



Albania Environment and Climate Change Analysis

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Introduction

This Environment and Climate Change Analysis (ECCA)¹ serves as a point of departure for a discussion on how environmental and climate change issues can be integrated in the Swedish cooperation strategy with Albania. Environment and Climate is one of three thematic priorities² set by the Government of Sweden for its development cooperation, and includes four focus areas: (i) adaptation to climate change; (ii) energy; (iii) environment and security; and (iv) water. In order to address these issues, five main questions will be discussed:

1. Which are the Key Environmental Problems and their Causes?
2. What are the Effects of the Environmental Problems?
3. What are Key Actors doing to manage the Environmental Problems?
4. How and to what extent are the Responses to Environmental Problems and Opportunities implemented and followed-up?
5. What are the implications for Swedish Development Cooperation?

The focus for Swedish development cooperation with Albania is to assist in equitable and sustainable reform processes that will enhance integration into the European Union. There are important environment linkages to several of the key sectors for economic development in Albania. Further, environmental pollution and degradation of natural resources affect livelihood opportunities and poverty reduction, and affects public health. Environment is one of the largest components of European Community legislation and is acknowledged to be one of the most difficult areas in which to achieve compliance.

1. Which are the Key Environmental Problems and their Causes?

Many of Albania's environmental problems are linked to its historic legacy of a centrally planned economy. According to the National Environmental Strategy (2006) and the Environment Sector and Cross Cutting Strategy (2007) the key environmental problems are water pollution, air pollution, land degradation/soil erosion, and biodiversity losses (not in order of priority). Disaster risks and climate variability and change pose other threats to Albania.

Water pollution: Albania is a mountainous country, blessed with abundant water resources: seven main rivers run from east to west. Groundwater is the only source for drinking water. Water pollution poses a severe problem; the quality of drinking water does not, in many cases, comply with the European standards due to the lack of adequate treatment and disinfection. Further, lack of maintenance of distribution systems during the last ten years results in

¹ This Environment and Climate Change Analysis was written as a desk study, at the request of Sida's office in Tirana (att: Peter Troste) by Antonia Sanchez Hjortberg and Gunilla Ölund Wingqvist at the Environmental Economics Unit (EEU), Department of Economics, University of Gothenburg, as part of Sida-EEU's institutional collaboration on environmental economics and strategic environmental assessment. Comments can be sent to gunilla.olund-wingqvist@economics.gu.se. The views expressed in this Environmental and Climate Change Analysis are those of the authors and do not necessarily represent the views of Sida.

² The three thematic priorities are: Democracy and Human Rights; Environment and Climate; and Gender equality and the role of women in development.

excessive water losses, water-borne diseases and occasionally epidemics. The contamination of surface water is serious, especially close to cities and industrial sites, due to insufficient wastewater collection and treatment, leaking sewers and waste dumps. Toxic organic compounds and metals from mining and industrial activity are heavily affecting the rivers Shkumbini, Fani, Gjanika and Semani. No quality data for groundwater is available. Considerable investments are going into reconstruction of irrigation and drainage networks for agriculture production, which put further pressure on water resources. Today more than 50% of the cropland is being irrigated, which is very high in comparison to neighbouring countries.³

Air pollution: Especially in the urban areas and the surroundings of Tirana and Elbasan, the air quality is poor and largely exceeds national and international standards. Major sources of air pollution include (road) transport, industry, energy production (oil and gas extraction and refining) and rapid urban development. Increasing traffic and old vehicles, run on leaded petrol combined with badly maintained roads⁴ is leading to heavier air (and noise) pollution and higher emissions of CO₂. Particulate matter from unpaved urban areas and construction work also contribute much to the air pollution and cause respiratory problems, in particular among the very young and old people.

Land degradation: Soil erosion is a major concern,⁵ mainly caused by unsustainable forestry, agricultural and pastoral practices. Particularly in the basins of Tomorrica, Zhullima and Petza the intensity of erosion is high.⁶ Forests, covering roughly 30 % of Albania, are being over-utilized due to lack of financial resources for their management and insufficient control over logging and grazing.⁷ Contamination of land is another major concern, mainly caused by abandoned industrial installations, mining enterprises and waste dumps. Waste management is at a low level, very little recycling of waste is undertaken and the main method of disposal is dumping on land. There are no collection systems in rural areas and small towns, and no system for management of hazardous waste. Some of the hot spots of hazardous substance are the chemical plant in Porto Romano, the plastics plant in Vlora (mercury), the nitrate plant in Fier (arsenic), the Ballshi Oil Refinery and Sharra landfill.⁸

