

**UNITED NATIONS DEVELOPMENT PROGRAMME**  
Regional Project with participation from the governments of:  
*Azerbaijan, I.R. Iran, Kazakhstan, Russia, Turkmenistan*

**Project Number:**

**Project Title:**

Towards a Convention and Action Programme  
For the Protection of the Caspian Sea Environment

**Project Short Title:**

CEP-SAP

**Executing Agent:**

UNOPS (8%)

**GEF Implementing Agencies:**

UNDP

**Project Site:**

Tehran, I. R. Iran

**Beneficiary Countries:**

Azerbaijan, Iran, Kazakhstan, Russia, Turkmenistan

**Estimated Start Date:**

January 2004

**Estimated End Date:**

January 2007

**LPAC Approval Date:**

**HQ PAC Approval Date:**

**Program Officer:**

Nick Remple

**GEF OPERATIONAL PROGRAM:**

OP 8 -

**GEF STRATEGIC PRIORITY:**

**Strategic Priority IW-1:** Catalyze financial resource mobilization for implementation of reforms and stress reduction measures agreed through TDA-SAP or equivalent processes for particular transboundary systems

**Summary of UNDP and Cost-Sharing**

<b>UNDP:</b>	<u>Current</u>	<u>Previous</u>	<u>Change</u>
TRAC (1&2)			
TRAC (3)			
Other (GEF)	\$6,026,400		
Regional Program			
<b>Cost Sharing:</b>			
Government			
Financial Inst.			
Third Party			
<b>AOS:</b>			
GEF			
SOF 03 (TRAC)			
SOF 07			
PPR			
Regional Program			
<b>Sub Total</b>	<b>\$ 6,026,400</b>		
<b>Parallel Financing:</b>			
- Littoral countries	\$21,142,000		
- EU/Tacis/BTC	\$4,460,000		
- EBRD	\$200,000		
<b>GRAND TOTAL</b>	<b>\$31,828,400</b>		

**Classification Information:**

ACC sector & sub-sector

DCAS sector & sub-sector

Primary areas of focus/sub-focus

Secondary areas of focus/sub-focus

Primary type of intervention:

Secondary type of intervention:

Primary target beneficiaries:

Secondary target beneficiaries:

**Brief Description:**

The current project proposed is a key element in support of the CEP in the preliminary implementation of the Strategic Action Programme and continuance of the Convention process. Implementation of this project is to be undertaken by UNDP with execution by UNOPS. The objectives of this project are to:

- Commence implementation of the SAP in three priority areas: Biodiversity, Invasive Species and Persistent Toxic Substances.

- Continue with specific capacity building measures to ensure a regionally owed CEP coordination mechanism capable of full implementation of the SAP and regional coordination of the NCAPs and consolidate/update the TDA, SAP and NCAP's following a series of information gap-filling measures.
- Strengthen the environmental legal and policy frameworks operating at the regional and the national levels and where necessary improve implementation and compliance of those frameworks.
- Achieve tangible environmental improvements in SAP priority areas by implementation of small-scale investments supported by a small matched grants programme

The project office will be based in the CEP PCU located in Tehran, I.R. Iran and will be executed in close coordination with an EU-Tacis CEP support project targeting fisheries and sustainable coastal development. UNEP's Regional Office for Europe will take responsibility for guiding the Convention process under a Memorandum of Understanding to be signed with UNOPS.

<b>On Behalf of Governments of:</b>	<b>Signature</b>	<b>Date</b>	<b>Name/Title</b>
<b>Azerbaijan</b>	_____	_____	_____
<b>Islamic Republic of Iran</b>	_____	_____	_____
<b>Kazakhstan</b>	_____	_____	_____
<b>Russia</b>	_____	_____	_____
<b>Turkmenistan</b>	_____	_____	_____
<b>On behalf of:</b>			
<b>UNDP</b>	_____	_____	_____
<b>UNOPS</b>	_____	_____	_____

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## ACRONYMS

CIS	Commonwealth of Independent States (of the former Soviet Union)
CITES	Convention on International Trade in Endangered Species
CEP	Caspian Environment Program
CTA	Chief Technical Advisor
EIA	Environmental Impact Assessment
EU	European Union
FAO	Fisheries and Agricultural Organisation
FC	Framework Convention for the Protection of the Maritime Environment of the Caspian Sea
FSU	Former Soviet Union
GEF	Global Environment Facility
GIS	Geographic information system
GNP	Gross National Product
GPA	Global Programme of Action for Protection of the Marine Environment from Land-based Activities
GIWA	Global International Waters Assessment
IAEA	International Atomic Energy Agency
ICZM	Integrated Coastal Zone Management
IMO	International Maritime Organization
IPIECA	International Petroleum Industry Environmental and Conservation Association
IPM	Integrated Pest Management
ISAG	Invasive Species Advisory Group
NCAP	National Caspian Action Plan
NCS	National Coordinating Structure
NEAP	National Environmental Action Plan
NFP	National Focal Point
NGOs	non-governmental organizations
NPPP	National Project Professional Personnel
MAGICA	Management Advisory Group and Intersectoral Coordination Assistant
MEL	Marine Environment Laboratory, IAEA, Monaco
ML	<i>Mnemiopsis Leydii</i>
OECD	Organization for Economic Cooperation and Development
PC	Programme Coordinator
PCU	Program Coordination Unit
PIPP	Priority Investment Portfolio Project
POPs	Persistent Organic Pollutants
PPA	Public Participation Advisor
PPR	Principal Project Representative
PTS	Persistent Toxic Substances
SAP	Strategic Action Programme
SAPIC	SAP Implementation Coordinator
SHG	Stakeholder Group
SHA	Stakeholder Analysis
TAB	Thematic Advisory Board
Tacis	EU Programme for Technical Assistance for the Commonwealth of Independent States
TDA	Transboundary Diagnostic Analysis
UEIP	Urgent Environmental Investment Project (Azerbaijan)
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
WCMC	World Conservation Monitoring Centre
WHO	World Health Organisation
WMO	World Meteorological Organization

## CONTEXT

### I. INTRODUCTION

The Caspian Environment Programme (CEP) represents a partnership between the five littoral states, Azerbaijan, Islamic Republic of Iran, Kazakhstan, Russian Federation and Turkmenistan, and the International Partners, the EU, UNDP, UNEP, and the World Bank. The overall goal of the CEP is to promote the sustainable development and management of the Caspian environment in order to obtain the optimal long-term benefits for the human population of the region. Sustainable human development and management will protect human health, maintain ecological integrity and support the region's economic and environmental viability for future generations.

During the first phase of CEP the goals of the GEF/UNDP/UNOPS project were: (1) creation of a regional coordination mechanism to achieve sustainable development and management of the Caspian environment; (2) completion of a Transboundary Diagnostic Analysis (TDA) of priority environmental issues to guide the necessary environmental actions; (3) formulation and endorsement of a Strategic Action Programme (SAP) and adoption of National Caspian Action Plans (NCAPs). This first phase was conducted from 1998 to present and involved copious input from all of the Caspian states. They have all expressed continued support for a single, regional structure that will coordinate initiatives to address regional environmental issues associated with the Caspian Sea.

The countries are anxious to further strengthen and begin implementation of the Strategic Action Programme, where the fruits of their hard labour during the first phase of the CEP will become evident. The CEP Steering Committee currently is responsible for governance and execution of CEP and has fully agreed to the need for a second phase of the GEF project and assistance with the further consolidation and implementation of the SAP. The next phase of CEP will witness the continued transition to enhanced governance and execution of the Programme by the littoral states themselves, with the international partners, including GEF playing a supportive role. The full ownership of the CEP by the littoral states is the ultimate aspiration of the CEP Steering Committee. The institutional arrangements of the CEP are reproduced in annex H of this document.

During this next phase of the CEP, extended national commitment will be evidenced by increased responsibilities in the littoral countries for programme management activities. Indicators of this commitment will include, *inter alia*:

- National support of National Coordination Structures and the PCU
- National support of Steering Committee Meetings and Activities
- National endorsement of the NCAPs and Ministerial agreement of the SAP (late 2003)
- Signing of the Framework Convention (November, 2003)
- National Support for any Caspian Regional Thematic Centres (CRTCs) that the countries agree to maintain, and support to the Regional Advisory Boards
- Execution of grants under the Matched Small Grants Programme.
- Encouragement of stakeholders participation in project activities

The countries are to demonstrate their commitment to protecting and restoring the Caspian environment prior to the GEF C.E.O.'s endorsement of the project by signing the Framework Convention and completing and endorsing their National Caspian Action Plans in accordance with the established procedures. Countries that have not signed the Framework Convention will not be eligible for support by the GEF Project.

In addition to strong national support, continuation of the CEP is encouraged by the private sector active within the region. Representatives of this sector have been major supporters of the CEP Phase I activities, and are expected to continue to do so throughout second phase activities. This private sector participation is critical for both sustainability and effectiveness of many of the commitments that will be made under the Strategic Action Programme and National Caspian Action Plans.

The Caspian littoral countries are cognizant of an array of environmental, socio-economic, legislative, and institutional challenges to reach their objectives. They are also conscious of potential barriers to success and alternative strategies have been developed in order to avoid the obstacles.

Initial steps have already been taken to increase the intersectoral coordination within the government ministries in each country; the continuation of this will be an integral component of the next phase of the Project. This coordination will enhance national level support of the Project as well as limit redundancy, improve efficiency and enhance national and regional communication among sectoral stakeholders.

Over the past decade the environment of the Caspian region has attracted media, political and global attention. The attention has not always been positive, though it has created an awareness of pending environmental problems that must be addressed in the region. In the first phase of CEP four major transboundary areas of environmental concerns issues were identified with regards to anthropogenic impacts on the Caspian waters, specifically the needs to protect and conserve biodiversity and reduce impacts of invasive species; to reduce levels of persistent toxic substances; to address sustainable use of bioresources, including fisheries; and to enhance sustainable coastal development.

The Caspian Sea is the largest enclosed water body on earth and given its volume and flushing rate there will be a considerable lag between managed interventions and the hoped for positive responses in the environmental conditions. All parties must understand that a period of seemingly no response is a natural feature of the water system and should not be interpreted as a failure of the remedial activities.

Two major areas of environmental concern are specifically addressed by this Project, these are regional biodiversity including threats from invasive species, and persistent toxic substances. A single country cannot solve any of these issues unilaterally, and the actions of each state directly affect the neighbouring littoral states. Sustainable use of bioresources and enhanced sustainable coastal management, are the foci of two EU-Tacis projects to be executed concurrently with the GEF project.

## **II. ENVIRONMENTAL ISSUES**

### **a. GEOGRAPHY**

The Caspian is the largest inland body of water in the world, containing some 44% of all inland waters on the globe. Physically the Caspian Sea is one of extremes. Its salinity varies from a few parts per thousand in the North Caspian during times of high Volga inflow, to more than 50 ppt in the Kara Bogaz Gol, an evaporite basin that nestles in the Turkmen coastline. Temperatures of the Caspian Sea likewise are extreme, ranging from summer highs in the mid 30 degree C range, to minus 20 degrees in the North Caspian causing icing each winter. The Sea is divided morphologically into three parts, the northern shallow part (average depth 6 m), the middle section with an average depth of 190 m (maximum depth 788m), and the southern Caspian with a maximum depth of 1025 m. Though the basin is well oxygenated in general, the vast variations in river flow may contribute to periods of deep-water anoxia from time-to-time.

The Caspian Sea occupies a deep depression on the boundary between Asia and Europe with a water level at present 27 metres below sea level. It is approximately 1200km long with a maximum breadth of 466km, contains 78,000 cubic km of water, and has a total coastline of more than 7000km. The Caspian is fed by five major rivers or river groups: in the north the Volga (80 percent of total inflow) and the Ural (5 percent); in the west the Terek, Sulak and Samur (5 percent) and the Kura (8 percent); and, in the south, the short mountain rivers from the Iranian Alborz range (4-5 percent). There is no appreciable run-off from the eastern side of the Caspian. The Caspian is subject to considerable water level fluctuations (a change of 3 m has been recorded, during the past 100 years, and even much more in geological times). These water fluctuations are mainly caused by natural phenomena but are also subject to anthropogenic effects. Evaporation generally is high, of the order of one meter per year, and is one of the contributory factors to water level fluctuations. However, the primary contributory factor is fluctuations in the inflow from the Volga, which are tied to climatic changes. The water level fluctuations have significant impacts on the coastal biodiversity and infrastructure, particularly in the shallow, northern part where loss of land and flooding are of real concern.

### **b. BIODIVERSITY AND INVASIVE SPECIES**

The Caspian biodiversity is low across all phyla compared to other seas, but, due to its historic isolation, endemism is high. Approximately 40% of the species found in the Caspian are endemic and the potential loss of global biodiversity is high. The history of Caspian flora and fauna is one of isolation and introduction. Two major species influxes have occurred during temporary linkages with the Mediterranean Sea through the Black Sea, and with the Arctic in past geological time. Subsequent isolation of the Caspian has worked on these two sources of biological populations, creating the high endemism and speciation characteristic of the system. Quantifiable data on the status of the biodiversity of the Caspian Sea is still scarce although efforts have been made to address the issue under the CEP and also by the private sector. In recent years no systematic monitoring of biodiversity, except in connection with fisheries productivity has been undertaken by the Caspian states; even population numbers of flagship species such as the Beluga sturgeon and Caspian seal are in dispute. This lack of sufficient knowledge is in itself a major threat. Other threats include habitat erosion and degradation - again observed but not measured - habitat fragmentation, unsustainable use of key species, pollution and invasive species.

The decline in Caspian biodiversity is most visible in the loss and reduction in number of the hallmark species and decline in habitats. The Caspian Seal, for instance, has undergone recent mass mortalities due to canine distemper virus, and with a finding of high concentrations of certain organochlorinated pollutants in the tissues of many dead specimens. The current health status of the population, numbering between 30,000 and 400,000 depending on whose estimates are to be believed, is uncertain. The sturgeons, in particular the giant Beluga, are threatened, due to over-fishing and the loss of spawning grounds resulting in large part from dam construction on the major rivers of the Caspian. The Caspian tiger, one of eight tiger ecotypes known in the world, once spanned the Caspian from northern I.R. Iran through the Caucasus, to Lake Balkhash in Kazakhstan and Turkmenistan. However, this species is thought to have become extinct in recent times, in spite of anecdotal evidence to the contrary. The demise of this major hallmark species reflects the massive loss of habitat in the region, from the former vast reeds of the Iranian coastline and loss of wetlands in Kazakhstan and Turkmenistan, to the urbanisation of the coast of Azerbaijan.

In the past 50 or more years, many species introductions in to the Caspian and associated habitats have taken place, some intentional, and some accidental. These have impacted regional biodiversity. Species have been introduced as keystones of the food web and for biological control whilst other species have invaded (and escaped to invade other seas) via water transport routes. An example of intentional introduction is the Azola, which was introduced into the coastal lagoons of I.R. Iran as a fodder for cattle flourished and now chokes many of the waterways on the Iranian coasts and has created a shift in the coastal ecosystems.

One major example of accidental introduction is the ctenophore, *Mnemiopsis leydyi*(ML), documented for the past few years in the Caspian Sea. It is potentially the most damaging and most acute threat so far recorded and may have already irrevocably changed the composition of the zooplankton of the Caspian. The ML is a comb jelly or ctenophore which originates from the brackish waters off the South-West coast of America and which was transported first to the Black Sea and now to the Caspian, it is believed in the ballast waters of sea going vessels. The *Mnemiopsis* invasion of the Black Sea devastated the fragile fisheries ten years ago and it now threatens the Caspian Sea. The commercial fishing industry fears for the loss of kilka and other valuable fisheries, with consequent effects on human livelihoods, food for the local population, and food sources for the Caspian seal and the sturgeon populations. Observations that the growth of *Mnemiopsis* biomass in the Caspian Sea is even faster than in the Black Sea support the need for rapid action. As early as 1999, reports identified the ctenophore *Mnemiopsis ledyii* as a major threat to the Caspian Sea, carried in the ballast waters of vessels travelling to and from the Black Sea via the Volga-Don Canal. The first phase of the CEP began to address this threat by establishing a regional working group (including international participants and Black Sea scientists), providing training courses to assist regional scientists to identify the organism and conduct basin-wide surveys during the 2001 and 2002 summer seasons. The Invasive Species Advisory Group (ISAG) has agreed an action plan for addressing the problem M.L, which includes possible introduction of the larger ctenophore *Beroe* as a biological control agent. CEP has supported in-vitro experiments on the feeding behaviour and propagation of *Beroe* in Caspian waters and has provided technical assistance to the I.R. Iran who are currently undertaking environmental impact studies on its introduction, following FAO guidelines. *Mnemiopsis* has already reached large densities in some southern portions of the Sea, surpassing those recorded in the Black Sea at its peak. A possible investment intervention targeting the invasive species issue is the construction of a ballast water treatment facility in Astrakhan, the only point of entry and exit from the Caspian for vessels from both the Black and Baltic Seas via the Volga system. Management of invasive species is critical to the overall health of the Caspian's biodiversity.

