Line ministries carry out technical supervision, offer technical advice, monitoring of Local Governments and liaise with international agencies. Equally, the central government through relevant focal points is responsible for meeting its obligations under the Multilateral Environmental Agreements (MEAs).

7. Economically, Uganda achieved strong economic growth and macroeconomic stability since the mid 1980s, largely the result of an ambitious programme of macroeconomic adjustment and structural reforms. Overall, the economy expanded at 6.0% per annum on average, 1.0 percentage point lower than the set target of 7%. The strong growth helped to reduce the proportion of Ugandans living in absolute poverty from 56% in 1992 to 35% in 2000 but with a slight rise to 38% in 2004, and a decline to 31% in 2007. Compared to the rest of sub-Saharan Africa, Uganda has performed better since 1990 in reducing the percentage of its people under poverty. If it maintains that trend, it could meet its MDG target on poverty reduction faster than Sub-Saharan Africa as a whole (Figure 1.1). Uganda's plan to reduce poverty to less than 10% per year 2017 is even more ambitious than MDG1.
8. However, despite the reduction in the headcount poverty, Uganda remains one of the poorest countries in the world. Moreover, the distribution of welfare gains has varied across regions, sectors and social/economic groups. For example, 63% of the population in Northern Uganda lives below the poverty line.

Figure 1.1: Proportion of people living on less than \$1 a day



Source: UNDP (2003)

9. Accompanying the economic transformation has been a shift in the contribution of agriculture to GDP falling from 54% in 1990 to 31% in 2007 (Figure 1.2). These shifts constitute the beginning of the process of structural transformation in the economy, whereby production slowly moves away from subsistence-based agricultural to a mix of commercial agriculture, services and industry as a result of shifts in demand and labour patterns in the economy.
10. It is not expected that Uganda will move away from agricultural production altogether, but that it is orientating its agricultural output towards regional and international export markets. Other indicators of Uganda's development status are given in Table 1.2.
11. The above improvements are a result of a planned approach since 1997 under the auspices of Poverty Eradication Action Plan (PEAP). The current PEAP comprises five 'pillars' of economic management; production, competitiveness and incomes; security, conflict resolution and disaster management; governance; and human development. Environment is cross cutting among all the pillars. In addition, the PEAP mainstreamed the MDGs as benchmarks for monitoring. The MDGs were adopted by the United Nations Millennium Declaration Summit in New York in 2000 and further expanded during the World Summit on Sustainable Development in Johannesburg in 2002.

Figure 1.2: Sectoral shares of GDP, 1990-2006

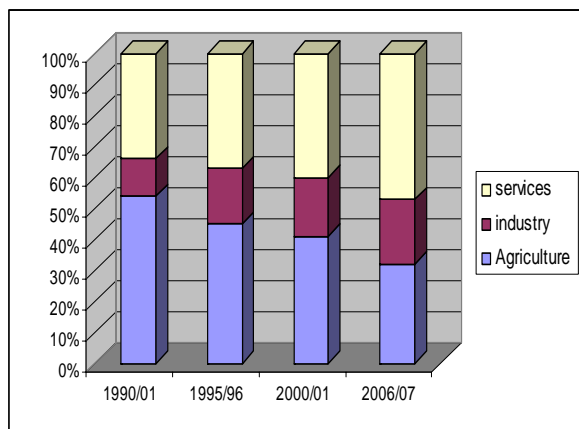


Table 1.2: Other indicators of development

Indicator	Value
Population size (millions)	28
Population growth rate	3.4%
Life expectancy at birth (years)	51
GDP growth rate	5.3%
GDP per capita (\$)	248
Debt (billion \$)	3.8
Poverty headcount ratio (2007)	31
HIV/AIDS prevalence rate	6.3%
Access to safe water	67%
Net primary school enrolment	84%
Girl/Boy primary ratio	96%
Under five mortality ratio (per 1000)	156
Maternal mortality ratio (per 1000)	505

Source: MFPED (2003)

2. Environmental and Natural Resource as key assets for rural economic growth and livelihood improvement

12. Natural resources are a core component of people’s livelihoods in many ways. First, they put Uganda in a relative good food security position because of good climate and soils that favour agriculture. Some families also harvest directly e.g. fish, wild game, and vegetables, mushrooms, bamboos, fuel wood e.t.c. Current annual fish consumption is estimated to be 10kg per capita. It is often argued that Ugandans would have found it difficult to cope with scarcity of essential commodities during the 1971-1980 Idi Amin era of bad governance had it not been for the households’ capacity to produce their own food.
13. A measurement of net annual household income and consumption from forest and non-forest sources also found that across all forest types and income groups, households derive 20.2% of their overall income from forest with 75.6% of the value of goods harvested from forests consumed in the home. Amongst income groups, high income households appropriated a greater overall value of forest goods [Glenn. K. Bush et al, 2006]. A similar PROFOR/World Bank funded study has established the same pattern in Uganda, but with men more dependent on forest products than women. [C. Kazoora, Z. Birungi and L.Dranzoa, 2007] (See Figures 2.1 and 2.2).

Figure 2.1: Livelihood Analysis for Nyantonzi parish by Cash and Non-Cash sources

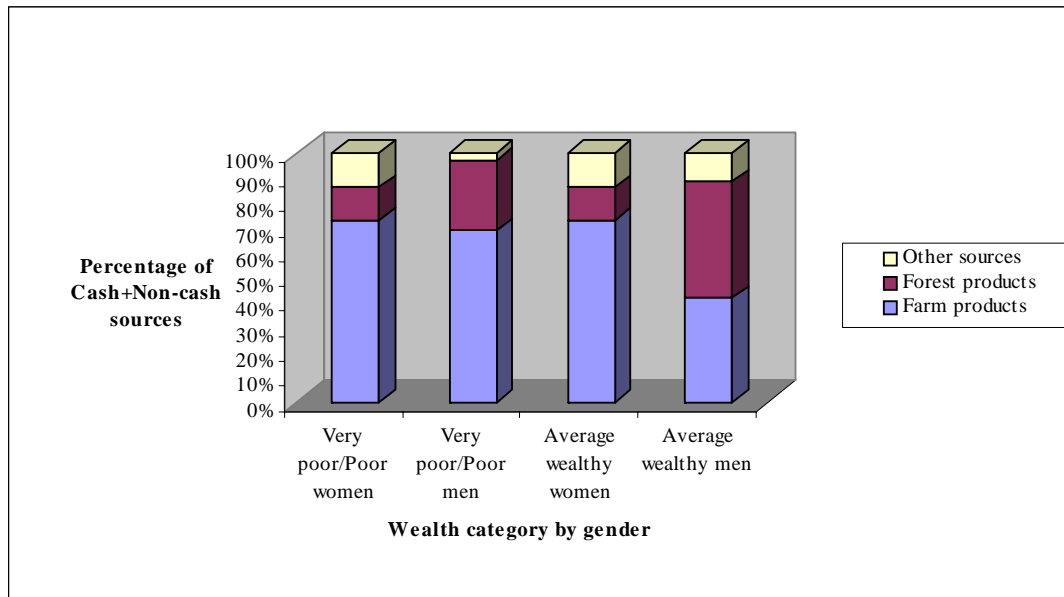
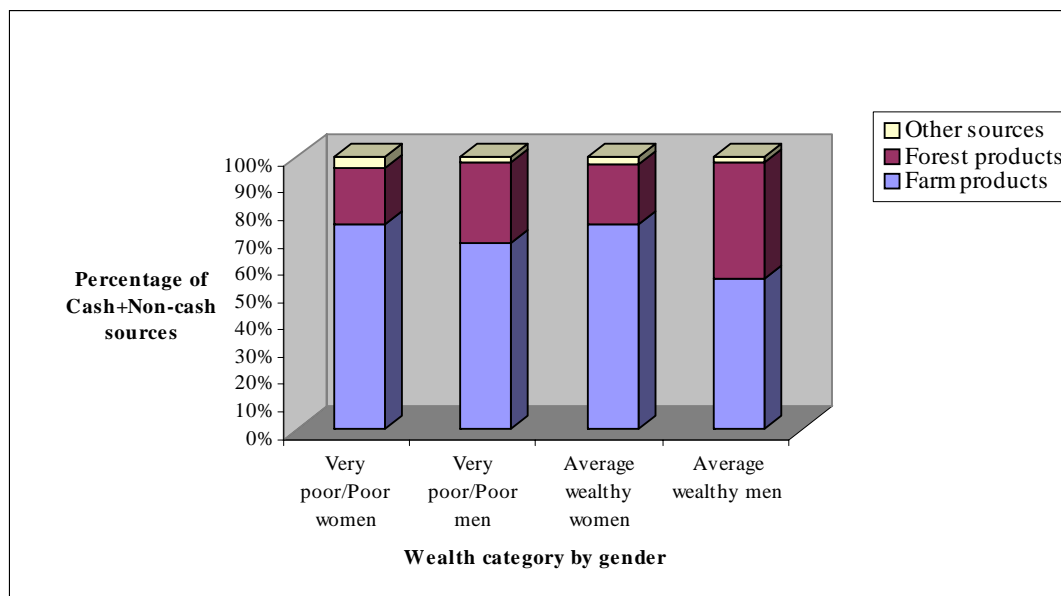


Figure 2.2: Livelihood analysis for Kasenene parish by Cash and Non-Cash sources



14. Secondly, 72% of Uganda's labour forces derive their livelihood from agriculture-based farming [UBOS 2006]. It is by no wonder that the government accepts that in the medium term, poverty reduction depends on expanding incomes from smallholder agriculture. This is because the incomes of the poor depend directly on agriculture, and secondly, farmers spend part of the income generated from cash sales on non- agricultural goods and services [MFPED, 2004]. This assertion is also collaborated by international evidence* that in low-income, agricultural economies, poverty responds much more to rural than to urban growth, and that agricultural growth is needed in order to generate broader rural growth

15. Thirdly, the volume of nature based resources on which households derive subsistence and income have generally increased since 2001. (Table 2.1). It is the nature-based resources shown in the same table that contribute 80% of the inputs into the emerging agro-processing industry and support the service sector (transport, banking, trade and commerce, e.t.c) (UBOS, 2006 pg 35).

16. Fourthly, the contribution of ENR sectors is also reflected in foreign exchange generation amounting to \$682million in 2005/6 or 77% of all exports (MFPED [2007]). The trend of earnings has also been promising (Figure 2.3). Further, Uganda derives foreign exchange from tourism (part of which is wildlife's-resource based). In 2001, total tourism receipts were \$161.7 million, making 24.7% to total export earnings and 7.4% of GDP. Additional benefits were employment generation, tax revenue and linkage to the hotel industry.

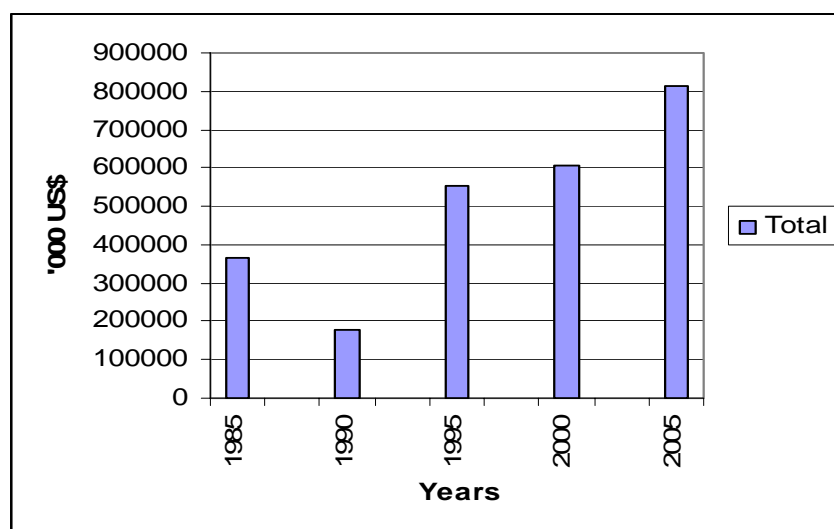
* The most influential research study has been the India Poverty Project at the World Bank. Findings from the project are on the World Bank Website: publications include G. Datt and M. Ravallion, "Why have some Indian states done better than others at reducing rural poverty?" *Economica* vol.65 no.257 pp. 17-38 (1998) and M. Ravallion and G. Datt "How important to India's poor is the sectoral composition of economic growth?" *World BANK Economic Review* vol.10pp.1-26 (1996)

Table 2.1: Trends in output of natural resource commodities

Commodity	Unit	2001	2005	General trend
Cash crops				
• Coffee	Tonnes	197,410	158,100	Decline
• Tea		32,857	37,734	Increase
• Tobacco		22,572	31,413	Increase
Plantains	'000 tonnes	9,732	9,391	Decline
Cereals	'000 tonnes	2,309	2,657	Increase
Root crops	'000 tonnes	8,288	8,050	Decline
Pulses	'000 tonnes	665	767	Increase
G.nuts /Soya/ Simsim	'000 tonnes	392	510	Increase
Fish	'000 tonnes	220	434	Increase
Animals	000s Animals			
• Cattle		6,144	6,770	Increase
• Poultry		29,671	32,600	Increase
• Sheep/Pigs/Goats		9,372	11,400	Increase
Total wood production	'000 tonnes	26,909	31,614	Increase

Source: MFPED [2006] Statistical Abstract

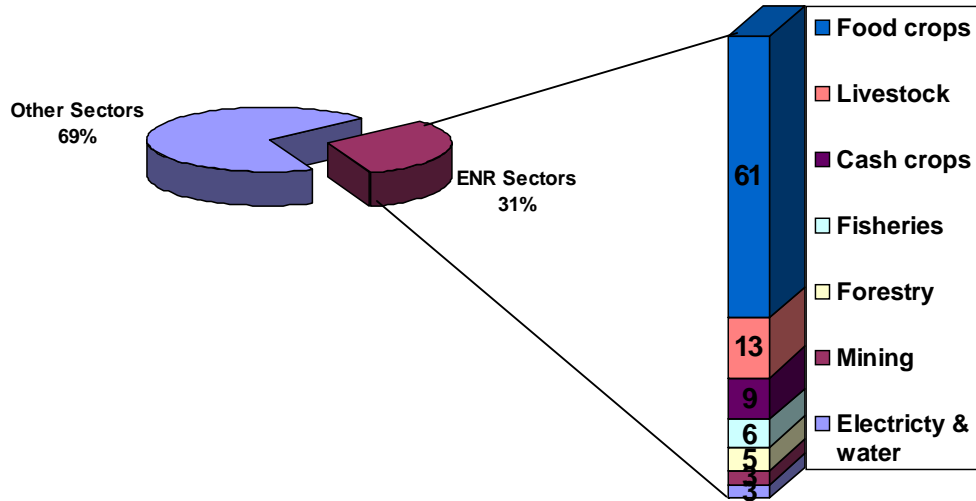
Figure 2.3: Trend in value of exports in dollars



17. Government accepts that the contribution of the sector would even be much higher if progress was made in improving climate for value-addition. Government fully accepts that its strategy for increasing households incomes under 'Prosperity for All' needs to address the value chain of our products (Budget Speech, 2007) by addressing all constraints at production, processing and marketing stages. By taking this strategy, the government would be addressing the stresses associated with stagnant world demand for some commodities, price volatility and unpredictable weather conditions [MFPED 2006]. The government proposed a strategy of cluster formation and facilitation around selected products. The strategy lists fisheries, floriculture and tourism clusters as starting points.