Biodiversity losses: Today 10% of Albania's territory has protected status, which is considered too small to have a long-term impact on biodiversity protection. An analysis of the status of protection of fauna and flora species shows that there are today 936 endangered species (575 fauna and 361 flora species) in Albania, or 18.7% of all fauna and flora species found in the country. Among the fauna species are those highest in the food chain, particularly mammals and birds, the most endangered.⁹ Some major problems stem from deforestation and tourism in coastal areas. A number of coastal deltas are suffering serious erosion due to changes in sediment supply following upstream activities such as hydroelectric dams and channel modifications, resulting in losses in aquatic species. Also marine habitats are threatened with local extinction of sea grass meadows and an increasing number of endangered species. Another reason for the decline in species diversity is the extent of illegal "sports" hunting and fishing since the collapse of effective controls after 1990.

³ Serbia-Montenegro – 0.9%, Greece – 37.9%, Macedonia – 9.0%, WB The Little Green Data Book 2006

⁴ Only 8 percent of all roads can be considered as good, WB Albanian Health Sector Note

⁵ Albania is one of the Mediterranean countries with the highest level of erosion (ESCCS, 2007).

⁶ Lireza, Q, 2006 "The spread of geomorphologic risks in Albania and their management"

⁷ Republic of Albania/Ministry of Finance, Progress Report on Implementation of NSSD, June 2005

⁸ EC, Commission Working Paper (COM (2006) 649 final), *Albania 2006 Progress Report*

⁹ ESCCS, 2007.

Disaster risks: Albania has mild winters with abundant precipitation and hot, dry summers. There are risks for tsunamis, earthquakes, floods and droughts.¹⁰ Floods occur frequently, especially in the lowland regions¹¹ and the instances of flooding have become more frequent the past years. Another more recent natural risk is the (mostly human induced) wild fires closely connected to summer droughts. They have been observed in the forests of Lura, Munella, Martanesh, in the region of Llogora and the hills of Renc.¹² Land sliding is another risk that threatens some areas of Albania, and especially exposed are the roads along the valleys of Shkumbani and Mati and some bigger river outfalls.¹³ Recent changes in risk patterns (i.e. increased frequency of flooding and fires) cannot be linked to climate change, but is more likely due to land-use changes (deforestation, urbanization, reduction of wetlands, etc.) and changes in socio-economic systems (economic development of flood-prone areas, which has lead to increased exposure to the inhabitants).

Climate variability and change:¹⁴ Albania contributes an average of 8 million tons of CO₂ per year, or approximately 1 metric ton per capita, in global greenhouse gas emissions, which is a relatively low level compared to other countries in its income group. This is due to the large share of hydro-power generation in Albania and shortage of high-energy intensity industries. However, predictions for future emissions indicate increasing CO₂ emissions if mitigation measures are not undertaken.

Albania is expected to face climate change related impacts. Climate change scenarios indicate an increase in temperature, decreased precipitation and increased potential evaporation, which may lead to milder winters, warmer springs, hotter and dryer summers, and drier autumns. Effects may be a decrease in wetland areas, increase in coastal flood-plain areas and a decrease in coastal forest. There will be an increased probability of extreme events: more frequent and severe heat waves and droughts, greater risks of fire as well as flooding and soil erosion. Changes in the hydrological cycle are more difficult to model than temperature and precipitation, however, probable results are less river flow and decreased run-off and soil moisture. A sea-level rise is likely to affect Albania; as the Mediterranean coast has low tidal range it is more vulnerable to sea-level rise than other parts of the world. Direct effects of sea-level rise include inundation and displacement of wetlands and lowlands, coastal erosion, increased storm flooding and damage, increased salinity in estuaries and rising coastal water tables. Indirect effects include changes in the distribution of bottom sediments, changes in the functions of coastal ecosystems, and a wide range of socio-economic impacts on human activities.

Climate change may affect groundwater discharge, and the forests, agriculture, energy, and tourism sectors. The potential impact on agriculture is highly uncertain. Crops are affected by temperature (the length of the growing season), photosynthesis and transpiration (CO₂, temperature, precipitation). Pests, diseases, weeds, available water, soil fertility and erosion are other variables that might be affected by climate change. Forest species with high

¹⁰ CIA Fact Book, Albania.