During the first phase of the CEP, the Biodiversity Strategic Action Programme (BSAP) was developed concurrently with the CEP SAP. The BSAP, which is a GEF project document and is shortly to be finalized, was initiated in order to identify the immediate steps to address biodiversity decline within the region. The BSAP objectives and targets have been incorporated into the SAP and included:

- i) To maximize biodiversity protection. This will be done by legal means, the implementation of a regional biodiversity monitoring systems, and a regional 'clearing house mechanism on biodiversity'. In accordance with the BSAP and stated in the SAP all of these actions are scheduled to occur within the first five years of CEP II.
- ii) To ensure that wherever possible all key species are maintained or restored to viable levels. This involves identifying and assessing key species and creation of a gene bank for key threatened and endangered species.
- iii) To control introduction and invasion of non-native (alien) species and manage impact of existing introduced/invasive species. This involves development of regional control procedures to manage the introduction of alien species in the Caspian, to reduce the impact of *Mnemiopsis* on the ecosystem of the Caspian and to develop a Ballast Water Reception capacity.
- iv) To ensure all key coastal and marine habitats are represented in a regional system of protected areas. This involves new and expanded protected coastal areas, the creation of regional information and management plans for the hydrological regimes of the major impoundments.
- iv) To identify and restore priority sensitive coastal and marine habitats through standardised methodology, and implementation of multiple habitat restoration projects.

The GEF project in Outcomes A, B and C will address components and interventions of all five BSAP targets.

### **c. POLLUTION**

Since the Caspian is an enclosed sea, it has limited carrying capacity compared to other bodies of water. Pollution entering the Caspian either is biogeochemically altered, or remains in the Sea for years, none escapes and dilution is limited from external buffering waters. The circulation of the Caspian Sea is typical of enclosed Seas and consists of a number of quasi-permanent cyclonic (counter clockwise) gyres that transport water and materials transboundary, as well as smaller anticyclonic and cyclonic gyres that come and go depending on the winds, water inflows, buoyancy fluxes, and other driving forces. Thus, pollution entering the Caspian Sea from the Volga and other major rivers, for instance, is ultimately distributed through the Sea and its sediments. Oil spills likewise respect no boundaries, and poor oil extraction practices in offshore Azerbaijan are reported to have soiled Iranian and Turkmen coasts, and perhaps Kazakh and Russian shores as well.

Extensive historical data are available from the former Soviet Union addressing water and sediment quality in the Caspian. However, transition economies of the past decade have shifted budget resources from the hydrometeorological agencies that performed these measures, and hence the database has declined extensively. Although some monitoring has taken place during the past decade, sampling and analysis techniques are often suspect, and monitoring frequency is much reduced. Iranian monitoring is sparse and cursory: little historical data are available on its offshore waters and bottom sediments. Fortunately, the advent of international oil and gas exploration and accompanying environmental baseline and impact studies, as well as various international donor programs (e.g., Baku Bay study), have provided some new data during the past decade that permit some degree of analysis. The TDA benefited from recent data from international sources, including a sediment quality cruise of the entire Caspian except Turkmenistan waters undertaken as part of first GEF support project to CEP. This cruise showed high natural concentrations of certain heavy metals in

sediments (due to geological sources; e.g., nickel, cobalt, and other metals), and persistent organic pollutants (e.g., DDT and its breakdown products, some other pesticides/insecticides, etc.). Based on the existing data and information, which may not be fully sufficient, with the exception of hotspots, no significant accumulations of petroleum hydrocarbons (PAHs) were observed in the coastal waters, nor were PCBs noted at a concentration to pose human health or ecological risk. In particular, the general northeast part of the Caspian Sea, off the Kazakh coast, seems to have coarser sediments with relatively low concentrations of inorganic and organic materials. This suggests that the sediments may not be the best phase in which to measure contaminants in the northern Caspian and that contaminant levels should also be measured in the water or suspended solids phase. The CEP cruises did not do extensive water column sampling, because single point samples are not representative of the average quality of the waters of the Sea. Given low concentrations of certain contaminants (e.g., heavy metals and some organics), accurate measurement requires large volumes and repeated sampling, which was not performed under the CEP to date.

Since the dissolution of the USSR the flux of pollutants into the Caspian has changed with a drastic reduction in industrial and agricultural activity in the four CIS states. A review of those reliable data that do exist, including data from sediment and ecotoxicological surveys undertaken as part of CEP, do not indicate a highly stressed environment, but of course there are hot-spots. The data do not support the generally held view that the Volga is the major source of pollution, and nutrient loading does not appear to be a regional problem, although on the Iranian coast some eutrophication is observed. There is little knowledge of contaminant loads sequestered in the major basin impoundments on the rivers Volga and Kura and these may be a potential threat if flushed from the reservoirs accidentally by flooding, dam breakage, etc. Seepage from impoundments is also a possibility not yet studied. Some heavy metals (Aluminum, Cadmium, Chromium, Nickel, Copper and Arsenic) are found at comparatively high levels throughout the Caspian sediments but this distribution suggests the source is due to the regional geology rather than pollution. Elevated levels of mercury, lead and chromium indicate local pollution sources superimposed over the regional signature. Levels of agrochemicals, in particular DDT and endosulfans, are a major cause for concern in the Caspian. Although a banned substance, DDT and its breakdown products have been detected at high levels in CEP sediment analyses indicating continued use of the chemical. DDT was also detected at relatively high levels in the tissues of seal and fish in autopsies undertaken by CEP.

Extensive data have been collected under the CEP regarding the ecotoxicology of the Caspian seals, sturgeon, and bony fishes. Although not all information is in hand, some trends have been observed from analysis of data on tissues and organs of Caspian biota. Organochlorides (particularly DDT and its breakdown products) are observed in these organisms, at levels thought to affect fecundity and immune systems hence the entire population (especially for seals, where bioaccumulation of between 10-1000 times the background level of these organochlorines has been documented). Other organochlorines measured in Caspian seals, in decreasing order of importance, include PCBs, HCHs, CHLs, and HCB. A recent mortality of seals in 2000 in the region had as a proximate cause the canine distemper virus (CDV), which combined with other stresses on the seals to cause mortalities in Kazakhstan, Azerbaijan, Turkmenistan, and possibly the Russian Federation (no direct data are available from the Russian scientists yet). By contrast, seal deaths in 2001 showed little sign of CDV, suggesting another proximate cause of mortality in that year.

Indirect evidence of pollution such as oil slicks photographed by satellites of widespread hydrocarbon contamination exists. Furthermore, the Ecotox Project recently reported that all fish sampled from Azerbaijan, I.R. Iran, and Kazakhstan (results not available from the Russian Federation and Turkmenistan) measured positive for cytochrome P-450C activity, indicating that the fish had been exposed to PAHs at some time in the recent past. However, the sources of these hydrocarbons is not clear: they may come from active oil and gas operations, from flooded contaminated area on land (due to inundation by higher water levels and surges), marine transport, even from natural seeps (the mud volcanoes emit hydrocarbons to the environment along the Apsheron ridge separating the South Caspian from the Middle Caspian), rivers, or perhaps other industry.

In summary pollution threats may include: contaminants sequestered in the major impoundments on the Volga, above Volgograd, and the Kura; continued and increased use of banned agrochemicals; potential widespread hydrocarbon pollution, with the anticipated expansion of oil and gas development; and, acute damage from oil and hazardous substance spillage. The actual pollution load data is very poor, and there is a general lack of knowledge regarding the specific issues in basin hot-spots.

In order to improve the water quality of the Caspian, defined as a measurable decline in levels of the main contaminant groups in the water, sediment and biota, the SAP (see appendix D) has identified six targets. These targets are:

- i) To implement a regionally coordinated water quality monitoring programme. This will involve a regional monitoring programme focused on critical contaminants and hotspots, a rapid assessment programme for contaminant levels in all Caspian waters, and provide reports on contaminant levels in the Caspian every three years, with proposals for remedial actions. This target will be met within the first five years.
- ii) To develop regional strategies for pollution reduction, including remediation of hotspots; a programme to dispose of stores of banned agrochemical products in the region in accord with Stockholm Convention on Persistent Organic Pollutants provisions; demonstration pilot projects, cost effective means of treating municipal wastewaters; reduction of pollution from oil and gas facilities; and establishing waste reception facilities in all major ports.
- iii) To limit the impact of leachate from contaminated lands through development and implementation of a regional action plan. This will be accomplished by a survey of major contaminated land sites, development of a hot spot strategy pertaining to POPs, and implementation of a series pilot projects to demonstrate reclamation technologies for a range of contaminants.

iv) To promote environmentally sound agricultural practices in the Caspian region, including the appropriate use of agro chemicals, promotion of environmentally sound agricultural practices and combating eutrophication in coastal zones.

v) To reduce risk of pollution disasters and improve response capacity. This involves the signing of a regional agreement on oil spill response, updating mapping of sensitive areas of the Caspian, risk assessment for oil and hazardous substances, and development of a regional agreement on minimum standards of maintenance of existing Caspian tanker fleet.

The Project addresses a number of the regional transboundary issues in this list within Outcomes B, E and F; the planned activities are intended to be interdependent and mutually supporting, and the national and regional level.

### **III. SOCIAL AND ECONOMIC ISSUES**

#### **a. INTRODUCTION**

The Caspian Region is facing a series of social and economic challenges that make it difficult to rapidly remedy the Caspian's environmental problems. These challenges, including demographic stresses, unsustainable exploitation of bioresources, increased oil and gas exploitation and transport, combined with transition to a market economies and a lack of transparency, must be considered when plans for environmental remediation are made in the Caspian region. Failure of states and the international community to adequately address these social and economic problems will result in sub-optimal outcomes for CEP initiatives. Many of these problems are well beyond the purview of CEP, however, it is critical that an awareness and sensitivity to these issues be maintained as regional policies and programmes are developed and implemented.

#### **b. DEMOGRAPHY**

The human population of the Caspian coastal region is approximately 12 million; 6 million reside in the narrow coastal strip of the Islamic Republic of Iran and 3 million in Baku and the coast of Azerbaijan. The remaining coastal populations are distributed on the Russian (Daghestan, Kalmykiya and Astrakhan oblasts) and Kazakhstan (Atyrau and Mangistau oblasts). The coastal population of Turkmenistan is very small, and is concentrated around the ports of Turkmenbashi and Chelekan. Unemployment rates are generally high in most of the coastal communities and considerably higher among women and the internally displaced populations. Consequently for many years to come the littoral governments may choose to give higher priority to job creation, health, and education than to environment protection. Individuals too are little concerned with safeguarding the environment when they are unemployed and faced with finding adequate food, shelter, education and healthcare for their families. A review of population growth rates shows a declining population in the north and a rising population in the south.

#### **c. FISHERIES**

The Caspian region is internationally renowned for its fisheries, and specifically for the delicacy of Caspian caviar. The Caspian fisheries also provide much needed protein to the diets of the coastal residents. Consumption of sardines, and kilka as well as sturgeon and sturgeon by-products are important to the region. The Caspian creates thousands of jobs for the fishing industry. The recent decline in fisheries has increased tensions among region-wide stakeholder groups. According to the CEP I Regional Stakeholder Analysis the fisherman blame the presence of the oil and gas industry for the decline in certain fisheries, while the oil and gas industry refers to severe, unregulated over fishing as the source of this decline. While steps are being taken by CEP to defuse these potential tensions, further efforts must be ensured.

Fishing has different levels of importance for the littoral countries. It makes up only a small part of Azerbaijan's national economy, although the 'shadow' fishing industry is believed to be substantial. In Turkmenistan and Kazakhstan, too, the fishing industry makes up only a small part of the national economy. In Russia, the Caspian fish catch comprises a significant portion of the regional economy and the Russian Federation accounts for half of the Caspian fish take annually. In 1994, Russia gave up its leading position to I.R. Iran as the primary regional exporter of caviar. Iranian fishing fleets harvest a number of species, including sturgeon, mullet and herring from the Caspian. The total catch in the southern Caspian Sea over the last two decades has increased due to the rapid growth of the herring fishery, while the sturgeon harvests have decreased markedly. Fisheries provide 7,000 jobs in I.R. Iran and perhaps an equal number in related activities.

Uncontrolled poaching has devastated the sturgeon populations that were already in decline due to a variety of reasons. Poaching is basically due to the presence of illegal organized fishing and lack of job opportunities in the coastal areas, combined with the presence of illegal networks of caviar exporters. These problems are exacerbated by the lack of enforcement of national and international agreements on fisheries management. The populations are historically and culturally acclimated to the weak enforcement of existing legislation, and thus, there is a high tolerance for poaching as well. In addition to sturgeon, other fish are also under threat.

#### **d. OIL and GAS**

Oil and gas have been a major industry of the Caspian since the end of the 19<sup>th</sup> Century. The Caspian Basin is believed to contain considerable oil and gas deposits, though the magnitude, value, location and even ownership are in some cases still unclear. Initially oil reserves were estimated to be approximately 50 billion barrels. This figure was upgraded to 200 billion barrels in the mid-1990s, but has recently been revised downward to 100 billion barrels. All the major international oil companies are involved in the exploitation of Caspian oil and gas, and the construction of the infrastructure, including pipelines, to deliver the oil to market. The

earliest dates for large-scale production from the two major known fields in Azerbaijan and Kazakhstan are 2007 and 2010, respectively. In Kazakhstan, the economies of the two oblasts bordering the Caspian Sea are already dominated by the oil sector. The new oil finds in Azerbaijan have not been as promising as anticipated by the international companies, but still present considerable potential for increased revenues if the targeted 1.5 to 2 million barrels per day for export are achieved. Azerbaijan's oil sector already accounts for more than 50 percent of the country's industrial production and 10 percent of its GDP. Turkmenistan has also had some oil finds, although the exact sizes of these are yet to be determined. Turkmenistan already has among the highest per capita natural gas reserves in the world, along with considerable oil reserves. The oil and gas sector represent just over half of the national GDP in Turkmenistan. Oil and gas exploration in Iranian territorial waters of the Caspian is currently not significant, although the Iranian parliament has passed bills allowing exploration in the Caspian Sea for oil and gas reserves by international oil companies. From 1991 to 1997, oil production in the region rose from 17.5 kt to 331.6 kt. Russia is hopeful of finding some deposits within the North Caspian.

This intense economic reliance on the oil and gas sectors in many of the Caspian countries results in the tendency towards the creation of petro-economies. This dependence upon a single, raw natural resource can leave economies precariously vulnerable to global market trends and fluctuations, and without careful management can exacerbate tensions throughout societies. As is the case around the world, countries can be more hesitant to halt or limit oil-drilling activities in order to protect natural resources when such drilling could significantly accelerate the economy. A further related problem is the accumulated expectation for an oil bonanza in some of the countries. For many years since the dissolution of the Soviet Union, the populaces of Azerbaijan, Kazakhstan, and Turkmenistan have been promised substantial improvement in their standard of living to be financed by oil money. Political instability will be a strong possibility if the oil money should not flow for political, economic, or other reasons.

So far the potentially vast oil and gas resources have already brought in millions of dollars worth of foreign investment into the Caspian region. Most of the money is being spent on the application of high technology to the often-daunting task of drilling in the open seas, in which case the money basically reverts to the technology providers in foreign countries. Only a relatively small part of the money is being spent in the littoral countries, particularly in the logistical support services, but not many substantial impacts have been made at the national level.

There is currently disagreement in the region over ownership of the reserves lying beneath the Caspian, as well as the question of which countries are going to control the transport corridors for the oil and gas export. Ownership of oil deposits are disputed and are currently tied to the issue of the unsettled legal status of the Caspian Sea. The dispute, which involves billions of dollars, has impacted the regional political relations. The continuation of the dispute may deter further investment in the disputed areas in the region, but no immediate solution is on the horizon.

Governments in the region, especially in the decentralized former Soviet States, with the exception of Russia, favour the presence of the international extractive industry and actively work to attract their presence. Political and economic prioritisation is often given to energy and natural resource ministries at the expense of ecological or environmental ministries. As a result, enforcement of measures intended to protect Caspian waters were often given the short shrift in the past and are not always easily embraced by all at present. Some major international oil companies however have environmental, health and safety standards that exceed those of the littoral countries, generally are careful to observe those standards, and use enhanced technologies in their operations that result in far better stewardship than the countries may require.

#### **e. TRANSPORTATION**

The Caspian Sea provides affordable transport of commodities and people between the littoral countries. Furthermore, the sea is strategically located between Europe and south-western Asia and can become a major corridor for the transport of goods from and to Europe and Kazakhstan, Iran, Turkey, the Arabian Peninsula, the subcontinent, and east Asia. The existing canal between the Don and Volga rivers also provides for transport between Mediterranean Sea/Black Sea and Baltic and the Caspian. In the past, the Caspian Sea was an integral component of the Silk Road. It still has the capacity to revive its historic role. Nevertheless, presently this capacity is not put to effective use.

Since the dissolution of the Soviet Union and the opening of the markets in Central Asia, Caucasia, and Russia, trade appears to be increasing, albeit at a slow pace. The traditional trade routes such as Batumi- Baku- Anzali are still not fully used due to political instability and the poor road conditions in Caucasia. Not much trade is carried out between Astrakhan and south, again an ancient trade route, due to the absence of a reliable fleet and the poor information sharing between potential trade partners. Transport to and from Turkmenbashi port is still highly irregular, thus discouraging trade. Transport between Baku and the Iranian northern part of the Caspian Sea is also fairly limited.

