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Ministry of Public Works, Transport and
Telecommunication, Albania

**Southern Coastal
Development Plan -
Strategic Environmental
Assessment**

Final Report

December 2007



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Southern Coastal Development Plan - Strategic Environmental Assessment

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Background

The Government of Albania is committed to ensure sustainable development of the Southern Coast while optimising economic developments and job creation.

The Southern Coast remains substantially undeveloped. While uncontrolled development in Saranda and Ksamil and inadequately regulated or sporadic development in Himara and other locations have locally compromised the value of the landscape, the Southern Coast remains a potentially very significant economic development asset nationally; and sub-regionally, the major economic development asset of the Southern Coast.

The conservation of the unique Southern Coastal environment, specifically: a) natural landscapes – landforms, natural drainage and biodiversity); and b) cultural landscapes – traditional settlements and buildings in their settings and other heritage assets, together with customary tree-crops and other agriculture, are of paramount importance in the formulation of a development strategy.

The challenge is therefore to elaborate and implement a Southern Coast Development (SCD) Plan and tourism development strategy that exploits the key assets of the natural and cultural environments, while minimising negative environmental impacts. This may appear to be obvious, but around the Mediterranean and indeed throughout the World comparably unique and pristine environments have been degraded by poorly conceived tourism policies, ineffective development strategies, poor site planning, mediocre architecture, over-development, and attendant pollution in all its forms.

The SCD Plan must be able to set options for

- Strengthened land-use and spatial planning capacity,
- Socio-economic development;

- Strategic environmental assessment concepts and principles,
- Social safeguard measures,
- Principles for development within a participatory framework.

The development plan needs to be supported by appropriate infrastructure and therefore the SCD Plan is accompanied by an Infrastructure Development Plan which has been elaborated with the objective of supporting sustainable tourism development.

In all, five reports have been prepared as part of the Southern Coast Development Plan:

- Document 1: Review of Prior Work
- Document 2: Key Extracts from the European Code of Conduct for Coastal Zones. Edited and annotated for the Southern Coast of Albania
- Document 3: Guidelines to support the formulation of development planning and control regulations for the Southern Coast.
- Document 4: Regulations to guide the preparation of local development plans and establish the principles of development control and development control procedures for the Southern Coastal Zone of Albania
- Document 5: Infrastructure Development Plan. Services and facilities required to support the Southern Coast Development Plan.

The present report constitutes a *Strategic Environmental Assessment (SEA)* of the SCD Plan. The SEA has been based on available information and brief visits to the Southern Coastal (SC) area.

Purpose of the SCD Plan

Objectives of the SCD Plan

The Development Vision in the Draft Plan asserts that: the key issues in reaching development and zoning strategy consensus is in managing the tensions between:

- the expectations for quick growth, mostly based on tourism development, along the whole coast,
- the need for preservation of large coastal stretches including numerous valuable environments and landscapes, and
- the need for gradual development of costly infrastructure which obviously defers development of certain localities.

Therefore, with the timescale proposed, the essential steps are as follows: a) draft development guidelines that acknowledge limitations on existing political, legal, funding and human resources, safeguard principal

environmental assets and postpone irrevocable decisions; b) formulate simple, unambiguous development regulations; and c) identify priority investments in key infrastructure that will catalyze or facilitate essential new investment in jobs and/or define and consolidate key planning conservation and policies and plans as a condition on sustainable, equitable resource utilization.

Outline of the SCD Plan

The following key points outline the current agenda for the development of the Southern Coast:

- The intrinsic natural and cultural values of the region, including both land and sea environments and ecosystems, require the full integration of sustainable development and environmental planning principles into development decision-making.
- Adequate infrastructure is required to meet the existing and forecast residential and tourist demand (in particular: transportation – through routes and access; sewerage systems and management, solid waste collection and disposal, and water supply).
- Infrastructure must be designed to minimise negative environmental impacts and be prioritised and phased to facilitate development objectives, consistent with available resources.
- Tourism (together with associated trade and complementary services) is planned as the leading sector in the regional economy and the principal catalyst for economic growth.
- Revitalization of traditional primary industries such as agriculture (mainly tree crops and market gardening) and fisheries (small-scale artisanal fisheries and fish farms to serve local and niche markets), together with programmes to support local arts and crafts and low-impact industries, is envisaged.
- Small- and medium-size communities should be sustained as viable social and economic entities.

The following section lists the key coastal resources and environmental assets of the Albania Southern Coastal Zone which must be respected as a set of preconditions.

a) Protection of significant environmental assets:

- Coastal and marine features of ecological, geological, geomorphological, cultural, landscape and historical significance should be protected.
- Important coastal habitats, land and sea, and the associated native flora and fauna should be protected in all instances and preserved intact where possible.

- A well-managed system of coastal parks and reserves should be developed (in addition to the existing National Parks), with local communities involved in the protection and management of sites.
- A significant percentage of the coastline and associated hinterland should be zoned as ‘areas of high landscape value’ to maintain the overall quality of the countryside as: i) an economic asset; ii) an ecosystem; and iii) the essential landscape framework to enhance the setting and ensure the separation of individual growth poles.
- A significant percentage of the coastline and associated hinterland should remain inaccessible to vehicles to support restrictions on built development in these areas and maintain their sense of remoteness for ecosystem protection and recreational use.

b) Sustainable use of natural coastal resources:

- Coastal seawater quality should be protected through strict limitations on development in ecologically sensitive areas (in tandem with areas of high landscape value and bathing beaches) through among others; i) the construction of appropriate sewage treatment infrastructure according to density; and ii) the application of such regulations as are required to ensure connection to central systems and maintenance of individual systems.
- Coastal development should be modulated in scale and distribution (while primarily determined by economic development objectives and landscape asset management considerations) in line with the available water resources (spring and groundwater).
- Effective solid waste disposal systems should be introduced (regulations, collection, storage, transportation and disposal) as a prerequisite for any coastal development.
- The conversion of economically productive land to urban uses should be minimised (such as agricultural land, tree-crops and forests) to maintain landscape asset value (cultural landscape and its value as a tourism resource) and the potential to diversify local economies.
- A policy to support energy-efficient modalities is necessary concerning: i) travel and transportation; ii) building construction techniques; iii) operational methods for tourism infrastructure and other economic activity, together with initiatives to generate such forms of clean energy as do not compromise the intrinsic landscape value of the coastal zone.
- Specific regulations are urgently required to control and manage: i) open-cast quarrying for construction and fill materials; and ii)

tipping of spoil, disposal of excess fill materials and construction/demolition waste. Such regulations should cover the location and management of sites, with specific requirements for low-impact operation and eventual rehabilitation after use.

Background

The World Bank is financing the multi-sectoral and multi-stakeholder Integrated Coastal Zone Management and Clean-up Program (ICZMCP). The SCD Plan is being elaborated within the framework of this programme.

The SCD Plan will cover the south Albanian coastal strip from Karaburun peninsula to Cape Stilo and the Greek border. An earlier study was carried out by the PAP/RAC - SOGREAH Consortium, the ICD Study and Plan. This study started with the assessment of the socio-economic potential of the Southern Coastal Region, and an evaluation of the sensitivity of its coastal, marine and terrestrial, ecosystems to accommodate the planned future development.

The study had three major phases. The Study, which was concerned with the analysis of the socio-economic and environmental situation in the SC area; an assessment of the land suitability/development potential and an analysis of the present tourism development situation and trends; an analysis of the institutional response to coastal pressures and problems; and a proposed set of urgent measures that need to be taken. The Development Plan that developed a coastal development strategy and land-use planning proposals for the study area. Finally, the Policy Action Plan that was supposed to develop in more detail the most critical policy actions and urgent measures not part of the spatial development plan, but with significance in Plan implementation.

The PAP/RAc - SOGREAH work was followed by the present TOR and the elaboration of the SCD Plan, with an Infrastructure Development Plan. The present work constitutes the plan, which is the subject of this SEA.

Legal and regulatory framework for the SEA

Albania's Territorial Planning Law

The Southern Coast Plan will be a ‘Sub-national Plan’ within the meaning of the draft of the new Spatial Planning Law¹. Under this proposed legislation, the “national planning authority may establish one or more sub-national planning areas to achieve a national planning prerogative in an area that includes more than one local planning authority” in particular circumstances. In such circumstances, a statement of intent is required to

¹ Law No.(..) on Territorial Planning, 2007: Chapter VI, Sub-national Territorial Plan, Article 17 Creation of a Sub-national Planning Area, Article 18 Proposed Sub-national Territorial Plan, Article 19 Review and adoption of a Sub-national Territorial Plan, and Article 20 Implementation of a Sub-national Territorial Plan

justify the creation of the sub-national planning area and plan. This includes:

- the boundaries of the sub-national planning area;
- the period of time for which the sub-national planning area; and
- the composition of the executive board of the sub-national planning area.

The sub-national planning areas involve an executive board which includes representatives of central government, local planning authorities, related public institutions and other stakeholders which is supported by professional civil servants, local government officers, with the possibility of contracting individual experts and institutions.

Following establishment of the sub-national planning area, special development controls are mandated to preserve existing circumstances during the preparation and approval period leading to the new plan; which requires the following:

- a strategic environmental assessment of the sub-national planning area;
- A statement of the critical national objectives to be fulfilled by the sub-national plan area;
- A definition of the sub-national planning area (normally conforming to the boundaries in the sub-national planning area); and
- planning instruments and development controls required (to be binding upon local planning authorities) to achieve the objectives of the sub-national planning strategy

Law on Environmental Impact Assessment

The Government of Albania issued the Law on Environmental Impact Assessment in January 2003, Law No.8990 (23.1.2003). The law prescribes: 1) a two-tier EIA system (consisting of preliminary and detailed EIA) for projects; 2) SEA for strategies and action plans in key sectors (energy, mining, industry, transport, agriculture, forestry, waste management) and for variety of national and regional plans for territorial adjustment (of urban and rural centres, industrial areas, coastal areas, tourism areas, protected areas and highly polluted and damaged sensitive areas).

Article 5 of this law gives the stipulations for when and how to elaborate a strategic environmental assessment:

1. Strategic environmental assessment shall undergo the following:
 - a) Strategies and action plans on energy, mines, industry, transport, agriculture, forests, on natural resources and mining properties management and on waste management;
 - b) Territory adjustment national and regional plans of urban and rural centers, industrial areas, coastal areas, tourism areas, protected areas and highly pollution and damage sensible areas.

2. State institutions or natural or juridical person that submits a proposal in accordance with paragraph 1 of this Article shall compile an strategic environmental assessment report and ask for evaluation of it from the Minister of Environment prior to endorsement by relevant authorities. Assessment is given through an environmental declaration which shall be published.

Procedures, deadlines and parties obligations in all phases of strategic environmental assessment process shall be the same as for projects requiring profound process of impact assessment on environment.

The procedure also includes: a) Consultations with relevant authorities, and b) public debate among representatives of the ministry which licenses the proposal, bodies for territorial adjustment and tourism, local government bodies, specialised institutions, interested persons, environmental NGOs and the proponent.

EU SEA Directive

The objective of an SEA is summarized in Art. 1 of the SEA Directive of the European Union²:

The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.

The preamble of the EU directive on the assessment of the effects on certain plans and programmes on the environment (2001/42/EC) - the SEA directive -gives the following statement as one (of several) substantial reasons for the SEA directive. Importantly, the precautionary principle is referred to in this preamble, being one of the fundamental principles of EU environmental policy.

² Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.