¹¹ Hoti, M and Axhemi, S. “Natural risks in Albania and the role of related warning systems for the reduction of natural disasters”

¹² Hoti, M and Axhemi, S. “Natural risks in Albania and the role of related warning systems for the reduction of natural disasters”

¹³ Lireza, Q, 2006 “The spread of geomorphologic risks in Albania and their management”

¹⁴ UNFCCC, Country Assessment Report on Climate Change, Albania, 2005; Initial Communication to UNFCCC, 2002; Second national communication to UNFCCC, Draft 2008.

resistance to heat and drought would be able to survive; those that need moisture will contract. Fires would be more frequent and more dangerous. Pests that prosper in warmer conditions can pose new threats. Related to the energy sector, Albania is heavily reliant on hydropower electricity production. Hydroelectric generation may be more sensitive to changes in river flows than other types of water systems (e.g. irrigation and water rights). For example, a 20% reduction in natural water runoff was projected to cause a reduction in power generation of 60%, whereas a 20% increase in runoff was projected to cause an increase in generation of 40%. In hotter and drier areas, hydroelectric power generation could be reduced virtually all year around. Thus, a heavy reliance of hydropower may be good for reducing greenhouse gas emissions and improving air quality in Albania in general, but can increase vulnerability to climate change. Thermal power plants may be less efficient due to increased outside temperature.

See also “*Selected environmental indicators*” in Albania and other countries in Appendix.

General political and institutional causes of the environmental problems presented above include: lack of efficient regulation and control operations; difficulties (albeit ongoing efforts) to mainstream environment and climate change into other sectors; weak institutional capacity, mainly related to environment and sector policymaking and enforcement of policies; unclear division of responsibilities between sector ministries and national/local authorities; ineffective monitoring and reporting systems; insufficient environmental financing; inefficient economic policy instruments; and low awareness among policy makers and the public related to environment and climate change issues.

2. What are the effects of the environmental problems?

Impacts on Poverty (security, vulnerability, opportunity)

Poverty has declined considerably in Albania during the last years¹⁵, mainly due to recent economic growth, migration to urban areas and the emigration resulting in remittances from Albanians living abroad. 65% of Albania’s population live in rural areas, and mainly depend on extensive agricultural and stockbreeding activities. People living in rural areas are significantly poorer than the urban dwellers. Poverty dimensions include low income, relatively higher incidence of health risks and undeveloped medical services, limited opportunities for good schooling and insufficient public services. Poverty is higher among those groups for which agriculture is the main source of income. Poverty reduction is closely linked with agricultural production growth, and diversified income generation.¹⁶ Hence, environmental degradation and climate change impacts will disproportionately affect the poorest, who are relying on water and forest resources, agriculture and pasture for their livelihoods.

Urban poverty has declined faster than rural poverty.¹⁷ In Tirana for instance, the poverty rate halved between 2002 and 2005. The rapid urbanisation puts new demands on basic infrastructure and public services, and has also led to illegal house construction and

¹⁵The absolute poverty rate declined from 25% in 2002 to 19% in 2005 and 4% lived in extreme poverty, World Bank, 2007.

¹⁶ Second national communication to UNFCCC, DRAFT 2008.

¹⁷ Between 2002 and 2005, the urban poverty fell by 43 % (from 19.5 to 11.2 %) compared to 18 % (from 29.6 to 24.2 %) in rural areas. Based on figures from the headcounts in 2002 respectively 2005, Source: World Bank, 2007.

unregulated connections to the electricity and water supply systems in the urban surroundings. The lack of purified potable water, sanitation, sewage facilities, and wastewater treatment, leads to health risks for poor and vulnerable people, and aggravates the environmental status of the water and land resources in certain areas (especially in the southern parts and near Tirana).¹⁸

Income poverty is a result of unemployment and lack of income opportunities. The unemployment rate was about 14% in 2004, but there is a big informal sector¹⁹, which is not reflected in the official figures. The unemployment and poverty situation, which is more striking among women and marginalized groups, is likely to aggravate the pressure on water and land resources (wood cutting, cultivation on marginal lands, etc). The country is also quite densely populated in comparison with many neighbouring transitional economies (see Appendix) and the rural population almost doubled between 1960 and 1990.²⁰ Natural disasters such as floods, landslides and wild fires strike particularly in rural and mountainous areas, where poor people often reside and have their livelihood. Loss of land due to erosion along riverbanks is a big concern for the communities, the local and the central government.²¹ About 140 thousand hectares of land face slide risks, with Korça, Elbasani, Dibra, and Tirana are at highest risk. Chemical contamination of land poses another serious risk to the migrants who are occupying areas on former industrial land.