I.R. Iran has been looking into the possibility of opening a trade corridor between Europe and south and east Asia through the sea route of Astrakhan/Baku-Anzali/Nowshar/Amirabad. Considerable investment has been made in the country to upgrade the port facilities. A highway is under construction to connect Nowshar to inland I.R. Iran, and then on to the Persian Gulf. Another highway is under construction east towards the Asian Highway to Pakistan and India. In Turkmenistan construction of Tejen-Serekhs-Mashad railways have connected the Iranian railways system to the central Asian system although not much trade is yet reported on this route. Iran and Azerbaijan have been discussing improvement to the Baku-Astara road to expand the bilateral trade but the work is yet to start. Russia has recently been promoting use of Volga as a trade corridor to the South although not much investment has been mobilized to support the imitative. Transport will increase gradually but not at a sustainably high rate.

An exception to this pattern may be the transport of oil and gas and their derivatives. Limited oil and diesel is occasionally shipped across the Caspian Sea from Kazakhstan to the Iranian ports, either for domestic consumption or re-export to Turkey. Oil is also being transported from Kazakhstan to Baku for further transport. Most of this transport is by an aging fleet of small (less than 5000 dw tonnes) tankers and the ports have less than adequate reception and storage facilities. The risk of a spill during transport or during storage is increasingly serious as evidenced by the Mercury incident in 2003 during which a vessel carrying train-car loads of crude oil from Aktau to Baku capsized killing most of the crew and spilling considerable oil into the sea which was dispersed with difficulty by the countries and the private sector. Another risk that will continue to be closely monitored is the possibility of a sub-sea pipeline from the port of Aktau in Kazakhstan to the port Sangachal south of Baku. Azerbaijan and Kazakhstan are currently in negotiations regarding this potential pipeline that would feed oil from Kazakhstan into the Baku-Tbilisi-Ceyhan system. Though construction of this sub-sea pipeline is largely illusory to date, the increased pressure to supply the Baku-Tbilisi-Ceyhan route with sufficient crude oil may lead to actualisation of this project.

During the GEF I project the littoral countries, being conscious of the issue of oil spills and the impact on the environment, cooperated with CEP, IMO and the World Bank to strive towards formulation and approval of a Mutual Aid Initiative and Regional Cooperation Plan in case of major Oil Spills. It is essential that while transport in the Caspian is put to best use and is encouraged, all appropriate efforts be made to reduce the risk of threat to the environment. It should be remembered that the *Mnemiopsis* ctenophore is believed to have entered the Caspian through the ballast water of transport vessels from the Black Sea via the Volga-Don canal. Any future expansion in extra-regional transport might enhance the risk of further invasion by species alien to the sea, as discussed in other sections of this report.

The transportation systems throughout the Caspian are in need of updating, enhancement and development, and these are being addressed to varying degrees by the individual littoral countries, as well as by the energy sector and the other international aid organizations. Nonetheless, CEP should remain alert to the trends in development of transportation routes and infrastructure to ensure a minimization of impacts on the Caspian environment wherever possible.

#### **f. TOURISM**

The environmental quality of the Caspian provides good opportunities for tourism including eco-tourism. Miles of dune beaches, unique wetlands, and rich forests combined with historical monuments and breathtakingly beautiful scenic views of the coastal area could attract tourists. Despite this, tourism is not well developed in any of the Caspian littoral countries and is basically limited to local tourism. A few resorts exist on the coast, but the tourist industry is not significant. The countries have not had the economic resources to develop the infrastructure necessary for tourism, and incentives to private sector development of tourism have been lacking. Additionally, in several areas tourism has been hindered or halted due to the Caspian Sea level rise and the inundation of tourist destinations. Fear of pollution has also played a role in dampening the development of a vibrant tourist industry. At this time given the poor economic situation, there are few able to spend money on vacationing, and those who can, typically have the means to travel farther than the Caspian shores. Having said this, it should be added that local tourism on the Iranian side is a major economic activity that provides the coastal areas with much needed income although inadequate tourism management has led to major stress on the environment particularly in coastal areas and wetlands.

#### **g. HUMAN HEALTH**

The GEF I project found that one of the most immediate concerns of the coastal zone resident stakeholder group was the condition of human health. In general, the human health in the region is believed to be low. However, there are no standardized studies that have been done on a region wide, coastal community basis. Exposure to pesticides, herbicides and other toxins, as well as close proximity to large levels of petrochemical activity, may have significant impacts on human health. In some areas, lack of access to potable water, basic sanitation, and medical care increases the risks to human health. Lack of proper sewage treatment raises concerns for human health, as does consuming fish from heavily polluted waters. There is anecdotal evidence that within certain environmental hotspots, there are significant human health impacts. However, data verifying this have not been forthcoming except for a Recreational and Ground Water Monitoring initiative under GEF I. Identifying specific environmental causes of human health decline is quite difficult, given the multitude of causes for any individual illness or disease. As a result, it is problematic to tie human health decline directly to poor environmental concerns.

#### **h. ECONOMIC TRANSITION**

One of the biggest challenges to the Caspian region, and to CEP in particular, is the continued ramification of transitions to market economies in the Former Soviet states. Since 1991 and the dissolution of the Soviet Union, the Former Soviet States have been struggling towards the transformation to market economies. These transformations have been punctuated by some success, though they remain largely dependent upon commerce with Soviet era trading partners and rely on export of non-value added natural resources. This is a legacy of the Soviet economic system, which in combination with other Soviet institutions create significant hurdles to free market development. Other conditions include the reliance upon state subsidization, lack of property rights and accompanying legal structures, and interdependent economies in now separate countries. A sudden shift to a *laissez-faire* economic system has come with accompanying shocks and has not been as easily surmounted as initially hoped by the countries and the international community.

To various degrees, all littoral countries are burdened with heavily subsidized, and otherwise non-viable, industries. In the former Soviet countries, many of these industries are closed due to lack of markets and finance, adding thousands to the ranks of the unemployed. In I.R. Iran, relatively newer technologies, combined with direct and hidden subsidies, keep most industries functioning, although quite a few cannot be sustained in the long term. The agriculture sector in the former Soviet countries provides many job

opportunities, yet is technologically and managerially underdeveloped. In I.R. Iran, industrially biased pricing systems and unsettled land tenure hamper agricultural development. The service industry appears to be the major growth sector in most of the littoral countries, although the lines between underground and transparent economic activities in certain countries are murky.

Many of the states are actively addressing the need for reforms, yet there is still a degree of trepidation on behalf of many external investors, which might be justifiable given the climate and barriers to investment.

#### **i. LACK OF TRANSPARENCY/ACCOUNTABILITY**

The lack of transparency and accountability alluded to above is a significant problem for development and enforcement of laws and regulations in the Caspian region. Further this lack of transparency traditionally hampers coordination between sectors, and specifically leads to environmentally counterproductive efforts from Ministries unintentionally working at cross-purposes. Additionally the perception of an endemic abuse of power in most of the region creates an image that does not attract international investment, and hampers tendencies for good faith agreements within and among littoral countries. However, this is well beyond the purview of CEP and again, CEP should maintain a keen awareness of both the impacts this has on the environment, as well as the perception of the Project itself.

The current underdeveloped civil society and the relative lack of democratic institutions create situations in which these problems are ongoing. The democratic institutions and conditions required for a more open society and transparent governance structures include access to an independent judicial system, access to unclassified information, respect for property rights, a free press and freedom of assembly. The pending ratification of the Aarhus Convention enhances the transparency of the region, in some states; however, this is far from the ideal that many would like to see. Nonetheless, given the current circumstances, on a social and economic level, this is certainly a step in the right direction.

### **IV. LEGISLATIVE ISSUES**

#### **a. LEGAL STATUS OF THE CASPIAN**

The legal status of the Caspian is a contentious issue facing the region. The division of the Caspian became problematic when the Soviet Union ended in 1991, and suddenly instead of two littoral states, there were five, all eager to claim the rich resources beneath the Caspian waters. Despite years of diplomatic manoeuvring, there is yet to be a clear settlement of this issue, and as a result many interrelated issues remain unresolved. A Special Working Group for drawing up a convention on the legal status of the Caspian Sea, comprising representatives of the Ministries of Foreign Affairs, continues its activities. The unresolved legal status of the Caspian Sea will continue to impact new fully regional agreements, even for those issues (environment and fisheries) that are de-linked from the legal status question. A summit of the Caspian State Presidents in April 2002 failed to break the deadlock; however, political changes in the region and the emerging understanding between the countries could expedite a final agreement as evidenced by signature of a number of bilateral and trilateral agreements between sub-groups on division of sea-bed resources.

#### **b. PARTICIPATION OF LITTORAL STATES IN INTERNATIONAL AND REGIONAL INITIATIVES**

With the support of the international community the Caspian states have joined a number of relevant international agreements on protection of the environment. These agreements have specific bearing on the Caspian, and management of Caspian resources. To summarize:

- i) Azerbaijan has signed, accepted, or ratified a number of the international conventions including Biodiversity, CITES, World Heritage, Climate Change, London Convention, and UN Convention to Combat Desertification.
- ii) I.R. Iran has a draft National Strategy for Biodiversity Protection, and has signed, accepted, or ratified a number of international conventions including Biodiversity, Ramsar, CITES, World Heritage, Basel, MARPOL Convention, Climate Change, London Convention, Stockholm Convention, OPRC, and UN Convention to Combat Desertification.
- iii) Kazakhstan has signed, accepted, or ratified a number of international conventions, including: World Meteorological Convention, Civil Liability Convention for Pollution Damage, Convention on Protection of Biodiversity, UN Framework Convention on Climate Change, UN Convention to Combat Desertification, Vienna Convention for the Protection of the Ozone Layer, Montreal Protocol and London Amendment to the Montreal protocol, Energy Charter Treaty and Energy Charter protocol on Energy Efficiency and Related Environmental Aspects, CITES, Convention on the Prohibition of Military or any other hostile Use of Environmental Modifications Techniques, Aarhus Convention, Convention on the Transboundary Effects of Industrial Accidents, Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Convention on Long range Transboundary Air Pollution, Basel Convention, World Heritage, MARPOL Convention, and Stockholm Convention.
- iv) The Russian Federation has signed, accepted, or ratified a number of international conventions, including: Biodiversity, Ramsar, CITES, MARPOL Convention, London Convention, Stockholm Convention and World Heritage.
- v) Turkmenistan has signed, accepted, or ratified a number of international conventions including: Biodiversity Protection, Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol, World Heritage, Basel Convention, UN Framework Convention on Climate Change, UN Convention to Combat Desertification and Aarhus Convention.

There has been sub-regional cooperation between the littoral states dating from early in the 20<sup>th</sup> century. Early agreements first between I.R. Iran and the Russia, and later by the Soviet Union and I.R. Iran set the legal basis for cooperation in the areas of fisheries, navigation, and other related topics addressing the Caspian Sea. Agreement has been reached on the Framework Convention for the Protection of the Marine Environment of the Caspian Sea and the Plenipotentiary meeting is scheduled for November in Tehran to sign the document. There is also ample evidence of environmental cooperation in a series of regional declarations and other agreements in the Region; for instance, the Almaty Declaration of May 1994 between the Caspian littoral countries established a basis for cooperation. This declaration was followed shortly by a delegation from the World Bank, the United Nations Environment Programme (UNEP), and the United Nations Development Programme (UNDP) to the region, which identified key problems and documented commitment from the littoral countries to participate in the Caspian Environment Programme. In May 1998, at meetings in Ramsar, I.R. Iran, the Caspian Environment Programme was formally initiated. Since then the CEP with the support of GEF, the European Union and other international organizations moved forward with development of a Transboundary Diagnostic Analysis, National Caspian Action Plans, and a regional Strategic Action Programme (SAP) to address the transboundary problems of the Caspian Sea.

As part of the Phase I CEP activities, under GEF partial support, and with UNEP additional support and facilitation, the Region has prepared a final draft of a Framework Convention for the Protection of the Environment of the Caspian Sea. Through a series of eight meetings, the Framework Convention has been negotiated. However, its signing and ratification have been delayed by the lack of regional agreement on the legal status of the Caspian Sea and other factors including the Convention institutional arrangements. As noted above, the Convention is scheduled to be opened for signature in November, 2003.

Under the CEP, a draft Regional Cooperation Plan for Emergency Response in case of major Oil Spills has been discussed and almost finalized; a draft Mutual Aid Initiative has been drafted; a regional plan has been drafted and agreed to combat the alien species *Mnemiopsis leydii* and other introduced species; a Fisheries Management Plan has been drafted and is being negotiated; and a Regional Biodiversity Strategy is going through its finalization process.

In addition to the CEP, the former Soviet republics and I.R. Iran all cooperate in fisheries management through the Caspian Bioresources Commission that meets every four months (previously meetings were annually) to discuss fishery management issues and decide on allocation of total catch quotas for Caspian fisheries and apportionment amongst the countries. Officially all the Caspian states are members of the Caspian Committee of Hydrometeorological Services (CASPCOM) although only Russia, Kazakhstan and Iran are active members. A Memorandum of Understanding between CEP and CASPCOM to cooperate and coordinate activities is pending.

### **c. COMPLIANCE AND ENFORCEMENT ISSUES**

In general, the environmental legislation of the Caspian states is well developed. It has undergone and continues to undergo considerable transformation, however, there is still considerable room for improvement to address issues including legislation gaps, inconsistencies, ineffective economic instruments and, above all, unsatisfactory compliance. Compliance with multilateral Environmental Agreements (MEAs) such as Aarhus, Espoo, CITES is often less than satisfactory. More assistance needs to be given once the country has signed and ratified a specific agreement to ensure compliance. Countries receive considerable GEF assistance in order to implement the Biodiversity and Climate Change Conventions and now also the Agreement on Persistent Organic Pollutants. However, the compliance is less than satisfactory, if not inadequate, despite initial advancements made during the first phase of CEP.

The challenges that will *inter-alia* impact CEP activities include:

- Insufficient appreciation and policy recognition of the value of the environment and biodiversity conservation.
- A lack of strong regional planning and management institutions leading to a lack of policy coordination and implementation.
- Inadequate public participation at levels of decision-making and weak public awareness of environmental issues.
- A general relative weakness of national environmental agencies/ministries in the region, in comparison with most developed and developing countries compounded by insufficient national budget allocated for the protection of the environment due to low priorities placed on environmental issues.
- Inadequate inter-sectoral cooperation and the lack of clearly identified mechanisms for work coordination amongst the ministries and other national agencies cause severe barriers to the successful governance of water and environmental issues.
- Low income levels and high poverty rates amongst some Caspian residents leads to non-sustainable use of Caspian resources leading to irreversible environmental degradation.
- In most countries the lack of effective, sufficiently trained and adequately compensated regulators leaves large gaps for abuse of power in coastal and marine affairs such as illegal fishing, shipping, and coastal planning/management.

- Non-integration of the development planning process and environmental development. Coastal zone planning is already beginning in some southern areas of the Caspian and pilot projects should be pursued on a national level in areas that are amenable to these.

## **V. INSTITUTIONAL ISSUES**

The Caspian Environment Programme has faced a variety of institutional challenges throughout the first phase of its existence. Nonetheless positive, proactive measures have been taken to resolve these at the regional, national and international levels. Other institutional challenges remain, though attention to is being paid to these, and modified management strategies are being formulated in order to create a smoother more durable regional programme. These strategies are addressed separately at the regional, national and international levels.

### **a. NATIONAL INSTITUTIONS**

In the Caspian Sea region, the lack of clear coordination mechanism at the national level is a major obstacle to the successful governance of water and environmental issues and is a barrier to successful integration at the sectoral level. In all states responsibilities are distributed over a relatively large number of ministries and institutions without a formal national coordination mechanism to deal with all Caspian issues although efforts are being made to establish them through CEP.

Low budget and limited career prospects impact the capacity in many of the ministries. Project management are often impacted by minimal budgets. There are few government structured training programmes that focus on Caspian environmental issues. Training provided by the donor community is often not well coordinated and at times carry contradictory emphases. Many of the ministries staff are scientists and have an innate belief that all environmental problems can be solved solely by technical solutions, without involving stakeholders. Environmental challenges are dealt with in isolation with little idea of an integrated, holistic approach to ecological management.

Funding problems at research institutes and regulatory bodies, such as the Hydrometeorological organisations, in the CIS negatively impact their activities and make them dependent upon projects funded by international agencies to a large extent. These bodies place great value on the owned databases and fiercely control access to them. On the rare occasions when access to the databases is granted, the resulting data are usually disappointing. Often the data is only in hard copy paper form and not quality assured, and is often design data; however these are usually the official data that must be presented and used. All this makes working with the research institutes and regulatory bodies challenging. Finally, there is often not sufficient communication a between the ministry and the research institutes and universities. This failed linkage is often not recognised by the international organisations and results in parallel and overlapping projects, which are usually mutually discounted by the two sets of beneficiaries. The CEP has tried to break down this barrier with some limited success, for instance the work of the Invasive Species Advisory Group and in fisheries management, but it needs to make a sustained, enhanced effort to continue in this direction.