Article 174 of the Treaty provides that Community policy on the environment is to contribute to, inter alia, the preservation, protection and improvement of the quality of the environment, the protection of human health and the prudent and rational utilisation of natural resources and that it is to be based on the precautionary principle. Article 6 of the Treaty provides that environmental protection requirements are to be integrated into the definition of Community policies and activities, in particular with a view to promoting sustainable development.

The preamble further explains the positive contributions of environmental assessments to achieving 'sustainable and effective solutions' [to development], while also considering the need to consult with the public.

The adoption of environmental assessment procedures at the planning and programming level should benefit undertakings by providing a more consistent framework in which to operate by the inclusion of the relevant environmental information into decision making. The inclusion of a wider set of factors in decision making should contribute to more sustainable and effective solutions.

....

In order to contribute to more transparent decision making and with the aim of ensuring that the information supplied for the assessment is comprehensive and reliable, it is necessary to provide that authorities with relevant environmental responsibilities and the public are to be consulted during the assessment of plans and programmes, and that appropriate time frames are set, allowing sufficient time for consultations, including the expression of opinion.

The Espoo Convention

The Espoo Convention on EIA in a Transboundary Context (Espoo 1991) sets out the obligations of the parties to the Convention to *inter alia* assess the environmental impact of certain activities at an early stage of planning. The convention has given rise to the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context.³

By the above commitments the Espoo Convention expressed the general obligation of the parties to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries. In the SC region transboundary effects of activities in Albania may have impacts across the border to Greece. This is being assessed in sect. 6.6 of this report.

Albania became a party to the Convention in 1991.

³ Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context, dated 21 May 2003

Protected areas

In 2002 the Albanian Parliament approved two important laws that together have created a new legal structure for protected areas. These are the law no. 8934 dated 05.09.2002 “For the Protection of Environment”, which is based on the concept of sustainable development, and the law no. 8906 dated 06.06.2002, “For the Protected Areas”.

The law “For the Protected Areas” has laid down the framework for the proclamation, administration, management and sustainable use of protected zones and natural biological resources. The law also provides the basis for the development and mitigation of ‘environmental tourism’ and other economic benefits and for the provision of information and education to the general public. The primary goal of the law is to provide special protection of the most important components of natural reserves, biodiversity and in general nature, through the implementation of a protected areas network based on the International Union for Conservation of Nature (IUCN)⁴ categories system. Furthermore the law defines the priorities and strategic objectives for the management of each category of protected areas.

Protected Areas in Albania have been for the most part considered as forest areas and they have historically been administered by the Directorate General of Forestry and Pastures (GDFP) within the Ministry of Agriculture and Forestry. Within the law nr 8906 /2002 “For the Protected Areas”, the Ministry of Environment has been given the primary supervisory role for protected areas in Albania and is responsible for:

- ③ Proposing areas to be protected.
- ③ Preparing the legal and managerial procedures to propose and declare a protected area.
- ③ Compile management plans for protected areas.
- ③ On going monitoring / regulation of management.

The law “For the Protected Areas” states that whilst the primary administrative role lies with the Ministry of Environment and GDFP, the interests of other ministries have to be taken into account.

The SEA process

The purpose of the Strategic Environmental Assessment

The purpose of the SEA is given in the EU SEA Directive as the following:

The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental

⁴ IUCN/CNPPA Management Categories for Protected Areas

considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.

The elaboration of an SCD Plan thus must be accompanied by an assessment of risks to the environment , the SEA, which will include the following:⁵

- (a) The contents and the main objectives of the plan and its link with other plans
- (b) The way environmental, including health, objectives established at international, national and other levels which are relevant to the plan and any environmental considerations, including health, have been taken into account during the preparation of the SCD Plan
- (c) The measures envisaged in the SCD Plan to prevent reduce or mitigate any significant adverse effects on the environment, including health, which may result from the implementation of the plan;
- (d) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including difficulties encountered in providing the information to be included such as technical deficiencies or lack of knowledge;
- (e) A description of the measures envisaged in the SCD Plan concerning monitoring environmental, including health, effects of the implementation of the plan
- (f) A non-technical summary of the information provided under the above headings

Sieve mapping process

The core of the proposed Planning Regulations for the Southern Coast Plan have been developed through a fast-track process based on sieve mapping process. The principle of sieve mapping is simple; it provides a transparent planning process where each element can be discussed separately and validated or rejected according to the overall objectives.

Development constraints are added in layers to eliminate land which is unsuitable (or less suitable) for development for various reasons. The overlapping layers ‘sieve out’ those areas unaffected by ‘hard’ development constraints to give ‘potential development zones’. Planning regulations in terms of ‘prohibitions’ with ‘justified exceptions’ restrict development in the areas defined by the sieve mapping process as ‘unsuitable’.

⁵ Annex IV of the Protocol on Strategic Environmental Assessment, Articles 1, 5 partially, 6, 7, 8, 9 and 11

As a result of this process, the entire land surface is categorised in terms of four basic categories:

- Absolute development prohibition areas – ‘no-go’ areas ‘sieved out’ by development constraints: principally: a) those excluded by layers of overlapping prohibitions; and also, where necessary, b) those areas where development is deferred pending resolution of land ownership or policy issues.
- No-build areas within potential development areas (i.e. landscape asset areas, protected forests, leisure and recreation assets, productive agricultural land, etc) within potential development areas subject to planning controls.
- Critical development areas, subject to comprehensive planning regulation, together with development briefs and design briefs where necessary (heritage villages, integrated resort areas, etc).
- Non-critical development areas, subject to simplified planning regulation.

It may be noted that the net development areas are fairly extensive and the resultant scope for action must be used judiciously in light of the policy. This entails that new building should be concentrated in a limited number of strategic locations, which maximise retention of the natural landscape and facilitate economic infrastructure servicing. A further sieve mapping exercise at the local level is necessary as part of the local plan process.

Environmental risk assessment

An environmental risk assessment has been conducted as a precursor for the SEA. The purpose of the environmental risk assessment was to:

- Provide an initial definition of the risks inherent in the development of the region that could diminish or destroy its natural assets and potential, and
- Assess the extent to which the land use measures proposed as part of the Southern Coast Regulation include all the risks and provide adequate measures to mitigate the risks.

The risk assessment of possible environmental impacts caused by the introduction of the SCD Plan is regarded as the first step towards ensuring an environmentally sustainable development. The risk assessment may be seen as a precursor for the SEA, elaborated alongside the development of the draft SCD Plan - basically outlining environmental concerns at the preparatory stage. In

this respect, the risk assessment contains the key elements to be considered in the SEA and thereby constitutes a scoping stage for the SEA.

Environmental impact assessment

The main difference between an SEA and an Environmental Impact Assessment (EIA) is that the SEA is based on an *assessment of plans and programmes*, whereas the EIA is conducted at a later stage in the preparatory process, at the *project or study level*. This also means that the EIA is characterised by the following conditions:

- The EIA is based on precise and detailed information, made available as a part of the project or study;
- The EIA involves project-specific stakeholders;
- The EIA assesses the environmental impacts likely to happen as an effect of the project/activities if no measures are taken against the impacts;
- The EIA prescribes specific mitigation measures;
- The EIA formulates an Environmental Management Plan, and
- The EIA communicates the findings and recommendations to the general public.

The EIA is preceded by a *screening process*, in which it is decided whether an EIA is to be conducted or not, and a *scoping process*, in which the contents of the EIA are being decided upon.

Environmental baseline of the southern coastal region

Introduction

Albania is a relatively small country situated in the southern part of the Balkan Peninsula, with a total surface of 28,748 km², bordering with Montenegro, Kosovo and Macedonia on the north and north-east, and with Greece on the south and south-east. The coast exhibits two fairly different types: the very active Northern and Central Adriatic coasts (273 km), and a solid and rocky Southern Ionian Coast (154 km), largely resembling the Eastern Adriatic coasts of Croatia and Montenegro.

The Albanian coast is the greatest national asset and attracts a very large number of visitors and tourists. Furthermore, the coastal environment constitutes resources of high economic and ecological values for the country

and it is considered to be the most important resource upon which the future development of the country depends.

The Southern Coast remains substantially undeveloped. While uncontrolled development in Saranda and Ksamil and inadequately regulated or sporadic development in Himara and other locations has locally compromised the value of the landscape, the Southern Coast remains a potentially very significant economic development asset nationally; and sub-regionally, the only significant economic development asset within the development planning framework of the Southern Coast. For this reason, the conservation of the unique Southern Coastal environment, specifically: a) natural landscapes (landforms, natural drainage and biodiversity⁶); and b) cultural landscapes (traditional settlements and buildings and their settings, other heritage assets and settings, together with customary tree-crops and other agriculture⁷), is of paramount importance in the formulation of a preferred development strategy.

Over recent years, pressure from tourism and residential development (mainly second homes), an inadequate legal and regulatory framework and weak law enforcement has impacted (with locally severe impacts, as in Ksamil) the coastal environment.

Due to the unsustainable management of these resources, considerable amount of wastes have been illegally dumped along the coastal roads or discharged into the sea. The largest sources of pollutants come from the direct or indirect discharges of untreated sewage waters. There is only one treatment plant in the study area (in Himara), which is only a mechanical treatment, in addition to only few and partial waste collection networks (in Saranda and Himara). Other main pressures to the coastal and marine environment are related to illegal buildings and uncontrolled development, shortcomings in the legal and institutional framework and low level of environmental awareness (NEAP, 2002).

The Southern Coastal Region

The Southern Coastal region is identified in terms of eight linked coastal regions, which together comprise the planning region. The constituent areas are:

- the Llogara National Park and Karaburun Peninsula in the north;
- the Butrinti National Park and the border with Greece in the south;
- all areas on the seaward slope in between (i.e. to the first major watershed for the linking sections);

⁶ Biodiversity in Albania, Report on National Situation of Biodiversity in Albania, Director of Nature Protection Directorate, National Environmental Agency, Albania, 1998

⁷ Republic of Albania, Albania: Integrated Coastal Management and clean-up Program, Heritage Assets Mapping, Final Report, SIM Spa, GICO Branch, i-MED, March 2005

- the area contained within the administrative boundaries of five towns:
 - The municipalities of Himara and Saranda; and
 - The communes of Ksamil, Lukova and Xara.

Landscape, ecology and biodiversity

The landscape

The Albania Coastal Zone Management Plan of 1995 identifies seven marine bio-geographic units in the Southern Coastal Region, whose coastline roughly coincides with the study area as defined in sect. 5.2 above. These units were defined according to coastal marine geomorphology, orientation, geology, substrate, and exposure to wind and sea swell. This classification could still be considered as valid today since it has been used as one of the bases for the preparation of the Biodiversity Strategy Action Plan (BSAP) of Albania, prepared by the Ministry of Environment in 1999. Reference is also made to the map S3 of that plan. One of the units is the Sazani Island off Karaburun Peninsula, which is not included in the present study area. It is therefore not dealt with here.

The landscape of the unique Southern Coastal region is characterised by a dramatic topography, which sets the frame for the natural development of habitats and the human influence on these habitats over time. The result is a region, which is visually influenced by two sets of landscape types, specifically the natural landscapes (reliefs, natural catchment areas and naturally developed habitats); and the cultural landscapes (traditional settlements and buildings and their settings, other heritage assets and settings, together with customary tree-crops, agriculture and other land use forms). The appreciation of the presence and importance of the cultural landscapes is the key to understanding nature conservation concepts in the Southern Coastal region.

The main bio-geographical units included in the Albania Coastal Zone Management Plan of 1995 are given in the following sections.