18. To sum up, even though the contribution of ENR sector to GDP has declined relative to industry and service sectors, it still dominates at 31% in 2007. (See Figure 2.4).

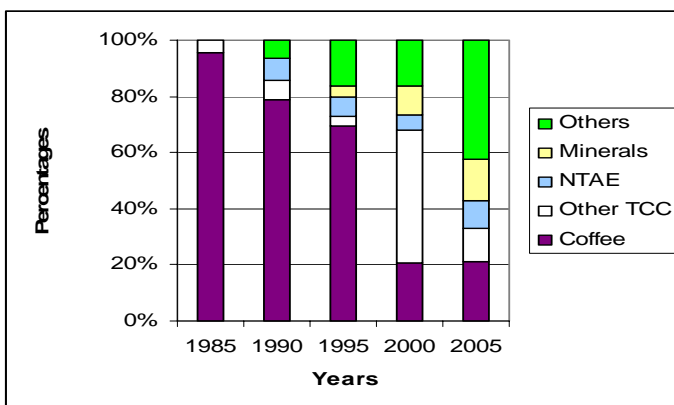
Figure 2.4: Contribution of natural resource base to GDP



19. The improvements made by ENR sectors to livelihoods, GDP, industrialization, foreign exchange, MDGs and economic transformation are traced to a number of reforms that collectively provided incentives to make this happen. The relative political stability enjoyed since 1986, continuity of government and restoration of law and order to protect both human population and its property top the list. The 1987 Economic Recovery Programme (ERP) which was aimed at addressing deficiencies in Uganda's export competitiveness, introducing market reforms into its agriculture policy, attracting more foreign investment, and improving the effectiveness of fiscal and monetary policies. This was followed by strong macroeconomic stabilization policies, liberalization of key markets and sectors-including the foreign exchange market and the coffee and banking sectors-in the first part of the 1990s. During the second half of the 1990s, the focus of Uganda's development policies shifted to poverty reduction, complemented by further reforms including further liberalization of the trade regime, restructuring and privatization of electricity and telecommunications, tax reforms, liberalization of international capital account transactions, and strengthening of banking supervision.

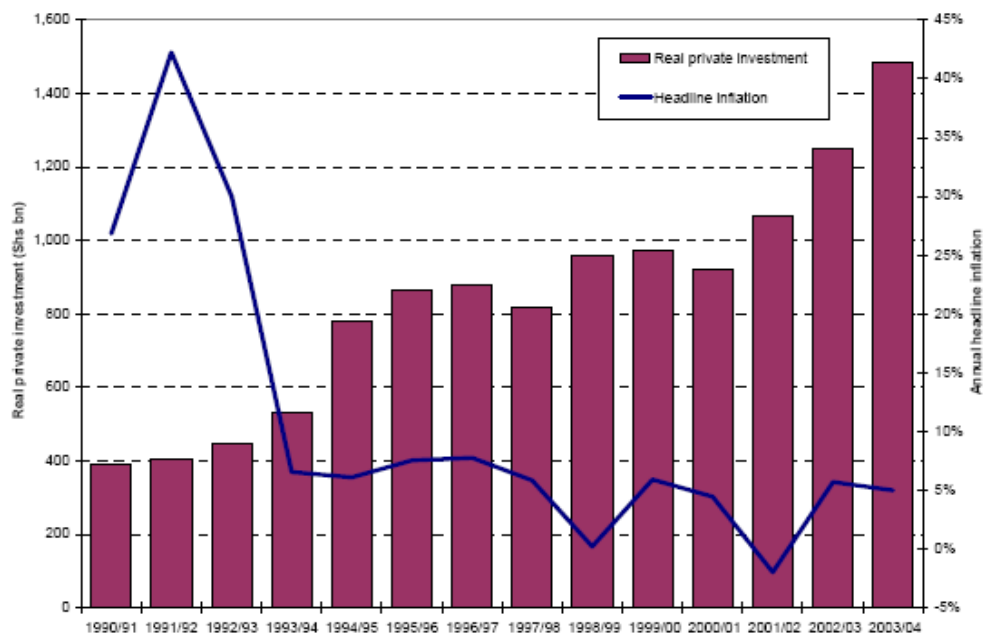
20. In 1992, government removed the bureaucratic and rent seeking activities associated with trade restriction measures in order to boost trade. In addition, it pursued a diversified export base away from the high dependence on coffee, which in 1986 accounted for 95% of the value of exports. Its proportionality has declined (Figure 2.3) as total earnings of all exports have increased (Figure 2.5). Export taxation was eliminated. Government also addressed institutional failures by abolishing the monopolies of Coffee, Produce and Lint Marketing Boards, a measure that paved way for giving the farmers relatively competitive prices for their produce in a more timely manner than before. Liberation went beyond trade to include foreign exchange too.

Figure 2.5: Trends in proportionality of foreign exchange by types of commodities



21. Further, government pursued a policy to attract foreign investment, through enactment of Uganda Investment Code, and establishment of Uganda Investment Authority. The level of Foreign Direct Investment (FDI) has consistently grown over years from a mere \$9million at the time of Rio, in 1992 to the present level of \$264million[†].
22. It should also strongly be observed that the government had to deal with one of the market failures related to macroeconomic instability by controlling inflation in order to create enabling environment for private sector investment (See Figure 2.6). It is usually a tendency and source of disincentive that high and unpredictable rates of inflation discourage private investment and savings as their value is eroded by price increases, with low levels of savings and investment in turn reducing the real growth of the economy.
23. However, effort is also needed to improve the monetary policy. Presently, Uganda's public expenditure exceeds domestic revenue. The shortfall, which is known as the fiscal deficit, is financed by donor support. In turn, this increases domestic money supply. To reduce this supply, in a consistent manner with annual inflation of 5%, Bank of Uganda has either sold foreign exchange or government securities to the market. In fact, government's net issuance of securities increased by 500% over the past five years while B.O.U foreign exchange sales increased by 1000% [AAPAM, 2005]. The rapid increase in the net issuance of government securities has led to a rapid increase in net government borrowing from the commercial banks, and this has inevitably squeezed the resources available for bank lending to the private sector (See Figure 2.7). This is a big source of disincentive as private sector cannot access enough funds to borrow to invest in natural resource based enterprises.

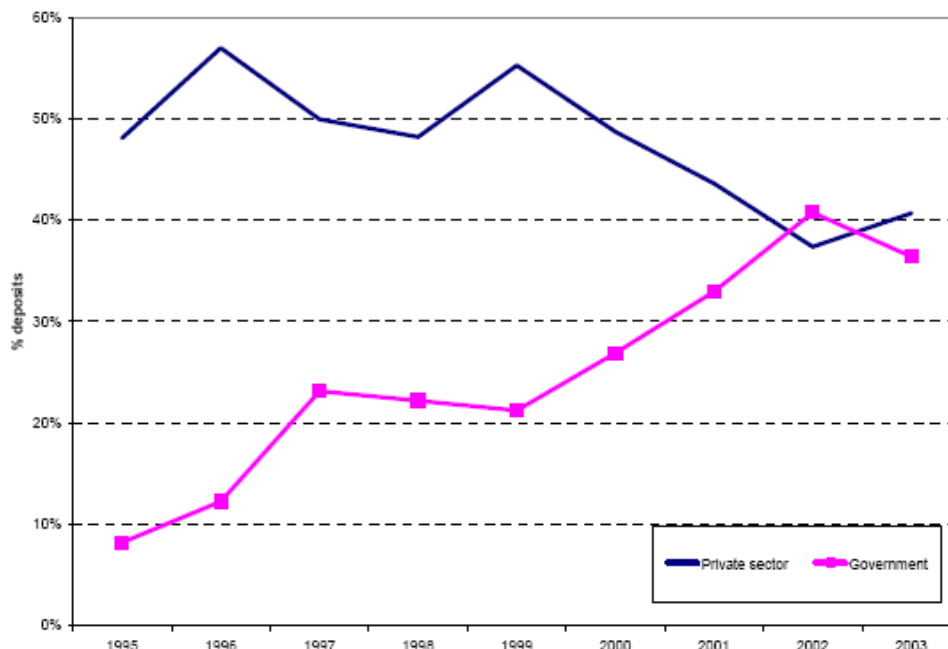
Figure 2.6: Inflation and real private investment, 1990/91-2003/04



Source: Uganda Bureau of Statistics (UBOS)

[†] World Investment Reports

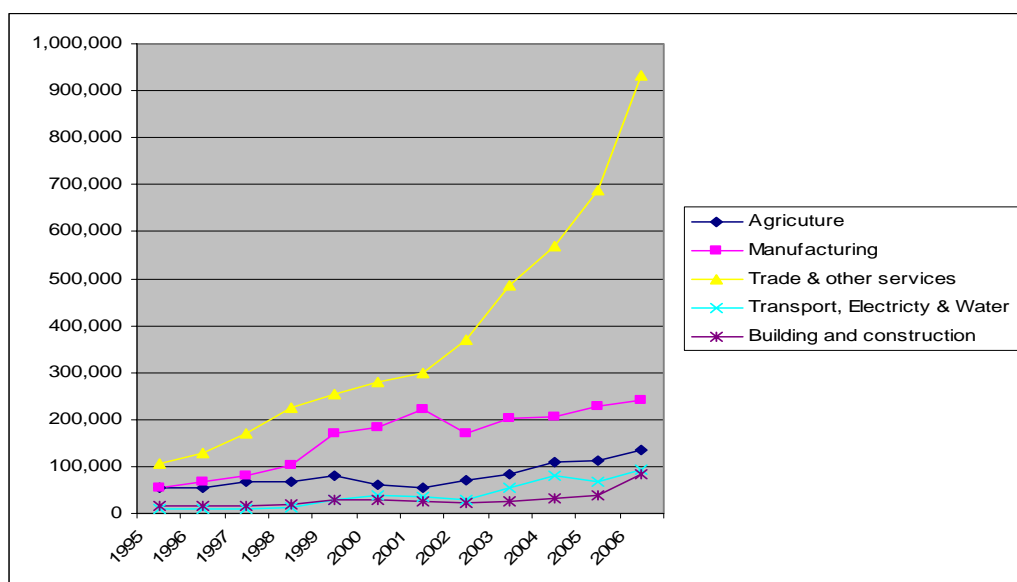
Figure 2.7: Commercial bank loans to private sector and Government, 1995-2003



Source: Bank of Uganda

24. The above situation does not auger well for an economy that has recognized that it is the private sector-led growth that will contribute to economic development and poverty reduction (PEAP pg 34). To make matters worse, the little credit to the private sector is used up more in trade and manufacturing than in agriculture (Figure 2.8). Evidence shows that it is the agriculture (crops, livestock, fisheries, forest) that has been disadvantaged for a very long time.

Figure 2.8: Trends in commercial lending, 1995-2006



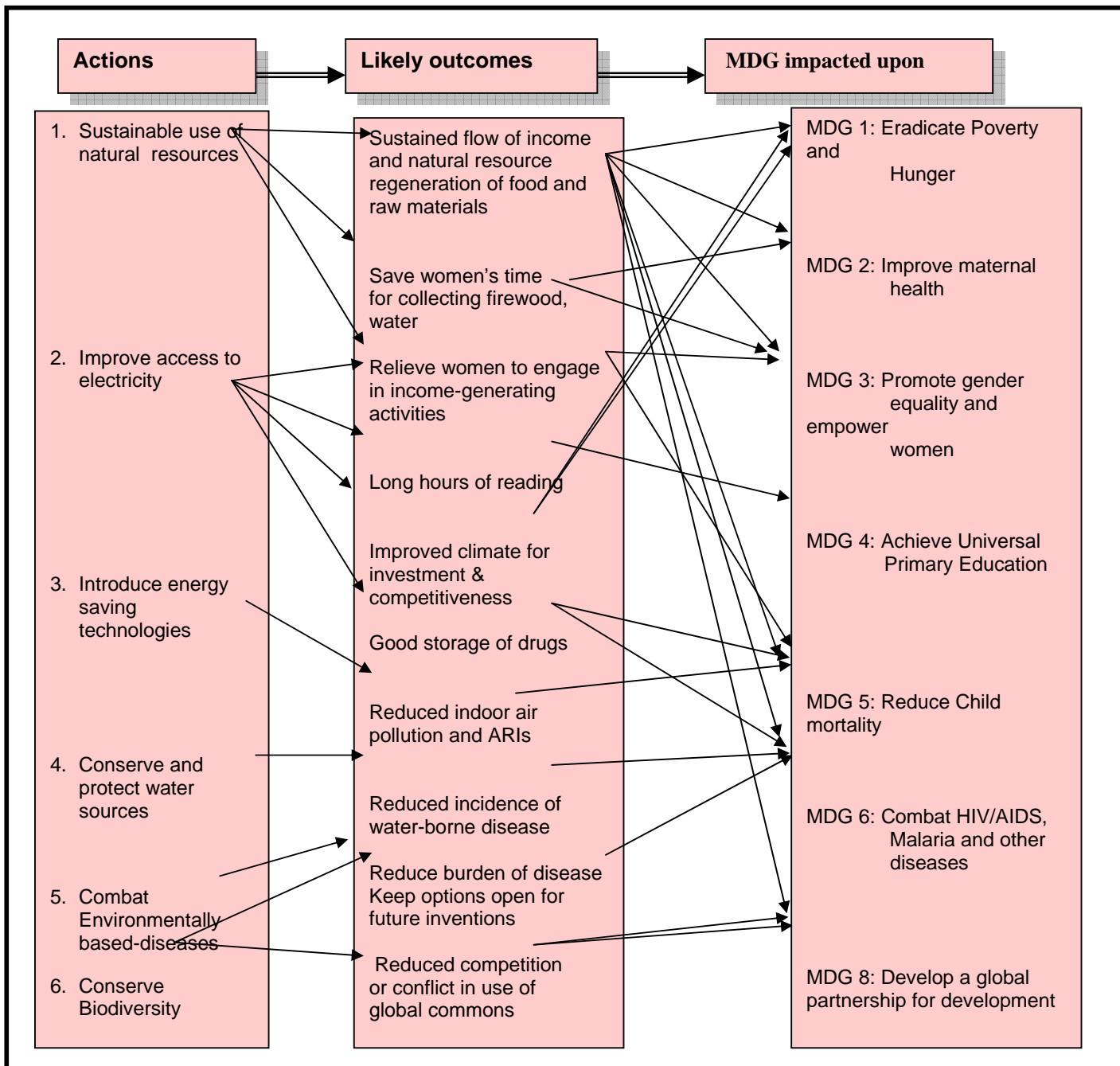
25. Many studies have recommended; among others that Uganda needs to avail long-term financing at lower cost vis-à-vis favourable tax regime to stimulate domestic industrial productivity [BoU, UIA, UBOS, 2004]. Further, recognising the above, the Minister of Finance amended Section 21 of the Income Tax to provide that “interest earned by a financial institution on a loan to any person for the purpose of farming, forestry, fish farming, bee keeping, animal and poultry, husbandry or

similar operations". This was meant to create incentives to the commercial banks to lend to the above types of enterprises. However, not all of them are featuring in bank lending portfolio particularly those that have long gestation maturity periods e.g. long rotational commercial forestry. Insurance companies too have not designed risk coverage policies for forest plantations. Yet a study by LTS/SDC showed that \$75m can be earned in a forest estate of 60,000 to 70,000 hectares of Pine which would be a very modest contribution to the balance of payment accounts.