Under the GEF I Project and in collaboration with EU/Tacis five Management Advisory Group and Inter-sectoral Coordination Assistants (MAGICAs) were recruited during 1999-2003 period, to actively build relationships between the various relevant ministries at the national levels to strengthen inter-sectoral awareness and coordination. Their activity has been to pry open the channels of communication between ministries, to serve as liaisons for CEP at the national level, and to provide input into the TDA and NCAP processes. The role of the MAGICAs has been tremendously important to addressing the institutional problems at the national level. Under the present project this role is being assumed in part by the Strategic Action Programme Implementation Coordinating Agents (SAPICAs).

### **b. REGIONAL INSTITUTIONS**

There are no regional environmental or natural resource management institutions that function under a legally binding authority in the region, with participation of all five littoral countries. The Bioresources Commission established a few years ago as a regional mechanism to promote common bioresources and fisheries management policies still remains an ad hoc cooperation body among pertinent technical national bodies. CEP was established and presently operates without an overarching regional legal framework to ensure an open-ended, legally binding political commitment of the Caspian littoral countries. Formalization of this framework will provide the legal basis for developing CEP into a financially self-sustained programme under the full legal, substantive and financial control of the signatory countries. A lack of a signed and ratified legal framework makes it impossible for CEP to enter into any contractual relations, which means that the support of international partners must be channelled into other vehicles (e.g., contracts with firms or NGOs, agreements executed by international agencies or national governments or agencies). This lack of a legal basis for the CEP is very discouraging for the countries and makes it extremely difficult for the hard-pressed Ministries of Environment to obtain and release budget resources for CEP activities. Under these mitigating circumstances, the commitment by the Caspian states to fund the CEP management in the future is impressive. The Framework Convention, with appropriate institutional arrangements and associated funding mechanism established under the Convention, combined with National Action Plans, could evolve into such a legal framework for the CEP and make it largely free and independent from fluctuating and uncertain funding policies followed by international financial mechanisms and donor countries. The Project will endeavour to promote early ratification of the Framework Convention and its further development since this is only effective instrument for strengthening the substantive activities of CEP. However, there are considerable barriers to early ratification and CEP may have to continue to function in legal limbo for some time. The signing of the Convention indicates an agreement of intent by the signatories, but only the ratification of the Convention by the required number of signatories will bring it into force.

Ratification of the Convention may pose various legal and technical problems for some countries prior to an agreement of the legal status of the Caspian. Even after ratification there is ample evidence of instances of Conventions being seriously delayed or even failing. For example the Bucharest Convention in the neighbouring Black Sea was delayed due to inadequate capacity and institutional weaknesses of some of the Black Sea littoral countries. Moreover, the general provisions of the Framework Convention require ancillary agreements to be negotiated and agreed to in order to make these provisions effectively operational. These can sometimes take a considerable time to negotiate. Several issues remain undefined in the present text of the Convention and will be dealt with either by resolutions/decisions of the Plenipotentiary Conference, by the first meeting of the Contracting Parties, or by other mechanisms decided by the Conference of the Parties. These issues include the institutional and financial arrangements for supporting the Convention. The location of the Secretariat for the Convention is still to be agreed upon by the littoral states.

It is hoped that the strengthening of the CEP PCU as a project implementation body, establishment of an interim secretariat and pre-negotiation of ancillary documents will prevent unnecessary delay of implementation of the Convention once it comes into force. Although the Convention is broadly perceived as the possible future legal framework for CEP, the text of the Convention does not refer to CEP. It envisages the "formulation of an Action Plan for the Protection and sustainable development of the marine environment of the Caspian Sea" but the CEP SAP is not directly mentioned. The definition of institutional links between the Convention, its Action Plan and CEP will be pursued through further negotiations. One of the possible approaches could be to adopt the SAP and the NCAPs developed under CEP as the essential basis of the Action Plan.

### **c. INTERNATIONAL INSTITUTIONS**

The inter-donor coordination within the CEP in its first two years of implementation left room for improvement. However in the last two years, the inter-agency coordination has improved considerably and the four main International Partners, UNDP, UNEP, World Bank and EU-Tacis, have since worked in tandem in the development of their current CEP support projects. The four CEP International Partners now meet regularly face-to-face (at least every six months) and are in constant communication. There has been an increased level of coordination with many other international agencies, bilateral donors, IFIs, NGOs and Convention Secretariats with activities in the region, as well as international research institutes and universities. Through its web-site, and innovative approaches to institutional challenges within the past two years, the CEP partners have managed to promote a positive and open approach that have countered some of the earlier criticisms. Of course there is still room for improvement, in particular with regards to relations with Bioresources Commission, CASPAS, CITES and other international and regional bodies who at times find it difficult coordinate and /or liase their activities with CEP. The present project actively seeks to address this issue.

There are numerous institutional challenges facing the next phase of CEP. Coordination of intra- and international bodies, confirmation of a legal commitment by the littoral countries to regional management of the Caspian, and development of broader transboundary ties throughout the region are major foci of the Project. The earlier challenges faced in the initial phase of CEP taught valuable lessons, and the successes of the initial phase can serve as the foundation upon which to build lasting, durable and more harmonious relations throughout the region. At the regional level, institutional ties are creating the web of relationships that will serve to facilitate Project activities. Despite the challenging start, CEP has emerged as a strong, focused programme that has the ability to bring about real improvements to the region. This strength will now have to be tested by the transfer of PCU to Tehran which will host the GEF project. The PCU will continue to coordinate overall CEP activities, but the EU/Tacis project staff will be hosted elsewhere in the region.

## **VI. PROJECT RATIONALE AND OBJECTIVES**

### **a. OBJECTIVES**

The primary objective of this CEP-SAP project is to support the countries to consolidate and begin to implement the Strategic Action Programme for the Caspian Sea, including filling gaps in information and developing capacity in the region for SAP implementation and project execution.

The first GEF support Project to the CEP focused on formulating a Transboundary Diagnostic Analysis (TDA) and development of National Caspian Action Plans and the Strategic Action Programme (SAP). Experts from around the region worked over a two-year period to analyse available data and information, and to identify the main perceived threats to the Caspian Sea. These perceived threats were evaluated at both the transboundary and national levels. For each of the perceived threats, a causal chain analysis was undertaken to identify root causes, and specific interventions to address those causes.

However, reliable quantitative data regarding the causes and impacts were either sparse or lacking, and although root causes could be identified they could not be ranked in terms of priority. Prioritisation is an essential step in the development of cost effective action plans. The analysis was therefore repeated from a different perspective. Taking into account earlier findings, the TDA team identified five Environmental Quality Objectives (EQOs), which represented the region's long-term vision for the Caspian. For each EQO a set of targets (with timelines) was developed and agreed to in order to achieve the objective and, for each target, a listing of required and costed baseline and incremental interventions was developed. The full set of EQOs, targets and interventions appears in Annex C of this project proposal. These are the basis of the SAP, which is to be signed by all Caspian states in November 2003. The initial targets include interventions to support further strategic studies, to refine the TDA findings and to determine the relative impact of the perceived threats. Early targets also include policy, legal and regulatory improvements, capacity-building and institutional reform.

A key component to these early reforms is the enhancement of intersectoral cooperation. During the initial phase measures were taken with the intention of reducing the redundancy of efforts by competing sectors. Multiple ministries were addressing various components of a single issue. In many cases in these countries, the competing approaches were counterproductive and a waste of already limited revenues. Within the SAP the countries have emphasised the need to increase intersectoral inclusion and cooperation. It is a key objective of this project to improve intersectoral harmonization and to assist the countries to develop strong inter-sectoral mechanisms.

At the same time as the regional SAP was being developed, national teams were developing their National Caspian Action Plans as well. There were several iterations of the SAP, and NCAP development workshops and regional meetings were held to ensure that the two development processes were fully integrated and resulted in:

- i) Five NCAPs, which while dealing with country specific actions address both national issues and the regional (transboundary) issues as specified in the SAP,
- ii) A SAP, which while based on and summarised the priorities of the NCAPs, reflect the regional (transboundary and common) issues stated in the NCAPs.

It was recognised that only through the national endorsement of the NCAPs could the political and financial commitment to the SAP activities be assured; while the SAP itself would be a regional policy framework document, with voluntary adherence. The five NCAPs are therefore the pillars of the SAP and they should be considered together as a whole. The five countries are presently endorsing their NCAPs. In order to begin to implement the transboundary components of the SAP, the Project will help the states to take four critical steps. These steps involve actions that will allow the SAP to move forward, while continuing the support to the regional management and legal frameworks and are referred to here as the Project objectives.

***The four Project objectives are:***

- i. To commence implementation of the SAP in three priority areas: Biodiversity, Invasive Species and Persistent Toxic Substances***
- ii. To continue with specific capacity building measures to ensure a regionally owned CEP coordination mechanism capable of overseeing full implementation of the SAP and NCAPs and consolidate/update the TDA and SAP following a series of information gap-filling measures.***
- iii. To strengthen the environmental legal and policy frameworks operating at the regional and the national levels, and where necessary improve implementation and compliance of those frameworks.***
- iv) To achieve tangible environmental improvements in priority areas by implementation of small-scale investments supported by a matched small grants programme***

Implementation of these objectives will require addressing the existing threats and the underlying causes of these conditions.

**b. THREATS**

The major threats to the Caspian Sea identified during the TDA/NCAP/SAP process include:

- i) Habitat/Biodiversity Loss: Loss of habitat due to human activities (settlement, industrial usage, technogenic desertification, damming of rivers, etc.) and loss of biodiversity due to human activities (e.g., oil and gas exploration and exploitation, over fishing, habitat destruction, introduced species).
- ii) Pollution: Hot spots of pollution, due to industrial, agricultural, and urban sources of pollution; use of POPs (e.g., DDT, HCH) and certain heavy metals (e.g., copper) in agricultural settings, including pest control (witness recent widespread spraying of DDT in Kazakhstan, Russia, and perhaps Azerbaijan to control locusts); accidental spillage of oil and oil products in the coastal zone and at sea; increased localised nutrient levels, possibly due to inadequate sewerage systems and sewage treatment and poor maintenance of existing facilities.
- iii) Invasive species such as *Mnemiopsis*; some accessing the Caspian via the Volga-Don and Moscow canal systems, others due to purposeful introductions (aqua-culture, biological control, pet-trade).
- iv) Fisheries decline due to uncontrolled over fishing of certain fish stocks, lack of regional fisheries agreement, and limited national capacity to control poaching and implement fisheries regulations.

**c. UNDERLYING CAUSE**

The above threats to the Caspian environment have many underlying causes many of which are common to several threats including:

At a regional level:

- Lack of regional agreement on legal status of the Caspian Sea,
- Absence of a ratified and in-force Regional Framework Convention for the Protection of the Environment, or analogous agreement,
- Lack of specific protocols for such a regional Convention (including protocols on land-based activities, biodiversity - conservation, invasive species and fisheries management)
- Insufficient national budget allocations for the environment due to low priority placed on environmental issues
- Intense economic reliance on oil and gas resources of the Sea, with accompanying socio-political tensions
- Global over-valuation of sturgeon caviar, combined with decrease in available supplies
- Weakness in understanding and policy recognition of value of biodiversity conservation for current and future generations
- Lack of regional planning and management bodies (e.g., for regional EIA, responding to transboundary emergencies, fisheries management, or regional conservation efforts)
- Weak public (stakeholder) participation at levels of decision-making and weak public awareness (under-developed civil society) of environmental issues

At the national level:

- Institutional weaknesses in the existing policies, legislation, and regulatory frameworks to address specific problems of the Caspian Sea
- Lack of enforcement of existing laws and regulations
- Low income levels and poverty amongst some Caspian residents
- General weakness of Environmental Agencies/Ministries in the region
- Absence of government will and budget dedicated to environmental matters
- Transition economies leave large gaps for abuse of power in coastal and marine affairs (fishing, poaching, use of resources, planning/management)
- Lack of an effective coastal zone planning and management function in all five countries
- Weak inter-sectoral cooperation on environmental issues (e.g., conservation, fisheries, resource use)
- Low value attached to environmental consideration in development planning

**d. BASELINE SCENARIO**

The countries are slowly moving towards stronger environmental policies, as their economies evolve and grow. Evidence for this comes from a variety of sources, including their adoption of many international conventions their active participation in the negotiations of the Framework Convention for The Protection of The Caspian Sea, and improved cooperation with CITES regarding the management of the sturgeon fishery. However, weaknesses in the Ministries of Environment in the Caspian states have led to poor compliance with existing national legislation and slow implementation of those international conventions that have been signed and ratified. Economic growth is given priority by all the countries while the environment remains low on the current political agendas with the consequent inadequate budgetary resources for environment. This situation will continue in the short-to-medium term since it is unlikely that the environment will benefit greatly from the expected oil and gas bounty in 5-to-10 years time under the present policy framework.

In areas surrounding the region's hot-spots the coastal population has grown accustomed to an impoverished natural environment. They have adapted to these unfortunate conditions, yet are experiencing adverse health impacts while doing so. With the present severely under-developed civil society, the attitude of powerless adaptation is unlikely to change in the next few years. The Caspian Sea is a threatened environment, which needs protective measures in place and support from civil society involvement to save it from further degradation. Governments tend to make decisions based on inaccurate or incomplete data regarding the environmental status of the Caspian (for instance, lacking up-to-date monitoring data on the Sea leads to severely outdated policy formation.). Occasional disagreements between departments within Ministries have led to compromised strategies and action plans. This ultimately results in waste of precious resources and policy stagnation. Regional cooperation often has benefited from international partner stewardship, though regional measures have taken place independently as well (e.g., Bioresources Committee). Throughout the region there are numerous internationally supported projects that partially address environmental issues, and do so incompletely and without coordination with other efforts. Project related international support and partnering has encouraged broad regional cooperation at a time when it is tenuous due to the unresolved legal status of the Caspian Sea.

The environmental damage to the Caspian has come to attention of the world quite dramatically over the last ten years with the failure of the sturgeon fisheries, decline of the Caspian seal, impact of invasive species such as *Mnemiopsis*, and increase in oil production by multinational corporations. However the major damage was begun much earlier in the 1950's and 1960's with the expansion of the industry and agriculture in the Soviet Union, combined with the impoundment of the great rivers entering the Caspian for hydro-electricity and irrigation waters. Slowly the anthropogenic pressures placed on the Caspian took their toll and brought about a sudden, although not fatal, collapse. To reverse the trend there needs to be active interventions on numerous fronts, but there also needs to be patience. The Caspian is an extremely large water body with a very slow flushing rate and it will be slow to react to the remedies, just as in the same way it was slow to succumb to the anthropogenic impacts.

**e. ALTERNATIVE SCENARIO**

The alternative scenario includes continued support from GEF and other international partners to catalyse and facilitate measures to project the Caspian environment. The GEF and other international partners have successfully assisted the parties in addressing transboundary environmental issues; this is the role they can continue to bring to the CEP. The work of the CEP will continue as a transitional mechanism towards a Convention and permanent secretariat. With support from the CEP international partners, the countries will proceed towards signing the Framework Convention, agreeing to institutional arrangements, and negotiating key regional protocols and agreements (Biodiversity, Invasive Species, Oil Spill Contingency planning, Fisheries Management, and others). International partner support to assist the countries with upgrading their policy and legal groundings, strengthening their institutional arrangements, improvement of compliance with existing national legislation, and implementation of multi-lateral and international environmental agreements will provide a firm foundation for future protection of the Caspian environment. Through the CEP, the importance and value of the Caspian environment can be advocated effectively at the international, national, and, importantly, the regional administrative levels. Assistance from the international partners for implementation of the SAP will provide the impetus for the National Governments to implement their own endorsed NCAPs. The NCAPs and SAP reflect a clear and empirically based quantitative assessment of the environmental status of the Sea derived from the TDA. Revision of the TDA based on the enhanced information base which this project will in part support, particularly in the fields of biodiversity and contaminant loading, will continue to serve as the much-needed technical basis for prioritising additional national and regional reforms, updating the SAP/NCAPs, and therefore enable better targeting of the riparian states' limited resources.

The CEP will provide a nucleus around which support from other international organisations can be mobilized. Specifically, the CEP can encourage the oil and gas sector to provide comprehensive and coordinated support towards the protection of the environment. More open and comprehensive private sector involvement will also assist the region to develop a sustainable mechanism for this alternative scenario. International donors will continue to have an impact on regional cooperation by supporting public awareness and participation efforts, with strengthened regional NGOs communication, implementation of a regional EIA process, and more transparent environmental decision-making processes.

