

## **NCAP review for Turkmenistan**

The main objective of the NCAP is the sustainable development of the Turkmen sector of the Caspian region. The results of the NCAP are reflection of the general policy of the country's development and are the addition to the previously planned activities adapted to the present situation. The working group, consisted of experts of five thematic expert groups including pollution control, coastal zone planning, fisheries and commercial bioresources, social economic issues and biodiversity conservation, was created to identify problems and to propose activities.

### ***National importance of the Caspian***

Turkmen coastal area of the Caspian consists of arid and semi-arid territories with only one, Atrek River, flowing into the Caspian Sea in the south. In the north, Turkmenistan has on its territory the unique and the largest bay, Garabogazgol, having the area of 18000 square km and being the important source of chemicals for the industry. In its center of the Turkmen coastal area the unique wetlands, recognized by Ramsar Wetland convention as of the international importance, are covering the Turkmenbashi bay and northern parts of the Khazar/Cheleken peninsula.

Occupying about 1200 km of the coastal area, Turkmenistan has the main oil producing territories on and around the Caspian Sea area. The Balkan velayat, covering the Caspian coast, is the main oil producer of the country (95% of total country's production). It produces also 15% of country's gas and provides almost all chemical industry's output. The transportation is the steadily growing industry providing the turnover of more than 4 millions tons of cargo (2001), two thirds of which is oil and oil products, through the port Turkmenbashi, oil terminals in Ufra, Aladja and Okarem. Caspian Sea provides the 85% of country's fish catch, and the Caspian coast is the only place of the country's sea fish processing industry. In total, the Balkan region provides around 18% of the total industrial output of Turkmenistan.

The industrial orientation of the development of the Turkmen sector of the Caspian Sea, together with the natural conditions, justifies the high share (78%) of urban population that is concentrated in Turkmenbashi and other coastal industrial towns. Due to steady growth of oil and gas industry, the growth rate of the local population, natural and due to migration, is higher than in other parts of the country.

Biodiversity of the Turkmen southeast Caspian Sea includes 1/3 of the all Caspian biodiversity, consisting of 869 species. Such groups as Birds, Benthos and Plankton are the richest in species and Bacterioplankton and Fish are moderately represented with species. Reptiles are represented only with 2 species. Water mammals are represented with one species of Pinnipedia – Caspian Seal, an endemic of the Caspian. At present, 83 species of fish have been registered in the southeast Caspian and its wetlands. The ornithofauna of Turkmen coasts distinguished by its greatest diversity. 27 species of birds, out of 297 species that are relevant to 23 orders, are included in the Red Book of Turkmenistan. Nine out of 79 species of mammals inhabiting the Caspian region are included in the Red Book.

### *Identified problems*

The collection of the data, problem tree analysis and prioritization of problems were used by thematic expert groups to identify the following problems, particular for the Turkmen Caspian coast.

1. The **continued soil degradation** in the form of desertification, deflation, erosion and soil salinization are caused by sea level fluctuations as well as human activities around towns and oil exploration fields and estimated in the territory of 14000 square kilometers along the 100 km coastal area of Turkmenistan. Despite the natural factors as a change in the sea level, the lack of coastal and planning mechanisms, leading to weak management and irrational placement (construction) of new objects on the coast, were identified as root causes of the coastal soil degradation
2. Even though the level of the municipal and industrial pollution is comparable with the one from 1991, these sources of **pollution** and soil degradation are still the threat to coastal habitats. The largest industrial polluters are the Turkmenbashi Oil Refinery, which discharges its industrial wastes into the Saymonov bay, followed by the Khazar (former Cheleken) Chemical Plant, where, due to the Caspian level rise, two plots of sludge storage filled with used activated carbon of the Hazar chemical plant turned to be in direct closeness to the Sea. Municipal wastes are mostly coming to the sea from Turkmenbashi town, which system, in emergency, is discharging wastes into the Turkmenbashi bay, and Cheleken town which has obsolete equipment and has difficulties in pumping wastes to the inland evaporation fields. The increasing threat is presented in offshore oil exploration and in the increase of transportation of oil products through coastal port Turkmenbashi and terminals in Ufra, Okarem and Aladja. Among root cause of all these problems, the lack of investments, insufficient monitoring capacities of the Caspecocontrol organization due to the obsolete equipment and lack of training as well as the low oil spill response capacity of Turkmen Maritime Lines, which is responsible for offshore oil spill response in all Turkmen sector of the Caspian Sea.
3. The **threat to the biodiversity** comes from the degradation and loss of the habitat, namely in Atrek river basin, Saimonov bay and in industrial oil exploration sites with accumulated associated water ponds. The shortage of the waters, due to undecided partner relations with Iran on shared use of the river's balance, leads to low of inflow along the Atrek river damaging the hydro-geological balance of the only spawning grounds in the Turkmen coast and diminishing the important Atrek river wetlands. The Saymonov bay, together with associated water ponds along oil exploration sites, are serving as an escape ground for coastal birds during stormy weather, leading to poisoning and perishing of thousands of birds annually. The second threat to the biodiversity, both coastal and marine, comes from the disturbance caused by human activities in the habitat areas. The poaching of sturgeon, excessive hunting on migrating and wintering birds and excessive water and coastal motor traffic are caused by the low protection capacity of the Khazar State reserve, lack of the alternative employment and increased unregulated tourist and economic activities in the coastal area.