26. Further, sustaining high economic growth and low inflation in an environment of ever increasing international oil prices amidst persistent power shortage on the domestic scene is a big challenge. Industrialisation and value addition for increased overall competitiveness of the economy will be frustrated. Needless to mention, it calls for urgent steps to address this disincentive. Short of which many of the MDG targets may not be met [BoU 2006, UNDP 2005]. Improving access to energy alternatives from that of wood fuel would contribute to human development benefits by reducing indoor pollution which is ranked as the second cause of morbidity in Uganda. Presently, only 2.3% of the population uses electricity for cooking. As high as 81.6% uses firewood and 16.4% charcoal, both polluting [MFPED, 2006]. The government should therefore continue to strive to raise rural electrification coverage from the 3% level to the 10% target level by 2015.
27. Another source of disincentive is the falling terms of trade, implying that average unit price of imports outweigh those of exports. Further, trade deficit has worsened, from \$530 in 2001/2 to \$957 between July 2006 and March 2007.
28. Incomplete markets failure is another source of disincentive. It occurs when markets fail to produce goods and services that are desired by the public but where the competitive market cannot emerge because of missing prices, ignorance, lack of information, weak property rights and high transaction costs of looking after the resource. For example, many of the services offered by the environment (e.g. indirect and non-use values) are not highly valued or even sometimes appreciated as direct (provisioning) values. Under the circumstances, governments become challenged to take the lead in investing to protect these values in the interest of the entire society.
29. Finally, Uganda's economic growth and its sustainability will depend on how well the environment and natural resources (ENR) are managed and used. However, Uganda's recent rapid economic growth has put significant stress on its ENR base resulting in environmental degradation. Consequently the quality and quantity of resources on which sustainable economic growth and poverty reduction depends is declining. Recent estimates of the cost of natural resource degradation in Uganda suggest that the cost of natural resource degradation is as high as 17% of gross national income per year, of which 6% consists of forest degradation and 11% soil degradation.[‡] Although the estimate is highly approximate, it receives dramatic confirmation from households' own voices that land productively is on a declining trend.
30. There is thus urgency to halt land degradation more so given the evidence that there is a well-established connection between improvements in small-scale agriculture and poverty reduction. One study in Africa found that a 10% increase in crop yields led to a 9% decrease in the number of people living on \$1 per day [Irz et al, 2001 in World Bank 2003: xix).
31. In conclusion, it can strongly be asserted that if the government successfully addresses the policy, institutional, and market failures, it will create an enabling environment to position ENR in driving progress towards the attainment of MDGs. Figure 2.9 gives a few examples of that strong linkage.

[‡] Environment and Poverty Report, 2003 (Check)

Figure 2.9: Delivering on MDG 7(Environmental sustainability) helps to deliver on other MDGs



Source: Cornelius Kazooru [2007]

3. Natural Resources Governance at the core of sustainable development and livelihood improvement

32. Abundant natural resources do not necessarily translate into wealth for the poor. This is quite true in Uganda where the commonly proclaimed abundance is not matched by a concomitant pace in poverty reduction. The State of the Environment Report 1994 underscored the importance of one factor of good governance if a fundamental change has to be noticed.
33. Making governance more friendly to the poor means tackling issues of property rights, access to information and decision-making, adequate representation, institutional transparency, and fairness in sharing the costs and benefits of resource management. In 1992, Uganda was one of the 178 governments at UNCED that recognized that good governance-transparent, inclusive, accountable, decision making- is a prerequisite for sustainable development. By endorsing the Rio Declaration, governments agreed to Principle 10- that environmental issues are best addressed with the involvement of all concerned citizens. To make possible citizen involvement, Principle 10 lists three fundamental “access rights” that empower citizens: access to information, opportunities to participate in decision-making, and avenues for seeking redress and remedy. When all these are protected by law and embodied in government practices, decisions are more likely to be equitable and environmentally sustainable, and more likely to be implemented.
34. Uganda’s history has evidence that bad governance not only negatively affected natural resource management but equally undermined the rule of law and human rights. This was particularly true during the Idi Amin era, 1971-1979, and Obote II era of 1980 -1985. The macro-economic instability was a source of disincentive to investment and instead it promoted speculation in short-term investments like trade. Poaching of wildlife and human encroachment into protected areas intensified. Wetlands reclamation continued unabated especially in south western part of the country. The country was ruled under Decrees with little or no participation of the society into their making. At regional level, the poor record in governance in Uganda created climate for the breakup of the East African Community and a lost generation for management of transboundary resources. The brain drain during the period reduced the much needed capacity and institutional memory needed for sustainable development. Infrastructure was run down and the country’s credibility to borrow was eroded.
35. It was not until 1986 with the take-over of government by the current government that strides in reversing the situation through a set of measures have been made. Top on the list is the enactment of legislation. Article 245 (a)(b) and (c) of the Constitution empowered parliament to provide for measures intended to (i) protect and preserve the environment from abuse, pollution and degradation (ii) to manage the environment for sustainable development and (iii) to promote environmental awareness. At the time, the government had already enacted an enabling legislation in form of National Environment Act, 1995. Since then, additional improvements have been made. A common practice has been to formulate policies, followed by legislation to give effects for the implementation of the policy, establish or improve structures for governance and formulate strategic plans and raise resources for implementing provisions of the policy and law. (See table 3.1.).In a like manner, the Uganda Constitution included a right to a clean and healthy environment as one of the citizen’s rights.
36. A key pattern that has typified natural resource governance is the participatory manner in the formulation of environmental related policies and laws. That culture is mainly traced to the National Environmental Action Plan (NEAP) process in 1991-1995. Non-Governmental Organizations have increasingly been given space in policy making processes, and informing of the formulation of planning frameworks like the Poverty Eradication Action Plan (PEAP) and sector-wide plans.
37. In this regard and based on Participatory Poverty Assessment among the poor, PEAP puts it that there are links between lack of access to safe water and sanitation and poverty (pg 147). It equally recognized that energy supply is critical to enhancing production, competitiveness and incomes (pg 64). The participation of CSOs in annual assessment of local governments including monitoring environmental compliance is a good step for promoting accountability.

Table 3.1 Illustrative environment governance instruments established by Uganda

Resource	Policy	Legislation	Institution	Strategy
Environment	National Environment Management Policy, 1994	National Environment Act 1995	National Environment Management Authority	Environment Investment Programme
Wildlife	Uganda Wildlife Policy 1999	Uganda Wildlife Act 1996	Uganda Wildlife Authority	Tourism Sector Strategic Plan, 2002-2006
Wetlands	National Policy for the conservation and Management of wetland Resources 1995	National Environment Act 1995	-	Wetland Sector Strategic Plan, 2001-2010
Forests	National Forestry Policy, 2001	The Uganda Forestry and Tree Planting Act 2003	National Forestry Authority (NFA)	National Forestry Plan, 2002
Land and Soils	<ul style="list-style-type: none"> • Draft Land Policy • National Soils Policy, 2002 	The Land Act, 1998	-	The Land Sector Strategic Plan, 2001-2010
Water	National Water Policy, 1995	National Water Act, 1995	-	National Water Action Plan, 1995
Energy	Energy Policy for Uganda, 2002	The Electricity Act, 1999	Rural Electrification Agency	The rural Electrification Strategy and Plan, 2001-2010
Fisheries	Fisheries Policy 2003	Draft Fisheries Bill, 2004	National Fisheries Authority*	Fisheries Sector Strategic Plan 2002-2010
Minerals	Uganda Minerals Policy, 2000	Minerals Development Act, 1999	-	-

*Proposed

38. Further, public participation is obligated under some of national laws and regulations. For instance, the National Environment Act 1995 and the EIA regulations compulse consultation and public participation during the EIA processes. The Local Government Act 1997 compulses a proportion of women in decision making structures while the Beach Management Regulations entitle women to access fishing. The Uganda Wildlife Act and the National Forestry and Tree Planting Act have opened up space for collaborative resource management and revenue sharing. In summary, the public-private partnership for environmental management is taking root and it is the way to go.
39. By way of an example, the Uganda Wildlife Authority has shared shs.1.398 billion with communities to date which amount communities have invested in rural roads improvement, health centres and schools. Besides, the private enterprises offered concessions in tourism and wildlife trade are broadening employment, rural incomes and contributing to the tax base. The enabling climate has also paved way for private sector investment in commercial forestry under the incentive supported sawlog production grant scheme and the emergence of private firms in urban waste management.
40. At this juncture however, suffice to mention a few principles in the legislation that form a cornerstone in the administration of environmental governance. They are the principles of public trust doctrine, the polluter pays, the precautionary, and intergenerational equity. The first principle is set in the Constitution. Article 237 Section (b) of the 1995 Constitution clearly puts it that “the government or local government as determined by parliament by law, shall hold in trust for the people and protect natural lakes, rivers, wetlands, forest reserves, game reserves, national parks and any land to be reserved for ecological and touristic purposes for the common good of all citizens” (Uganda 1995, pg 146). This same principle is re-emphasized in the Land Act, 1998. Although government has made attempts to violate this principle sometimes with success, the resistance and opposition it is witnessing in some of the cases like planned degazetement of Mabira Central Forest Reserve is a testimony that actually environment is becoming a foundation for good governance as it is mobilizing cross sectional people to air their voice. The desire by the

public to protect natural ecosystems stems from their dependence on them for regulatory and ecological functions that have short and long term bearing to agricultural productivity, water provision, electricity generation, micro climate amelioration and biodiversity conservation.

41. According to the **Polluter Pays Principle**, the potential polluter must bear the financial costs of preventing pollution and those who cause pollution should pay for remedying the consequences of that pollution. It is on the basis of accepting this principle that laws like National Environment Act 1995 and the Water Act 1995 include provisions related to environmental licensing including payment of pollution fees in relation to the level of pollution. From a livelihood perspective, the revenue earned is to be invested to protect the public from likely vulnerability to pollution related risks.
42. However, in as much as policies exist to effect polluter-pays principle, they must be monitored and evaluated regularly to avoid a situation whereby polluters may find it cheaper to pay the fees compared to adopting abatement technologies. The fact that high levels of organic and industrial pollution continue to be measured in Nakivubo channel that feeds into Lake Victoria calls for urgency in stepping up monitoring and enforcement.
43. On the other hand, the **precautionary approach** recommends the use of planning tools such as environment impact assessment to determine and assess the impact of development projects and other activities before they are undertaken to ensure that potential damage can be evaluated and prevented or substantially minimized. The **intergenerational equity determines** the equitable access to environmental resources for the present generation as well as for the future generations, this determines locus in environmental matters. After establishing the breach of the right to a clean and healthy environment, the pertinent question to entertain is **“who can take a case to Court involving the environment?”**
44. Article 50(1) and (2) of our Constitution gives locus to any person whose rights or freedoms have been infringed or threatened to, can apply to a competent court for redress. Any person or organisation can bring an action against violation of another person's or group's human rights. Section 4(3) of the National Environment Act empowers the National Environment Management Authority or the local environment committees to bring an action against any person whose activities have or are likely to have a significant impact on the environment. In **National Association of Professional Environmentalists vs AES Nile Power Ltd Okumu Wengi J.** held that Section 72 of the National Environment Act is an enactment of class actions and Public interest litigation and abolishes the restrictive standing to sue and locus standi doctrines by stating that a Plaintiff need not show a right or interest in the action.
45. Another key principle in environmental management is subsidiarity. It stipulates that environmental management decisions should be taken at the lowest possible level of public authority that is the closest to the population concerned. In that regard, high levels of government should be a subsidiarity function, performing only those tasks that cannot be performed effectively at a more immediate or local level. Government has made strides in pursuit of the above principle. Under the Local Government Act, 1997 it decentralised the management of natural resources. Other legislation did the same, through the establishment of local level institutions for Environment and Natural Resource (ENR) management (Table 3.2.)

Table 3.2: Local level structures operationalising subsidiarity principle

Law	Structure
1. National Environment Act, 1995	Local Environment Committees
2. The Water Act, 1995	Water Use Groups and Associations Water and Sanitation Committees
3. Uganda Wildlife Act, 1996	Local Government Wildlife Committee
4. National Agriculture Advisory Services Act 2001	Sub-county Farmers Forum and Farmers groups, Parish Coordination Committees, Parish Development Committees.
5. The National Forestry and Tree Planting Act 2003	Forest Committees
6. Land Act 1998	Communal Land Associations
7. Local Government Act, 1997	Technical Planning Committees, Parish Investment Committees
8. Fisheries Policy, 2002	Beach Management Unit

46. In some respects, the legislation has also been gender sensitive. The Land Act 1998 for example requires the prior written consent of both spouses in transactions involving family holdings. The Act prohibits decisions pertaining to customary land that deny women access to ownership of, or occupation of land. However, women activists (e.g. Uganda Women Network) are still lobbying for a co-ownership clause into the Land Act. Land is the most important resource in Uganda because people depend on it for cultivation and therefore their livelihoods. In a case below the benefits associated with decentralized natural resource management are described.
47. Improving tenure rights over natural resources as a component of governance is going to be fundamental in improving rural livelihoods. Although more resource specific studies need to be conducted to capture the level of wealth created by natural systems, the evidence to date strongly suggests that the livelihoods of the poor are built around these systems and more importantly the access and tenure rights. For example, the key variable explaining income levels for rural households in Uganda is access to land and livestock.
48. Families owning cattle are four times more likely to come out of poverty than those solely dependent on crops. In villages near Lake Victoria, the key variable explaining wealth is access to fishing boats and gear. Income-wise, these are found to be even more important than other wealth-associated factors such as access to education (Ellis and Bahigwa 2003). By implication therefore, improving governance systems for common property resources like water, rangelands, fisheries, wetlands, and communal forests is going to remain an important factor.