More specifically, the Project will result in the following alternative scenario:

- i) Primary toxics of concern (chlororganics, oil-related products, and some heavy metals) recognised and sources clearly identified; legal/policy interventions reviewed and further reforms agreed in updated SAP/NCAPs- so national legislation will address these primary toxics of concern more effectively (and identify means to strengthen compliance of existing laws), creation of regional and national plans of action for land-based sources, development of a focused, integrated regional monitoring programme utilizing bio-marker and biological effects techniques.
- ii) Improvement of the protection status of globally significant biodiversity in the Caspian, including an agreed protocol for the Convention and protection measures implemented for specific species and habitats, regionally agreed biodiversity targets (BSAP) and creation of a network of protected areas focused on priority targets, and the development of a regional biodiversity monitoring programme.
- iii) Invasive species control mechanisms identified in a Protocol to the Convention, national commitments and actions to voluntarily follow IMO Guidelines on ballast water treatment and to endorse anticipated ballast water convention, a regional body established to provide expert advice regarding introductions, and public awareness/education projects conducted, and an action plan for addressing the problem of *Mnemiopsis* implemented.
- iv) Commencement of SAP implementation, following high-level endorsement of the SAP and NCAP by each riparian country.
- v) Establishment of a permanent country supported PCU -as custodian of legal documents governing the CEP, and as operational programme management and coordination with capacity to implement and execute regional projects. The PCU is to be located in Tehran for the duration of the project.
- vi) Enhanced capacity in the National Coordinating Structures to implement and execute national projects and assist with execution of regional projects and development of institutional structures to deliver intersectoral cooperation, communication and coordination.
- vii) Regional and national capacity for monitoring and evaluation of SAP and NCAP implementation.
- viii) Incorporation of SAP and NCAP priorities into ongoing activities and programmes of the Implementing Agencies in the region.
- ix) Capacity to effectively involve all Stakeholders, in particular coastal communities, in developing planning processes for Caspian environmental protection.
- x) MSGP implemented to address issues of immediate concern and to further encourage public participation

**f. RATIONALE - Why should GEF get involved at all?**

Continued attention to the regional environmental agreements currently being negotiated will be required of the national and international community, as the region struggles to agree on the legal status of the Sea. These regional environmental agreements include Fisheries Management Agreement, Framework Convention, Oil Spill Response Cooperation Plan, Caspian Biodiversity

Action Plan, Hydrometeorology Cooperation. Lacking a formal agreement regarding the legal status, some governments may be inclined to delay progress on these environmental agreements, except when encouraged by the international community. On their own, the countries will continue their focus on national environmental issues, and neglect the transboundary ones (primary toxics, globally significant biodiversity including sturgeon, and invasive species). By neglecting these critical transboundary issues, the shared waters of the Caspian will not be improved and the collective management of the biodiversity will suffer. GEF funding will provide the incremental funds needed to allow these countries to focus on and resolve these transboundary issues. The GEF has gained regional acceptance as a major international partner and leader in regional and transboundary environmental initiatives, in collaboration with the various UN agencies, IFIs and EU/Tacis. The execution of the alternative scenario outlined above would benefit greatly from this continued leadership. UNDP's strengths in capacity building, institutional strengthening, increasing public awareness, enhanced multi-stakeholder participation, and demonstration projects (through the Matched Small Grants Project) will help lead the region to a more sustainable environmental framework. UNEP's strengths in regional agreements will assist the region in achieving consensus on these issues. The experience in interaction with the private sector (particularly the oil and gas industry) during the first phase of GEF support to CEP has been particularly useful in striving towards a long-term sustainable mechanism for the environment. The ongoing support of GEF for CEP will ensure that continuity is maintained and optimal results of addressing key transboundary issues is achieved.

**OBJECTIVE I: To commence implementation of the SAP in three priority areas: Biodiversity, Invasive Species and Persistent Toxic Substances.**

**OUTCOME A: A quantitative assessment of habitat loss in the Caspian and its coastal zone and verification of critically threatened areas, and the design and establishment of a standardized monitoring methodology programme for the Caspian Sea in conjunction with the oil and gas industry.**

**Justification:** Early during the data collection phase in the first GEF support project it became clear that there was a dearth of information regarding the status of the Caspian marine and coastal habitats and species. There was no evidence of any current systemic monitoring of habitats or species being undertaken by either government regulatory bodies or academic institutions. It was even more surprising that there was little evidence any data collection had taken place in the recent past. The only organizations which professed to have undertaken any monitoring of biodiversity were the fisheries organizations, in particular the Russian Fisheries organization and its institute KaspNIRKH based in Astrakhan, which had collected data as part of its fisheries mandate. However, these data could not be made available to the CEP for reasons of sensitivity. Questions remain over the value to CEP of these fisheries data. The international oil companies have undertaken detailed surveys of the areas close to their existing or planned facilities and in potentially affected areas as part of the baseline Environmental Impact Assessments required by their Production Sharing Agreements. With the oil companies' permission CEP was able to obtain a considerable number of these surveys and analyze the results as part of the TDA. However, these are only small pieces of a bigger jigsaw puzzle and in themselves provide little information regarding the overall biodiversity and its health in recent times. The most complete historical picture comes from work done in the 1950's and 1960's, which is summarized in L.A. Zenkevich's Caspian Sea volume of his 'Biology of the Seas of USSR' series written in 1963. Many of the reports prepared by the national experts for CEP drew heavily on this work, in many cases without much added value.

In the past the Caspian was the focus of many scientific studies and expeditions lead by the Soviet zoological and botany institutes. The Zoological Institute (ZIM) in St. Petersburg has been able to provide CEP with a meta-database of Caspian scientists and papers, proceedings and publications stretching back for over one hundred years. There are also records of extensive reference collections of Caspian flora and fauna deposited in St. Petersburg, but they have remained unavailable. The importance of good reference collections is especially critical in the Caspian, where there is tremendous intra-species diversity because of great variability of physical and climatic conditions. Species, which were classified as distinct, have now been found to be regional variants of the same species and the level of endemism in the Caspian is being questioned. Some independent laboratories working with the oil companies have begun to establish their own databases and reference collections out of necessity, which are now valuable tools to help in the understanding of Caspian biodiversity.

Both marine and coastal Caspian habitats are coming under increasing pressure from urban and industrial development and it is agreed that there has been an extensive loss of habitat over the past fifty years. However, there no regional or national record of these changes and no coordinated response to protect those key habitats that do remain. Studies of historical satellite images by CEP have shown considerable changes in land-use within the last ten years and expanding desertification on the eastern and western Caspian coasts. As part of their National Oil Spill Contingency Planning Measures the countries are now beginning to map out their marine and coastal sensitive areas, some for the first time. The CEP and EBRD, as well as the international oil companies have been assisting the national regulatory bodies prepare environmental sensitivity maps of their coasts and coastal waters in accordance with International Maritime Organisation guidelines (IMO). CEP has also developed a proposal for an online interactive map of the whole Caspian in conjunction with UNEP's World Conservation and Monitoring Centre (WCMC) in Cambridge. This will be similar to maps that WCMC already have available for the Caribbean and Mediterranean. The ImapS (Interactive Maps Service), as it is known, will be one of the activities of Outcome A and will form a block of the new biodiversity database to be developed.

The Project will support the design and development of a Caspian Coastal Sites Inventory concentrating on sensitive sites based on vulnerability or environmental sensitivity index (ESI) and biotype. Existing data collected from the relevant Ministries (Environment,

Shipping and Emergencies), scientific institutes, NGOs and oil companies will be used to compile the preliminary inventory. Where deemed essential, limited field studies will be undertaken to supplement this. This study and subsequent mapping (ImapS) will provide a database of valuable sites and vulnerable key species habitats around the Caspian coastline for use by local government, private companies and community organisations in each of the Caspian's coastal provinces, as well as by national and international agencies. ImapS will combine information on the distribution and extent of coastal and marine habitats and the ecological conditions, environmental sensitivity, usage history and legal status of sites in GIS format that can then be accessed on the World Wide Web.

ImapS will be linked to and built upon an expanded biodiversity database of species, the pilot for which was developed by the CEP in the first GEF support project. The pilot Caspian biodiversity database was prepared in collaboration with the St. Petersburg Zoological Institute and KaspNIRKH. The expanded database will comprise three blocks: species description and natural history; Caspian Coastal Sites Inventory and ImapS; and field data. It will be in English and Russian and will cover all major phyla and classes. The Project will also support the revision and refinement of the check-list of Caspian species prepared during the first GEF project and will identify species those to be included in a Caspian Red-data book. Where possible, the database will also include electronic identification keys.

The Project will use the preliminary results of the Caspian Coastal Sites Inventory to form the national and regional guidelines for the protection and rehabilitation of environmentally sensitive sites and to assist on-going conservation projects in the region. These will include contingency plans for managing the major prevailing threats to vulnerable sites and will provide the policy framework for design of a regional monitoring system. The aim is to establish everyday tools that will be useful for coastal development planning, identification of priority sites for protection or restoration, and management of oil spills, clean-up operations and other emergencies at different types of sites (to be incorporated in the national and regional oil spill contingency plans).

The final step will be the design of a monitoring programme to meet the decision needs imbedded in the proposed guidelines for the protection and rehabilitation of environmental sites. The monitoring programme must be cost effective and sustainable, to be supported by a combination of government regulators, research institutes, NGOs and the private sector. The monitoring programme must utilize and integrate all available information to give the most complete picture possible of the health status of Caspian biodiversity. Sources of data include:

- Fish catch data and fisheries research programmes
- Plankton surveys (sampling equipment to be established on oil company service/exploration vessels)
- Oil and gas company monitoring programmes from fixed off-shore installations
- Government agency monitoring programmes (see below and outcome D)
- Monitoring programmes from coastal protected areas and 'Caspian Watch' network (see below).

More worrying even than the lack of information about Caspian biodiversity is the severe capacity crisis. There are very few scientists working on biodiversity in the region and most of them are in the latter half of their careers and can be quite rigid in their thinking. These scientists typically have a fisheries background, which somewhat colours their ideas on conservation management. A major objective of this second CEP project will be to execute a capacity building programme targeting biologists and conservation managers in the region. Personnel from relevant national and local government agencies and research organizations will be trained and equipped in the monitoring techniques required under the proposed monitoring programme. Young scientists will be targeted and the training experience of the Caspian Floating University, Astrakhan, which was established jointly by CEP and UNESCO in the first GEF support project, will be utilized. The private laboratories serving the oil companies such as the ERT laboratory in Baku will be asked to provide assistance. The training will include basic taxonomy, sampling techniques (marine and terrestrial), use and development of electronic keys, and vegetation and land-use mapping. [The project would also facilitate formal academic exchanges for post-doctoral researchers at leading international laboratories and research centres.] It is hoped that a monitoring centre can be set up in each of the Caspian states at strategic locations, fully equipped to execute the proposed monitoring programme with the assistance of the private sector. In establishing this network the project will consult with the Secretariats for Convention for Biodiversity and Convention for Migratory Species.

In addition, a series of workshops will be organized to introduce the specifications and operation of the Caspian Coastal Sites Inventory (CCSI), ImapS technology and to build local capacity in its use in each coastal province. The Project will facilitate adoption of the CCSI by local groupings of private companies, local NGOs and interested community groups with the purpose of forming a 'Caspian Watch' network of voluntary monitors and reporters. The Project will provide training to these networks, using a mix of international and government agency personnel as trainers. The work will take into account the findings of, and the lessons learnt, from a UNDP/Shell supported project in the I.R.. Iran, namely the Environmental Sensitivity Mapping System, and will endeavour to include Risk Assessments elements.

The activities under this outcome are summarized below:

<b>Activity A1:</b> Undertake a quantitative assessment of the coastal and marine habitats of the Caspian Sea and develop a preliminary Caspian Coastal Sites Inventory, which will include information on environmental sensitivity, prevailing threats (including water level fluctuations), usage history and legal status of the sites.
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<b>Activity A2:</b> In collaboration with UNEP's World Conservation Monitoring Centre produce quantitative and accurate Environmentally Sensitive areas maps of the Caspian and make available using internet map server technology (ImapS). These maps will form one block of a Caspian biodiversity database and be a component of the Regional Oil Spill Cooperation Plan.
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<b>Activity A3:</b> Create an up-to-date Caspian biodiversity database, building on work done in the first GEF support project to CEP.
<b>Activity A4:</b> Develop guidelines for the protection and rehabilitation of environmental sensitive sites and design a monitoring programme to serve the decision making process.
<b>Activity A5:</b> Provide training to government agencies, NGOs and local communities on execution of the monitoring programme.

***OUTCOME B: Preliminary implementation of the Caspian Biodiversity Action Plan, focusing on compliance with existing nature protection regulations, implementation of species and habitat protection conservation action plans and targeted public awareness campaigns***

***Justification:*** The biodiversity components of the Project place deliberate emphasis on initiating specific on-the-ground management actions. The aim is to move beyond assessment and planning, to purposefully devise, test and initiate demonstrations of effective solutions to some of the important environmental and biodiversity conservation issues that are facing the Caspian littoral States. While the Project provides for some further preparatory tasks in Outcome A, the main thrust of this outcome is a series of pilot and demonstration management actions that make use of the surveys, data-gathering and analyses that has already been undertaken. The rationale for this approach is that resources are limited and the priority needs are to foster local concern and political will, and thus to strengthen local capacity for managing human activities affecting the Caspian.

To this end, there is an urgent need to devise and demonstrate appropriate, effective means of strengthening natural resource management in the Caspian. It is also important to build and equip a broad community of local stakeholders with the capacity to influence governance, use and conservation of the Caspian Sea. This ‘bottom-up’ approach will start with local pilot activities, to demonstrate effective solutions, and then extend effective models upwards and outwards.

In order to achieve sufficient demonstrable progress towards appropriate management solutions in the short time-span of the Project, only a limited selection of the Caspian’s priority biodiversity conservation issues will be tackled. For each selected issue, swift development will be made through a systematic process of management-oriented data gathering, planning, decision-making, action and evaluation. The three activities within this component are:

- Establishment of Caspian Eco-net of Conservation Practitioners
- Development and implementation of Caspian Seal Action plan
- Development and implementation of a coastal lagoon adaptation plan, I.R. Iran.

Over the coming decade, other agencies and programmes will be implementing a number of other significant conservation projects at particular sites around the Caspian. Planned projects include the International Crane Foundation’s management support for important migratory bird sites across the region; UNDP-GEF conservation projects in the Volga delta, Kazakhstan wetlands, and on the Iranian Caspian coast; World Bank-GEF proposals to support management of Hazar Reserve in Turkmenistan, the Ural River in Kazakhstan, watershed and coastal management in I.R. Iran and Azerbaijan and JICA supported project in Anzali Lagoon in Iran. They will also include elements of capacity building and the development of tools and systems for effective multiple use management of natural resources. The CEP Project will play an important function in linking, coordinating, and exchanging resources and lessons. The CEP Project will integrate these more specific or localised projects as appropriate. In this way, the impacts of these efforts will be of greater duration and more extensive geographically.

A conservation capacity building programme for conservation practitioners will be developed and facilitated by the full-time Project biologist plus a part-time technical resource person in each country. This team will work in conjunction with a specialised conservation training institution, such as the WWF College, Wetlands International or an established university. These institutions will serve as an external partner with the ability to draw in short-term specialist trainers and advisors. Some participants will have opportunities and resources from other external assistance projects, and these links will be encouraged and fostered as much as possible. In this way the capacity-building activities under the CEP will be coordinated with those of other GEF projects such as those in the Volga, Ural and Hazar Reserve.

Using the training programme as a springboard, the Project will support the establishment of a network of conservation practitioners in the region, provisionally termed CoNet. The Caspian Bio-Net listing of scientists and other stakeholders that was prepared with World Bank support would provide an input to the CoNet. The training programme participants will form the core founding membership. Activities will include servicing CoNet for the first three years, including costs of administration, a CoNet newsletter, electronic communications between members, and links to allied groups such as the World Conservation Union - International Union for the Conservation of Nature (IUCN) and World Commission on Protected Areas (WCPA). The long-term aims of CoNet will include developing and sharing common resource materials, facilitating exchange of experiences regarding issues and lessons, regional conferences, study tours. CoNet will possibly serve a Caspian Alert System to warn of emergency events likely to threaten conservation sites in the region and facilitating rapid and coordinated responses.

The Project will provide guidance for initiatives to conserve the endemic marine mammal, the Caspian seal, as the main top predator in the Caspian Sea. The Caspian Seal is characteristic of much of the flora and fauna of the Caspian Sea - it was originally an import. The seal is thought to have originated from the Arctic Sea during the glacial periods along with the Lake Baikal seal. The Caspian seal

is one of the World's smallest seals, weighing 50-60 kg and has adapted to the Caspian's harsh environment. It is listed in the IUCN Red list of threatened animals as vulnerable and it is unclear how many seals remain in the Caspian. The population in the early 20<sup>th</sup> century was estimated to be more than 1 million. Population numbers at present are unclear with estimates varying between 30,000 to 400,000. The true significance of the recent mass mortalities of up to 10,000 individuals is unknown but they do signify an alarming indication of deteriorating ecological conditions in the Caspian Sea. The seal is a flagship species at the top of the food-chain and sensitive to impacts and consequences of human activities in the Caspian Basin. It is a bell-weather species. The CEP has a significant role to play in coordinating and facilitating concerted actions leading to conservation of the Caspian Seal, between countries, and scientists, policy makers and managers.