Vlora Bay

Vlora Bay reaches from the City of Vlora (east) to Cape Galloveci (west). The coast is mainly rocky, with small gravel beaches, except in the eastern part that is sandy, and the center area of the bay that is filled with sand and mud. The maximum depth in the bay is 55 meters. The shallow water areas of Vlora Bay are covered with sea grass meadows of *Posidonia oceanica* and *Cymodocea nodosa* which are ecologically important and serve as ideal nursery and feeding grounds for many aquatic species. In the deeper parts of the bay, a larger and rarer macrophytic algae grows.

Orikumi lagoon is located at the southern end of Dukati (Vlora) bay, in a restricted military zone and is connected to the sea by a canal. Only about 130 ha of the former larger Orikumi (Pasha-Limani) Lagoon remained in the present days. Some 25 years ago drainage works and the construction of a dike dried up approximately 400 ha of the former lagoon. Many agricultural polders

are currently abandoned or used for non-intensive grazing and natural vegetation has invaded considerable part of the formerly cultivated lands.

Orikumi is an archaeological site of prime importance. According to some specialists, it may even surpass Butrinti in significance.

Commercial fishing in the Vlora Bay is prohibited and fishermen from Vlora fish mainly in the area parallel to the coast up to Vjosë Delta. The most common method of fishing is trawling by boat with large nets at various depths along the edge of the continental shelf.

Karaburuni Peninsula

The northern and western coasts are 14 km in length from Cape Karloveci to Cape of Gjuheza, extending up to Bristani Bay.

The slopes of Karaburuni Peninsula are very steep on the western side, culminating in the central part. The western side is characterized by high vertical cliffs diving underwater to great depths, deeply incised by canyons with intermittent sandy beaches. These cliffs are highly subjected to erosion and numerous caves can be seen where freshwater springs often percolate.

The vegetation is dominated by low and sparse shrubs on both sides of the ridge, with some loose patches of conifers and other tree species.

The underwater coastal environment along the western side is quite diversified and relatively abundant and is organized into various descending marine ecological zones.

The peninsula's canyons and caves, often inaccessible by land, are ideal habitats for monk seals.

The area holds some interests for fishery.

Karaburuni to Dhermi

The coastline along Rreza e Kanalit stretches for 30 km, and extends from Bristani Bay to Dhermi. Rreza e Kanalit area is similar to the Karaburuni Peninsula in terms of marine flora and fauna. The area is defined by the considerable height of the Mount Cikes Ridge running directly parallel to the shoreline, with series of coves, cliffs and mixed sand/pebble beaches at the seashore. The Llo-gara National Park is included in the area. Further along the coast is Palasa valley, which is an erosion valley and delta created by spring fed rivulets; and Dhermi, characterised by two streams, one intermittent and one spring fed, that have carved two small valleys on the south side of the larger Palasa valley near the sea. The Dhermi stream is spring fed and has cut deeply into the landscape producing a canyon and many cliffs up stream.

On the sea-facing slopes the vegetation is in most places like on the Karaburuni peninsula, low, sparse and shrubby, whereas further inland there are areas with maquis-like vegetation and conifers stands.

The coastal shoreline along the bay area has cultural heritage sites of significant value including: sculpted frescoes from early Christian period, inscriptions from Hellenistic period, and the Gama Bay ancient quarries and inscriptions.

Dhermi village to Porto Palermo

The coastal profile from Dhermi to Porto Palermo encompasses several different environments. The coastal relief is more gentle, sloping to the sea bed, with the exception of few rocky outcrops. The underwater environment is characterized by an important swell adjacent to the coast composed of alternating pebbles, gravel rock with sand. *Posidonia oceanica* sea grass meadows dominate the shallow areas.

Vunoi Canyon is very impressive; its special habitat has a potentially high biodiversity and prehistoric remains (Iron Age) have been found in a grotto along the canyon. The canyon extends to the sea and into a narrow gorge, culminating in a beautiful secluded pocket beach.

Porto Palermo is highly attractive as a potential site for tourism and nautical sports. It is a naturally well-sheltered area, where the ancient settlement of Panormis was located, and has a potential as nautical base; Ali Pasha's castle, a museum and some military buildings could be used as information and educational centers. The submarine base with its 800-m long tunnel could be attractive for tourists, as well as the archaeological remains (amphoras) of the II century BC that can be found in this bay.

Cape Qeparo to Cape Qefali

Cape Qeparo to Cape Qefali encompasses 20 km of shoreline divided between the districts of Vlora and that of Saranda. This part of the coastline is characterized by the succession of different geological ages producing seven landscapes: (1) The rocky cape of Qeparo; (2) Qeparo; (3) Borshi Plain with the large olive plantations; (4) the narrow coast of Lukova, with large slanted limestone layers; (5) the wide coast of Cape Qefali; (6) the beaches of Kakome; (7) and the vertical folded cliffs of the Bay of Pogajetes, north to Cape Qefali.

The white sandy beaches are prominent throughout the region and extend well into the marine environment up to 20m in depth.

Cape Qefali to Cape Stillo

The coastline profile from Cape Qefali to Cape Stillo is not as spectacular as the adjacent regions. The coastline can be divided into several sections: (from Cape Qefali to Saranda, the cliffs are low and inclined enclosing small gravel beaches; (2) the area including the town of Saranda; (3) the area south of the town of Saranda; (4) the abandoned citrus plantations and deforested areas in the vicinity of Ksamil; (5) Ksamili Islands, with small sandy beaches, wind sculpted maquis forests; (6) the cape of Shkalla with low rocky cliffs and small pocket beaches; (7) the area of Lake Butrinti and the delta plain is one of the richest nurseries and breeding habitats along the

southern coast; (8) the rolling hills south of Lake Butrint, with small river beds, pocket beaches and wetlands; and (9) the pristine and rocky island of Stillo.

Terrestrial biodiversity

The Southern Albanian Coastal Region is characterised by a significant diversity of flora, habitats and plant associations of a particular national importance. A number of plant species in the area appear on the national list of rare species, a considerable number of plants are distinguished for their specific scientific interest, while many of them are of particular economic values as medicinal plants, oil-bearing plants, industrial plants, decorative plants, etc.

The southern coast of Albania represents an important cross of migration routes of the flora of the Balkan region. The area is very rich with almost 1,400 vascular plant species (representing more than 40% of the total flora of Albania). A large number of rare and endangered species of Albania are found in the area. Many endemic and relict plant species are found inside the study area.

The main habitat types of natural vegetation found in the Southern Coastal areas are⁸: ...

- Vegetation of lowlands or evergreen forests and shrubs,
- Mediterranean pine forests (Assoc. *Pistacio- Pinetum halepensis*), that are not indigenous for the area,
- Plant communities dominated by *Euphorbia dendroides*, *Pistacia lentiscus* – *Allianca Oleo – Ceratonion* (Assoc. *Pistacchio – Euphorbietum dendroides*),
- Phrygana vegetation (Assoc. *Chrysopogono – Phlometum fruticosae*, Assoc. *Ericetum manipuliflorae*),
- Pseudo-steppe vegetation dominated by *Brachypodium ramosum* (Assoc. *Brachypodium ramosi*),
- Oak deciduous woodlands (Assoc. *Quercetum frainetto*), *Quercus ithaburensis* subsp. *macrolepsis*,
- Mountain coniferous forests (Assoc. *Pineto – Abietetum borissi-regis*), and
- Forests dominated by *Pinus leucodermis* (Assoc. *Pinetum leucodermis typicum*).

Likewise, the south coast of Albania has a rich fauna diversity. In particular, the area holds a very rich fauna of insects (invertebrates). Furthermore, 11 species of amphibians (out of the 15 species known in the country) and 30 species of reptiles (out of 37 species known in the country) can be found in the area. Some 250 bird species are reported from the area, out of 330 species known in the country, which makes the Southern Coastel region a

⁸ from: MedWedCoast 2005: Management Plan. Complex: Llogara - Rrëza e Kanalit - Dukat - Orikum - Tragjas - Radhimë - Karaburun. Final Draft. GEF/UNDP-MoE Conservation of Wetland and Coastal Ecosystem in the Mediterranean Region.

very important area for birds. The area is an important site for birds of prey, with the rare lesser kestrel and egyptian vulture among a range of notable raptors. Passerines occur with a very large diversity, owing to the significant variation in topography and habitats. Aquatic birds are important in the southern part of the area, where Butrinti Lake has recently been designated as a Ramsar site, owing to its richness in water birds.

The study area is very rich in mammals. Some 55 species out of 71 species known in Albania are expected to appear along the southern coast of Albania. 17 mammal species belong to the Red List of Globally Threatened Mammals.

Marine biodiversity

Being located at the border of three sub-regions, the western and eastern part of the Mediterranean Sea and the Adriatic Sea, the southern Albanian coast is very important for marine biodiversity, as the fauna and flora include species from mixed origins: strictly Mediterranean species, remnant fauna and flora from the Atlantic and migrant fauna from the Indian Ocean through Suez Canal. The marine flora includes 131 macrophytic algae; marine fauna encompasses a total of 251 fish, 46 echinoderm, 104 decapods and 84 mollusc species.

The most important - and protected - Mediterranean marine habitat, sea grass meadows consisting mainly of the seaweed *Posidonia oceanica*, can be found along the coast (5-45 m depth). *Posidonia* meadows are important as habitat for feeding and breeding for numerous marine species of fish, crustacean and other invertebrates.

Some important marine reptiles and mammals are recorded in the area. Sea turtles (*Caretta caretta*) visit the southern coast, where several attempts for breeding have been recorded. Also, three most important Mediterranean marine mammals, the monk seal *Monachus monachus* and the dolphins *Delphinus delphi* and *Tursiops truncatus*, are recorded in the area.

Environmentally sensitive and protected areas

A wide range of habitats are found in the study area, such as: high mountain ecosystems (up to 2,000 m); alpine and sub-alpine grasslands; different types of forests (mixed conifers and broadleaved, mixed broadleaved dominated by deciduous trees, broadleaved dominated by evergreen trees, shrubs and maquis, alluvial forests); lowland pastures; sandy and rocky coastal habitats; coastal wetlands such as Butrinti lake, Bifi (Rreza) lake and Orikumi lagoon; streams, torrents and karstic springs; caves, etc.

The Biodiversity Strategy and Action Plan (BSAP), adopted by the Albanian Government in 1999, defines 8 Environmentally Sensitive Areas. The definition of these areas is based on the integration of the characteristics

of the terrestrial and marine systems into unified environmental units. The list of existing and proposed protected areas is available in the table below.