Box 3.1 Decentralised fisheries management in Uganda

Uganda provides an instructive example of democratic decentralization that is both ecosystem-friendly and serves the interests of the nation's low-income fishers. Until the late 1990s, management of fishing in Lake Victoria, Lake Albert, and other inland lakes was the province entirely of the central government. The government pushed for decentralization and the creation of new fishery rules led to the formation in 2003 of Beach Management Units (BMUs)-local institutions charged with regulating fishing along specific stretches of the lake and shore. Each BMU is headed by a committee with 9 to 15 democratically elected members from each of four different stakeholder groups: 30 % boat owners, 30% fishing crew members, 10% fishmongers, and 30% other stakeholders. In this way wage laborers, merchants, and other low-income families associated with local fishing can participate in the committee along with wealthier boat owners. To address gender disparities, BMUs are encouraged to have women make up 30 percent of the committee "whenever possible" (Waldman et al. 2005: 65-68)

The duties of the BMUs cover the daily management of the local fishery: issuing fishing gear, and working with the government Fisheries Department to enforce regulations against illegal fishing practices. The BMUs also collect fishing data to help guide their management decisions. The local committees are allowed to keep 25% of money generated from licenses and landing fees to fund their operations (Waldman et al. 2005:65-68).

Results of the decentralization have been encouraging so far. The BMUs report better control over illegal fishing and improved working relations with central government authorities. The fishing statistics that BMUs have collected have brought greater local awareness to the need to reduce fishing pressure and fish more sustainably. On Lake Albert, BMUs have declared three non-fishing zones designed to protect known nursery areas and thus maintain the fish stock. The committees report voluntary reductions in the use of illegal fishing gears, indicating a change in attitude of the fishing community. It is too early to tell if these improvements in management have translated into more income for local fishers, or sustainable fishing practices.

49. As the argument goes, land tenure or other tenure rights cannot make crops grow in a country where lending by banks follows individuals' political connections or their regular flow of funds from salaries and allowances [Nyangabyaki B, 2002]. Besides, banks are interested in short-term loans usually of commercial nature, not long term loans for agricultural production and investment into conservation. To charge interest rate of 20% on average when annual inflation is about 5-6%, commercial banks are not yet influenced to support sustainable development. The government also needs to improve the coverage of land titling from the current 1%. Evidence from a number of countries like Thailand, Brazil and Honduras demonstrates an increase in investment and access to credit and land value following land titling [Deininger, 2003].

50. Another achievement in creating a climate for good environmental governance has been the enactment of the Access to Information Act, 2005. This will open up space to hold government accountable for its actions. However, guidelines need to be put in place to give practical implementation procedures of this important legislation. This will complement other measures in place like the strengthening the Offices of the Inspectorate of Government, the Human Rights Commission and the Justice and Law Order Institutions.
51. Overall, there seems to be need for the government of Uganda to clearly understand the key ingredients of good governance particularly from the perspective of enhancing accountability. Short of that, many rules, laws, institutions will be set up and yet on the ground, accountability will not be realized. Three examples can be cited here in justification of this position. The BMU Regulations gave BMU mandate for fisheries enforcement and sustainable fishing. This is inconceivable because the very BMU with interest to make money from fishing cannot go far to enforce compliance of all required standards through enforcement. In the Water Sector, the Ministry of Water and Environment is responsible for both water management and regulation. That is not sustainable. It is important to separate the two functions.
52. In forestry, the National Forestry Authority is only mandated to look after the Central Forest Reserves that constitute only 15% of all the forests in the country, leaving another 15% to UWA under the park system and 70% on private land. It is equally inconceivable that a government can loosely leave 70% of the forest estate to private landowners without sufficiently understanding the type of policy instruments that would make private land owners actually operationalise those policy provisions 'forcing' them to look after the forests for national interest. Owing to these weaknesses, government ends up with what is usually referred to as policy and institutional failures- that is to say policies are made, and institutions are created, but because the ingredients of their feasible implementation and operation are not studied, they end up failing.
53. Secondly, in view of the many institutions and structures established under different laws, it is important that the government assess the financial implications for them to perform the functions delegated to them. Perhaps, it may also be necessary that government supports the local institutions created by the poor themselves which may be more cohesive based on gender, location and social norms. In a recent study, it has been found out that forest based associations as drivers for sustainable development in Uganda are involved in production, primary processing, forest based service providing, secondary processing and forest based services in that order. All these contribute to rural livelihoods but support to small and medium enterprises has not been adequate and consistent.
54. There are additional factors inhibiting attainment of good environmental governance. Many communities are rural and illiterate factors that render them voiceless. Even where they see mismanagement, corruption and political patronage, they cannot report it. This is complicated by the fact that they cannot meet the costs of reporting, follow up or even obtaining environmental justice when their rights are violated by the more powerful, including the state. In ***Kabbs Twizukye and others Vs. Uganda Investment Authority, case No.761 of 1998***, the tree farmers were able to obtain compensation for their trees after degazettement of Namanve Forest Reserve simply because they had to pool resources together to follow through the litigation process. Many poor cannot afford these costs, thereby creating a need for a poor-poor judicial system. Even among the educated and informed, the lack of compensatory mechanism to reward individuals reporting environmental abuses makes it expensive for them to pursue such cases in the legal system. Other sources of frustration is that the judicial system has many backlogs of cases which is another source of disincentive to report abuses.
55. In other instances, it has been the CSOs to defend the rights of the poor. They cannot, however, sustain such efforts unless they have their own dependable sources of funding. This position is reached following the case, ***Greenwatch Vs. Golf Course Holdings Ltd, High court case No.834 2000*** in which Greenwatch was asked by the court to deposit a security of shs.50million before the case could be heard.
56. Under the above circumstances, it still remains a barrier for communities to confidently and consistently pursue their rights a factor that calls for a reform of administration of environmental justice countrywide.

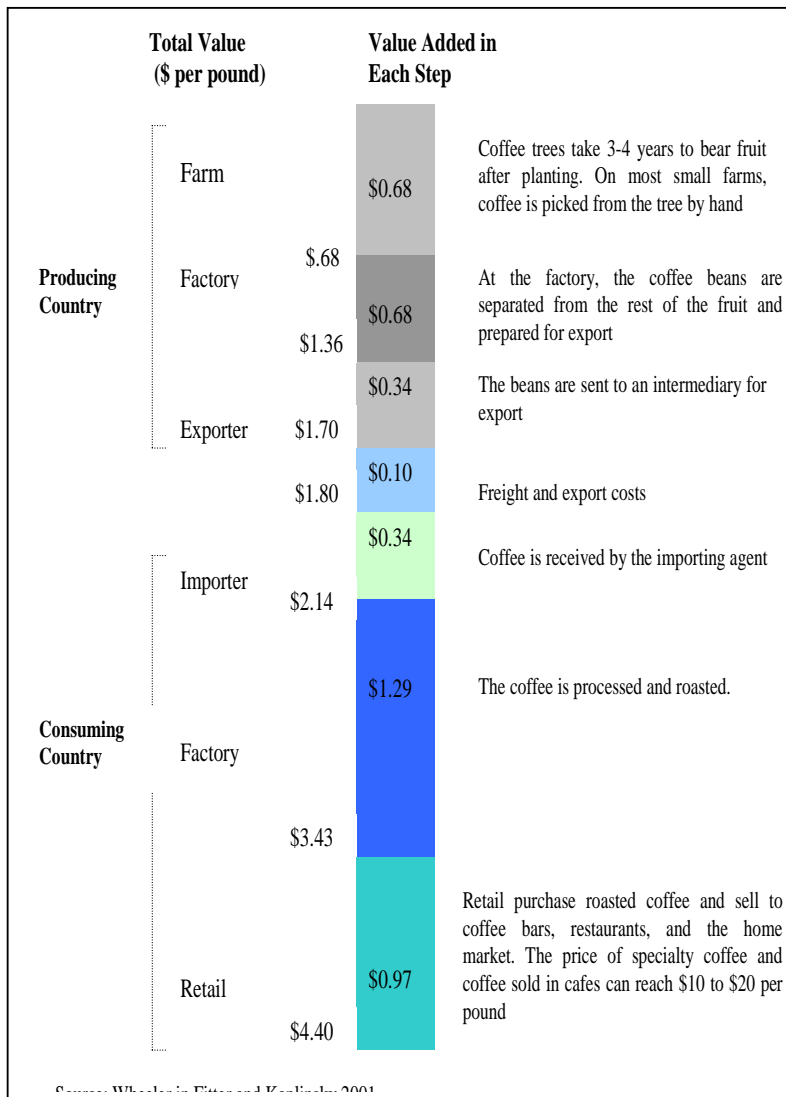
4. Creating a level playing field: - Rural people and communities being able to process and value add on natural resource products and can fairly and equitably enter the market place.

57. It has already been mentioned that both the Uganda Private Sector Competitive Strategy and the Wealth for All Programme put emphasis on the value addition. This would bring about many benefits like increasing the shelf-life of products, cushioning against price fluctuations typical for raw products and above all, broadening market integration opportunities.

58. However, a fundamental area of interest in the market chain of different natural resource products is that there is a fairly level playing field so that the communities are gainers in the chain, and can therefore have incentives to sustainably use the natural resource base. An illustrative example of the long standing cash crop of coffee in Uganda shows that farmers globally on average obtain only 15% in its value-chain. In Uganda this proportion is about only 5%.

59. Table 4.1 is just indicative of the products for which value-addition is urgent. Generally, trade in them is highly localized and it is only in the recent past that a few are starting to be integrated in the international trade.

Figure 4.1: Coffee market value chain



60. Some of the non-wood forest products that account for 74% of the international trade in wildlife commodities (fetching \$101million annually) are found in Uganda. They are Gum Arabic, natural honey, Aloe vera. Suffice therefore to provide a few illustrative examples to give evidence on the needed level playing field conditions.

Table 4.1: Summary of Uganda's tradable products

ECOSYSTEM	PRODUCTS
1. Wetlands	Handicrafts, furniture, fish, medicines, dyes, building materials (fencing poles, timber and thatch), bricks and pottery
2. Forest	Butterflies, aloe vera, honey and bee wax, drums and fiddles, juice, ocimum oil, wine extracts, medicinal plants and tree barks, bamboo shoots, timber, pet animals (snakes, frogs, chameleons, lizards, tortoises, birds)
3. Savannah	Shea butter, wild fruit juice (Taramarindus), medicinal plants, gum Arabica, mushrooms, timber, thatching grass
4. Open water	Fish (Nile perch, Tilapia, African lung fish, Silver fish) and fish products (fish maws, fish skin, fillets), ornamental fish, hydro-electricity
5. Farmed	Moringa, Neem, Eye bird chillies, Aloe vera, Pyrethrum, Prunus Africana, coffee, tea, sunflower, e.t.c

61. First information is power. It is known that product processing, marketing, transport, and sales are the main aspects of commercialization. To a certain extent, sheer lack of information on current market conditions and trends contributes to lack of marketing power. New information services can help with this. In Uganda a coalition of NGOs, government agencies, and private companies operates FOODNET, a regional network that collects weekly or daily price information through radio broadcasts, the internet, and cell phones. The service, which reaches seven million people weekly, prevents middlemen from manipulating prices to under-cut producers. Farmers estimate that the service has raised their return on products by 5-15 percent (WRI 2005). There is no doubt that with the spread of the mobile phones, it is going to be visible for farmers to access market information.
62. The above example also underscores the importance of forming association or networks to obtain economies of scale in marketing and value addition. Perhaps this is an area where a lot of investment has to be made in Uganda now. The collapse of the cooperative structures in mid 1980s partly as a result of trade liberalization left many farmers vulnerable to middlemen who gained more than the farmers themselves. The current trend to revitalise cooperatives in order to give effect in the implementation of 'Wealth for All Programme' particularly for credit will not be sustainable unless these cooperatives are fully owned, patronized and managed by the members themselves. Political overtones now influencing their rejuvenation may ultimately become a source of risk. A case study in Box 4.1 shows the importance of associating to tap economies of marketing and technology access by farmers in agriculture. This is one of the eight strategic enterprises under the Plan for Modernisation of Agriculture, particularly in the districts of Arua, Kibale, Kitgum and Soroti.

Box 4.1: Associating improves access to market and technology

Uganda Honey Association (UHA) is a national apex body in the apiculture sector in Uganda, which was formed in 1995. The main aim of the association is to promote the development of bee keeping in Uganda. The association is composed of over 80 primary societies and community groups with a membership of over 5,015 bee keepers. A 13-member executive board, four of whom work fulltime for the association, leads the association.

UHA offices are located at Nalukolongo, Industrial Area, Kampala. The UHA honey facility is also located there. The main activity of the association is to train beekeepers throughout Uganda to produce top quality honey for the local and export markets. Honey and wax are processed in the Nalukolongo honey refinery, which is set up with the latest steel equipment. UHA received assistance from Uganda's USAID Agri-business Development Centre (ADC) through the Investment in Developing Export Agriculture Project (IDEA project). Uganda Honey Beekeepers Association is currently running Nakasongola Apiculture Centre (NAC) funded by the German Government at 111,000 Euros. It began operation June 2003. It is intended for the management and utilisation of honey-bees (*Apis Mellifera*) for enhanced food security, incomes, and improved standards of living, especially of vulnerable groups (women, youths, disabled, the landless, the poor etc.) the majority of whom live in rural areas. The centre stresses the conservation and protection of natural resources for enhanced productivity, and economic returns to small-scale bee farmers at household levels. It is however, hoped that when the centre is fully developed, it will be in position to house the regional secretariat for the proposed bee keeping association for the East African region, among other activities.