The Project will support four priority Seal-related activities over the next 3 years: (a) seal population surveys; (b) coordination of seal health research; (c) lobbying for improved protection measures; (d) formulation of a Caspian Seal Management Plan.

The Seal activities will be guided and monitored by an ad hoc Seals working group, comprising a small number of local and international experts and a representative of the PCU reporting to the Biodiversity Advisory Group. The working group will be supported by the Project, organising a series of workshops each year for planning, coordination and analysis.

The Project will coordinate a series of annual Seal surveys of the whole Caspian, comprising both aerial survey and photography, and on-ground monitoring of numbers at haul-out and pupping sites. An existing, specially equipped plane operated by the Russian Federation State Committee of Fisheries and in cooperation with authorities in the Caspian states will undertake the aerial survey and photography. The Russian Fisheries institutes in Murmansk (currently involved in the survey of Lake Baikal seals) and Astrakhan have been identified as potential partners. In parallel, a synchronised series of systematic field site surveys will be organised and undertaken by local and national conservation groups and NGOs, coordinated and with some operational funds provided by the Project.

There is a priority need to better understand the proximal and root causes of the recent mass mortalities of seals in the Caspian. Monitoring levels of seal mortality is proposed at 3-4 key locations and conducting post-mortem examination and analysis of seal tissues to determine levels of Persistent Toxic Substances (POPs, hydrocarbons and metals) and incidence of canine distemper virus. This work will be linked with the Persistent Toxic Substance activities outlined in Outcome E. The Project will work closely with World Bank, which, through a Japanese Trust Fund, plans to propose a second phase of the CEP Ecotox study. Emphasis will be placed on enabling local scientists and institutions to undertake this work where possible. When outside assistance is required it will be made available, for example for sophisticated laboratory analyses.

The Project will advocate and facilitate introduction or strengthening of specific immediate protection measures for local populations of the Caspian Seal. Measures will include, inter alia, enhanced active protection of seals from all disturbances at critical stages of their life-cycle and a moratorium on seal culling for scientific or commercial purposes. The lobbying and facilitation activities will include information distribution; drafting model regulations, – with the aim of encouraging each national authority to take the necessary actions – formation and involvement of the public interest groups in routine seal population monitoring (see Outcome I); development of environmental education programmes for schools centred on the Caspian Seal and its ecology; and ensuring, through training and network activities, that conservation site managers are knowledgeable about seals and their conservation needs. In addition, it is hoped that plans can be formulated for a seal research and rescue centre and implementation commenced, within the lifetime of the Project and with the assistance of the private sector and governments of the North Caspian states,

Over the 2-3 years of the Project, the CEP and Advisory Group will work towards incorporating these and additional elements into a Caspian Seal Management Plan. This will be designed to frame systematic implementation of actions in each country, and in due course become a common regional plan under which the issues are being tackled and endorsed as part of the proposed Biodiversity Protocol to the Framework Convention for the Protection of the Caspian Marine Environment.

There are numerous coastal and marine habitats identified in the NCAPs and CEP Biodiversity Strategy and Action Plan which require protection, too many for the Project to address at once. Threats come from climate change, water level fluctuation, pollution, sedimentation and urbanization, and nowhere is this more dramatically demonstrated than on the southern coast of the Caspian in the I. R. Iran. The narrow, fertile coastal strip has seen rapid agricultural and urban development with a large increase in population and reduction in wetland habitat. After discussions with I. R. Iran Department of Environment, it has been agreed that one of the coastal lagoons will be the subject of an adaptation pilot project to determine the best management strategies under differing water level scenarios. There are a number of lagoons along the Caspian coast including Anzali, Amirkola and others. Many are nationally protected areas and some Ramsar sites. Fed by the short rivers flowing from the Albrus range, the top of the catchments are heavily forested with the trees making way for intensive agriculture, including rice, on the coastal plain.

The lagoons are at the mercy of the Caspian Sea. Recent water level fluctuations of the Caspian brought about by climatic change impact upon the distribution and salinity of the lagoons, which, if gradual can be accommodated by the system. However, in recent times rapid water level fluctuations have been experienced, and combined with urbanization have created concrete barriers to the landward retreat of the lagoons. Added to these problems are high levels of siltation caused by de-forestation in the upper catchments and high agro-chemical inputs (fertilizers and pesticides) for the surrounding farmlands.

To protect the lagoons and numerous other wetlands on the southern Caspian coast they must be allowed to adapt as best as possible to Caspian Sea changes, removing all artificial constraints and minimizing anthropogenic pressures. The ability of the pilot lagoon to

*adapt under present conditions will be assessed under different water level fluctuation scenarios and a management plan for the lagoon's adaptation will be prepared and protection measures initiated. The project will also address the coastal eutrophication issue. The Project will work with the environmental agencies, local government authorities, local NGOs, community groups and interest groups (fishermen, farmers, foresters and tourism businesses) in preparation of the plan. The planned impact will be to amend land-use planning and practices throughout the lagoon basin and not just in close proximity to the lagoon and it will include an economic valuation of the lagoon to local and wider communities. It is anticipated that thresholds will be set for water and siltation levels above which key decisions will need to be made. This will require permanent monitoring of these parameters at strategic locations to establish and to support empirical decision making.*

*At the end of the pilot project, which is envisaged to take two years, the results will be demonstrated at a regional workshop to be held at Ramsar and lessons learned for other coastal lagoons and wetlands will be presented and discussed.*

*The activities under Outcome B are summarised below:*

<b>Activity B1:</b> Establishment of an Eco-Net around the Caspian, comprising a coordinated network of conservation practitioners from institutions, NGOs and other stakeholder groups. A structured training programme will be provided and linkages facilitated with international conservation groups.
<b>Activity B2:</b> Development and implementation of a conservation action plan for the Caspian seal. Assistance will be sought from the private sector in implementation of the plan.
<b>Activity B3:</b> Implementation of a water level fluctuation adaptation management plan for a coastal lagoon of global biodiversity significance selected for a pilot project.

***OUTCOME C: Implementation of the CEP invasive species action plan in close coordination with the GEF GloBallast Ballast Waters project to address, in particular, the impact of the ctenophore Mnemiopsis on the Caspian ecosystem.***

***Justification:*** *The movement of exotic plant and animal materials between regions and ecosystems has increased significantly in recent decades through diverse human activities, including agriculture, horticulture, aquaculture, forestry, trade, research and travel in general. A significant number of alien plant and animal species have been introduced to the Caspian, some inadvertently and others with the deliberate intention of augmenting the indigenous biota, leading to benefits for humans. Introductions have been made without due consideration being given to protection of the Caspian ecology, of its indigenous biota, or to ensuring that impacts and consequences of introductions are minimal.*

*The biology of the Caspian Sea and its coastal lands and waterways has evolved in geographic isolation from other seas and aquatic systems. It includes numerous endemic plant and animal species and biological communities with distinct characteristics. It is also a relatively simple system with low species diversity compared to other places of comparable age and size. The combination of isolation and low diversity may have made the ecology of the Caspian especially vulnerable to the impacts of alien species introductions.*

*The Transboundary Diagnostic Analysis prepared in the first phase of the CEP records over 47 alien species imported either deliberately or by accident into the Caspian in recent times. Indigenous Caspian species have also been exported and have become aggressive invaders of new territories elsewhere, for example the zebra mussel in the Great Lakes of America. The Caspian is a very unstable and variable environment and the successful Caspian species demonstrate great genetic plasticity and adaptability making them ideal invasive species. To date, there has been a general lack of consideration and regard by government authorities and those engaged in the primary producing industries for the protection of the natural ecology and biodiversity of the Caspian Sea from the possible impacts of introduced species. Little attention has been given to exerting quarantine controls over the import and export of biological materials to and from the region.*

*The Caspian's most serious invasive species currently is the ctenophore Mnemiopsis leidyi, which is thought to have been introduced into the Caspian in the ballast waters of ships travelling between the Black Sea and the Caspian via the Volga-Don river systems. Urgent action is needed to work out the most sensible ways of dealing with the problems caused by Mnemiopsis, and ameliorating the major damaging consequences if possible. The CEP has an important role to play in driving these actions and increasing the urgency with which they are undertaken. At the same time, there are no easy solutions and the CEP must ensure that investigations are conducted rigorously. The current situation must not be exacerbated by rash actions. There is an outstanding need to prevent similar disasters in the future. The Project will aim to accelerate the investigative activities initiated in the past two years on Mnemiopsis and will also provide leadership in the development of a comprehensive approach to the control of species imports and exports throughout the Caspian.*

*A number of activities were supported and encouraged by the GEF in the first support project. These centred on establishing an Invasive Species Advisory Group (ISAG) involving all countries and regional and international experts, monitoring the spread of Mnemiopsis through the Caspian basin, establishing a Mnemiopsis database, and assessing and forecasting its ecological, economic and social impacts. Support also focused on conducting laboratory experiments on the ctenophore predator Beroë ovata, and preparing a plan for using Beroë in the biological control of Mnemiopsis. An assessment was compiled of the likely effects of such a secondary introduction if it was to go ahead, with the formulation and agreement on an action plan to counter the treat of Mnemiopsis.*

The ISAG set a number of pre-conditions on the introduction of *Beroë* as a biological control agent and proposed procedures for country consultation prior to introduction. The pre-conditions included:

- Further in-vitro experiments on the feeding behaviour of *Beroë* in Caspian waters including mesocosm experiments.
- Propagation and cloning of trials of *Beroë* to guarantee controlled introduction.
- A thorough assessment of possible impacts and consequences of the introduction of *Beroë* into the Caspian Sea, drawing upon studies done in the Black Sea - where it has been present for more than four years - and its home waters.
- Approval in principal to its introduction by the five littoral states.

Also further work is required to assess the overall impact of *Mnemiopsis* on the Caspian since it differs greatly from the Black Sea with regard to sea temperature and salinity distributions and therefore its suitability for *Mnemiopsis*. In the cold freshwaters of the North Caspian very few specimens have been found while in the South Caspian the biomass of *Mnemiopsis* has already been recorded above the maximum value found in the Black Sea.

The Project will support the continued work of the CEP Invasive Species Advisory Group, which will operate as working group to the Biodiversity Advisory Group once formed. The ISAG will be responsible primarily for driving and guiding the efficient implementation of the planned activities, with support provided by the Project Biologist. The group will also maintain an overview on the spread and impact of *Mnemiopsis* in the Caspian, and review and apply information from other research and management programmes concerning *Mnemiopsis* and *Beroë*. The Project will disseminate up-to-date information to the public, governments, other scientists and managers using a quarterly bulletin, via the CEP communications network and the CoNet.

The Project will also support the on-going monitoring studies being undertaken by the Caspian states of *Mnemiopsis*. In Russia, Azerbaijan and I.R. Iran the fisheries authorities coordinate the work with technical assistance being provided by CEP; the Project will continue this support. In Kazakhstan and Turkmenistan only limited work has been undertaken because of lack of sampling equipment and vessels and in both these countries more active support will need to be provided. The monitoring programme should be extended to include concurrent standardized sampling of the composition and density of zooplankton on which the *Mnemiopsis* feed. The impact of *Mnemiopsis* on the zooplankton will indicate what might be the ultimate impact on the Caspian fisheries (kilka, herring, sturgeon) and Caspian Seal, with *Mnemiopsis* preying firstly on the slower moving more vulnerable zooplankton species. Efforts will be made to mobilize a wider monitoring network to include research institutes, universities, NGOs and commercial organizations. The purpose of these surveys will be to capture regular data on the distribution and development of the *Mnemiopsis* population, comparing and contrasting these data with data on zooplankton and fish stocks (regular stock assessments are now being undertaken by the countries) to establish its current and predict its future impacts. The existing *Mnemiopsis* database will be extended and developed to include GIS technology to help make these comparisons possible.

Further support for research into the impact of introduction of *Beroë ovata* or other biological agents for the control of *Mnemiopsis* will be provided by the Project in the form of mainly technical assistance. Limited funding will be provided to conclude the experiments that have been already started in I.R. Iran, under the direction provided of the CEP ISAG.

In I.R. Iran, the Fisheries Organisation has conducted an assessment of the possible ecological impacts and risks of the introduction of *Beroë*, based upon a complete proposal for its introduction from Iranian waters. The CEP has provided regional and international technical assistance to help develop and review the proposal and assessment. The relevant authorities in I.R. Iran are now considering the proposal. If all Iranian conditions are met it will be shared with the relevant authorities in the Caspian States. It is understood that I.R. Iran will not go ahead with the introduction unless all necessary in-vitro experiments are undertaken and a consensus is reached by all five Caspian littoral states. However, I.R. Iran will not expect all five states to go through their official approval procedures but simply to comment positively or negatively on their proposals. This will be a test-bed for the development of standard regional procedures for the introduction of alien species to be abided by all littoral states. Under the present timetable the laboratory work will be completed by July 2004 and the introduction, if approved would take place in September 2004. If a decision to proceed is made by the five States, the use of further Project funds to assist with the introduction, subject to the review and endorsement of the CEP Steering Committee will be considered. The project will endeavour to coordinate with and benefit from FAO advice.

To date, insufficient attention has been given to effective quarantine controls for the Caspian region against accidental introductions. Similarly, there has been little observance of the precautionary principle with regard to deliberate introductions. Knowledge of the local biology and the behaviour of introduced species are inadequate in most cases to predict the likely impacts, or to understand the impacts once the damage is done. Finally, little or no attention has been given to the reciprocal problem of Caspian species being exported and becoming threatening invasive pest species in other regions.

It must be noted that the alien species of the Caspian are not limited to the ML. In the south the introduction of a fast growing plant, *Azala*, into some lagoons as a fodder is now leading to serious eutrophication problems as the plant spreads into rivers, lagoons and rice fields.

The Project will support efforts to strengthen the systems for controlling import to and export from the Caspian of potential invasive species, with particular emphasis on aquatic species, including:

i) *An extensive review and evaluation of existing regulations, policies and practices in all relevant sectors, concerning the accidental or deliberate introduction or export of aquatic species (with the potential to be invasive in the Caspian) to and from the five Caspian States.*

ii) *The review and status report will be used to formulate a 5-year action plan for strengthening the region's system of controls over the import and export of species. The plan will be comprised of recommendations for effective, semi-standardised control regimes, extending to education, regulation, policy and practice, applicable to each country and across the region, and may include establishment of a Caspian Invasive Species Commissioner to independently evaluate all proposals. The recommendations will be developed through participatory processes with industry groups, government agencies and the public, coordinated through CEP ISAG and will be implemented through the NCSs.*

iii) *An Invasive Species database for the Caspian will be developed in conjunction with experts in the Russian Zoological Institute in St. Petersburg and Helcom.*

iv) *Particular attention will be given to systematically strengthening surveillance and regulatory controls over practices and avenues with the highest risk of introducing harmful species. The Strategy will incorporate updated black lists of the worst potential invasive species and the specific management plans compiled and put in place to tackle the identified priorities – see below.*

v) *Shipping through the Volga River and Volga-Don Canal is blamed for transporting live planktonic and benthic organisms in ballast waters and on hulls into and out of the Caspian Sea. A collaboration with the GEF-UNDP-IMO GloBallast project on a pilot monitoring programme to establish extent of transport of live organisms by shipping and public education programme will be established in the port of Astrakhan. In addition, a pre-feasibility study will be launched into means and ways of preventing ship-borne invasive species, including the construction of ballast waters reception facility in Astrakhan. This study will be carried out in close consultation with the Russian Ministry of Natural Resources, Astrakhan Port Authorities and the Russian Ministry of Shipping. The Project will try to encourage all countries to comply with existing guidelines on ballast waters management.*

*To date, there has been little concerted effort made to control or eradicate introduced species once they have become established as invasive pests in the Caspian. Effective control requires a systematic approach and cooperation between agencies in sharing information and resources. This is especially so in the Caspian region where all five states share responsibilities for using and protecting the sea. The Project will support development of a cooperative system for controlling the most destructive and dangerous alien species that have invaded the Caspian.*

*The activities included in Outcome C are summarised below:*

<b>Activity C1:</b> Support and expand the <i>Mnemiopsis</i> monitoring programme on-going in the five Caspian States.
<b>Activity C2:</b> Provide technical assistance in development of a proposal for the introduction of <i>Beroë Ovata</i> and/or other alternatives in the Caspian as biological control agent for <i>Mnemiopsis</i> , and provide support to the I.R. Iran and Russia in undertaking in-vitro behavioural studies of <i>Beroë</i> and an environmental impact assessment report.
<b>Activity C3:</b> Review the national legislation on introduction of alien species and make recommendations for the formation of a Caspian Regional body to evaluate and authorize introductions.
<b>Activity C4:</b> In collaboration with the GEF Globallast undertake an assessment of extent of traffic of ship-borne invasive species into and from the Caspian via the River Volga and undertake a pre-feasibility study into ways and means of controlling invasions at the port of entry Astrakhan.