Climate change and environmental degradation, especially access to clean water resources, is generally considered to be two of the greatest environmental security threats today.²² Specific threats to environmental security in Albania could be linked to the degradation of land and natural resources in combination with increasing population. Land degradation, mainly resulting from deforestation and hazardous waste, may lead to decreased access to livelihood opportunities for the rural population, and possibly to unrest.²³ Availability of natural resources is affected by quantity as well as quality; although Albania enjoys good quantity of water resources today, the quality of surface water (possibly also groundwater) is bad. The situation is aggravated by the lack of efficient regulations and control operation both within Albania and its neighbouring countries.

Impacts on economic development

Albania has after the financial collapse of 1997, had relatively high rates of economic growth, on average 6%.²⁴ The growth has primarily been driven by domestic demand, which in its turn has been fuelled by remittances from abroad. Transfers and remittances from abroad were estimated at 13% of GDP in 2006.²⁵

¹⁸ World Bank, 2007

¹⁹ According to estimates, the informal economy is at least 30 % of GDP (mainly within construction and agriculture), Republic of Albania, Progress Report NSSED, 2005

²⁰ Sida Country Economic Report 2006:5, *Migration and Pro-Poor Growth in Albania*

²¹ ESCCS, 2007

²² Human security in a broad sense includes “freedom from fear” and “freedom from want”. Environmental security, one aspect of Human Security, aims to protect people from the short- and long-term ravages of nature, man-made threats in nature, and deterioration of the natural environment. UNDP, HDR 1994.

²³ Smith et al., 2008.

²⁴ Real GDP growth rates have been on an average annual rate of 6 percent over the period 1999-2005 (WB 2007). In 2006, the real GDP growth was 5% (EC progress report on Albania, 2007).

²⁵ EC Progress Report, 2007. Remittances contributed to 15% in 2005 (EC Progress Report, 2006) so its share is decreasing.

There are important environment linkages to several of the key sectors²⁶ for economic development in Albania. The industrial sector, accounting for roughly 14 % of GDP, is mainly based on energy production (petroleum), metallurgical industry, manufacturing industry (leather-shoes, textile and confection), production of chemicals and wood processing. When the industrial sector collapsed in the early 1990s and households switched from coal to electricity for heating, the quality of air actually improved.²⁷ But as industry is now recovering fast the risk for deterioration of air quality is apparent. All the major industrial activities are typical polluters of the environment, and the shortage of both financial and human capital within environmental management institutions makes it hard to control and monitor the impact on environment from such activities.

The major source of electricity generation in Albania is hydro-power, but the self-sufficiency of primary energy sources in general and of oil in particular is declining quickly and energy imports are now necessary. The dry year of 2005 (hampering the electricity generation from hydro power) together with difficulties in procuring electricity from abroad, made the country suffer from power supply shortages and led to a consequent drop in GDP growth. Climate variations have a significant effect on the energy sector (see section 2.5). There are plans to construct thermal, solar and small hydro-electric power station²⁸ to cover the increasing domestic demand for electricity and to avoid speeding up the trade deficit.²⁹ In the short term heavy oil will be used in the thermal plant, but it will be designed to convert to natural gas in the long run. A national strategy for the energy sector has been elaborated with external assistance from the US, Italy, EU, World Bank and others.³⁰

The construction and tourism³¹ sectors are also growing fast. There is a considerable private investment capacity in the construction sector, but the government faces problems with issuing construction permits fast enough and this leads to a lot of illegal constructions. The expansion of the tourism sector can lead to further pressure on the aquatic resources due to new establishments in the coastal zone. Strategic Environmental Assessment and spatial planning will be vital for a sustainable coastal zone development as well as investments in proper sanitation, sewage, wastewater treatment and solid waste management facilities. Investments in municipal infrastructure are important from an environment and health perspective, and should be combined with proper pricing mechanisms and efficiency measures.

The agricultural sector accounted for about a quarter of GDP in 2004 (compared to over 40% in 1992) and approximately half the population makes their living from agriculture, mainly in small subsistence farms. Levels of fertilizer and pesticide use decreased dramatically after 1990 and are still low in comparison with what is common in Europe.³² Agricultural practices on slopes in mountain areas currently create problems of soil erosion. Overall productivity remains low and Albania is unable to compete with imported agricultural products. A major constraint is the slow land registration process.