Source: Agricultural Council of Uganda

63. At a higher level, government must continue to place for a leveled playing ground in international trade for its natural resource based products by continuing to advocate for unfair protectionism to farmers in developed countries through subsidies.
64. Providing a clear policy framework is yet another example of creating a leveled playing field for allowing natural resource based products to integrate in the local and international market. An illustrative example is the Wildlife Act 1996 which opened up opportunities for different user rights. Wildlife trade started under this policy framework in 2000 and it is promising although the annual revenue of 3 million dollars is still low relative to other resources thus making wildlife trade generally still invisible. Nonetheless, Uganda is already the world's leading exporter of helmeted chameleon (*Chamaeleo hoehneli*) (UNEP WCMC 2004). In 2001, about 1750 such chameleons were exported, the figure rising from 230 of 2000. Likewise, 2090 *chamaeleo bittaeniatus* (Moutane Chameleon) were exported, a rise from 178 of 2000.
65. Other wildlife that has been integrated in international trade include Brandypodion Xenorhinum (single melded horn chameleon), red-crowned brown and brown-necked parrots) [UNEP WCMC 2004]. Table 4.1 provides a wide range of products that are all candidates for which specifically and generally enabling environment has to be created to improve their value addition. Support services are needed for product development, extraction testing, standardization and certification, market testing and linkage establishment with markets.
66. Further, the increasing consumer concerns for health and safety and the consciousness regarding the environment presents yet an unrivalled additional opportunity in the whole of Africa in trade of organic products[§] [Okaasi S. Opolot, Dinah Kasangati & Rusoke Charles). In monetary terms, this has grown from \$4.6million in 2001 to \$7.7 million in 2003. The fact that it dominated by small certified farmers makes its benefits widespread.
67. Key constraints to be overcome are low investment in the sector leading to failure in fulfilling existing orders, limited research and extension service and high costs of international inspection and certification. These are requirements in which the government has to initially invest. Despite the problems, the ability by the organic farmers to get organized under an umbrella association enables them to access information and other support services more cost-effectively than would have been witnessed in tourism sector, with stakeholders organized under an association (Box 4.2). Suffice it to mention therefore that strengthening of genuine local institutions is going to be an important area in which government needs to invest.

Box 4.2: Village based associations get training support from UCOTA

The Uganda Community Tourism Association (UCOTA) was established in July 1998, to empower local communities in sustainable development through small-scale tourism and handcraft enterprises, also known as Community Tourism. Community Tourism aims at involving the local people in the planning, decision-making and implementation of tourism development activities. This form of tourism assures that the benefits stay as much as possible in the local community. To date UCOTA has grown into 50 member-groups countrywide, representing about 1200 individuals of whom 63% are women and 37% men.

The groups operate small enterprises ranging from accommodation, guiding services, and restaurants to craft shops and music, dance and drama performances. Most of the groups fund a community project, such as clinics, schools, water sources and literacy programmes. It also trains them in several aspects like tourism marketing, crafts making and organizational strengthening.

Source: www.ucota.or.ug/ucota/index.htm

68. Presently, the government is encouraging farmers and the poor to farm savings and credit cooperative organisations, commonly referred to as SACCOs. This is intended to level the ground for accessing one important input, that is, credit. Evidence has also come to emerge that well-managed community institutions in ENR sector have harnessed the capacity to borrow competitively from commercial banks and micro-finance institutions [C. Kazoora, et al, 2006]. One important constraint the government has to address is that the burden of the cost of accessing credit is heavier on the pro-poor institutions than it is on the rich ones.

[§] This is because Uganda's usage of fertilizer is lowest in Africa, at 1kg of fertilizers per hectare, compared to 9kg/ha for Sub-Saharan Africa and less than 3% of that used in East Africa

69. Although still generally limited, technology development and adoption is also an important factor. Rudimentary technology has been found to be inhibiting full realization of values from natural resources [EU, UNDP 2004]. Where it has been improved, there is hope for increased gains for the farmers. For example, the UNIDO funded technology for fruit drying has enabled farmers to trade in bananas, pineapples, pawpaws e.t.c in Masaka and Iganga.
70. Another factor to be recognized is that an efficient transport system (in terms of speed, reliability and affordability) is very critical for the export competitiveness of a land locked country like Uganda. It was found that although there are no explicit taxes on Ugandan exports, the effective burden to exporters due to costs of overland transportation only is high, even though it has been reduced from over 30% on average to 25% for exports (mainly non-traditional exports). However, transport (air freight) costs for perishable exports are considerably high, sometimes as high as 50% of unit price. Needless to mention these costs place Ugandan exports at competitive disadvantage relative to other exports [Rudaheranwa N, 2004]. As Uganda looks forward to tapping opportunities offered to it for trade e.g. AGOA and Everything But Arms it must make its policies incorporate the barrier of being landlocked.
71. Energy is a vital input into small-scale agro-processing (e.g. milling of cereals, cooling of milk, secondary timber-processing, fish storage e.t.c, e.t.c). As has been reported by UBOS the current policy on alternative energy sources and rural electrification needs to examine the cost of using alternative forms of energy [UBOS 2007].
72. There is also evidence that establishing formal trade linkages between the Ugandan farmers and external consumers can go a long way in creating incentives for sustained production. With support of GEF/SPG, two hundred acres of mango have been cultivated in areas that were degraded in Iganga. Enterprise Uganda linked the farmers collectively to the external market, a factor that has motivated more farmers to put their degraded lands under orchards. Like with other products, it needs to be mentioned that farmers must get organized in order to raise and sustain the minimum required scale for trade. Once organized, it also calls for supporting farmers into what is known as business to business trading principles.
73. There is no doubt that it pays to support some confidence of the poor to strive for more demanding activities. That support could come in form of enabling legislation, training, credit grants, information, research, institutional development, product development and transfer of technical know how and technology.
74. Generally, the value-chain analysis of individual natural resources has not been well studied. This is a barrier to understanding the key losers and winners, and how the differences among them can be narrowed down for fairer and more sustainable trade.
75. Although very few studies have been conducted to establish the barriers to enhanced value-addition, the few that have point to the conclusion that Uganda has a lot of issues to address and they may differ by product. A value chain study involving five commodities (coffee, fish, flower, fruits and vegetables and tourism)** was revealing. Uganda's tourism has to be promoted beyond the flagship of gorilla; government has to invest in creating a "higher profile of Uganda as a tourism destination" through say aggressive search for potential (EB) to network with, establishing the presence of Tourism Board in some selected countries (e.g. China) and training guides in multi-lingua interpretation. Pricing in relation to quality and attractions is considered high, and this may create a barrier.
76. In the fisheries sector, there has been broadening of the market. The industry is governed by many standards related to product process, functions e.t.c. For example, in 2006, EU inspectors were not as satisfied with Uganda's quality control processes as they were in 2000: Processors failed to observe the code of conduct, (Standard Operating Procedure for Uganda). The remark

** Jorg Wiegratz, Paschal Nyabuntu and Charles Omagor [2007] Competing and Learning in Global Value Chains. Firm's experiences in the case of Uganda, Volumes 1&2, A publication under Uganda Programme for Trade Opportunities and Policy (UPTOP)

that “Lake Victoria seems to be on the edge of over-exploitation” is now raising signals to the government and industry at large to invest in aquaculture. In addition, it justifies the starting of certification so that fishing is made economically, socially and environmentally sustainable.

77. Uganda’s value chain would also be enhanced if Ugandans or firm made improvements on the “soft” competitiveness factors. These include trust, honesty, coordination, reliability, consistency, royalty, responsiveness, communication, relationship management, mutual understanding, proactive behaviour, and ethics, among others.
78. The study also recommended that support needs to be given to analyse non-economic aspects of embeddness of GVCs at their local modes e.g. the social, cultural, political, institutional and cognitive pre-conditions that enable or disable local actors to integrate and perform in GVCs or carry out governance of the domestic GVC in a certain way.
79. Efforts to improve the climate for value-addition, competitiveness and fair trade must be pursued at different scales-global, regional, national and local in an integrated manner. To compete, Uganda must compare favourably with other investment locations, particularly within the East and Central African region. Recent executive opinion surveys indicate that between the years 2003 and 2006, Uganda’s overall international competitiveness ranking has deteriorated. Whereas it was ranked 80th of 100 competing countries in 2003, in the 2006 survey, it was ranked 113 out of 125 countries.
80. Uganda needs to improve infrastructure. It had a poor ranking in that regard, 118 out of 125, compared with its East African and African neighbours. Although it fared well in the area of macro-economic stability, it needs to improve on the performance of public institutions and technological readiness. Over the last three years, the Global competitiveness Report has consistently identified access to finance as the single most problematic factor for business in Uganda. Equally, there are also grave concerns over corruption, which is ranked as the second most important business community concern. At regional level, the EAC Common External Tariff needs to be resolved as it still constrains Ugandan firms to compete in the regional market.

5. Environment and Natural Resources in National Accounting, PRSP's and MDG performance

81. The Poverty Eradication Action Plan (PEAP) calls for sustainable economic growth, recognizing that short-term GDP growth can be obtained from depletion of resources, but that maintaining economic growth over the long term is not possible unless the environment and natural resources are managed sustainably. In a recent assessment, it has been concluded that despite a lot of investment having been made in the formulation of policies, plans, strategies and projects for environment and other sectors, Uganda is still falling short of a sustainable path to sustainable development [NEMA, UNEP, 2006]. This assertion was reached based on evidence that environmental degradation costs \$1.3 to \$3.8 billion, of which 85% is attributed to soil erosion [NEMA, 2000/2001]. Biodiversity Index was reported to be falling, reflecting losses which have been registered in forests, wildlife, wetlands, fisheries, to mention but a few. The same assessment, while recognizing that environmental issues were better integrated in the current PEAP than the previous (Table 5.1); it was NOT a good predictor of the actual environmental quality on the ground. The assessment called for improved implementation and enforcement. Relatedly, there is urgency to start assessing the cost of degradation to the national economy and hence environmental accounting.

Table 5.1: Integration of environment into 5 PEAP pillars

Pillar	Priority actions	Reference
1. Economic management	<i>General:</i> Actions to enhance environmental sustainability	Pg 34
2. Enhance production, competitiveness and incomes	<i>Agriculture:</i> Integrate environmental concerns, especially soil fertility in farmer advice, e.g. NAADS <i>Livestock:</i> Implement the water for production strategy. <i>Energy:</i> The rural electrification strategy will be implemented. <i>Mining:</i> Put in place mining regulations <i>Tourism:</i> Diversify tourism products <i>Environment:</i> Develop a strategy for the ENR Sector <i>Land:</i> Improve security <i>Forestry:</i> Establish Tree Fund in support of the planting <i>Fisheries:</i> Establish new Fisheries Agencies <i>Wetlands:</i> Support community initiatives <i>Climate:</i> Establish appropriate institution for CDM <i>Wildlife:</i> Minimize encroachment	Pg 55 Pg 63 Pg 65 Pg 67 Pg 68 Pg 73 Pg 75 Pg 78 Pg 80 Pg 82 Pg 83 Pg 84
3. Security, conflict resolution and disaster management	<i>Natural disaster:</i> Establish an Emergency Contingency Fund in accordance with the Public Finance and Accountability Act	Pg 108
4. Good governance	<i>International Conventions:</i> Government will fulfill all its reporting requirements under International Conventions	Pg 121
5. Human development	<i>Health:</i> Procure malaria commodities (preventive and curative) <i>Water and Sanitation:</i> Expand rural water supply	Pg 167 Pg 170

82. Before discussing the measurement of economic performance, suffice it to describe the strong and weak aspects of PEAP. PEAP has been strong in rallying government-donor partnership in poverty reduction. The participatory processes leading to its finalization have been improved. Costs of degradation have been reflected to the extent possible and the causal relationship between environment and poverty have been described (Box 5.1).

83. The problems facing the country were explained and remedial actions proposed. Baseline and target indicators were included (Table 5.2). Importantly, the indicators were aligned to the MDG indicators and targets except for the MDG Plus targets in respect of fisheries, biodiversity, renewable energy and chemicals that harm the environment.

Box 5.1: Illustration of the values PEAP attached to the environment

- The cost of NR degradation is 17% of GNI per year.
- Forests provide economic value \$360m of which only \$112m is captured in the official state.
- Average distance travelled to collect firewood has risen markedly from 0.06km in 1992 to 0.73km in 2002.
- The annual direct production value of wetlands range between \$300-600 per hectare.
- Purification and carbon sequestration in values go up to \$ 10,000 per hectare.
- The median time to collect water is 30 minutes.
- The presence of electricity in a village increases households' consumption by 10%.

Source: PEAP (2004/05)

Table 5.2: Illustration of PEAP's use of 'baseline' and target indicators

Strategic objective	Outcome	Baseline 2002/03	Target 2001/08	Target 2013/14
2.4 Increased and sustainable forestry production	• % of land under forest cover.	24%	27%	30%
	• Distance travelled to collect firewood	0.73km	0.5km	<0.5km
2.2 Increased and more efficient agricultural production	• % of households with land titles for agricultural production.	<1%	1.5%	3%
	• % of titled land	12%	17%	25%

84. On the weak side, the 3-year span of PEAP does not match the long term perspective to dealing with environmental issues. It is too early though to borrow any positive lesson from countries that have taken a longer period (e.g Djibouti 10 years; Kenya 15years, and Mauritania 15 years). Although it makes reference to developmental challenges where trade-off choices have to be made (e.g. wildlife conservation vs. pastoralism; water for animals vs. water for human being; conserving wetlands for provisioning functions vs. ecological functions), it does not pronounce itself on the preferred choice. It is by no surprise that conflicts arise in practice when investments are being proposed.
85. Finally but not the least, it needs to be cautioned that addressing environmental concerns goes beyond their mainstreaming in macro-level planning frameworks like PEAP. Mainstreaming must equally be advocated for in all other types of instruments that give effect to the implementation of environmental policies (e.g. sector-wide plans, local government's plans, technologies, curricula, bye-laws, institutions, funding mechanisms e.t.c). Equally, mainstreaming must permeate all stages followed for each of the above (i.e. conceptualization and identification, design, appraisal, budgeting, implementation, monitoring and evaluation). Accordingly, environmental activists should take interest to participate in the on-going PEAP evaluation process [C. Kazooru, 2007].
86. There are two main reasons why the current PEAP is strong on environment namely that the time PEAP was being revised, the MWLE had made 'Guidelines for mainstreaming Environment and National Resources Issues in other Sector Programmes' which the ENR PEAP Revision sub committee used. The support from the Netherlands Embassy also facilitated this group to consistently pay attention to issues of environment and natural resources. The tone was this group followed very clear, namely that ensuring a win-win situation for environment and development. Government should therefore consider supporting environment and natural resources working group to interface with the PEAP revision process.
87. As already alluded, in Uganda, as in many other countries, several overarching policy questions drive the need for environmental accounting:
- Is GDP growth sustainable or is Uganda depleting ENR wealth in order to fund current consumption, in other words, 'living off its natural capital?'

- What is the true economic importance of ENR sectors to GDP and how significant are they for household livelihoods, especially the poor?
- What is the potential for ENR sectors to fund the sustainable management of these sectors?

88. Gross Domestic Product (GDP) or Gross National Income (GNI) is the indicator commonly used to assess economic growth. However, it has 2 limitations; first, it does not account for depletion or degradation of natural resources and secondly, GDP measures the goods produced, but not the “bads” associated with the production of those goods e.g. soil erosion, pollution, resource depletion, e.t.c. In such a situation, GDP growth rates may be seen to be impressive but over the long term, the economy could be bleeding.