	Name of Protected Area	Size	Existing and Proposed Status (IUCN categories)	District	Comments
1.	Llogora- Orikum, Karaburun-Sazan-Radhimë-Tragjas-Dukat	35,000 ha	Existing status: Llogora national park (1010 ha) (category II); Karaburun-Reza e Kanalit Managed Nature Reserve (20000 ha) (category IV) Proposed status: National Park (Marine/Terrestrial) (Category II)	Vlora	The area of the highest biodiversity value in the country, and one of the most important in the Mediterranean basin: alpine and sub-alpine pastures and meadows; Macedonian fir (<i>Abies borissi-regis</i>) forest mixed with pine forests of <i>Pinus nigra</i> , <i>Pinus leucodermis</i> ; mixed deciduous woodland with <i>Quercus coccifera</i> , <i>Q. macrolepis</i> ; typical Mediterranean maquis; typical rocky coastal vegetation; wetlands with residues of alluvial forests; a well developed littoral and benthos; <i>Posidonia oceanica</i> ; dolphins (<i>Delphinus delphini</i> and <i>Tursiops truncatus</i>); the monk seal (<i>Monachus monachus</i>) visit the caves and shores of the western slopes of Karaburun peninsula; north limit of alliance <i>Oleo-Ceratinion</i> . Endemic, sub-endemic, and many rare and threatened taxa appear inside the area, such as <i>Taxus bacata</i> , <i>Ceratonia siliqua</i> , <i>Pitymys felteni</i> , <i>Pitymys thomasi</i> , and others. High potential for ecotourism development.
2.	Canyon of Gjipe	1,200 ha	Existing status: Nature Monument Proposed status: Protected Landscape	Vlora	Very attractive landscape of particular and interesting geomorphologic formations rich in caves.
3.	Porto Palermo	600 ha	Existing status: No protection Proposed status: Marine Park (within bay)	Vlora	The best-preserved marine and coastal area of high scientific value in the country. A very well developed littoral zone, with a number of threatened taxa protected by international treaties (Barcelona convention). Of no less importance is its terrestrial part with very extended beds of <i>Euphorbia dendroides</i> and <i>Salvia triloba</i> . The presence of the Ali Pasha castle adds some historical values to the area.
4.	Borshi Stream	2 km	Proposed status: Protected Landscape	Saranda	A stream with well developed and preserved sites of <i>Nerium oleander</i> along its downstream.
5.	Kakome bay and Cape Qefali	2,200 ha	Proposed status: Protected Landscape and Seascape Area (Category V)	Saranda	An area of very attractive landscape and seascape, of scientific, tourist and recreational values. As a military area it is well preserved and provides resting sites for the sea turtle <i>Caretta caretta</i> , a very threatened species in the Mediterranean. The appearance of this species in this area gives a unique value and importance to the area in national context; some 400 ha of this area to be designated as Scientific Reserve (Category I).
6.	Çuka Channel-Ksamili Bay and Islands	1,000 ha	New status: Protected Landscape and Seascape Area (Category V). Part of enlarged National Park	Saranda	The area, in particular Ksamili's small islands very close to the seashore, form a unique and wonderful landscape/seascape. The islands are covered by a very typical and developed Mediterranean evergreen vegetation, while in the sea water there is a very rich flora and fauna – most notably <i>Halophyla stipulacea</i> and <i>Pinna nobilis</i> which are both protected species by conventions to which Albania is a Party. Some 400 ha out of 1,000 ha of the area should be designated as Strict Nature Reserve (Category I).

7.	Butrinti Lake and its surroundings	4,000 ha	Existing status: Archaeological National Park and Ramsar site New status: Part of enlarged National Park	Saranda and Delvina	In spite of its ecological problems, Butrinti lake is an important area for its ichthyofauna / aquaculture and avifauna. In the lake <i>Mytilus sp.</i> is cultivated – providing the area with important economical values. Bifi (Rrëza) lake in the Southeast of Butrinti adds other natural and biological values to the area. Typical Mediterranean forest of <i>Quercus ilex</i> , <i>Q. robur</i> , <i>Alnus glutinosa</i> , <i>Ulmus campestris</i> , <i>Fraxinus angustifolia</i> and others with rich fauna in insects and reptiles covers most of the ancient city of Butrinti which has been designated as a UNESCO Site. The ancient city, along with nearby castles, brings both historical and cultural values to the area and makes it very attractive for visitors and tourists. For its ecological and cultural values the Butrinti lake has been recently designated as Ramsar site.
8.	Pagane – Cape Stillo and Islands	500 ha	New status: Strict Nature Marine and Terrestrial Reserve (Category I), as part of the enlarged Butrinti National Park	Saranda	Transboundary Protected Area. One of the best preserved marine and coastal areas of the country with high scientific value for its very well developed littoral zone. Possible breeding ground for sea turtles <i>Carreterra caretta</i> . Of no less importance appears to be its terrestrial part with typical Mediterranean forest and shrubs. The appearance of the turtle <i>Testudo marginata</i> in the area is of a very high scientific value.

Environment

With a rather low density of inhabitants (currently 68.000 residents in all, in 2020 an estimated 85.000), few and very narrow roads with little traffic and an almost complete absence of industries the general state of the environment in the Southern Coastal area is rather good. There are two notable environmental problems, though, which are highly visible, if localised: Discharge of untreated sewage water from villages and towns, and solid waste problems (including littering and garbage dumping in the countryside).

Sewage water is led untreated directly to the streams from the mountains as well as to the sea. Downstream from settlements the water quality of the streams may be poor, though no specific measures are available. Directly off stream openings at the sea or off towns and villages at the sea the water quality will suffer from the eutrophication and pollution. Practically no measures are currently taken against the deteriorating water quality, and an absolute precondition for development in the Southern Coastal region is that strict measures are taken against untreated sewage water.

In many places in the region, solid waste and garbage are leaving a negative impact on the landscape. Waste management is all but absent, even if some form of waste collection has been initiated in Sarande and Himara. Waste and garbage left at random in the landscape will create a suite of environmental problems and leave a very negative impression on an otherwise scenic landscape. As with sewage treatment, setting up a full solid waste management system - together with a major awareness raising campaign against littering - will be an essential precondition for attracting visitors and investors to the Southern Coastal region.

The present level of agricultural activity is generally low and is not likely to lead to fundamental environmental effects. Earlier intensive agricultural schemes, which included large-scale drainage programmes in the Orikumi area and in the large valleys south of Sarande, have undoubtedly caused significant environmental problems in terms of eutrophication and likely also pollution with pesticides. It is not known to which extent the environment in the area still suffers from past agricultural events.

Aquaculture is an ongoing activity in Lake Butrint (mussels) and in Palermo Bay (fish). Despite being low-scale activities nowadays the environmental effects should still be studied in closer details, as aquaculture is a proven source of water eutrophication in many areas.

Water

The Southern Coastal area is rich in streams and springs. The streams between Qeparo and Vunoi are among the major streams, and the Buronja Spring in the hinterland of Qeparo and the magnificent Blue Eye Spring near Saranda belong to the most notable springs. The area is rich in groundwater resources, though the resources are unevenly distributed because of the karstic nature of the mountains.

Near or in the villages and towns the streams are heavily polluted with sewage water, which is let out directly from households, and with solid waste, in particular plastic bottles and plastic bags.

Human health and safety

The Southern Coastal region has a rather low density of inhabitants. The scattered villages are experiencing a decreasing number of residents and only the bigger towns (in particular Sarande and Himara) enjoy a growing number of residents. Human health and safety issues are mainly related to the following:

- Traffic and road safety
- Pollution and effects of untreated sewage water

In Sarande the air quality may at times be inferior because of traffic and emissions from cars - in particular emissions from diesel-driven vehicles without particle filters (very few vehicles in the area have particle filter), but it is not known to which extent the effects of this will influence human health.

The most prominent issue concerning traffic and traffic-related effects on human safety is the lack of separation of traffic forms in the villages and towns. the main coastal road - even if not heavily trafficked - leads directly through the villages and towns. Because of the very limited space for the road alignment between buildings, other structures and the hard surface of the mountain, there is little or no space left for sidewalks, parking, areas in front of shops and cafes etc. In addition, the roads see a significant amount of slow and

vulnerable vehicles, including bicycles, agricultural vehicles, carriages drawn by horses or donkeys etc.

With a poor visibility and little room for avoidance even limited traffic creates hazardous situations along the narrow roads, in particular in settlements.

Health hazards created by untreated sewage water may not be a significant problem for residents. For beach holiday tourists in the bigger towns like Sarande, Ksamil and Himara the discharge of untreated sewage water can cause problems. With growing number of visitors this problem is likely to grow until measures - sewage treatment facilities - are taken at the necessary level.

Cultural heritage

The presence of a varied cultural and traditional heritage on the coast considerably raises its attractiveness and allows to broaden and diversify the tourism potential, leaving a range of opportunities for tourism development and income-generation and job-creation opportunities. The cultural heritage consists of the archaeological (prehistoric, Illyrian, Hellenistic), Byzantine, Ottoman and vernacular buildings, with sites offering a wide range of tourism development possibilities. At the same time most of the heritage requires considerable efforts for its preservation and rehabilitation.

Traditional village architecture makes south Albanian coast extremely attractive. Villages such as Dhermi, Vunoj, Himara and Qeparo are hillside settlements and built a few kilometers up from the shore. They are surrounded by cultivated or formerly exploited land, mainly terraced olive tree plantations, vineyards and orchards. The layout of these villages is characterised by their adaptation to the contours, their density and their formal cohesion. Houses are built in stone that are mostly oblong and carefully joined with a very thin layer of mortar, and the corners are made of larger stones for locking the walls together. Roofs are four-sided pitch roofs.

In the report *Heritage Assets Mapping*⁹ the cultural and traditional assets and objects have been described in detail.

Infrastructure development plans

In the document *Infrastructure Development Plan. Services and facilities required to support the Southern Coast Development Plan* (TBU-HBA-P&P Joint Venture 2007) the necessary infrastructure facilities for supporting the SCD Plan are presented. As the document has been elaborated on the basis of the sieve mapping process (see sect. 4.2) and includes environmental considerations the notion here will be limited to a summary of the main infrastructure issues..

⁹ SIM Spa GICO Branch, iMed 2005: Heritage Assets Mapping. Albanian Integrated Coastal Zone Management and Clean-up Programme, Final Report 2005.

Approach

The approach taken for proposing supporting infrastructure for the SCD Plan is based on the following parameters: a) identification and prioritisation of key investments which can catalyse or facilitate economic growth in accordance with the environmental considerations expressed by the development strategy; b) adoption of a medium-term perspective that limits investment in capacity to that which can be utilised over the 5-year infrastructure planning timeframe while retaining flexibility for future systems expansion; and c) identification of minimum impact approaches, technologies and building techniques.

Roads: A limited upgrading of the national coastal road to a 6.5m carriageway is recommended, to achieve a safe, ‘scenic route’ with local improvements to address major bottle-necks, work on improving sight-lines and generally slightly higher design speeds, and with the addition of surfaced lay-bys to allow vehicles to pull-over at view-points.

Airports and ports: The former military airport east of Saranda should be redeveloped as a regional hub for turbo-prop aircraft. Fast, ferry-boat access to coastal town is also being proposed as an option.

Water resources are generally adequate for the projected needs and are thus not considered a constraint. Management of the water resources for achieving a 24-hour supply needs to be obtained.

Wastewater: A mix of central reticulated systems (municipal systems and developer’s package systems) and individual septic tank-based systems is recommended with the objective of maintaining sea-water quality and removing current pollution loads on waters in the planning region.

Solid waste management: Waste disposal plans have been endorsed (subject to review of EIA), but additional measures are required to establish and maintain a garbage-free environment along the Southern Coast.

Power supply: In relation to power transmission and generation, the proposed new 110 kV overhead line could cause significant landscape damage and substantially reduce the potential economic value of the landscape asset. Proposals have been made to reduce these impacts. This is also true, albeit more limited, for small-scale hydro-electric generation plans. In terms of alternative energy sources, windmills may be feasible in some locations; however, the detrimental impacts of modern, full-scale pylons and wind turbines would be significant and should also be evaluated against degradation of the landscape asset. In all these instances, full EIA are required.

Water supply

Despite adequate existing water resources, all water supply systems except in the case of Xarra do not have a 24-hour supply. This is mainly due to poor system management and usage habits. The communities often access water via illegal connections and thus illegal consumption, there is generally

poor management of the existing systems and people do not pay for the real cost of water and the costs of high losses.