²⁶ The most important sectors are: Services (54% of GDP), agriculture and fisheries (23%), the industrial sector (~14%), transports (~10%) and construction (9%). EC Progress Report, 2006.

²⁷ Albanian Center for Economic Research (ACER), Common Country Assessment Albania, 2002

²⁸ NES, 2006; ESCCS, 2007.

²⁹ The trade deficit widened to 23.1% of GDP in 2006 and 24% in the first half of 2007, compared with 24.1 % in 2005, compared to 21.7 % in 2004.

³⁰ Ministry of Industry and Energy, First part of the National Strategy of Energy

³¹ Within the service sector, tourism counts for the major part and grew by 29 % in 2004

³² NES, 2006

An area of concern for the poor and for people migrating to urban areas, is the number of outstanding disputes over land ownership. Many people have invested capital in homes or businesses on land, which they may not legally own, or for which the status still remains uncertain.³³ A new law offers the residents of dwellings, constructed without permission on state land, the opportunity to legalise them against the payment of a fee, even if there are other claims on the land.³⁴ The mechanism is likely to contribute to establishing clear property rights and might have a positive effect on the environment, as clear property rights tend to induce a more sustainable use of land and water resources. However, the land registration process is slow mainly due to insufficient institutional capacity. This is a key issue within the process of meeting with EU requirements.

The climate will change over the next few decades, whatever the world manages to achieve on the mitigation side. But the costs of climate change adaptation will rise exponentially if efforts to mitigate emissions are not successful. According to the Stern review³⁵, much of the adaptation will have to be autonomous, driven by market forces and by the needs and devices of households and firms. Governments should assist in this process. The first and best way for Albania's government to accelerate adaptation is to promote sustainable development successfully. Second, improving disaster preparedness and management saves lives and is cost effective. Inaction will be far more costly than adaptation. However, as financial resources are scarce, adaptation should not only focus on expensive, supply-side infrastructure investments, but also on increasing efficiency of already existing facilities, awareness raising and empowerment.

Climate variability already affects the Albanian economy. The government estimates that the costs of the floods in 2002 amounted to USD 17 million.³⁶ The flood during 2004 affected 500 families severely. Costs for damages by (mostly human induced) forest fires in 2007 are estimated to ALL 1.2 million (approximately USD 15 thousand).³⁷

Impacts on public health

There are clear linkages between degradation of environment and health issues. Children and old people are particularly at risk to the effects of air, soil and water pollution. An increase in the number of deaths among children under the age of 5 related to conditions of the environment has been noticed.³⁸ In some areas, the cumulative effect of different types of pollution is especially severe. For instance epidemiological data from the vicinity of three hot spots in Albania show rates of asthma, bronchial disorders and lung pleonasm, which are between five and fifty times the national average.³⁹

Access to safe water and adequate sanitation are other significant public health issues in Albania, especially in rural and mountain regions. Among the rural population 50% have

³³ NES, 2006

³⁴ Part of the fee contributes to a compensation fund for former owners; EU Progress Report on Albania, 2006

³⁵ Stern Review Report on the Economics of Climate Change (2006). http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm#Top

³⁶ The situation become serious due to a number of factors: reduced sucking-pump capacity at draining stations in lowland areas; broken dikes; uncontrolled migration and settling in lowland areas; electricity cuts resulting in non-functioning of water pumps.

³⁷ 2nd National Communication, Draft 2008.

³⁸ Republic of Albania, *Progress Report on Implementation of the National Strategy for Socio-economic Development during 2004, Objectives and long-term vision, Priority Action Plan 2005-2008* (NSSSED)

³⁹ NES, 2006

access to running water, either inside or outside their dwelling. In Tirana most people have running water, but it is considered to be of poor drinking quality.⁴⁰ In rural areas, 94% of the population has access to improved sanitation, compared to 99% among urban population.⁴¹ Wastewater treatment is weak in the whole country affecting the water quality and public health. Low levels of access to improved water and adequate sanitation increases the risk for water-borne diseases.

3. What are key actors doing to manage the environmental problems?

The development of environmental institutions and legislation in Albania is quite recent. The Ministry of Environment was established in 2001 and the Law on Environmental Protection⁴² and a National Environmental Action Plan were created in the following years. In 2005 the Ministry of Environment was expanded with the incorporation of forestry and fisheries management and the management of environmentally protected areas, and became the Ministry of Environment, Forests and Water Administration (MEFWA).