89. While GDP is a good starting point to assess the performance and growth of the economy, a complementary macroeconomic indicator is needed to evaluate whether GDP is sustainable. Adjusted Net Savings (ANS) is such an indicator to complement GDP by assessing the sustainability of economic growth. ANS is based on the concept of Genuine Savings, developed in the late 1990s by the World Bank (Hamilton and Clemmens 1999; Kunte et al, 1998; World Bank, 1997). In Box 5.1 Uganda’s ANS was estimated at 6%. This compares to that of Kenya at 8% and that of Tanzania at 3%.

90. Perhaps a serious criticism of Genuine Saving is that it does not include additions to the volume and/or value of natural capital. Additions may come about through new discoveries (minerals), improvements in the management of natural capital that might increase its value (fisheries, forestry, wildlife, e.t.c), or changes in technology or commodity prices that make previously under utilized resources economically exploitable. There is no easy solution to this problem yet.

Box 5.2: Genuine Saving as % of Gross National Income

Genuine Saving, Uganda 2002	World Bank estimated value in 2002 (US\$ million)
National Saving	\$ 971
- Consumption of fixed capital (i.e. depreciation of manufactured capital)	-\$ 431
+ Investment in human capital	+\$110
- Deforestation	-\$318
- Depletion of mineral resources	Na
- Cost of environmental damage from carbon dioxide emissions	-\$10
= Genuine Saving	= \$322
Gross National Saving as % of Gross National Income	17%
Genuine Saving as % of Gross National Income	6%

Source: unpublished data from World Bank

91. Uganda through the Uganda Bureau of statistics has been exploring with NEMA the possibility of pilot satellite environmental accounting. The concern though, is that the choice of which resource to staff off with under the initiative has not been made. The data requirements and capacity needs assessment can only follow when the choice is made. The cost implication of going environmental accounting has not been made more so given that environmentalists are pushing for too many indicators.

92. Nonetheless, if well conceived, prepared and implemented, environmental accounting or related studies could be powerful to rally the political will for improving environmental governance in the country. An example can be borrowed from neighbouring Tanzania (Box 5.3). It is quite relevant to Uganda where the shift from project to general budget support calls for strong evidence to defend the funding requests.

Box 5.3: Public Expenditure Review informs decision to increase budget allocation to environment

Tanzania has adopted Public Expenditure Reviews (PER) to monitor value for money under budgeted performance. PER is comprehensive, identifying multiple sources of revenue including non-tax revenues, and now allows for an expanding agenda beyond priority sectors that tend to have protected budgets. The government considers natural resource as one of the priority sectors. When the Ministry of Finance failed to see key environmental values, expenditures or revenues showing up in the early PER submissions at either sector or macro level, it called for an inquiry on environment, energy and land within the PRS exercise.

The PER for the environment sector aimed to 'establish levels, trends and distribution of environmental expenditure by government; and the level of environmental expenditure required to meet the country's environmental priorities and poverty reduction objectives' (VPO 2004). Conducted by Nor consult using figures for two financial years 2000-2, it turned out to be a critical turning point in highlighting:

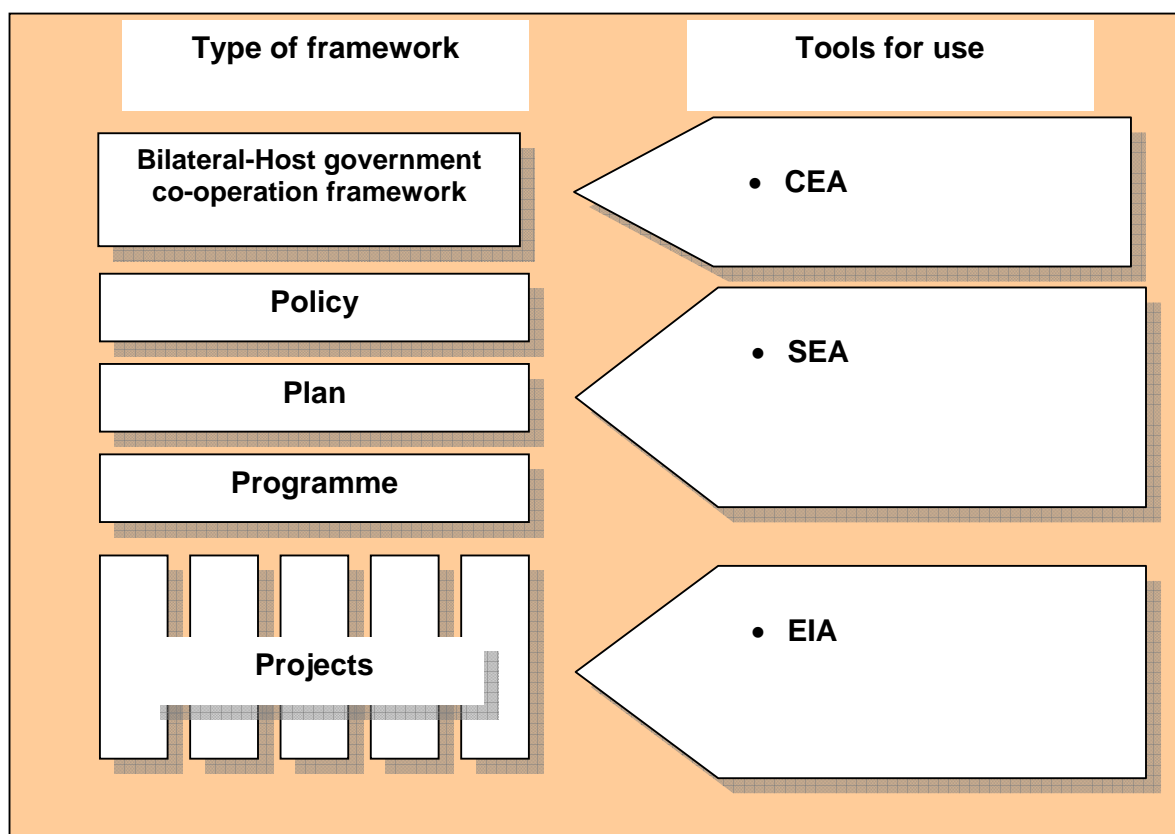
- the considerable potential for environmental resources to contribute to revenue;
- significant under pricing, and very low revenue collection in e.g. fisheries and wildlife;
- the low share of revenue going to districts;
- the relatively low levels of investment and recurrent expenditure on environmental assets and improved revenue capture;
- how some environmentally sensitive 'priority' sectors, in spite of identifying environmental needs, spent nothing on environmental management; and
- the constraint to environmental integration posed by established government budget formats and codes.

Through the environment PER, the potential for investing in environmental management for poverty reduction has become clearer to Ministry of Finance and to environment authorities, as a means to claim an appropriate share of the national budget. The environment PER consequently proposed a significantly increased medium-term expenditure framework for the environment, emphasizing those sectors and local government authorities that deal with poverty-environment issues. The official environment budget has now grown considerably – from Tsh 1,076,707,300 in 2005-6 to Tsh 5,675,971,000 in 2006-7. The Strategic Budget Allocation System now links public sector expenditure planning to the MKUKUTA in a way that both focuses on outcomes and clarifies different ministries', departments' and agencies' responsibilities. All of this has helped to take the MKUKUTA far out of the realms of planners' dreams and into real daily operations.

Source: Paschal Assey et al [2007]

93. As the country prepares itself to evaluate PEAP and develop a new one, it must make choice on a few indicators that demonstrate a very powerful linkage between environment and development, and in turn rally political support. Beyond that, an institutionalized system to periodically carry out joint assessment of ENR sector must be put in place to measure progress. Such assessments are for example now a common feature of the sectors of Health Local Government and Water and Sanitation.
94. Beyond the PEAP revision, government must adopt a culture of mainstreaming environment in other planning frameworks and programmes using appropriate tools. Sustainable development requires a strategic approach that takes into account the interactions among environmental, economic and social issues. Practically, impacts are assessed and addressed at different levels of scale and using a variety of tools as demonstrated in Figure 5.1.

Figure 5.1: Matching impact assessment tools with type of planning frameworks



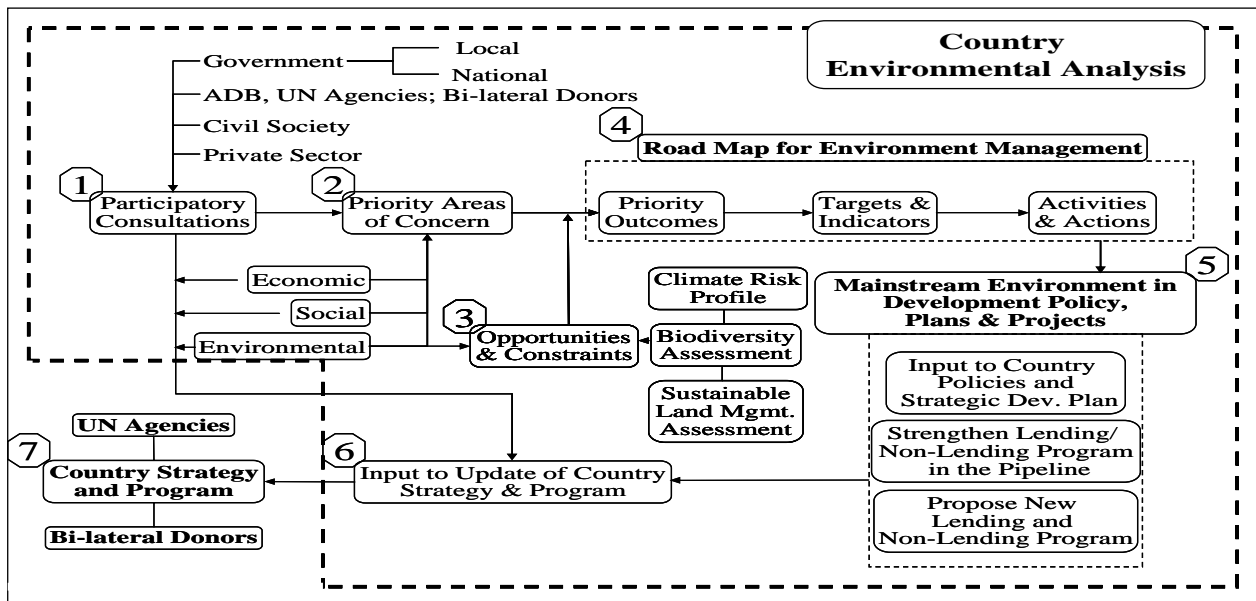
95. Uganda signs cooperation frameworks with donors and multilateral financial agencies. They carry out Country Environmental Analysis (CEA) as a procedure of their programming. CEA is a flexible tool with three main analytical building blocks: (i) assessment of environmental trends and priorities (ii) policy analysis and (iii) assessment of institutional capacity for managing environmental resources and risks (World Bank, 2002). Figure 5.2 presents how CEA is used in practice.

96. Further, the government can use Strategic Environmental Assessment (SEA) for assessing likely impacts from the implementation of national policies, plans and programmes.

“ A Strategic Environmental Assessment is a systematic process of evaluating the environmental consequences of a proposed policy plan or programme initiatives in order to ensure they are fully included and appropriately addressed at the earliest stage of decision making on a par with economic and social considerations, including a written report and the involvement of the public throughout the process”

97. SEA as a planning tool is relevant now because of the government's approach to development from a broad policy framework as compared to the previous project approach which has been using Environmental Impact Assessment (EIA).

Figure 5.2: Process diagram for the country environmental analysis (CEA)



6. Analysis of the important emerging issues with respect to the environment and natural resources

98. The sustainable management of the environment must always be analysed in the context of a very dynamic environment characterized by innovations in technologies, growth and migration of populations, increased globalization, change in environmental parameters locally, nationally and globally, and change of human perception to all the above. Under the circumstances, environmental issues shift in prioritization on the agenda for sustainable development. This chapter thus reviews the emerging issues in which Uganda is going to find itself greatly involved.

• GMOs

99. Scientific and technological developments in the area of biotechnology and genetic engineering have increased significantly in the past decade. These developments cut across a wide range of fields including agriculture, medicine, environment and industry. Compared to any technology in history, these developments are fast paced characterized by polarized debates on the risks and benefits of biotechnology in general and Genetically Modified Organisms (GMOS) in particular.

100. The convention on Biological Diversity (CBD) defines biotechnology as:

“any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use”. Interpreted in this broad sense, genetically modified organisms (GMOs) are products of biotechnology resulting from genetic engineering techniques and applications. GMOs are organisms that have been genetically engineered. In simple terms, genetic engineering (GE) is the process of taking genes from one strain of a plant, animal, or virus and inserting them into another, with the goal of reproducing characteristics of the original species in the receiving species.

101. The range of GMOs developed to address problems in agriculture, health and environment has increased. Consequently, this has raised negative concerns and fears. Biotechnology has received far greater acceptance in the field of medicine and healthcare than in the field of food and agriculture.

102. The configuration of COMESA countries into sub-regional initiatives including the East African Community (EAC), Intergovernmental Authority on Development (IGAD) and Southern African Development Community (SADC) complicates matters towards a common strives to establish the policy on biotechnology and GMOs in particular, while each country strives to establish the policy and regulatory frameworks on biosafety and biotechnology, few have the capacity to fully enforce them. This makes the need for a common regulatory standard in the COMESA region plausible through setting acceptable standards that could be automatically approve everywhere, even without and testing

103. It is gratifying to mention that within the framework of NEPAD, African governments have resolved to promote programmes that will generate a critical mass of technological expertise in targeted areas so as to harness agricultural productivity and pharmaceutical products. Governments in Africa only became convinced of the need to think regionally about their GMO policies following debates that arose in 2002 regarding the import of GM maize as food aid.

104. The fact that countries in East and Southern Africa are differently exposed to this problem calls for closer regional policy coordination because GMOs can easily spread through formal and informal cross-border trade. Uganda has made guidelines for the importation of GMOs for

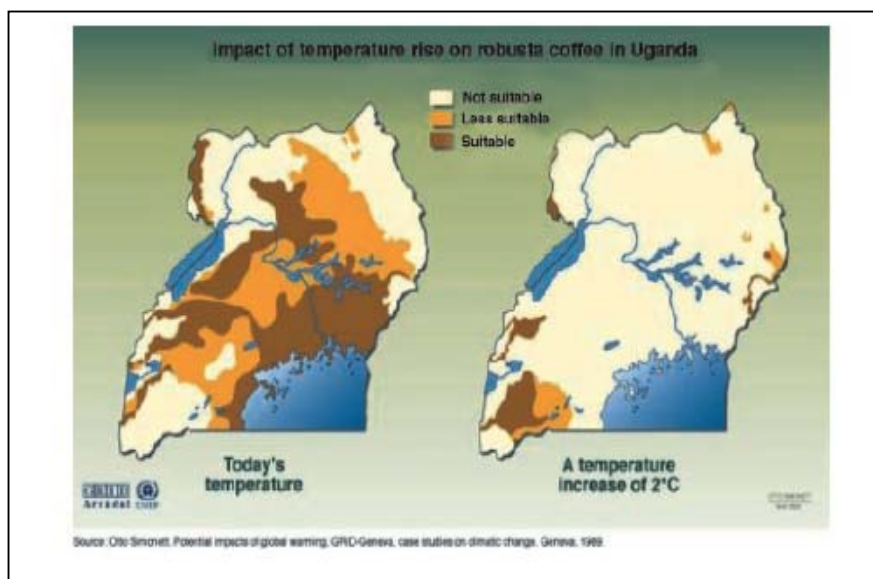
research under the guidelines on Biosafety in Biotechnology for Uganda. In 2005, the government went a step further to make the National Environmental (Access to Genetic Resources and Benefit Sharing) Regulations, 2005. All in all, countries should continue to work within the NEPAD's framework.