Water quality is generally good and drinking water does not need treatment. Chlorination is carried out for larger systems. Quality problems only occur in exceptional cases.

Waste water

Wastewater produced by residents, tourists and small-scale industry cannot be seen as a limiting factor for tourism development. Modern sewerage collection systems and modern technology of wastewater treatment are so well advanced that practically any concentration of residents and tourists can be handled and processed without doing harm to the recipient water body (in this case coastal waters).

However, it needs to be clearly understood that tourists are highly sensitive to wastewater and associated smells and traces. Tourists want to be assured that the pollution they create is eliminated before the residual water enters the sea in which they will go swimming. Thus it is crucial that wastewater entering the sea does not threaten the quality of bathing water as well as aquatic flora and fauna.

Regulations

EU legislation requires the EU countries to comply with the 91/271/ECC Urban Wastewater Treatment Directive plus the amending directive 98/15/EC. Albania is aiming at EU accession and so any investments in the urban wastewater sector should comply with this directive.

Also, The Government of Albania (Council of Ministers) has issued the Regulation No.177 dated 31.03.2005, which follows for all practical purposes the above specified EU directive. Chapter IV, clause 6 also permits “less rigorous treatment” for less sensitive areas, coastal waters not being endangered in terms of eutrophication.

Current situation

A biological wastewater treatment of the constructed wetland type has been constructed for 30,000 PE in Saranda. The plant can be expanded to 60,000 PE if required at a later stage. Construction works will be completed in 2009. The effluent is discharged into the Ionian Sea. This is a low-cost technology plant, which has been well tested worldwide and is an appropriate solution for this particular case.

The sea water quality in the bay of Himara is already negatively affected by untreated wastewater discharge into the sea. An extension to the sewerage system is currently under discussion and this proposed sub-project is now seen as a priority if it can be linked into the network before the main road is rehabilitated and newly asphalted. At the present time the sewerage pumping station does not function and the very simple form of treatment (a

settling tank) as used in Himara, has been out of operation for some time and is apparently beyond rehabilitation. Wastewater is discharged directly into Himara bay, which is unfortunate given that the area dependant on and promoting beach tourism and has led already to nuisance for tourists and residents.

Solid waste

The solid waste management along the Southern Coast is currently very poorly organised. Uncontrolled dumping of garbage and littering of the coastal area will significantly impact on tourism development potential.

Two main types of solid waste need to be addressed, i.e. communal waste and construction waste. Each must be dealt with in a different way.

Communal waste

The sector is under organisation. A feasibility study on the solid waste management in the SC area has been carried out and has recommended that a new landfill should be constructed (at Bajkaj), together with a transfer station (at Himara) and the necessary infrastructure (trucks, waste bins etc). Construction of these facilities is planned to be completed in 2009.

Construction waste

Construction waste (building materials and spoil) is currently dumped on vacant, unsupervised land, often at the top of a steep slope; this allows heavier waste materials to roll down hill under gravity (and pollute a watercourse) and lighter materials to be wind-blown and spread over very large areas. This typical scenario creates a serious nuisance in towns as well as in the open countryside. At several locations along the coastal road, construction waste is simply dumped over the road edge, being visible from afar and spoiling the scenery. This problem is so severe along the northern approach to Saranda that the environment is degraded to an extent rarely seen anywhere else in this part of the World.

In order to stop such uncontrolled littering, the Ministry of Public Works, Transport and Telecommunication has developed a regulation. It has been approved by the relevant Ministries (Ministry of Public Works and Ministry of Environment) and must now be enforced.

Energy

Practically all electric energy is produced from hydropower plants. The positive side of this is that all produced energy is renewable; the downside of it is that energy production is directly linked to rainfall.

The section Saranda - Vlore is a ‘missing link’ for the high voltage power grid. The 35 kV line is clearly not capable to sustain future tourist development along the coast. Furthermore generation capacity needs to be increased and, in particular, generation capacity independent from river

flows is required to ensure reliable power supply year round and to sustain tourist development on the coast.

There are no significant energy resources within project area. Significant hydropower resources are located further inland. However, there is the potential for development of alternative energy resources. While some small-scale schemes have been proposed, no plans are known about any development of large generation plants in the project area.

Transport

Transport facilities need to support two main types of traffic:

- Arrival and departure of tourists to and from the coastal region; and
- Local traffic generated by people working and living in the area, including sightseeing traffic caused by tourists while in the region.

The possible modes of transport are road, air and sea transport.

The need to improve road capacity and road standard is evident. However, it is important to be clear about the objectives of road improvement. The upgrading of the road system needs to achieve the following three main objectives:

- Maintain the coastal road ‘driving experience’;
- Create sufficient transport capacity for: i) local people to travel to work; ii) tourist arrival and departure; and iii) sightseeing trips, and
- Traffic and human safety.

Special attention needs to be paid to village through-routes. Currently, those sections are very narrow and often the road is completely blocked by a single car parking fully or partly on the street. Safety issues are considerable. Optimal solutions need to be designed on a case by case basis; few general solutions can be offered.

Environmental risks and mitigation

In this section an overview is given of the main environmental consequences the Southern Coastal areas may face when the SCD Plan will be adopted and implemented. The assessment is based on an initial risk assessments compiled

in the report *Southern Coastal Development Plan - Environmental Risk Assessment* (draft, November 2007)¹⁰.

Risks and impacts can not be regarded individually and isolated as more risks and impacts can be caused by one single activity. The way they are being addressed by means of mitigation measures depend on a thorough understanding of causes and effects. One of the main objectives of an EIA - and one reason why an EIA differs significantly from an SEA - is to compile a detailed picture of the specific environmental effects and their causes, once the details of the given project or activity are known. Secondly, on the basis of this detailed picture the EIA must ensure the identification of precise and specific mitigation measures which can be carried out under the detailed design stage, during construction and under operation of the project.

Landscape, ecology and biodiversity

The natural values of the SC region can be described by means of landscape features, ecological features and by its biodiversity. As there is a significant overlap and connection in terms of the definitions of landscape, ecology and ecosystems, and biodiversity, these issues are treated in the same section.

Risk profile

With a highly varied topography, the presence of a large number of habitats and the current rather low density of inhabitants in the southern coastal areas the natural values are rich and provides for a high biodiversity.

Outside built-up areas the basic features of the landscape are well preserved and the most visible impact to the natural landscape features is the terraced mountain sides formerly covered by orchards and olive groves present during the communism period. Near the villages impacts to the landscapes are much more visible and include quarries, newer buildings and constructions established without permissions and uncontrolled garbage dumps.

Natural features within the southern coastal region are highly variable as a consequence of a varied topography, a diverse set of micro-climates and a long influence by humans through various land use activities. Natural values in the area are documented by previous studies, though information on present status and trends for biodiversity appears to be very scant. Environmental impacts such as fires and cultivations have reduced the extent of pristine vegetation significantly, but subsequent adaptations by wild plants and animals to areas which have been under cultivation have restored the biodiversity value of the area to some extent. Since the end of the communism period the land use has changed and large areas have been abandoned. These areas now appear in various environmental conditions and succession stages. Terraced areas formerly used for orchards and olive groves, now cleared of trees, appear highly visible in the landscape but do hold cultural values because of the history of these areas.

¹⁰ COWI A/S: *Southern Coastal Development Plan - Environmental Risk Assessment*. Draft, November 2007, Min. Public Works, Transport and Telecommunication.

An increase in population and a strong focus on the development of the tourism facilities in the area will have consequences for the landscape and the natural values. A development of the road infrastructure will apply new pressure on areas currently without access and urban development and development of new resorts and other tourism and recreational facilities will take up land currently left in a natural or near-natural state.

Road infrastructure development may have specific direct and indirect impacts on nature and environment due to increased/improved accessibility. Large areas in the SC region are characterised by no or very few developed areas, houses, roads/paths etc, even if many areas have been under cultivation during the communistic period. Today, many areas appear abandoned and areas formerly under cultivation are now subject to a widespread regeneration of natural features and successions. Any development of the transportation infrastructure will have profound consequences for the environment and choices and strategies will be decisive for the magnitude of these impacts. The dramatic topography of the southern coastal areas makes it extremely difficult and costly to establish new roads or widen existing roads. The current location of the main road through villages and towns along the coastal road hinders in all effects a widening and any establishments of sidewalks because of the very narrow alignments.

In order to secure a comprehensive preservation of the natural values, in particular the significant biodiversity and ecosystems present in the plan area, during an extended process of socio-economic development it is recommended to elaborate a coherent plan for the conservation of the natural values for all of the southern coastal area. There may be a need to designate new protected areas and to ensure an ecological connection between existing protected areas and other nature areas.

A management plan for the Llogara-Karaburuni complex of natural sites has recently been elaborated by MedWetCoast¹¹. This plan comprises a very useful and important step towards ensuring preservation of the natural values in the northern part of the plan area. Because of the extensive and comprehensive character of this management plan there are several elements of the plan which can readily be adopted to the remaining part of the SCD plan area. Efforts and resources should be invested in elaborating a full and integrated management plan for all of the SCD plan area, thus extended the vision for the preservation of the Llogara-Karaburun area to the remaining part of the SCD plan area. This may call for the designation of new protected areas in order to secure a network of protected areas in the southern coastal region, which can serve as the conservation backbone for biodiversity and the establishment of ecological corridors between areas and sites of high importance.

¹¹ MedWetCoast 2005: Management Plan – Complex Llogora-Rieza e Kanalilt, Dukat, Orikum, Tragjas, Radhime, Karaburun. GEF/UNDP-MoE Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region.

Key risks

The main risks to the landscape, ecology and ecosystems and to the biodiversity in the SC region can - based on the above - be compiled as follows:

- Fragmentation of landscape units, habitats and ecological systems
- Impacts to marine areas and the coastline
- Impacts to landscape scenes and views
- Erosion, fires, wear on habitats and related impacts to natural resources
- Location and management of mines, quarries, dump sites

Fragmentation of landscapes, habitats and ecosystems leads to degradation of populations of plants and animals, thus impacting the biodiversity in a given area. In the same way, physical impacts to the coastline and marine areas will also cause a deterioration of the environment for marine organisms, eventually causing a reduction of the marine biodiversity.

Fragmentation of landscape units, habitats and ecological systems

Loss and fragmentation of habitats and areas is a consequence of a range of infrastructure development activities, in particular development of new resort areas and the related infrastructure, roads and harbours and marinas. The sieve mapping procedure has excluded the most vulnerable, valuable and sensitive areas for development of any kind, but subsequent EIAs must in any case establish potential impacts leading to fragmentation and reduction in natural areas - and by means of suitable mitigation measures point to acceptable infrastructure solutions.

Even high voltage transmission lines, like the 110 kV line between Vlore and Saranda, will result in a fragmentation of the landscape, though the effect will mainly be a visual one.

The old olive plantations have turned into areas of importance for biodiversity (especially birds) and for landscape scenery. Despite of their value, small-scale development activities, such as establishing campsites within olive groves, may still be carried out without impacting the value of the groves.