Poverty Reduction Strategy, sector policies, plans, programs

Albania is currently preparing a National Strategy for Development and Integration (NSDI)⁴³, which has a strong emphasis on economic reform. It is developed in a consultative manner with the ambition to integrate sector strategies. The input from MEFWA is the Environmental Sector and Cross-Cutting Strategy (ESCCS), which in turn is based on the National Environmental Strategy from 2006 and supported by action plans for specific issues such as agriculture, biodiversity, waste management, fishery, forestry and pasture. The cross cutting approach relates also to other sectors, i.a. transport, agriculture, and territory planning. The ESCCS is an ambitious document and seems to be well integrated in the NSDI. The vision of the ESCCS (improvement of life quality; creation of conditions for a sustainable and integrated development; and integration of environmental strategy with other sector strategies) is in line with the NSDI strategic priorities, which are: (i) integration into EU and NATO; (ii) development of democracy, human rights and good governance; and (iii) rapid, balanced and sustainable economic, social and human development. However, while the NSDI has an economic and financial approach, the ESCCS does not really link the environmental aspects to economic development or poverty reduction. EU accession seems to be one of the major driving forces for environmental performance improvement.

Albanian EIA regulations are inserted in the "Law 8990, dated 23.1.2003 on Environmental Impact Assessment" as well as in follow up regulation, adopted in December 2006. For the most part, formally the Albanian EIA regulation meets international standard demands. The responsible authority for EIAs is the Directory of EIA and Permits, based at MEFWA. MEFWA prepares legislative proposals, reviews and makes decisions regarding EIA projects based on information from regional environmental authorities. Smaller processes are determined at regional and local levels. EIAs and reviews of EIAs are performed by certified EIA experts.⁴⁴ Chapter II of the Law on Environmental Protection addresses strategic

⁴⁰ World Bank *Albania Health Sector Note*, 2006

⁴¹ WB, *Little Green Data Book*, 2007

⁴² Law no. 8934, 2002

⁴³ The NSDI is succeeding the national Strategy for Socio-Economic Development (NSSED) which until 2005 was the main strategic document for the Albanian government. NSDI, 2007.

⁴⁴ Inger Alness/SEPA, 2007

environmental assessment (SEA), but the SEA regulation needs to be strengthened and supported by improved implementation structures.⁴⁵

Albania participates in the Stabilization and Association Process with the EU. The process of approximation of environmental legislation, procedures and policies to the *Acquis Communautaire* began in 2004. A National Plan for the Approximation of Legislation was adopted in 2005, setting objectives over a ten-year period until 2015.

Albania is party to the international environmental agreements on Biodiversity, UNFCCC, Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Ozone Layer Protection and Wetlands.⁴⁶ Efforts to implement international conventions to which Albania is party should be prioritised.⁴⁷

Under the UNFCCC, Albania has the status of a non-Annex I country, and has hence no emission reduction targets related to greenhouse gases. The **initial national communication** related to climate change was submitted in 2002 and the second national communication is being prepared by the Climate Change Program with support from MEFWA and UNDP.⁴⁸ In the initial national communication, which focused on mitigation, Albania states that climate change is not a priority. This is reflected in the NSDI where climate change is not emphasised. The ESCCS mentions climate change a few times but only in relation to mitigation (energy efficiency). However, the initial communication states that, where mitigation and adaptation measures have multiple effects and are contributing to sustainable development goals, they will be important (these instances are however not mentioned explicitly in the NSDI). The National Climate Change Action Plan (NCCAP), presented the initial communication, focuses on both mitigation and adaptation to climate change.

Mitigation is primarily focused on the energy sector, but also on sustainable transports, preservation of forests and development of new management options, increased efficiency of agriculture through genetic improvements, and ecologically and economically sustainable agriculture. **Adaptation** measures focus on water resources, agriculture, natural ecosystems, energy, and health. Measures include water saving mechanisms (monitoring of quality, pricing mechanisms, new legislation for water use), new resistant crops, protection from soil erosion, monitoring of forest fires and ecosystems' health, reduction of wood-use for energy, and building of dams for protection of wetlands. Related to electricity production, considerations shall be taken to changes in water run-off and the energy resource planning shall be integrated (real price for electricity; energy savings campaigns; alternative sources; etc.). Further, air-quality monitoring and public awareness are in focus.

The Climate Change Program in Albania, that works with the **second national communication**, has the following priorities: (i) promotion of sustainable development benefits (such as job creation, food security, health and environmental improvement, capacity building, efficiency improvements, and gender equality and empowerment of women), and (ii) vulnerability reduction (minimize disaster risks and economic losses, and increasing

⁴⁵ Inger Alness/SEPA, 2007; Capacity Gap Assessment on SEA in Albania, 2006.