***OUTCOME D: Assessment of the pollution loading of the Caspian and determination of the source, distribution and composition of Persistent Toxic Substances (PTS) which include persistent organic pollutants, oil product and heavy metals, in the riverine waters and sediments and coastal waters, in order to prioritise future interventions directed at amelioration of the environment.***

***Justification:*** *The Caspian Thematic Centre for Pollution Control and Abatement based in Baku with the support of the EU-Tacis programme undertook a survey of the land-based point sources pollution, in the Caspian coastal zone. The objective of the work was to identify a comprehensive list of priority hot spots and develop a programme of action to be taken in order to ameliorate pollution from land-based sources, as part of the CEP Strategic Action Programme. Unfortunately the study was hindered by a number of factors, including:*

- *Limited data on pollution loads from the main contributory river basins outside of the coastal zone defined as the study area.*
- *Uncertainty regarding the reliability of official pollution data, which were often deemed outdated, incomplete and not always correct, and limited verification of those data on the ground.*
- *No assessment of diffuse source pollution in the contributory basin.*

*Until a better understanding of the pollution sources is achieved the littoral states will continue to expound anecdotal theories regarding the pollution loadings in the Caspian and fail to develop credible action plans to tackle the problem.*

The first activity under this outcome will be a Rapid Assessment of Pollution Sources (RAPS), point and diffuse, in the near Caspian basin. The near Caspian basin is defined in the SAP as the contributory basin in the territories of Azerbaijan, I.R. Iran, Kazakhstan and Turkmenistan and Russia, but excluding the Volga basin upstream of the Volga Cascade impoundments at Volgograd. The upstream Volga basin is treated as a point source, as are the rivers Kura and Araks as they enter Azerbaijan territory.

The assessment will be carried out using the methodology developed by the GEF Global International Waters Assessment Project (GIWA), combined with a GIS database to enable pollution loadings to be estimated at a sub-basin level. Assessment of these diffuse sources, especially agro-chemicals, is of particular importance for the Caspian where one of the priority pollution concerns is organochlorinated pesticides. In addition to pollution loadings at basin and sub-basin levels, RAPS will provide a priority listing of pollution hot spots in the near basin. The RAPS results will be validated by on site investigations and cross checking against official data, and in the case of diffuse sources water sampling and analysis. When designing the RAPS questionnaire care will be taken to ensure that it is structured in such a way to elicit the information from the interviewee and not cause defensive response. The answers from the questionnaires will be compared to official data to determine the degree of correlation.

During the first GEF supported project to CEP, informal links were made with a number of international waters projects in the Kura, Volga, Ural and Iranian basins, including:

- The Russian Federal Volga Revival Programme
- UNESCO Volga Demonstration Project
- USAID Water Management in the South Caucasus (Kura)
- EU- Tacis Joint River Management Project –Kura basin
- GEF Lower Volga and Ural wetland management projects

In addition, linkages were made with the Academy of Sciences in each country and through those to active research projects. The Russian Academy of Sciences are particularly active in the Caspian and CEP has collaborated with the Oceanographic Institute in Moscow, NIRO the Fisheries Science Institute, the Zoological and Botany Institutes in St. Petersburg and research institutes of the Federal Service of Hydrometeorology and Environmental Monitoring Service. The CEP web-site contains a meta-database of all scientific institutions involved in the Caspian and a list of active scientists from all five countries. In this project, these linkages will be strengthened and deepened. Coordination of SAP activities and on-going research project will be undertaken by the CEP Advisory Boards, the ToR of which are given in full in Annex H.

These contacts have yielded valuable data on pollution loadings in these three river basins and some information on the sequestered loads in the Volga Cascade reservoirs, the Volga delta and Mingechar reservoir on the Kura. The Project will undertake a limited contaminant survey to determine levels in the reservoir sediments and contaminant fluxes during critical flow periods. In known sites of deposition in the Volga Delta, core samples will be taken and analysed for PTS in order to determine spatial and temporal information on loadings from the River Volga, which is often described as the major pollution source to the Caspian. A desk study will be undertaken to determine pollution loadings from the Araks River.

The RAPS will be a primary input into the Caspian Sea Programme of Action Plan for the Protection of the Marine Environment from Land-based Activities, which will be developed in conjunction with the Global Programme of Action for the Protection of the Marine Environment from land-based Activities (GPA) and based on their guidelines. The Action Plan will be a project document, however its findings and recommendations will be incorporated into the revised NCAPs and the SAP at the review stage, towards the end of the project. The purpose of the Programme of Action is to provide a framework for development of concrete, costed and targeted project proposals in a basin-wide setting. A set of project pre-feasibility studies for the top ten hot-spots (point or diffuse) will be prepared based upon a set of agreed design norms. Efforts will be made through the PCU to garner regional and international support to advance implementation of these hot spot pre-feasibility studies projects should they be included in the revised NCAPs.

The first GEF CEP support project developed a survey of contamination levels of Caspian coastal sediments; this was the first to be undertaken following the break-up of the Soviet Union. Despite incomplete coverage, and the unfortunate circumstance that did not allow the project vessel into Turkmen waters, an interesting general picture emerged (see section Environmental Issues) which was contrary to much of the perceived wisdom in the region. Some national experts have questioned the findings of high levels of pesticides, particularly DDT, and the lack of evidence of general, widespread hydrocarbon pollution. The pollution flux in the hot spots of Azerbaijan along the coast to I.R. Iran was not detected, and the survey did not confirm that the Volga was the major polluting influence on the Caspian, with relatively clean sediments being found throughout the Northern Caspian. One reason why the flux could not be detected was that measurements were taken below the natural mixing layer of the Caspian Sea; below 20 metres depth the Caspian is highly stratified.

Further surveys of coastal and off-shore areas are to be undertaken to give complete coverage of the Caspian and in attempt answer or address some of the criticisms which have been levelled at the first survey. Also perhaps samples of suspended material should be analysed in the near shore waters. The objectives will be to extend the current database of reliable information and update the organic and inorganic database created in the first phase. The project partner for this work will be the International Atomic Energy Agency's (IAEA) Marine Environmental Laboratory (MEL) in Monaco, who partnered the activities in the first project. However, samples may need to be sent to another laboratory for analysis of Dioxins and Furans and advice will taken from the POPs Convention Secretariat. In the first survey all analyses were carried out in Monaco, except for the Russian samples which were undertaken by the Russia Hydrometeorological laboratory, Typhoon, in Obninsk and was seen as a failing. Where facilities and

capacity exist, every effort will be made to involve national laboratories, in this second survey, split samples will be taken and inter-calibration exercises organized by MEL. The parameters to be measured will be reviewed in light of the results of the previous survey, but will include a full suit of metals, hydrocarbons (petroleum hydrocarbons and PAHs) PCBs and organochlorinated pollutants, classified as Persistent Toxic Substances within this study. Where appropriate the survey will again be undertaken along transect lines monitored by the Soviet Hydrometeorological Service, in some cases for more than one hundred years, and in key hot spot areas. In those areas where it is thought useful and appropriate, suspended solid as well as sediment samples will be taken for analysis.

In the first GEF CEP support project an attempt was made to help the countries to establish a Regional Ambient Contaminant Monitoring Programme and the Regional Centre for Effective Regional Assessment of Contaminant Levels, based in I.R. Iran, with the assistance of the MEL prepared draft proposals for consideration by the littoral states. Although the proposals were deemed useful they were premature and support from the countries was lacking. The crucial links between emissions, ambient contaminant levels and their impacts on the environment had not been made and the argument for establishing a regional monitoring programme was not strong enough for the countries. Insufficient knowledge of the emissions and their impact on the environment existed at the time to be able to design a limited monitoring system that would be able to support fully decision making, whilst being cost effective. Knowledge of the pollution load's impact on the environment is lacking, and in these circumstances it is often ambient contaminant level data that are used as a basis for policy setting and, because of inherent conservatism, leads to reliance on large, comprehensive monitoring programmes. In the CIS, as in other areas of the World, this type of large monitoring programme has become institutionalised and regulators find it difficult to relinquish the believed certainty that they provide, even when faced with extreme resource shortfalls.

A regional monitoring programme must have clear, agreed objectives. It must be targeted at known priority impacts. The scale must be realistic, limited to the key regional contaminants, and the results quality assured/ quality controlled. The appointment of an external control laboratory, to monitor results and build capacity through training in the national laboratories in the early stages will be vital to establish confidence in the results. The Regional monitoring programme will be a sub-set of, and not a replacement for, the national monitoring programmes. The detailed land-based source assessment; detailed analyses of ecotoxicological results obtained by the World Bank project; and an improved knowledge of contaminant distribution in the Caspian will provide the background information necessary to design and implement a Regional Monitoring Programme at the end of the Project. Design of the monitoring programme will be undertaken by a working group established under the appropriate CEP Advisory Board, to be advised by consultants from MEL in Monaco.

One of the likely features of the Regional monitoring programme because necessity for a cost-effective design will be the use of bio-marker and biological effect monitoring techniques and biological monitoring (benthic and zooplankton composition). It is proposed therefore that limited funds be made available to the countries for trial of a number of possible techniques as part of this project. It is also hoped that these will be linked with trials currently being undertaken by the oil companies in Azerbaijan and Kazakhstan. It is recognized that sediments samples although good for screening and providing a snapshot have an unacceptably slow response time for regular monitoring and another media should be investigated.

*The Activities under this Outcome are summarised below and expanded in Annex B.*

<b>Activity D1:</b> Expand and improve the Tacis land-based activity assessment, including contaminant source assessment in the coastal zone and major river basins (Kura/Arax, Volga up to Volgograd, Sefid Rood, and Ural), including point and non-point sources and quantification of hot spots within the rivers (working with the GPA Secretariat in The Netherlands, the POPs Secretariat in Geneva, and with the regional and national PTS and POPs assessments and enabling activities).
<b>Activity D2:</b> Determine the flux of major contaminants from the Volga cascade (in conjunction with the planned UNESCO project) and the Mingechaur reservoir.
<b>Activity D3:</b> As a continuation of work from the first GEF CEP project, further surveys of the riverine waters, sediments and sea waters in the Caspian states, including the coastal sediments off Turkmenistan, assessing the impact of key transboundary contaminants in water and sediments.
<b>Activity D4:</b> Assist in the design, promotion and implementation of a cost effective and affordable regional monitoring methodology/programme for key transboundary contaminants and in conjunction with the oil industry develop an environmental rapid assessment methodology/programme using bio-marker techniques, combined with awareness-raising activities.

***OUTCOME E: Regional and National Action Plans addressing the activities contributing to transboundary Persistent Toxic Substances (PTS) including persistent organic pollutants, oil products and heavy metal pollution***

***Justification:*** The screening survey of coastal sediments in the first phase of GEF support to CEP clearly demonstrated that Persistent Toxic Substances (PTS), in particular organochlorinated pollutants were one of the main transboundary concerns for the Caspian Sea. Evidence of their destructive presence and impact on the environment was also indicated in seal, sturgeon and bony fish

tissue biopsies undertaken by the World Bank's Ecotoxicology project. Despite this evidence, actions to prevent further damaging discharges, in either the NCAPs or the SAP were limited for a number of reasons.

With regard to pesticides and banned substances such as DDT, many regional experts refused to believe that it was a current problem, stating that the levels of DDT were a result of the expansion of agriculture in the region during the 1960's and 1970's prior to the ban on the substance. The analysis of DDT and its breakdown products by MEL clearly showed that the chemical is still in use in the region and that, as demonstrated by the PCU, can be bought freely in local markets. All the Caspian countries have legislation in place that bans DDT but implementation and compliance are weak and it remains a cheap, effective pesticide for many farmers.

Although the environmental legislation and standards controlling the Soviet oil and gas industry were stringent, again, their implementation and compliance were poor. The Caspian has been left with a huge legacy of pollution from existing and abandoned off-shore and on-shore oil and gas facilities. The responsibility for these now resides with the State owned oil companies and the State Governments. The cost of the clean-up is likely to be enormous and there is natural reluctance on the part of the governments to make any commitments at the present time when there are more pressing demands on the national budgets. There is also discussion regarding the general impact of hydrocarbon pollution in the Caspian and whether because of natural seepage the environment has somehow become adapted naturally to high levels or due to natural seepage the ecosystem is susceptible to any additional hydrocarbon pollution load.

As part of the assessment of the pollution from land-based sources, outcome D, an inventory of the discharges from the on-shore facilities will be made and in outcome E, this will be expanded to include estimates of inputs from natural seepages, off-shore facilities and marine vessels. It is also hoped a clearer understanding of the impact of the hydro-carbon pollution on the environment can be reached, factors which need to be taken into account are the high decomposition rates in the southern Caspian (to be assessed) and the limited dispersion from the known hot-spots by the weak currents that exist in the Caspian.

The main sources of heavy metals are industry, whose discharges are often subject to little or no treatment, and mining activities in the upper reaches of the Caspian basin outside of CEP's jurisdiction. Interestingly, another possible source of heavy metals may be wind blown material from coastal contaminated land sites in dry coastal areas as found in Azerbaijan, Kazakhstan and Turkmenistan.

In executing the activities under this outcome care will be taken not to duplicate the work to be undertaken under the GEF operational programme #10, funding enabling activities for eligible countries that are signatories to the Stockholm Convention on Persistent Organic Pollutants. Support under GEF Enabling Activities is provided to assist countries to develop a National POPs Implementation Plan. Three of the five Caspian littoral states are currently signatories to the Convention - Islamic Republic of Iran, Russian Federation and Kazakhstan - but none have yet ratified. UNDP is aware that in all three countries GEF Enabling Activity Proposals are being prepared and is conscious that in implementation of this project it will need to work closely with the appropriate implementing agency to ensure synergy. This project will deepen and advance the National POPs Implementation Plans in key areas to be drafted under the GEF enabling activities; addressing the barriers to implementation, including capacity building, information exchange, public awareness, and compliance and enforcement in the Caspian basin. The project will attempt to synergise with the GEF supported national enabling projects dealing with POPs in the littoral countries.

This outcome will commence twelve months after the start of the project in order to allow enabling activities to commence in the three signatory states and for project coordinating mechanisms to be established. The first activity will be to develop a Regional Action Plan for addressing transboundary PTS. This document like the Action Plan for the Protection of land-based sources will be a project document, only, and its recommendations will be incorporated into the NCAPs and the SAP at the review and revision stage. The Regional Action Plan will pull together a number of strands and bind them into a coherent document, including:

- National Caspian Action Plans
- National POPs Implementation Plans of the three signatory countries
- Regional Action Plan for the Protection against land-based sources of pollution
- National regulations for off-shore oil and gas development
- Appropriate IMO Conventions against pollution of the marine environment
- Global POPs monitoring programme

The Regional Action Plan for addressing transboundary PTS and the Regional Action Plan for the protection against land-based sources of pollution are to be seen as complimentary and will come under the same CEP coordination mechanism. At this stage it is assumed that the documents have been developed separately, but not independently. If the opportunity arises during project execution it is strongly advised that the documents are combined.

The development of the Action Plan will require working at the national and the regional levels. Mirroring the POPs National Implementation Plans, the Regional Action Plan shall include the following sections:

- Regional objectives for reduction of PTS release (AP against pollution from LBS and GEF POPs enabling activities)
- Criteria for prioritising remediation, reduction and elimination of PTS releases
- Assessment of institutional capacities for PTS management
- Assessment of PTS legislation, regulatory and compliance capacities

- *Assessment of PTS monitoring Capacities (linked to activity D4)*
- *Inventory of POPs production, stocks and contaminated sites (GEF POPs enabling activities)*
- *Inventory of heavy metal sources and hydrocarbon sources, on-shore and off-shore (AP against pollution from LBS).*
- *Barriers to PTS phase out, remediation and reduction identified*
- *Barrier removal actions identified*
- *Awareness raising and information exchange mechanisms identified*
- *Capacity building activities identified.*

*Working groups shall be established in each country under the National Coordinating Structure and, in the POPs signatory countries, consultation mechanisms will be established with the POPS focal point.*

*One of the most pressing problems for the Caspian is the uncontrolled and illegal use of organochlorinated pesticides such as DDT. One of the commonly cited reasons for the continued use of this pesticide is its low cost in comparison with, for example, synthetic pyrethroids. In this region the use of DDT, unless vigorously policed, will not stop. For existing bans to be effective there needs to be governments acknowledgement of the problem and reaffirmation of policy; policing of pesticide production/importation and sales; public awareness campaigns regarding the environmental damages and costs of continued use, in both agricultural and urban centres, and targeted public education campaigns and demonstration projects on credible pest control alternatives*

*The project will consult through the CEP National Coordinating Structures with the Ministries of Environment, Agriculture and Health and the meteorological organizations in all five Caspian littoral states to determine where the use of banned pesticides is most prevalent. The inventories of POPs stockpiles to be conducted under the POPs National Implementation Plans will be useful indicators in this regard in the signatory countries. It is envisaged that two, maximum three, target areas will be identified. In each area the following activities will be undertaken:*

*i) An inventory of banned pesticide stockpiles (if not already undertaken) and validation survey and implement their removal possibly with the assistance of the private sector.*

*ii) A survey of local farmers to determine the pesticide usage patterns. The survey would be done by a national NGO and all participants would remain anonymous.*

*iii) Survey of waters and biota of the areas to quantify levels of present and historical use and impacts on the environment of organochlorinated pesticides.*

*iv) In line with the Guidance of the Inter-Organisation Programme for sound management of Chemicals (IOMC) on Reducing and Eliminating the use of Persistent Organic Pesticides, undertake training in Integrated Pest Management and establish farmer field schools in the area to disseminate knowledge.*

*iv) Delivery of an area-wide public awareness campaign on the damage, both locally and in the Caspian basin caused by the use of banned pesticides. In member countries, this work will be undertaken in conjunction with the Fisheries and Agriculture Organisation under an inter-agency agreement. The Governments of the Caspian littoral states will be encouraged to lead the campaigns and reaffirm policy statements. The pesticides campaign will be followed up with a campaign against PTS and in particular pollution from hydro-carbons. The involvement of the international and, crucially, the national, oil and gas companies, as well as the governments of the Caspian states will be vital to give these campaigns credence.*

*The activities to be undertaken are summarized below and expanded in Annex B.*

<b>Activity E 1:</b> Draft and agree, in coordination with the national GEF supported enabling POP activities, a regional Action Plan for addressing the activities contributing to transboundary PTS, including Persistent Organic Pollutants hydrocarbons and heavy metal pollution.
<b>Activity E2:</b> In two pilot project areas, undertake a survey of usage and stockpiling of pesticides, undertake a stakeholder education programme and demonstrate the use of Integrated Pest Management (coordinated with any national POPs Enabling Activity inventories to avoid duplication).
<b>Activity E3:</b> Undertake a regional public awareness campaign against the use of banned pesticides and other PTS (coordinate with any similar activities planned under country's POPs Enabling Activities).