Risks	Causes	Mitigation
Loss and fragmentation of habitats, incl. cultural habitats (olive groves, orchards) and coastline areas	Uncontrolled development Poor planning and location of new roads and other infrastructure Poorly planned use of natural resources	Enforcement of local development plan by all relevant local/regional authorities Preparation of general conservation measures for valuable habitats and landscapes, as outlined

	(wood/timber, soil, rock)	by the SCD Plan Cross-ministerial commitment to the SCD Plan and its aims and principles
Loss of ecosystem functions	Fragmentation of habitats and their interaction with the physical environment	Enforcement of local development plan Preparation of general conservation measures for valuable habitats and landscapes
Disturbances of species	Poor planning and location of new roads and other infrastructure Lack of environmental awareness	Enforcement of local development plan Preparation of general conservation measures for valuable habitats and landscapes, including ecological corridors between protected areas Designation of protected areas
Decreasing populations of species	Loss and fragmentation of habitats Loss of ecosystem functions	Enforcement of local development plan Preparation of general conservation measures for valuable habitats and landscapes, including ecological corridors between protected areas Designation of protected areas

Impacts to marine areas

The marine areas are among the most important assets of the SC region because of their immense recreational values. Nevertheless, the risks that the marine areas become impacted by an uncontrolled development is imminent. Pollution and disturbances to the marine ecosystems are the main risks and must be carefully controlled.

Presently the main environmental problem is caused by the discharge of untreated sewage water. The SCD Plan brings a strong focus to the sewage treatment issue and it is being expected that problems with untreated sewage will be much reduced in the future despite the SC region potentially hosting a much larger human population on a seasonal basis.

Disturbances from marine traffic of various forms must also be kept in control, as it may have an impact on the marine life as well as the recreational values of

the coastal areas. Motorized marine vessels in operation near the coast, like speedboats and jetskis, emit a lot of noise and regulations should be established on where such vessels can be used.

Risks	Causes	Mitigation
Increased pollution and eutrophication	Lack of a complete and operational sewage treatment system Run-off from coast Construction activities at or close to coastal waters	Preparation of sufficient sewage treatment system(s) prior to granting construction permit Built-in retention measures at new constructions near coastline EMPs for construction activities near coast with specific focus on protection of coastal waters
Increased ecosystem disturbances from touristic and recreational activities	Recreational activities (motorboats, jetskis) Marine transportation (commercial, private)	Designation of areas reserved for motorboats and jetskis etc Designation of specific routes for commercial traffic
Loss of habitat	Marine works (marinas, harbours, piers) Sedimentation from coastal run-off or washing out of material Changed coastal hydromorphology causing changed sedimentation patterns	Enforcement of local development plan Sufficient and approved EIA procedure Cross-ministerial commitment to the SCDP and its aims and principles Designation of marine protected areas

Impacts to landscape scenes and views

The landscape scenery of the SC region is unique and characterises the whole area more than any other assets. The dramatic topography, where the visitor can lead his views from the open sea right up to the top of the mountains inland - and at many places along the coast, is found in very few other areas. So far, a substantial part of the coastline is free from constructions and elements which disturb the scenery and the unique views. Only the widespread dumping of garbage and solid waste along the coastal road and other places in the landscape mars the otherwise beautiful landscape.

The SCD Plan has been prepared with the particular purpose of ensuring a preservation of the landscape and the views. The SCD regulations provide a number of stipulations which aim at controlling and restricting the construction of new building and other features. The SCD regulations must be specified for the purpose of the individual building and construction projects by means of EIAs.

The construction of new infrastructure facilities, such as roads (or widening of roads), power transmission lines and hotels and resort areas, will necessarily cause impacts to the scenery. The overall impacts can be reduced significantly by following the regulations issued by the SCD Plan and carrying out specific EIAs for each project.

On the other hand, a comprehensive solid waste management system established - together with a change of attitude among residents concerning how to dispose of solid waste - will have a positive effect on the impression of the landscape.

Risks	Causes	Mitigation
Scattering of buildings and structures, spreading of settlements	Uncontrolled development Lack of local development plans and their enforcement Lack of appreciation of natural and cultural landscapes (olive groves, remnants of orchard terrasses)	Enforcement of local development plans Inspection Programme for awareness raising
New buildings and structures established without attention to scenic and landscape values	Insufficient attention in design and planning stage Insufficient architectural awareness Uncontrolled development	Enforcement of local development plans Inspection Programme for awareness raising Incentives for appropriate/excellent construction
Visible power transmission lines and wind mills	Poor planning of location and alignment Lack of environmental attention during construction	Sufficient and approved EIA procedure Cross-ministerial commitment to the SCD Plan and its aims and principles
Scars from road cuttings	Poorly planned and aligned roads	Sufficient and approved EIA procedure

	Lack of appropriate road construction techniques, incl lack of post-construction mitigation	EMP formulated and observed, including requirements for immediate restoration of vegetation
Increased dumping of garbage, fill material, construction material	Insufficient solid waste management system Lack of environmental awareness	Preparation of sufficient solid waste management system prior to granting construction permit
Increased erosion	Construction on unstable slopes Lack of post-construction treatment of earthworks Lack of understanding of erosion risks before (planning) and during construction	Enforcement of local development plan EMP formulated and observed, including requirements for immediate restoration of vegetation Cross-ministerial commitment to the SCDP and its aims and principles
Wildfires	Lack of enforcement of regulations Lack of understanding /awareness of consequences	Awareness raising programmes for residents and for visitors (through tourism service providers)
Uncontrolled use and location of mines and quarries	Lack of local development plans and their enforcement	Sufficient and approved EIA procedure EMP formulated and observed Enforcement of local development plan

Erosion, fires, wear on habitats and related impacts to natural resources

Parts of the SC region are prone to soil erosion and efforts should be taken to stop the erosion processes by planting of suitable shrubs. While this problem may not be related specifically to the development of the SC region, construction activities in the region may increase the problems.

Also, wildfires in the landscape may create substantial changes to the appearance of the landscape and on a short-term basis generate problems for the biodiversity in the area.

Risks	Causes	Mitigation
Wear and tear of habitats	Unregulated traffic outside roads and	Enforcement of local development plan

	paths/trails Poorly planned use of natural resources (wood/timber, soil, rock)	
Increased erosion	Construction on unstable slopes Lack of post-construction treatment of earthworks Lack of understanding of erosion risks before (planning) and during construction	Enforcement of local development plan EMP formulated and observed, including requirements for immediate restoration of vegetation Cross-ministerial commitment to the SCDP and its aims and principles
Uncontrolled use and location of mines and quarries	Lack of local development plans and their enforcement	Sufficient and approved EIA procedure EMP formulated and observed Enforcement of local development plan

Environment and natural resources

Environment as defined here includes aspects of water, soil and air and their preservation. In addition to the issues mentioned below there will be a range of less significant environmental effects of new and controlled development activities - positive as well as negative. It will be the task of the detailed EIAs to identify and describe the nature and dimensions of these additional effects.

The main consequences for the environment (as *environment* is defined here) of the implementation of (parts of) the SCD Plan are related to the following issues:

- Sewage treatment and management of recipients
- Waste management
- Provision of energy and energy management
- Air quality in towns
- Preservation of ground water
- Preservation of springs

- Provision of safe drinking water

Sewage treatment and management of recipients have been treated under the recipients, surface water and marine areas. Similarly, waste management have been treated under the areas, where inferior solid waste management creates an impact (in the landscape, as a factor in human health risks etc).

Air quality

The air quality is not a significant environmental issue at the coast, aptrly because of the very low traffic and partly because the wind blows from the sea and removes pollutants and dust.

With a growing population and a growing traffic the total air emissions will be somewhat larger, but only locally - like in Saranda - will there be situations, where the emissions will be felt as a problem. Also, with improvements to engine technology the emissions from vehicles will decrease with time.

Locally, dust may appear as a problem, in particular in relation with gravel exploitation from quarries, and during construction of larger buildings and roads.

Risks	Causes	Mitigation
Increased gaseous pollution	Emission of pollutants from increased traffic (road, marine)	Specific demands for max. emissions for commercial vehicles (incl boats and ships) in the SC region
Increased dust pollution	Emission from construction sites Uncontrolled use and location of mines and quarries Lack of local development plans and their enforcement	EMPs for construction activities formulated and observed Sufficient and approved EIA procedure Enforcement of local development plan

Ground water and drinking water

In general, the water supply and water resources are sufficient in the region. Discharge of sewage water and dumping of solid waste into streams are the main environmental problems related to water.

Risks	Causes	Mitigation
Increased pollution and eutrophication	Lack of a full and operational sewage	Preparation of sufficient sewage treatment

	treatment system Spills from accidents and construction activities	system(s) prior to granting construction permit EMPs for construction activities and operation above groundwater reserves with specific focus on protection of soil and drains at or near groundwater reserve
Depletion of resources of clean drinking water	Insufficient planning of natural resource use	Cross-ministerial commitment to the SCDP and its aims and principles Enforcement of local development plan

Springs and surface water

See under 6.2.2.

Risks	Causes	Mitigation
Increased pollution and eutrophication	Lack of a complete and operational sewage treatment system	Preparation of sufficient sewage treatment system(s) prior to granting construction permit
Increased pollution	Construction activities and natural resource exploitation close to springs	EMPs for construction activities near springs with specific focus on protection of ground water and spring surroundings
Increased litter and garbage dumping	Insufficient solid waste management Lack of environmental awareness	Preparation of sufficient solid waste management system prior to granting construction permit

Human health, safety and welfare

The SC area is sparsely populated and approx. half the human population is found in Saranda. Human health, safety and welfare issues related to environmental conditions are relatively modest. The main problems are related to the following issues:

- Traffic management in towns and villages
- Transport systems (incl marine transportation)
- Mobility and maintenance of community coherence
- Maintenance of local socio-economy (incl agriculture, horticulture, aquaculture, forestry etc)

Health

A development of the SC area for the purpose of attracting more visitors to the area will inevitably cause more traffic, more emissions, more noise and more pressure on the natural resources. Because of the poor road infrastructure - even after a completion of the upgrading of the main, coastal road the road traffic is likely to remain very limited, except in Saranda. Health-problems related to traffic will thus be limited.

The SCD Plan puts forward a number of preconditions for a sustainable development, including the establishment of sewage treatment systems and waste management systems. As such the health problems related to the inferior management of sewage and waste are likely to decrease, as the SCD Plan envisage a strong extension of the waste and sewage management systems.

Risks	Causes	Mitigation
Increased noise levels	Increased traffic, increased urban activities, noise from bars and restaurants	EMPs for construction activities and operation formulated and observed Regulation of traffic density in urban areas (various means) Establishment of noise walls at main roads at critical points in urban areas Enforced noise regulations in urban areas
Poor air quality	Increased traffic	Regulation of traffic density in urban areas (various means) Specific demands for max. emissions for commercial vehicles (incl boats and ships) in the SC region
Poor drinking water	Depletion of resources of	EMPs for construction

quality	clean drinking water due to poor planning Increased pollution and eutrophication	activities and operation above groundwater reserves with specific focus on protection of soil and drains at or near groundwater reserves Preparation of sufficient sewage treatment system(s) prior to granting construction permit
Increased litter and garbage dumping	Insufficient solid waste management Lack of environmental awareness	Preparation of sufficient solid waste management system prior to granting construction permit

Safety and traffic management

The passage of the settlements along the coastal road is very problematic because of the very narrow streets and an almost complete lack of separation of traffic forms. Because the traffic is very limited few accidents actually occur, but with a strong focus on bringing more visitors to the area the potential risks to human safety in the smaller settlements will become for real.