⁴⁶ CIA Factbook, 2007

⁴⁷ European partnership with Albania, 2007.

⁴⁸ According to the UNDP the work is quite advanced; they have initial reports on climate variability and trends; climate change projections and impacts; and adaptation options. The reports focus mainly on the Drini and Mati coastal area of Albania; these areas were considered most vulnerable during the initial communication. The reports are still in a draft format and are not publicly available yet. Communication with Keti Chachibaia, UNDP; and Ermira Fida, Albania Climate Change Program.

institutional response). General adaptation measures are proposed to be integrated into development policy and planning at all levels, inventory of existing practices to climate variability, disaster relief, warning systems, and awareness creation. The information collected for the draft second national communication seems relevant, and the analysis is well performed. However, the conclusions seem to focus heavily on new and costly infrastructure investments, especially related to water resources and energy.

Mainstreaming of environment, climate change and sustainable management of natural resources across sectors

The efforts of the Albanian government to mainstream natural resources management into sector strategies and the new NSDI are ambitious. However, the mainstreaming efforts began recently and implementation has not yet started, hence it is too early to comment on the actual result. The will is obviously there, but the implementation and enforcement capacities are lacking.

Related to climate change, the UNFCCC states that the national communication processes, including efforts in raising public awareness, was important for mainstreaming mitigation measures; the national energy strategy is one example in which findings have been incorporated.⁴⁹ Adaptation measures are still not properly addressed in the NSDI.⁵⁰

Challenges for capacity development

The legal framework in Albania is improving. Efforts have mainly been focused on new legislation and strategy development but the enforcement capacity is very weak. Even when breaches of environmental law have been proven, the formal mechanisms to recover fines are too weak.⁵¹ Albania faces two challenges regarding capacity development:

- 1) One major challenge for fulfilling Albania's obligations of the *acquis* will be to increase the capacity among institutional staff. The number of people directly involved in environmental management will also need to increase dramatically.⁵² As Albania's integration to EU demands stronger administrative capacity to deal with environmental issues, Sweden has supported a twinning arrangement between the Ministry of Environment and the Swedish Environment Protection Agency with focus on capacity building in monitoring and assessment systems and EIA. Swedish environmental support has also co-financed and provided consultancy services to projects dealing with solid waste management, natural resources development, strengthening of sustainable communal forestry, implementation of Local Environmental Action Plans and the Land Administration and Management Project, led by the World Bank.⁵³
- 2) Another challenge is the building up of local capacity for environmental management; problems in relation to local implementation are obvious. As part of the decentralization process which is taking place in Albania, the provision for instance of communal infrastructure now rests with local authorities, and these do not have the capacity to neither plan nor implement large infrastructural investment projects in accordance with international standards.

⁴⁹ UNFCCC, 2005;

⁵⁰ Ermira Fida, Albania Climate Change Program, telephone communication 7 March, 2008.

⁵¹ In 2004, 80 % of the imposed fines remained unsettled, NES 2006

⁵² It needs to be trebled at least by 2015 in order to fulfill the practical requirements of the law necessary to apply to the *acquis*, NES 2006

⁵³ Sida Country Report, January – December 2006

4. What are the implications for Swedish Development Cooperation?

From this brief review it can be concluded that the environmental problems Albania is facing pose a number of challenges for both poverty reduction and sustainable economic development. Complying with EU environmental requirements may prove to be one of the most demanding tasks for the Albanian administration work with EU harmonisation. While the highly prioritised reform efforts include the important development of a new legal and policy framework for environmental management, effective implementation leading to measurable improvements remain a key concern.

A few development issues seem critical from an environmental sustainability perspective during the coming years:

- The rapid urbanization and development in coastal areas puts new pressure on domestic infrastructure and the supply of public services (water, sanitation, waste management, etc). It is important to combine supply-side measures with demand-side measures, to increase efficiency, introduce adequate pricing mechanisms and tariff systems, and avoid un-economic and unsustainable wasteful behaviour.
- Deterioration of land and water resources is a major problem in Albania, which might be further aggravated by future climate change, with negative impacts on economic development, poverty reduction, and health. There is a need to develop sustainable, equitable, and integrated water and land resources management practices based on catchments. The inertia in the process of registration for land property and low spatial planning capacity are constraints to the sustainable use of land resources.
- Climate change risks aggravating the already serious energy crisis through its effect on hydro-power generation. Solutions to the energy crisis should involve a serious discussion of measures to enhance energy efficiency as well as increased energy trading as alternatives to the construction of CO₂ emitting large-scale thermal power stations.
- The industrial sector is growing fast, which increases the need for improved environmental management in order to minimize negative external effects from this growth. A mix of legal and market based policy instruments should be considered.
- The institutional capacity, both at national and local levels, for environmental management and climate change is still very weak and suffers from lack of both financial resources and trained staff, and stronger legislation in the environmental field is needed.
- If climate change is taken seriously by Albania, efforts must be made to mainstream climate change adaptation into sector strategies, and integrate climate change issues in the rapid and sustainable economic development it strives for. It should be kept in mind, however, that climate change impacts are extraordinarily difficult to predict, why adaptation should be seen as a social process rather than a set of tools that will work in all places, a 'one-size-fits-all'. It is not always necessary with large infrastructure investments – but sometimes it might be crucial. Many adaptation measures can be implemented using good development-cooperation practices, i.e. participatory, rights based approaches with the perspective of the poor. Development efforts could be based on experiences from already existing strategies for coping with climate variability together with adequate monitoring of climate related issues.

- Sida is co-financing the Natural Resource Development Project (NRDP) in Albania with the World Bank and GEF. The project objective is to establish or maintain sustainable, community-based natural resource management in erosion-prone areas. NRDP includes a climate-change mitigation component, with the objective to increase carbon sequestration through afforestation and reforestation of highly degraded land. The project objective and the integrated approach seems highly relevant to improve natural resources management, reduce land and watershed degradation and increase living conditions in targeted areas. An EIA has been performed of the NRDP which states that the successful implementation of the NRDP will clearly have a major positive impact on environmental and natural resources in upland areas of Albania and on downstream resources in the watersheds.

Issues for Sida to consider

Against this background the following issues could be relevant for Sida to consider in the development of a new cooperation strategy with Albania:

Strategic environmental integration

- How can Sida together with other development agencies further support the integration of environment in key national and sector strategies (for instance within the energy, tourism, spatial planning, and construction sectors) and the implementation of the same? Can the commitment in the Paris Declaration to “*develop and apply common approaches for strategic environmental assessment at the sector and national levels*” be put into practice in Albania?

Specific environmental interventions

- Should Sida devote particular attention to spatial planning, integrated water and land management, land reforms and improved tenure security, given its importance for economic development and environmental sustainability? Would support to Strategic Environmental Assessment at sector level be relevant?
- The NRDP provides a good opportunity to start integrating climate change adaptation at local level. However, efforts should be made not to create bypass solutions but to support existing systems for environmental control and monitoring, and awareness creation, in accordance with the Paris Declaration.

Twinning arrangements

- In what sectors can other Swedish authorities (apart from SEPA) be involved in twinning projects to transfer knowledge and train Albanian civil servants in the area of harmonization to EU legislation?
- Sweden has a long tradition of decentralization with very strong and independent regional and municipal authorities. Can Sida draw on some specific competences in Swedish regions/municipalities? For instance in development of tourism and experiences from negotiation processes within the Environmental Code, etc.

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APPENDIX 1

Selected Environmental Indicators					
	Albania	Serbia/ Montenegro	Slovenia	Bulgaria	Sweden
Indicator					
Population density, rural (people/sq.km of arable land)	296	110	557	71	53
Agricultural land (% of land area)	41	55	25	48	8
Forest area (% of land)	29.0	26.4	62.8	32.8	67.1
Annual deforestation (% change 1990-2005)	0.0	-0.4	-0.4	-0.6	0.0
Irrigated land (% of cropland)	50.5	0.9	1.5	16.6	4.3
Fertilizer consumption (100 grams/ha of arable land)	612	906	4,160	495	1,000
Nationally protected areas (% of total land area)	2.7	3.7	14.5	4.5	10.9
Bird species threatened	9	10	7	11	9
Energy use per capita (kg oil equiv)	760	2,004	3,591	2,494	5,998
CO2 emissions per capita (metric tons)	1.0	6.2	7.7	5.3	5.9
Passenger cars (per 1 000 people)	47	181	456	286	457
Internal freshwater resources per capita (cu.m)	8,595	5,456	9,348	2,706	18,949
Access to improved water source (% of total population)	96	93	..	100	100
Access to improved sanitation (% of total population)	91	87	..	100	100

Source: World Bank, 2007, *The Little Green Data Book*