- **Climate change**

105. Although the current debate on climate change is still marked by political and scientific issues, suffice to mention that human activities are responsible for most of the warming (IPCC 2001). The intensity of these activities differ by region, thus calling upon some regions to take lead in mitigation measures as the vulnerable regions take on adaptation measures. In Uganda, people have illustrated their understanding of likely presence of climate change impacts in many ways. The receding of ice on mountain tops like Rwenzoria, the Elnino phenomenon of 1997, the current flooding in the Soroti and Karamoja region, the fall in the water levels of L. Victoria and some rivers are some of the examples. The impacts to socio-economic development are also varied, with break-out of diseases, business risks because of power rationing, increase in costs of infrastructure maintenance especially roads, a threat to food security and climate induced conflicts over resources.

106. Uganda is already worried about likely fall in crop yields due to climate change. An example is illustrated in Figure 6.1 where a likely rise of 2^oc would reduce the land area suitable for coffee—the long standing cash crop of the economy. A recent report by FAO estimates that developing countries may experience an 11% decrease in lands suitable for rainfall agriculture by 2080 due to climate change (FAO, 2005). Owing to the multi-sectoral nature of the impacts of climate change, government is called upon to develop systems and capacities among its institutions and population to climate proof their investments. In that regard, new technologies and approaches.

Figure 6.1: The potential effect of global warming on coffee production in Uganda



- **HIV/AIDS**

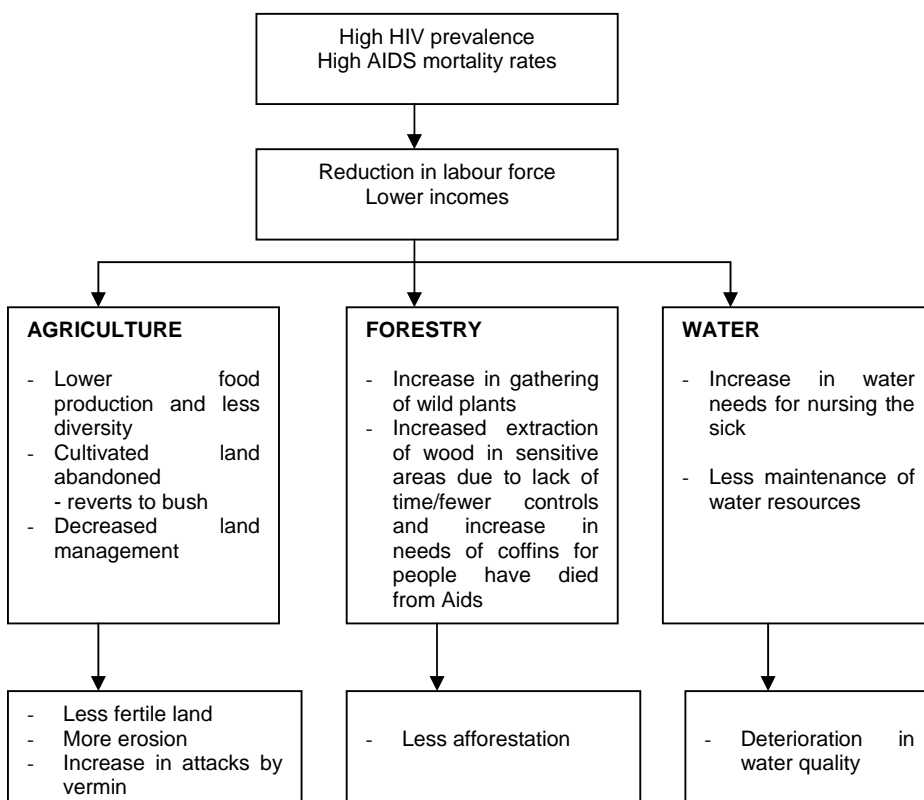
107. Uganda is faced with two extreme problems. The first is HIV/AIDS which has left a toll on population. The second is environmental degradation. Taken together, these problems and attending to them is likely to retard the pace of development. Although the environment

dimensions of HIV/AIDS pandemic has received little scholarly attention, a few examples cited by organisations and projects point to the conclusion that more information gathering and study is needed. They also point to the urgency to mainstream HIV/AIDS in environmental investment programmes.

108. Generally speaking, households adopt many changes with regard to natural resources use and collection strategies following the loss of family members. ABCG 2004 reported four interrelated copying strategies involving the selection, use, collection and level of consumption of natural resources. These strategies are but a reflection of likely changes in labour, financial resources, decision making centres, management of tenure rights, knowledge and information base, social networking e.t.c that come with morbidity and mortality linked to HIV/AIDS.

109. In Figure 6.2, the likely links between HIV/AIDS and some natural resource sectors are given. Conceptually however, it is difficult to clearly distinguish the HIV/AIDS related impacts from those of other illnesses. This is why more studies need to be done.

Figure 6.2: AIDS, natural resources and the environment



110. AIDS is the leading cause of death for people between the ages of 15 and 49 and is responsible for 12% of all annual deaths.

• **Food miles**

111. Over the last fifty years, there have been dramatic changes in the type of food communities' produce, the way they process it and market it to the consumers. Some of what used to be food crops have entered the global market as part of non-traditional exports. The term "Food Miles" was first coined 12 years ago in a report by the SAFE Alliance, now sustain, which highlighted concerns over the negative environmental and socio-economic impacts of increasing transport of food^{††}. Food miles are simply the distances traveled by food staffs from farm gate to consumers.

^{††} SAFE Alliance[1994]: The Food Miles Report: The dangers of long distance food transport

They are generally measured as tonne-kilometres, i.e. the distance travelled in kilometers multiplied by the weight in tones for each food staff. The rise in food miles leads to increase in the environmental, social and economic burdens associated with transport. These include carbon dioxide emissions, air pollution, congestion, accidents and noise.

112. Growing concern has led to a debate on whether to try to measure and reduce food miles. However, it is also likely that options for reducing food miles could reduce consumer choice or increase food prices. This could lead to reduced consumption with possible negative health impacts. Presently, food miles as an indicator for sustainable development has not been studied nor is it understood.

- **Carbon trading**

113. Global warming has spawned a new form of commerce: the carbon trade. This new economic activity involves the buying and selling of “environmental services,” including the removal of greenhouse gases from the atmosphere, which are identified and purchased by eco-consulting firms and then sold to individual or corporate clients to “offset” their polluting emissions. While some NGOs and “green” businesses favor the carbon trade and view it as a win-win solution that reconciles environmental protection with economic prosperity, other environmentalists and grassroots organizations claim that it is no solution to environmental problems such as global warming.

114. Carbon trade is legitimized by the Clean Development Mechanism (CDM) of the Kyoto Protocol, an international agreement that aims to deal with the threat of global warming. The CDM is one of the Protocol’s market-based “flexible” mechanisms, which include emissions trading and joint implementation.

115. Of the 19 carbon sequestration projects in Africa as of June 2006, seven were based in East Africa with Uganda having 3^{††} and sharing^{§§} [Robit Jindal, 2006]. This indicates that Uganda, and East Africa generally, is currently the [preferred] region for international carbon investors. However, for this trade to flourish in future, more needs to be done globally by re-negotiating the Kyoto Protocol, and nationally by addressing tenure insecurity, transaction costs and institutional capacities.

- **Trade liberalization and environment**

116. By the time of Rio in 1992, the Slogan was ‘trade not aid’. It is no wonder that Agenda 21 advocated for an open, multilateral trading system supported by the adoption of sound environmental policies. In order to achieve this, a number of concerns that affected developing countries were singled out for action. They include removal of barriers to markets or trade, improvement of commodity prices and terms of trade, removal of distortions in international trade and reduction in the protection of agriculture.

117. However, there are three main aspects that many countries are still debating, and these are holding back the speed of using trade as an instrument of growth. The first is that the high environmental standards set by the developed countries and the high costs of accessing technologies are barriers to developing countries, and work to the advantage of the rich countries. The second is that in some developing countries, Uganda inclusive, environmental care is a luxury. Degazettement of forests to pave way for industrialization has been on top of political agenda because it is argued that developed countries despoiled their environment until wealth allowed them the means and the motivation to put the environment back together. The third aspect is that there is a held view that behind most environmental measures is the motivation of green protection, the attempt to replace with green standards the tariffs that have been steadily reduced through negotiations. Beyond the above aspects, there are also issues to ensure that trade does not lead to depletion of resources; increase pollution; displace the vulnerable

^{††} The three are Forest Rehabilitation in Mt. Elgon and Kibale National Park, Plan Vivo Project, Nile Basin Reforestation

^{§§} The International Small Group and Tree Planting Programme (TIST), and Commercial Plantations Project.

communities or become a conduit for transfer of invasive species. The unfavourable terms of trade and the continued protection of farmers in developed countries calls for concerted action and negotiations among developing countries.

- **Discovery of oil**

118. The discovery of oil in western Uganda presents a great opportunity for development, and accordingly improving the country stock of natural capital. As the government looks forward to fully exploit this resource and other non-renewable resources, it must put in place enabling policy environment to address a number of issues. Top on the list is to plan how to invest the windfall revenue to ensure lasting wealth, and deciding on how much ought to be saved and how much should be invested and in what. Second, there is need to distribute benefits equitably, balancing and managing conflicting local level, national and likely transboundary concerns and interests. Thirdly, government must put in place adequate systems of governance and a stable macroeconomic environment that curbs rent seeking behaviour, speculation and corruption. Finally Uganda must build technical and managerial capacity of its citizens to manage this resource^{***}

- **Emerging global actors**

119. The global economy is in the midst of a far-reaching transformation with China, India, (Brazil, and Russia) leading the charge. Except for Russia and Brazil, these emerging major global actors are not richly endowed with crucial minerals such as oil, gas, or nickel, but they have a large and voracious appetite for these minerals to fire and secure their recent impressive growth performance. Their impact in the world's energy and metals consumption is significant. For example, China accounted for one-third of the increase in world oil consumption. In the period 2002-2005, the country accounted for 50% of the increase in world consumption of copper and aluminum, almost all the growth in nickel and tin and more than the entire rise in demand for zinc and lead. To secure its commodity needs, China is forging close trade links with commodity producers in Africa, the Middle East, Australia and Latin America. Increasingly, it looks like that the problem of the 21st century will be the problem of the struggle to control the world's natural resources, especially oil and gas. Africa is at the center of this struggle. If Africa's resources are harnessed properly and productively, the continent could benefit immensely from this struggle. However, if badly managed, Africa could be left worse off. But African countries face the dilemma of the short-term need of raising financing for development through natural resources exploitation and the long-term need of future development. How should this dilemma be addressed? Uganda and the IGAD region should factor these trends in their diplomatic relations, trade arrangements and strategies for adding value to their natural resources e.g. teaching Chinese language to prepare for absorption of Chinese tourists.

7. Key recommendations, questions which need further address and conclusion

120. Historically, ENR continue to be a source of livelihood and economic transformation in Uganda. They still constitute a core asset of development. While that be the case, this report has pointed out that it is not the abundance *per se* which matters; governance is equally important. The importance of the latter aspect is heightened by many factors, including but not limited to globalization, decentralization, privatization, trends towards ecosystem/landscape approaches from resource specific interventions, and Uganda's commitment for the attainment of MDGs. While the multilateral environmental agreements (MEAs) serve as basis for standardizing practices for environmental management globally, there is always need at national level to develop pro-poor and environmentally sensitive policies, laws and institutions. Uganda's progress in that regard is commendable. Much more is however needed in implementation and enforcement. The public must be empowered to demand for accountability. Government too, must

^{***} This capacity has tended to evade many African countries including those that have been exploiting oil for the last 30 years.

review its systems of information dissemination and administration of environmental justice. A key question that is posed for discussion is: *“What aspects of governance need to be improved for creating enabling environment for a natural resource base led economy?”*

121. The dependence of communities on ENR for food security, employment, income generation, insurance to risk is still very widespread. The emerging industrialization and integration of the economy into the regional and international markets are also dependent on natural resources as a core asset. Structurally, it is the households and small and medium enterprises mainly that harness the resources. Their scattered nature and size create challenges for the government to mobilize them cost-effectively, let alone to provide support in terms of capacity building, information, technology, credit to mention but a few. No doubt, government is challenged to support resource-user institutions most of which are already clustered around known commodities and services (e.g. fish, flower, honey, tourism, timber e.t.c) so that they can be able to attain the required scale of production and marketing that is profitable. The strategy of the government to form and support such clusters under its private sector competitive strategy is thus very timely. Equally, the zoning of the country into agro-ecological zones is a good intervention as it will match the natural resource-based enterprise development with environment. Already, the Soroti zone is emerging as a successful citrus fruit growing area. As government pursues the above and other practical strategies, it needs to equally address the disincentives emanating from lack of suitable loanable funds for SMEs, high interest rates, unfavourable country competitiveness, corruption, poor definition of tenure rights, and high costs in relating to SMEs.
122. Another fundamental of source of disincentive to nature-based enterprises is the generally low proportionality of benefits in the value chain of the respective commodities. The marketing of commodities in raw form makes farmers vulnerable to price fluctuations and speculative behaviour of middlemen. The lack of affordable processing technologies, skills, funds are some of the additional barriers. At a time when trade is liberalized, consumers' choices have greatly been broadened including giving them value-for-their money. As the government upholds its private sector led economic transformation, it must come to terms with the structure, capacity and behaviour of SMEs. A question it must answer is: *“What package of measures should government put in place to build the capacities of SMEs in sustainable natural resource management and value-addition?”*
123. An emerging area deserving government action is to work towards a minimum scale in the management of environment particularly where it is unfeasible at individual level. Ecosystems exist at different scale- local, sub-national, national and regional for example. Sustaining ecosystems requires keeping in mind the interconnections between these scales. Poor watershed management may negatively affect the flow of water resources downstream. In Uganda, the Constitution provides for local governments to cooperate in development (including conservation). To date, there is very limited practice for local governments to jointly plan and implement programmes for shared problems.
124. The demarcation of decentralized structures resulted in incongruence of ecological boundaries with those of administrative boundaries. In a few examples e.g. the River Rwizi Integrated Watershed Management Project the magnitude of the problem of water scarcity downstream has become a rallying factor for cooperation. It is in such instances that government needs to offer a lot of guidance. If well implemented, the above project could pave way to the understanding and introduction of the payment for environmental services. The above argument leads one to pose the following question: *“What criteria should government put in place to guide future decisions to inform the scale at which interventions will be more cost-effective and environmentally sustainable?”*