4. The decrease of the level of commercial fishing and increase of uncontrollable private fishing activities, including poaching on protected species (sturgeon), are main problems, identified by the experts on **fisheries and commercial bioresources**. The Balkanbalyk association, the industrial fishing enterprise and main leasing of commercial fishing boats in the Turkmen sector of the Caspian, has decreased the level of its production mainly due to reduction of the operating fleet, currently consisting of vessels procured during 70-80s of the past century. At the same time, the absence of updated legal framework, including national rules of fishing on the Caspian Sea, and the obsolete equipment of the State Fish Protection Inspection of Turkmenistan, the enforcement agency on fishing resources, are among main root causes of the increase of poaching and uncontrollable use of the fishing resources.
5. **Social-economic situation** in the region primarily depends on the development of oil and gas industry, making industrial towns and settlements economically depending on economic situation in one or two enterprises. This leads to the low diversification of the economic structure of the region, leaving underdeveloped light and food industries and resulting in the lack of the employment options. Another issue, diminishing the social economic development of the Turkmen coastal zone, is the lack of water supply (both fresh and irrigation), leading to the underdeveloped agriculture within the widely available land resources.  
The working group has elaborated

### **Strategy and measures**

The limited resources, the urgency of required response measures on one issues compared to another, different impacts of different issues and problems called for the development of criteria to prioritise root causes and to rank actions to tackle them. The set of criteria was elaborated by experts, including impacts on health, on biodiversity, on economy, to define the priority problems. Actions were ranked against the state's interest, feasibility (availability of resources to implement), impact on recreational value of the coastal area, environment and economic benefits and the priority of solving problem. At the joined meeting the criteria were applied to the existing problems and actions. Finally, the actions were divided into the institutional, legal and investment in order to ease the funding identification process. Following priorities in the Turkmen part of the Caspian Sea were identified by each thematic section.

In the coastal planning the main priority action was to renew the agreement between the IRI and Turkmenistan on the use of Atrek river waters, followed by the institutional and legal strengthening of the scientific capacity to study the Caspian issues, such as sea level fluctuation, coastal land erosion and other.

The pollution control is lead by measures to modernize the treatment facilities of the Turkmenbashi Oil Refinery, as well as to strengthen the oil spill response capacity of the Turkmen Maritime Lines, to solve the issue of radioactive waste of the Khazar Chemical Plant and to provide the new technologies during drilling operations.

Strengthening the national normative and legal bases to combat poaching together with the strengthening institutional capacity of the Khazar Reserve are considered as a priority actions in biodiversity protection field. They are followed by measures to rehabilitate Adjiyab spawning grounds in Atrek rives and legal measures to control bio resources of the Caspian among others.

In fisheries thematic group, the priority actions received the measures to elaborate

and introduce the methodology of total allowable catch among litoral states and to construct the hatchery on the Turkmen Caspian coast. Other measures included the strengthening the capacity of the enforcement organization (Fishery control), the renovation of the fishing fleet and the increase of the awareness in the coastal communities.

Finally, the modernization of water provision systems of towns and settlements in the Caspian coast was defined as a priority action for the social-economic section, as well as the construction of water treatment plants in major towns of the coast and modernization of the equipment on drinking water wells. Institutional and legal measures includes the elaboration of agricultural and small business development programs for the coastal area.

#### **Budget and implementation arrangements**

In total 75 activities were proposed by the NCAP in amount of 2.226 billion manats (428 million US dollars), including short-term and long-term actions. The NCAP proposed the comprehensive resource mobilization strategy, including inclusion of “polluter pays” principle into government programs, more active use of grants and technical assistance resources, the involvement of local markets and communities in implementation measures and other. More than 90% of the activities will be financed from the country’s own resources, leaving 5% for grants and TA, 2% for loans and 2 unundetified resources. Financing of 16% of the activities were already secured at the time of the completion of the NCAP.

To strengthen its implementation capacity the NCAP proposed the thorough analyses of the the possible risks and measures to overcome them. Activities are divided into short-term (up to 5 years) and long-term (10 years). The NCAP proposes the implementation strategy which includes 5 and 10 year review of activities by the working group comprised from experts and decision makers from relevant organizations.