Risks	Causes	Mitigation
Increased traffic accident rates	Increased traffic on roads with insufficient capacity Increased traffic speeds Lack of separation of traffic forms	Regulation of traffic density at critical points (various means) Speed-regulating measures in urban and rural areas (various means) Establishment of sidewalks in urban areas Establishment of paths for pedestrians and bicyclists in rural areas Establishing kerbs along all main and major roads Establishing safe road crossings in urban areas

Community coherence and welfare

A focus on the development of new resorts and other facilities for serving a expected strong growth in tourists and visitors implies the risk that the existing communities and settlements may be neglected in terms of communal services and community coherence. While a general socio-economic development in the SC area is likely to contribute to an improved welfare the risk persists that the economic growth will attain a skewed distribution. The SCD Plan has been formulated with a consideration for the existing communities and their opportunities for gaining part of the growth, but as a substantial part of the residents in the SC area will not be getting an active and direct role in the socio-economic development, there remains a responsibility for the public to make provisions for this part of the communities.

Risks	Causes	Mitigation
Lack of mobility and transportation	Loss of access to fields, beaches, utilities Insufficient public transportation	Maintaining local tracks and paths in rural and urban areas Ensuring access to beaches at regular intervals during privatisation Preparation of public transport system for local people and for visitors/tourists
Deteriorating life quality	New developments impacting traditional life style and causing increased basic living costs Degrading community coherence Limited public space Lack of health treatment, emergency services	Formulating specific social support programmes for elder and poor people Ensuring physical community coherence (traffic systems, paths, tracks, communication means etc)

Cultural heritage

The SC area is rich in cultural and historical monuments and objects, currently in highly varying conditions and protection status. The World Heritage Site at Butrint represents one extreme in terms of protective status, available resources for maintenance and communication, whereas a substantial number of ruins of churches, castles and other objects are found in the SC area currently with insufficient maintenance or resources for restoration and dissemination.

The cultural heritage in the SC area constitutes one of the main resources for the touristic development of the region and the sustained efforts for its preservation dissemination should therefore be given a high priority.

In the report *Heritage Assets Mapping*¹² is found a comprehensive documentation of the cultural and historical elements in the SC area, their status and needs in terms of preservation. The main challenges concerning the cultural heritage in the region are the following:

- Preservation of cultural heritage objects and their surroundings
- Registration, documentation and restoration
- Awareness raising

Cultural heritage

While the monuments and objects represent an integral part of the Albanian history and culture the resources currently allocated for their preservation are highly insufficient. The present situation creates a range of risks for the heritage in the coastal region, and a number of mitigation measures must be initiated as a part of the SCD Plan in order to ensure that the economic development of the SC area can take the cultural heritage into account.

Risks	Causes	Mitigation
Degradation caused by lack of maintenance	Lack of funds for maintenance, reconstruction and presentation/promotion Lack of knowledge, building codes, awareness, understanding of heritage	International fundraising for preservation and promotion of main cultural heritage objects in the SC region Awareness programmes for tourism service providers
Inappropriate restoration	Lacks of funds for proper restoration Lack of knowledge, building codes, awareness, understanding of heritage	International fundraising for preservation and promotion of main cultural heritage objects in the SC region Education and exchange programmes for museum staff
Heritage encircled and shadowed by development	Lack of planning and protection of heritage surroundings	Enforcement of local development plan Local awareness raising projects

¹² SIM spa GICO Branch, iMed, 2005: Heritage Assets Mapping. Albanian Integrated Coastal Zone Management and Clean-up Programme, Final Report.

Lack of public visibility, understanding and awareness	Insufficient registration and documentation by museums	Public awareness raising programmes Information services Increased support to museums and capacity building of staff
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Cross-cutting environmental issues

The efficiency with which the SCD Plan will govern development by setting the scene for the further planning processes at regional and local levels depends heavily on the acceptance of the plan among citizens in the southern coastal region and the among the politicians, who will have a part of the responsibility for setting the plan in motion and support it over time.

Based on the preliminary assessments conducted as a part of the SEA process a number of potential limitations in the institutional capacity to govern and manage the SCD Plan have been noticed. It is acknowledged that various efforts have been initiated - or are underway - to strengthen the capacity of the responsible institutions at central, regional and local administrative levels. Despite these initiatives focus should remain on a number of issues critical to the long-term preservation of the environment:

- Environmental awareness raising
- Institutional capacity building
- Monitoring, enforcement and inspection
- Sectoral co-ordination at central and local levels
- Land ownership issues

Environmental awareness

Most people and stakeholders with an interest in the SC area are likely to appreciate the natural and cultural assets of this region. Yet, the optimal policy for making the best use of these assets in a socio-economic development may not be apparent to the majority of the stakeholders and the communities in the SC region.

A widespread understanding and acceptance of the purpose and goal of the SCD Plan is fundamental to its success: A long-term and controlled planning and development process can incorporate the necessary consideration for the environment - including the required investments. An uncontrolled exploitation of immediate business opportunities may result in economic profit on a short-term basis, but is likely to rapidly deplete business and development opportunities - with significant impacts to the environment as a consequence.

The important relationship between a careful and sustained planning process and the preservation of the environment is the key link to establishing a wide awareness raising process, which targets a range of stakeholders.

Risks	Causes	Mitigation
Lack of information and understanding of the SCD Plan and its role in describing a sustainable socio-economic development of the SC	Lack of environmental awareness	<p>Targeted awareness raising programmes in the SC region, following the introduction of the SCD Plan</p> <p>Preparation of local development plans/physical plans for specific areas, following the introduction of the SCD Plan</p> <p>Formulation of awareness raising programmes for tourism industry, incl. eco-labelling and green key concepts</p>

Institutional development and capacity building

The SCD Plan is ambitious in its efforts to prescribe a wide-ranging socio-economic development which will built on - and indeed secure preservation of - the environmental and cultural assets of the region. The planning process is intricate and requires the understanding and active involvement of a number of public authorities for the detailed planning processes and subsequent execution of (parts of) the plan, as well as assessment, inspection and monitoring of the consequences for the environment of the individual projects initiated under the umbrella of the SCD Plan.

For ensuring a sufficient official support and capacity for implementing the SCD Plan a range of capacity building activities may be necessary.

Risks	Causes	Mitigation
Insufficient abilities to undertake public responsibilities in the implementation of the SCD Plan Lack of public	Lack of capacity, skill and involvement of local authorities Low institutional capacity in implementing policies	<p>Short term: Gap analyses of capacity and resources</p> <p>Long-term capacity building programmes</p>

commitment to SCD Plan		
Decision-making inappropriate for the scope and reach of the SCD Plan	Lack of knowledge of best practises in sustainable use of natural resources	Gap analyses of capacity in the short term Long-term capacity building programmes Compilation of best practises from abroad
Public distrust and lack of commitment	Unsolved land ownership issues and property rights	Ministerial level decision-making available

Monitoring, inspection and enforcement

Monitoring, inspection and enforcement are key issues in the process of ensuring environmental safeguarding during the construction stages of a given project and during its operation. For projects subject to an EIA the monitoring of possible effects on the environment during construction will be formulated and detailed in an Environmental Management Plan. For other projects the general environmental protection regulations should be followed carefully, as during the operation of projects and infrastructural entities, which may have an effect on the environment.

In order to ensure a public commitment to the environmental consideration integrated in the SCD Plan the appropriate behaviour of the authorities are essential. Any lack of adequate performance is likely to result in a distrust in the plan as well as in the authorities, with the subsequent risk that the general public will neglect the environmental concern in its manners.

Risks	Causes	Mitigation
Decreasing support to SCD Plan and its role in governing development and regional/local planning	Lack of inspection and monitoring mechanisms	Long-term programmes for building up capacity and skills in local at regional environmental inspection units
	Lack of legal enforcement	Review legal framework and ordinances (gap analysis) and revise framework Long-term programmes for building up capacity and skills in local at regional environmental inspection units

Sectoral coordination and co-operation

The effective implementation of the SCD Plan requires a substantial input and support from several ministeries and sectors. Without a strong and sustained sectoral coordination the execution of the plan is likely to be compromised and there is an imminent risk that negative environmental effects will be seen as a consequence of an under-performance of the execution of the SCD Plan.

Risks	Causes	Mitigation
Insufficient governmental (central and regional level) strength to implement and support SCD Plan	Lack of capacity, skill and involvement of local authorities Lack of intersectoral coordination at the ministerial level	Gap analyses of capacity in the short term Long-term capacity building programmes Support to IMWG or other appropriate body for implementing the SCDP

Transboundary effects

The Espoo Convention, to which Albania is a party, states that activities which may have transboundary environmental effects, shall be informed to the neighbouring country, where the environmental effects may be felt. The SCD Plan foresees activities and projects, which are included on the Annex I of the Espoo Convention and which must be notified to the neighbouring country - in this case Greece, should there be a 'significant adverse transboundary impact'. The foreseen activities listed on Annex I are limited to the following:

- Upgrading of the airport at Saranda - provided it will have a runway of at least 2100m.

The distance from the planned airport at Saranda to the Greek border is more than 20 km and consequently no transboundary impacts are expected.

Other activities and environmental effects generated because of the implementation of the SCD Plan are not covered by the Espoo Convention.

Environmental assessment of the SCD Plan - conclusion

Positive environmental effects

The implementation of the SCD Plan is likely to have a range of positive effects on the environment and human health and safety. As mentioned elsewhere the approach to the SCD Plan has been based on a set of objectives,

which has brought a strong focus on the long-term preservation of the environment. As such, the planning process has included - and is recommended to include - the following steps:

1. Environmental risk assessment (*finalised*)
2. Sieve mapping process (*finalised*)
3. Formulation of development regulations (*finalised*)
4. Strategic Environmental Assessment (*finalised, this report*)
5. Local development plans (*to be carried out on municipality level*)
6. Environmental Impact Assessment (*to be carried out for individual projects*)
7. Environmental Management Plan (*to be formulated and observed for individual projects*)

The initial sieve mapping exercise (see sect. 4.2) has ensured a thorough attention to environmental matters from the beginning of the planning process by setting the baseline for future development activities. The SCD regulations¹³ have been formulated on the basis of the sieve mapping and are thus carrying forward a comprehensive set of environmental considerations.

The positive environmental effects of the SCD Plan can be summarized as found in the table below. As discussed below (sect. 7.2) the expected positive effects depends on a full compliance with the guidelines and regulations issued as a part of the SCD planning process.

Issue	Positive effects by SCD planning policy
Landscape, ecology and biodiversity	Landscape coherence; landscape views and scenery; preservation of biodiversity; preservation of important marine areas for recreation and for biodiversity; soil erosion reduced
Natural resources	Wise use of natural resources; environmentally acceptable location of resource areas and their exploitation

¹³ TBU-HBA-P&P Joint Venture 2007. Regulations. Regulations to guide the preparation of local development plans and establish the principles of development control procedures for the Southern Coastal Zone of Albania. Albania IZCMCP.

Sewage treatment	Sewage treatment covering basically all SC area
Solid waste management	Solid waste management covering basically all SC area
Surface and ground water	Protection of water resources, as resources, as recipients and as ecological entities
Human health and safety	Reduced pollution loads (sewage, solid waste); improved traffic safety on the coastal road and in towns and villages; strengthened socio-economic abilities
Cultural heritage	Preservation of cultural and traditional heritage; increased awareness
Institutional capacity	Long-term strengthening of planning capacities and decision-making capacities
Environmental awareness	Increased environmental awareness in the public
Land ownership	Ownership issues solved

Risks

Despite the efforts taken for ensuring a thorough attention to environmental issues in the planning process and in the guidelines for the SC development there remains a significant risk that the intentions to safeguard the environment may fail in some places and in some projects. The SCD Plan is the first step towards an execution of a long array of specific, detailed projects over time. With every individual project the necessary attention must be paid to the environment in order to preserve the strategy and policy outlined in the SCD Plan and ensure a sustainable economic development.