125. It has been observed that more effort needs to be put in place to address weaknesses in implementation and enforcement of the many good intentioned environmental laws. The multiplicity of institutions in ENR has meant that the scarce financial and human resources available have been spread very thinly on the finite resource base. Some local level structures have not been created or operational because the financial implications of sustaining them were not fully thought through. Nonetheless, evidence has shown that resource users have started and sustained institutions they have formed for their own benefit. Factors like gender, location, social identity and networks are key factors making such institutions cohesive. Their contribution in national development generally and ENR management is usually fully captured because most of them operate informally. Further, it has been mentioned that creating linkages between local and global enterprises bring brings a lot of benefits. At national level, the public private partnership are also emerging in collaborate resource management, tourism development, waste management and provision of water. These many examples have been given to illustrate the opportunities the government could take advantage of it such partnerships are strategically guided and supported. Accordingly, a good question for discussion is: *“What package of policies, incentives and other measures should government put in place to promote and sustain strategic private-public partnerships for ENR management, processing and marketing?”*
126. By virtue of high dependence on agriculture, many households face numerous stresses and shocks, some potentially catastrophic. The Uganda National Household Survey 2005/2006 (Agriculture Module) revealed that 43% of all national crop plots suffered from damage, mainly due to rain shortage (19%), followed by crop disease (10%). The level of risk facing poor rural households has risen with increased market exposure linked to globalization matched by the withdrawal of the state for the direct provision of services such as those provided through state marketing boards, subsidies and price controls. Domestic shocks, such as the HIV/AIDS pandemic, have further weakened the position of many poor households.
127. Reducing levels of risk, where possible, and provision of instruments to reduce vulnerability has to be a central element of prop-poor development policy. This not only provides social protection for poor people, but enables them to undertake new, viable but more risky livelihoods, increase their participation in markets and generate pro-poor economic growth.
128. Households lost out when they responded to government call to plant vanilla whose prices subsequently fell on the world market. Climate change too is increasing vulnerability. Once farmers cannot cope with risk and vulnerability, it is the whole economy to suffer. A challenge therefore is to mainstream risk and vulnerability in development. It is gratifying that some donors in Uganda e.g. DANIDA has started climate proofing its development assistance. Uganda therefore needs to adopt a policy of mainstreaming risk and vulnerability in development. A key question the government needs to address is: *What are the major emerging risk and vulnerability issues for which government support is necessary to maintain the participation of households in natural resource based production?”*
129. An over-arching means to ENR management is funding. The low revenue base of the economy compels the government to borrow. It has to pay interest. The unfavourable terms of trade have also meant that government has not earned as much from using trade to fund its development. The internal resources the government raises and the aid it receives are competed for by many sectors. The unfavoured sector, both from government spending and commercial banks lending is agriculture. This is a mismatch between the rhetoric of ENR importance and government support. There is hope that with the discovery of oil, Uganda’s problems with funding may be shelved. The failures of many developing countries with oil to realize that dream begs the question on how the government should use the potential oil revenue. A specific question is: *“Should the government consider the establishment of Oil Trust Fund, and if yes, how should it be managed?”*

130. All in all, the importance of ENR cannot be over emphasized. The government's PEAP recognizes that fact. But more needs to be done. The finalization and funding of ENR Sector Plan is urgent. It has dragged for long. The linkage between MDG 7 (ensuring environmental sustainability) with other MDGs has been demonstrated in Figure 2.9. The linkage would justify treating ENR as a pillar in its own right in PEAP while at the same time maintaining the mainstreaming approach among other pillars. The true use of environmental resources should be captured through initiatives for environmental (green) accounting. The government needs to come out with very few and highly representative indicators for rallying the general public and political will in institutionalized system of periodic monitoring and review. The on-going processes to evaluate the PEAP and to formulate the next one offer windows of opportunity. An equally important study to commission in contribution of the above processes should seek to answer the following question: *"What is the total environmental income generated in the economy and how is its use distributed"*.

Annex 1: Terms of reference for the study

IGAD Directors of Conservation and Directors of Economic Planning Conference: “Environment and Natural Resources as a Core Asset in the IGAD Region for Wealth Creation, Poverty Reduction, and Sustainable Development”

Terms of Reference for a National Situation Report to Contribute to this Conference

1. Background

IGAD – the Inter-Governmental Authority on Development, and IUCN – The World Conservation Union are convening a major and high level conference on the importance of environment and natural resources in poverty reduction, wealth creation and sustainable development. This conference will be attended by senior (Director) level participation from the countries of the IGAD region (Sudan, Eritrea, Djibouti, Ethiopia, Kenya, Uganda, and Somalia) with some observers from neighbouring countries. It is expected that senior decision makers from the Ministries with responsibility for macro-economic planning (Ministries of Planning and National Development, Presidents Office, Ministries of Finance) and Conservation (Forestry, Wildlife, Environment, Fishery, Water, Range management). Other Ministries will also be invited, for example Agriculture and Health (with respect to HIV/AIDS and the use of herbal medicines), as well as some representation from civil society.

This conference which will be held at an appropriate conference centre on the Kenya coast during October 2007, will address the following major issues:

1. **Livelihoods (wealth creation, poverty reduction):** This will explore how natural resources are a core component of people’s livelihoods in the region and make major contributions to the achievement of the MDGs and PRSPs;
2. **Natural resource governance (rights, equity including gender, devolution):** Devolved governance structures are becoming an increasingly important component in the region. This will be explored in the context of natural resource governance and how this improves rural people’s livelihoods and reduces risk;
3. **Market chains and value adding on Natural Resources:** Rural people need to be better able to engage in the market place so that larger proportions of income from natural resources are trapped at the community levels. This theme will analyze the incentives and perverse incentives that either support or mitigate entry into such markets;
4. **Natural resource economics and national accounting:** Natural resources are a central aspect of rural people’s livelihood strategies, yet are, to a large degree not reflected in national accounting, PRSP indicators and other measures of national growth. This theme will explore how this can be improved in practical ways, including Strategic Environment Assessments (SEA), and market and trade analysis; and
5. **Emerging issues:** There are a variety of emerging issues which have a potential important impact on the overall theme for the conference. These include Invasives, Climate change and adaptation, GMOs, Carbon trade, “food miles”, pandemics such as HIV/AIDS, effects of globalization, and conflict and insecurity.

The Overall theme of the Conference is “Environment and Natural Resources as a Core Asset in the IGAD Region for Wealth Creation, Poverty Reduction, and Sustainable Development”. While the purpose is to understand the extent to which environmental assets (goods and services) are important to livelihoods of people in the IGAD region and the extent to which such values are integrated into macro-economic planning (PRSPs) and so support national and regional delivery on the MDGs.

There are four main Objectives for senior decision makers in National Planning and Conservation related Ministries to:

1. Create Awareness and understand of the importance of the environment, and in particular the natural resources in improving the livelihoods of people in the IGAD region;
2. Demonstrate the importance of the environment and natural resource base as a key asset in livelihoods (PRSPs, MDGs, performance – indicators);
3. Focus and explore linkages and possible interventions with existing instruments and facilities; and
4. Discuss and agree to actions that will need to be undertaken to improve the integration of the environmental goods and services into macro-economic planning and PRSP performance towards the achievement of the MDGs.

In preparation for the conference national situation papers will be prepared by consultants. These will be summarized in focused two page summary sheets. A regional synthesis will also be provided and summarized.

This is a technical meeting designed to explore the interface between livelihood improvement and sustainable development and so to the achievement of both the MDGs and PRSPs in the countries in the region. It will agree on a variety of suggested actions and interventions for implementation at both national and regional levels.

2. Terms of Reference for National Situation Reports

The national consultant for ???{country} will produce a National Situation report of no longer than 31 pages (excluding annexes) in a format as described in Annex 1. The report will address, but not be limited to the following major areas (the questions are meant to assist the national consultant in exploring the main theme in question and are not all inclusive):

1. Livelihoods (wealth creation, poverty reduction):

- a. How are natural resources a core component of people's livelihoods?
- b. What contribution do environmental and natural resource assets make to the achievement of the MDGs and PRSPs?
- c. What are the policy and legal incentive in place (or evolving) to make this happen?
- d. What are the perverse incentives (policy, law, markets) which prevent people from being able to benefit from their natural resource assets on a sustainable basis?

2. Natural resource governance (rights, equity including gender, devolution):

- a. To what extent has natural resource governance being devolved to the lowest accountable bodies and to people and communities?
- b. How can improved natural resource governance improve rural people's livelihoods and reduce risk;
- c. To what extent is policy and legal rhetoric being put into practice on the ground?
- d. Is their and equitable (including gender equity) distribution of the costs and benefits of devolved natural resource governance, including equity in access and ownership rights, land and resource tenure?
- e. Are rural people and communities adequately informed about their rights and responsibilities for devolved natural resource governance, and are they in a position to take on such rights?

3. Market chains and value adding on Natural Resources:

- a. How can rural people better engage in the market so that larger proportions of income from natural resources are trapped at the community and family levels?
- b. What are the policy, institutional and structural impediments for such engagement? How can these be resolved in a practical manner?
- c. How can rural people and communities' better process and value-add on natural resource based products in a manner that is socially beneficial and environmentally sustainable?
- d. What are the market chains for natural resource products? How can they be made more equitable and efficient?

4. Natural resource economics and national accounting:

- a. How are natural resources reflected in national accounting, and other measures of national growth? How can this process be improved?

- b. Does the country have indicators (and means to measure) that reflect the value of the environment and natural resources in the PRSPs and the performance of all the MDGs?
 - c. To what extent are natural resource assets reflected in national and regional marketing and trade? How can this be improved?
 - d. Is Strategic Environment Assessments (SEA) used in a practical and function manner so that the different sectors (and programmes) responsibly integrate environmental aspects of direct relevance to the sector?
5. **Emerging issues:** There are a variety of emerging issues which have a potential important impact on the overall theme for the conference. These include Invasives, Climate change and adaptation, GMOs, Carbon trade, "food miles", pandemics such as HIV/AIDS, effects of globalization, and conflict and insecurity.
- a. What are the key emerging issues in ?? {country}? How do they impact on, or are impacted by the environment and natural resource base?
 - b. What strategies and actions can be suggested to better integrate these emerging issues into national development and environmental planning processes?

The executive summary of the report should be in a format that can be extracted from the main report and be part of a short (approximately 2 pages, or four sides of A4) publication highlighting the main issues of the national report. This two page publication will be shared with the participants of the conference and be more widely available.

In the conclusion section of the report (and also summarized in the executive summary) the consultant should suggest up to four main questions (based on his/her analysis of the situation in ??{country}) that could be suggested for the conference to deliberate on with a view to developing some concrete action points.

To achieve these terms of reference, the consultant will be expected to consult with a variety of stakeholders (Government, NGO and Civil society). This will probably be confined to those in the country's capital. Such consultations should be augmented by both the published and grey literature that relates to the issues being analyzed.

3. *Outputs Expected*

1. National Situation Report for ?? {Country}; and
2. Draft of a stand alone 4 page document (comprising the summary of the report) which will be the basis of a short publication

4. *Contractual Obligations*

A draft National report shall be received by IUCN and IGAD during July 2007. These draft reports will be made available to the regional consultant who will compile a regional synthesis report. The executive summaries of the national report will form the basis for a short 2 page publication highlighting the main issues from the national report. The consultant will receive comment from IGAD and IUCN by the beginning of September 2007, and a final version of the national report will be received by IGAD and IUCN by the end of September 2007.

This will be a fixed fee contract for US \$??? with an indicative level of effort of approximately 20 days. This level of effort can be spread over the contract period which will be from May 2007 to the end of September 2007, with the draft national report being submitted not later than the end of July 2007.

Annex 1: Draft Report Outline

Chapter	Title	Length of Section
Title	Title page	1
TOC	Table of contents	1
Exec. Sum.	Executive Summary summarizing the main issues from the Analysis, which also raises a maximum of 4 question areas which it is felt should be addressed by the conference	4
1	Introduction to the country and study	2
2	Environmental and Natural Resource as key assets for rural economic growth and livelihood improvement	4
3	Natural Resource Governance at the core of sustainable development and livelihood improvement	4
4	Creating a level playing field: - Rural people and communities being able to process and value add on natural resource products and can fairly and equitably enter the market place	4
5	Environment and Natural Resources in National Accounting, PRSP's and MDG performance	4
6	Analysis of the important emerging issues with respect to the environment and natural resources	4
7	Key recommendations, questions which need further address and conclusion	3
Annexes	<ol style="list-style-type: none"> 1. Terms of reference for study 2. List of Acronyms 3. Time schedule 4. People consulted with 5. References 6. Other Annexes. details and text deemed necessary to include 	

Annex 2: References

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Annex 3: List of people consulted

NAME	TITLE	ORGANISATION
1. Mr. Gordon Mumbo	Regional Project Manager CBSI	Nile Basin Initiative
2. Dr. Frank Kansiime	Associate Professor and Director Environmental assessment & Monitoring (Wetlands, Water and General	Makerere University Institute of Environment & Natural Resources

	Environmental Ecosystems	
3. Mr. Bazira Eliphaz	Ag. Director	Ministry of Water and Environment
4. Eng. Sottie L.M. Bomukama	Commissioner	Directorate of Water Development (Water supp. Dept.)
5. Dr. Mathias K. Magunda	Soil and water Management	National Agricultural Research Organisation (NARO)
6. Mr. Katungi David	Regional Coordinator Decentralised Dev't Planning	National Planning Authority
7. Mr. John Bosco Kintu-Kavuma	Economic Analyst	National Planning Authority
8. Mr. Dhizaala Sanon Moses	Coordinator Research & Statistics	National Planning Authority
9. Dr. Bahigwa G	Director	PMA
10. Mr. Richard Kimbowa	Programme Manager	Uganda Coalition for Sustainable Development
11. Mr. Damian Akankwasa	Executive Director	NFA
12. Mr. Ronald Kagwa	Environmental Economist	NEMA
13. Mr. ohn Makambo	Director Operations	UWA
14. Mr. Fred Kafeero	National Coordinator	Environmental Alert
15. Mr. Lawrence Kiiza	Director	Economic Policy, Tax Policy & Planning MFPED