The environmental risks as described in the previous chapter (chapt. 6, Environmental risks and mitigation) represent the main threats to the environment - and human health and safety, as assessed from an early planning stage. For the purpose of sustaining the attention to the environment it will be necessary to ensure that the approach and the planning policy will be maintained to subsequent planning levels - and that the approach to environmental safeguarding will remain cautious.

Two mechanisms will be particularly important for the subsequent planning stages:

- Establishing a thorough EIA process for all major activities and projects, and
- Formulating and observing an Environmental Management and Monitoring Plan for all major activities and projects, prescribing the necessary precautions to take for obtaining an environmentally acceptable development.

It is recommended to approach the EIA procedures with a conservative view to the extent and level of environmental assessment to be carried out for each of the activities and projects. The Albanian EIA law includes a list (Annex I) of projects which must be subject to an EIA procedure. However, with the given cautious approach to the environmental sustainability of the SC development it is recommended to carry out environmental assessments on projects and activities whenever the particular development entails environmental risks - being on the Annex I on the EIA law or not.

Mitigation measures

As a part of the strategic assessment of environment effects of the SCD Plan a range of mitigation measures have been identified for reducing negative effects of specific development activities in the southern coastal area. In this chapter these measures and their effects are being described in more detail.

The development of the SCD Plan has included an extensive sieve mapping process in which environment concerns have been integrated at a number of levels. In this way a substantial consideration for the environment has been included as a precondition for the socio-economic development of the southern coastal area as one of the paths leading to a sustainable development.

The sieve mapping process thus represents the first level of environmental considerations taken for ensuring a safe and sustainable model for socio-economic growth in the southern coastal area. The second level is made up by the present SEA, which constitutes a specific assessment of the risks and effects anticipated by the execution of the SCD Plan - and thus the mitigation measures proposed for minimizing negative effects. A third level will be introduced by the Environmental Impact Assessments (EIA) to be carried out in accordance with the Albanian EIA law for projects and activities of a certain character (defined in the EIA law). Again, the individual EIAs will identify specific mitigation measures, which - if implemented and observed - will serve to reduce possible negative impacts on the environment.

In the table below is presented the mitigation measures identified at the second level, the level of the SEA. The mitigation measures have been presented without ranking.

The measures should be deployed as general guidelines for the elaboration of specific measures for the individual EIAs to be carried out for projects and activities.

Mitigation measure	Description
Elaboration and enforcement of local development plans	A local planning process is essential for guiding and governing the implementation of the SCD Plan. Local plans must be elaborated in accordance with the regulations in the SCD Plan and an environmental screening must be done for all projects and activities which may have an impact on the environment. The EIA law includes lists of activities which must be subject to an EIA
Inspection and monitoring of development activities and their effects	According to the EIA law it is required to monitor construction activities and their possible effect on the environment. Details of this should be formulated in the Env. Management Plan issued for all activities subject to an EIA. Inspection schemes should be set up for activities and projects where environmental impacts are foreseen also in the longer term (e.g. sewage treatments systems; exploitation of natural resources). For ongoing assessments of the state of the environment monitoring programmes should be established, covering natural assets, landscape and natural resources (incl surface water and groundwater), marine areas. A parallel monitoring programme should be formulated for cultural and historical assets, given the significant importance of the cultural objects and monuments in the southern coastal region
Capacity building of regional planners and environmental authorities	With the new law on territorial planning and the SCD Plan the requirements to regional and local planning abilities and capacities will grow significantly. New responsibilities for planning and execution and supervision of plans and EIAs will require a significantly strengthened regional and local capacity. The overall objective of the SCD Plan to support rather than impact the environment require a substantial capacity

	and knowledge within the environmental sector
Planning and implementation of sewage treatment systems	New and contemporary sewage treatment systems (see Planning Document 5, <i>Infrastructure Development Plan. Services and facilities to support the SCD Plan</i>) are a precondition for enabling a sustainable and environmentally positive development in the coastal area. The positive effects of new sewage treatment systems will be significant, as untreated sewage water now constitutes one of the most serious environmental problems in the southern coastal area
Planning and implementation of solid waste management systems	New and contemporary solid waste management systems (see Planning Document 5, <i>Infrastructure Development Plan. Services and facilities to support the SCD Plan</i>) are a precondition for enabling a sustainable and environmentally positive development in the coastal area. The positive effects of comprehensive solid waste management systems will be significant, as the uncontrolled spreading of solid waste around towns, villages and in the landscape constitutes one of the most serious environmental problems in the southern coastal area
EIA for individual projects and activities	The Albanian EIA law lists the types of projects and activities which must be subject to EIA processes. Given the overall objective of the SCD Plan to ensure a socio-economic development with a consideration for the environment it is strongly recommended to conduct the EIA screening process with a conservative perspective and initiate environmental assessments
Environmental Management Plans for all major construction projects	EMPs constitute strong tools for managing possible environmental risks during construction and operation of projects and activities likely to have negative environmental effects. EMPs should be formulated and executed for all larger construction projects and regular environmental inspection of the execution of the EMPs should be conducted

Incentive schemes for traditional and excellent building projects	The traditional building styles is one of the strong cultural assets of the southern coastal region. Incentives schemes should be set up with the objective of supporting new bulding and renovation schemes which visually connects to the traditional building architecture (see also: <i>Village Development Guidelines for the SCR</i> . HBA Oct. 2007)
Ministerial support and inter-ministerial coordination to SCD Plan	The execution of the SCD Plan involves a number of line ministries and their support and mutual coordination of activities and priorities relative to the SCD Plan will be essential for its implementation and eventual success. The organisation of the inter-ministerial coordination may adopt several forms and levels, but the key issue is to allocate sufficient strength and executive power to the coordination of the plan
Traffic safety measures in towns and villages	Safety measures include sidewalks, clearly marked pedestrian crossings with lights, traffic lights, speed bumps, demarcated parking areas, separation of traffic forms. Specific traffic safety measures must be identified for each town and villages and installed on a continuous basis
Road safety measures	Safety measures include crash barriers, good and even road surface, warning signs, levelling out of narrow curves and steep road sections, white stripes at road edge, designated sections for overtaking, etc. Specific road safety measures must be identified for each road section and installed during new road improvement projects and on an continuous basis
Regulation of marine traffic and leisure boat activities	Specific routes for commercial marine traffic and demarcated areas for leisure boats, speedboats and jetskis must be designated in order to minimise conflicts between recreational activities and marine commercial and leisure traffic
Public access and mobility	In order to sustain public welfare in the resident communities maintenance of public access to fields, beaches and other places with traditional right of access should be ensured. Specific EIAs for new development projects and infrastructure projects must ensure that mobility and access is

	sustained
Education and awareness raising	The overall attention to the environment provided by the SCD Plan will require an altogether new and common understanding among the resident communities of the importance of environmental and cultural preservation. Only with a wide, public support will it be possible to change attitudes towards discharge of sewage and waste and to accept and observe systems and regulations which serve to safeguard the environment. Preservation of and support to the cultural and traditional heritage in the southern coastal area will likewise require widespread awareness raising programmes
Land ownership issues	Solving land ownership issues is regarded as an important precondition for a wide acceptance of the SCD Plan and for the environmental considerations expressed by the plan. Ownership issues must be clarified before environmental concerns will be converted to practical environmental protection measures

Monitoring and indicators

The ability to follow and assess the progression of the SCD Plan and the possible effects it may have on the environment depends on the availability of precise indicators - and the instruments to monitor these indicators. At the strategic level (i.e. for the SEA) the indicators will in most cases have the character of proxy pointers to the direction the environmental considerations are taking. In the table below a set of indicators are proposed for each of the mitigation measures proposed as a part of the SEA.

For the subsequent environmental assessment level, the individual EIAs, a specific set of indicators must be established for each EIA, and the mechanisms for their monitoring must be specified as well.

Mitigation measure	Indicator	Monitoring
Elaboration and enforcement of local development plans	No. of local development plans approved No. of people	Statistics

	participating in public meetings as a part of the local planning process	
Inspection and monitoring of development activities and their effects	No. of reports on environmental problems filed at regional env. authorities	Env. reports filed at the REA
Capacity building of regional planners and environmental authorities	No. of trained regional planning and environmental staff capable of governing the implementation of the SCD Plan	REA reports and statistics
Planning and implementation of sewage treatment systems	Sewage treatment systems in place in all new built-up areas Sewage treatment installed at existing built-up areas	Env. reports filed at the REA
Planning and implementation of solid waste management systems	Solid waste management systems in place in all of the municipalities No. of waste collecting trucks arriving at controlled landfill areas per month	Env. reports filed at the REA
EIAs for individual projects and activities	No. of EIAs approved by regional environmental authorities	Env. reports filed at the REA
Environmental Management Plans for all major construction projects	No. of EMPs approved by regional environmental authorities No. of EMPs successfully	Env. reports filed at the REA

	conducted and reported to regional env. authorities	
Incentive schemes for traditional and excellent building projects	No. of approved projects No. of media notices on outstanding building projects	Programme statistics
Ministerial support to and inter-ministerial coordination of SCD Plan	Minutes of meetings from inter-ministerial committee coordination meetings Line ministry resources allocated to specific programmes and projects in the SC area	Interministerial Working Group/Committee
Traffic safety measures in towns and villages	Rate of accident frequencies No. of sidewalks, pedestrian crossings and other safety-enhancing measures installed	Health care statistics Statistics and reports from the General Road Directorate
Road safety measures	Rate of accident frequencies Total length of crash barriers, improved road sections and other safety-enhancing measures installed	Health care statistics Statistics and reports from the General Road Directorate
Regulation of marine traffic and leisure boat activities	Marine traffic routes marked on charts Local development plans with demarcated areas for	

	leisure boat activities	
Public access and mobility	No. of public access roads to beaches Frequency of use of public transportation systems	
Education and awareness raising	No. of people taking part in organised environmental events No. of media notices of environmental events No. of curricula elaborated and introduced in schools	
Land ownership issues	No. of cases filed for the documentation of private ownership	Statistics at the Ministry of Interior

Missing information

The SEA is based on a compilation of available material, of which a substantial has been prepared and developed by the PAP/RAC-SOGREAH Consortium under a previous IZCMP contract. In addition, two visits to the southern coastal area have been carried out, but no field work or other means of collecting new data and information has been carried out.

A thorough compilation of existing infrastructural elements in the Southern Coastal area has been elaborated¹⁴ and made available for the SEA. Projections of future infrastructural needs for supporting a sustainable tourism development are given on the basis of existing information, consultations and limited site visits.

For the purpose of the SEA the following observations concerning the available information can be given:

- Surveys of biodiversity (occurrence, distribution, trends etc) are virtually non-existing.

¹⁴ TBU-HBA-P&P Joint Venture 2007: Infrastructure Development Plan. Services and facilities required to support the Southern Coast Development Plan. Draft November 2007.

- Landscape analyses are almost non-existing, except for overall and map-based descriptions of slopes, aspects etc.
- Distribution and description of vegetation types and habitats are in all effect non-existing. Preliminary analysis of main habitat types done by means of satellite images (Ikonos, 1 m resolution) has been carried out by the PAP/RAC-SOGREAH Consortium, but despite the importance of this work a thorough qualitative classification and delineation of habitat types can only be done with a substantial input from field surveys - after an initial analysis of e.g. satellite images.
- Surveys of cultural values appear to be very thorough and detailed.
- Data on environmental issues (effects of sewage discharge etc) at specific sites not available.