**OBJECTIVE II: To continue with specific capacity building measures to ensure a regionally owned CEP coordination mechanism capable of full implementation of the SAP and regional coordination of the NCAPs and consolidate/update the TDA and SAP following a series of information gap-filling measures.**

**OUTCOME F: A sustainable, strengthened and regionally owned coordination mechanism for development and management of the Caspian environment, in the form of a newly established CEP**

***Programme Coordination Unit located in the Islamic Republic of Iran, Tehran capable of executing and coordinating regionally based projects; strong country-supported National Coordination Structures; a network of institutions addressing transboundary environmental issues; updated TDA and updated SAP and NCAPs reflecting additional reforms identified from improved TDA/knowledge base.***

***Justification:*** *In the first four years of the existence the management structure of the Caspian Environment Programme has been heavily supported by the International Partners. The support has included funding the post of Programme Coordinator and staff of the PCU, local staff for inter-sectoral coordination support in all five countries, the cost of all Steering Committee meetings and the activities of the Caspian Regional Thematic Centres. A pre-condition set by GEF for further funding of the CEP was that the countries bear more responsibility for CEP's management structure. At the extra-ordinary Steering Committee meeting in Baku in March 2003 the Steering Committee agreed to a revised Institutional Arrangements document for the CEP, which committed the countries to:*

- i) Mobilize sufficient resources to implement all national activities and support all regional actions, specified in CEP National Action Plans and Strategic Action Programme in accordance with programme dates.*
- ii) Provide all umbrella projects with appropriate workspace.*
- iii) Provide the National Coordinating Structure and its staff with the necessary financial support to execute its Terms of Reference; this includes adequate office space, utilities, meeting expenses and administrative support.*
- iv) Provide access to all data and information required for implementation of the CEP, in accordance with the rules and procedures of the littoral state.*
- v) Each country shall, as the incumbent Chair of the Steering Committee, host and support the Steering Committee meeting and Regional Advisory Groups meetings, providing venue, logistical support and translation.*
- vi) Provide support for their representatives to attend the Steering Committee meetings and the meetings of the Regional Advisory Groups.*

*In addition, I.R. Iran, as the host-country of the PCU is committed to provide the furnished premises for the PCU and space for those International Partner projects, including the GEF project that are based in the PCU. The new Programme Coordinator (PC) and PC assistant will be from the Caspian region and will be supported by their governments, including salary, travel and activity budget.*

*Although officially the PCU was transferred to I.R. Iran in December 2002, the physical transfer has been delayed awaiting the approval of the Programme Coordinator by the Steering Committee by simple majority and the final selection of the PCU premises. The full transfer will be executed by October 2003, including the transfer of the CEP library, web-site and database supported by the PDF – B activity. In order to host the Project it is anticipated that PCU will require additional furniture and computer equipment, including a network and powerful server to support the Caspian database and web-site. The Caspian database will be expanded to include databases held by associated CEP institutions. The enlarged database will be of a dispersed structure. If required contributing institutions from the region will be given assistance to put their data into digital form and make it available through the CEP web-site. Access to these dispersed databases through the web-site will be subject of an agreement between the contributing institution and the Project. The report 'CEP information technology needs' prepared under a World Bank study will provide inputs for the design of computer and telecommunications systems for the PCU and associated CEP institutions.*

*The CEP web-site has been the main tool for dissemination of results for the Caspian projects. It has been highly successful and widely praised by scientists and decision makers alike. The Caspian Information System is the most complete gathering of information and data on the Caspian Environment anywhere. This project will help to maintain and expand this valuable resource and increase its capabilities and linkages with other international waters projects. Through the UNEP regional seas programme and IW-Learn CEP has excellent communication and knowledge transfer with many international waters projects.*

*The status of the new PCU in Tehran is not clearly stated in the existing CEP Institutional Arrangements; the decision whether CEP is to be a permanent or the rotating PCU has yet to made. The Steering Committee agreed in July 2002 to review their position in December 2003, one year after moving of the PCU to Tehran and the signing of the Convention by the countries, then scheduled for February 2002. This project document assumes that the PCU will be become permanently located in Tehran and its capacity needs to be enlarged over the next three years to enable it to monitor implementation of the SAP and execute regional SAP supporting projects. The Project also recognizes the need for the states to strengthen the capacity of the National Coordinating Structures to be established in each of the littoral countries.*

*The Project will provide training in basic project management tasks (budget planning and management, contracting, personnel, procurement and financial reporting) to the PCU and NCSs staff using the services of UNOPS, UNOG and the UNDP country offices. The World Bank will provide training on management procedures with respect to MSGP. In the case of the PCU, the Programme Coordinator will have considerable management responsibility for the Matched Small Grants Programme. Unfortunately, the CEP as yet has no supporting legal document and no legal status, and at present is unable to undertake any direct project execution via the*

PCU. The Project executing agency, UNOPS, will therefore be responsible for all contracting and disbursement of funds for the MSGP.

The Project will also assist the PCU to establish a programme for the monitoring and evaluation of SAP implementation, linked to similar NCAP monitoring programmes to be undertaken at the National Coordination Structures (see below). At the end of the Project a full review of the SAP will be undertaken and a report presented to the Steering Committee containing recommendations for improving implementation and, amending or adding to SAP commitments. These recommendations would in turn feed down and be included as part of the NCAP reviews and revisions, which are recommended to take place four years after adoption.

The Project will provide the Programme Coordinator with technical assistance to revise the CEP Institutional Arrangements with reference to the SAP and the Framework Convention. The revision will provide a road map for a smooth transfer of programme management from CEP institutional structure to the secretariat of the ratified Convention and clarify the status of the SAP in relation to the Convention's Action Plan (see section on institutional issues). Assistance will be given through UNEP's Regional Office for Europe.

The National Coordinating Structures will have several key CEP implementation roles, including Inter-sectoral coordination for all CEP regional and national activities; monitoring implementation of the National Caspian Action Plan (NCAP); attracting funding for the NCAP and coordination of implementation of the SAP at the national level. The possible composition of the inter-sectoral coordination bodies in each Caspian State is given in the table below.

<b>Azerbaijan</b>	<b>I. R. Iran</b>	<b>Kazakhstan</b>	<b>Russian Federation</b>	<b>Turkmenistan</b>
<ul style="list-style-type: none"> <li>▪ Ministry of Natural Resources and Ecology</li> <li>▪ State Committee of Hydrometeorology (part of Min of NR)</li> <li>▪ State Committee of Fisheries (part of Min of NR)</li> <li>▪ Ministry of Health (Saneped)</li> <li>▪ Ministry of Oil</li> <li>▪ Ministry of Agriculture</li> <li>▪ Azerbaijan Academy of Sciences</li> <li>▪ Commission for Biodiversity (under the Min of AoS)</li> <li>▪ Ministry of Economy</li> <li>▪ Ministry of Shipping (once formed)</li> <li>▪ Ministry of Emergency Situations (once formed)</li> <li>▪ Executive Power of Baku City</li> </ul>	<ul style="list-style-type: none"> <li>▪ Department of the Environment</li> <li>▪ Meteorological Organisation</li> <li>▪ Ministry of Jihad Agriculture including:               <ul style="list-style-type: none"> <li>- The Fisheries Organisation</li> <li>- Fisheries Research Organization</li> </ul> </li> <li>▪ Ministry of Energy</li> <li>▪ Ministry of Oil</li> <li>▪ Ministry of Finance</li> <li>▪ Ministry of Road and Transport including:               <ul style="list-style-type: none"> <li>- Ports and Shipping Organization and</li> <li>- Metrological Organization</li> </ul> </li> <li>▪ Ministry of Interior (Including the Deputy for Development affairs)</li> <li>▪ Planning and Management Organization</li> <li>▪ Scientific Research Organization</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ministry of Environment</li> <li>▪ Kazhydromet [Ministry of Environment]</li> <li>▪ Ministry of Environment (incorporating fisheries)</li> <li>▪ Ministry of Agriculture (incorporating biodiversity)</li> <li>▪ Kazakhstan Academy of Sciences</li> <li>▪ Ministry of Energy and Mineral Resources</li> <li>▪ Land Resource Agency</li> <li>▪ Ministry of Economy</li> <li>▪ Ministry of Health (including saneped)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ministry of Natural Resources</li> <li>▪ State Fisheries Commission</li> <li>▪ Astarakhan, Kalmykia and Dagistan local governments reps</li> <li>▪ Federal Service for Hydrometeorology and Monitoring of the Environment</li> <li>▪ Russian Academy of Sciences</li> <li>▪ Ministry of Transportation (including shipping)</li> <li>▪ Ministry of Emergencies</li> <li>▪ Ministry of Finance</li> <li>▪ Ministry of Construction and planning</li> <li>▪ Ministry of Agriculture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ministry of Nature Protection</li> <li>▪ National Hydrometeorological Committee</li> <li>▪ Caspian State Enterprise</li> <li>▪ The State Fish Industry Committee</li> <li>▪ Turkmenistan Academy of Sciences</li> <li>▪ Turkmen Geology</li> <li>▪ Turkmenistan information standards centre</li> <li>▪ Min of Health (sanity and epidemiological inspection)</li> <li>▪ Civil Defence and Emergency Situations Department</li> <li>▪ Ministry of Oil and Gas</li> <li>▪ Ministry of Economy</li> </ul>

The National Coordinating Structure will be managed and directed by the National Focal Point and will be funded by the country. The minimum NCS staff contingent will be one time full-time mid-senior level professional (consultant or employee), although normally 2 to 3 full-time staff are expected. The Project will pay for one additional full-time staff member to assist with implementation of the SAP at the national level in the fields of persistent toxic substances, biodiversity and invasive species. The national SAP implementation coordinator (SAPIC) would report both to the Programme Coordinator and the National Focal Point, while consulting and sharing information with the other CEP partners (including the GEF and EU project managers) as needed. In addition, the Project will support in each country the formation and meetings every six months of a CEP Inter-sectoral Coordination (CIC) body to be chaired by the National Focal Point.

With completion of their main task, collation of the TDA, the Caspian Thematic Regional Centres have been closed. In their place there will be five Advisory Boards namely the Biodiversity and Invasive Species Advisory Board; the Fisheries Advisory Board; the Emergency Response Advisory Board; The Pollution Advisory Board and the Sustainable Coastal Development Advisory Board. It is anticipated at the end of this project significant, additional knowledge will have been gathered regarding biodiversity, PTS and invasive species and from the EU-Tacis projects, fisheries and coastal degradation. This information should be incorporated into the TDA and, where appropriate, be used to amend the SAP and NCAPs, identifying additional interventions or changing priorities. At the end of the programme the PCU in collaboration will revise the TDA and if necessary the SAP and NCAPs, with the full participation of the member states.

The advisory board will meet twice a year and provide thematic guidance on CEP implementation. The Caspian states will each be responsible for hosting one of the advisory boards (final allocation has not yet been decided) with the NFP or representative as chairman and the NCS fulfilling the secretariat functions.

The activities to support under this outcome are listed below and are described in more detail in Annex B.

<b>Activity F1:</b> Supporting establishment of the Programme Coordination Unit in Islamic Republic of Iran, including provision of additional furniture and computer equipment and assistance with preliminary training needs.
<b>Activity F2:</b> If not already undertaken as part of PDF-B activities, transfer the Caspian Information System and web-site to I.R. Iran. Develop the information system further by developing strong linkages with contributing institutions. Maintain web-site.
<b>Activity F3:</b> Provision of project management training to the staff of the PCU and NCS to enable them to execute regional and national projects.
<b>Activity F4:</b> Support national SAP implementation activities by provision of a SAP implementation coordinator for GEF focal areas and national inter-sectoral coordination activities by formation and support of a coordination body.
<b>Activity F5:</b> Develop an integrated monitoring and evaluation programme for the SAP and the NCAPs, measured against the process, stress reduction and environmental status indicators defined in the SAP (see annex D).
<b>Activity F6:</b> Revise the TDA, SAP and NCAPs based on new and improved knowledge base.
<b>Activity F7:</b> Fund semi-annual inter-agency consultation meetings in each country; the GEF Project Manager will attend CEP Steering Committee meetings.

### ***OUTCOME G: Enhanced and informed stakeholder and intersectoral participation in the management of the Caspian environment.***

**Justification:** CEP has been mindful of the need for coordination of efforts throughout the process and has sought to form collaborative partnerships with multiple stakeholder groups in form of Caspian Concern Groups (CCGs) throughout the region. These efforts have been successful and very informative both for CEP and for the CCG. Continued integration is critical to success of CEP, and integration of all stakeholder groups into CEP strengthens the sense of local, national and regional ownership of the Project.

Civil society movements for the improvement of the Caspian are emerging, though they face some degrees of difficulty. These include apathy, low prioritisation, misinformation and ignorance, and outdated understanding of basic environmental processes. Environmental education is beginning to emerge in select areas of the Caspian, and will continue to do so under the Project. This education is critical to enhancing public awareness and improving regional conditions and is expected to have long-term regional benefits.

The CEP Stakeholder Analysis conducted during GEF I strengthened the Public Awareness and Public Participation (PAPP) component of the GEF I project. The objective of this component was to establish connections with the public sector through media events, workshops and information campaigns. Also broad ranging educational activities, such as training for journalists and local authorities was provided through this component. Within each country a Public Participation Advisor (PPA) was recruited to garner local support and opinions about environmental issues pertaining to the Caspian, and a series of small grants were distributed to projects and NGOs throughout the region. Initial contacts were established with other international efforts to establish an NGO network and to enhance public sector participation. These contacts will be fostered in the next phase of the Project. The contacts that have been established among stakeholders in the coastal communities should be built upon in the future.

In order for stakeholder input to play a continued and enhanced role in CEP, public participation must be an integral part of the development of CEP in the future and the PAPP component must be maintained and strengthened. The public participation strategy of CEP is intended to be inclusive of as many stakeholder groups as possible in order to increase collective ownership of process and the outcomes of CEP. Multiple stakeholder involvement in assessment, management, protection and rehabilitation of the Caspian environment will increase the sense of responsibility for these waters.

The Project Public Participation Strategy (PPPS) will be based on the principal understanding that the Stakeholders participation is a critical aspect of successful environmental policy implementation because stakeholder groups serve as both contributors to and remedies for environmental degradation. Their actions often are the root cause of problems, and by modifying their actions we can hope to resolve or ameliorate the environmental problems they cause. Additionally, stakeholders in the region are also those who are most profoundly affected by environmental degradation at the local and regional level because they must live with the effects of a low environmental quality

Based on this understanding the PPPS' overarching aim is to channel resources to strengthen further public appreciation of Caspian environmental issues and associate stakeholders in the decision making processes and implementation of the thematic activities funded and/or supported by the CEP. This aim will be pursued through seeking the following results:

- (a) Relevant and accessible information having been provided to as many stakeholders as possible;
- (b) Strengthened consultations and cooperation at the local or sub-national levels

- (c) *Enhanced regional networking*
- (d) *Awareness and capacity of targeted stakeholders groups enhanced*

*Each of the desired results will be pursued through a number of activities that are listed below and further elaborated in the Logframe. The PPPS will be led by the CEP management team and will be implemented through recruitment of one Public Participation Advisor in each of five countries and establishment of an appropriate number of Concern Groups in the coastal local communities.*

*The PPPS will consist of three elements to continue the progress made thus far and to further increase the outreach and public participation. These elements are education, information dissemination and sensitization; Stakeholders involvement and Enhanced access to grants. These are specifically intended to build upon earlier efforts and should be pursued as seamlessly as possible:*

*i) **Education, information dissemination & sensitization:** one of the key challenges in the region is the general lack of appropriate level of sensitivity to environmental issues and lack of information about the Caspian environment and CEP. The project will build upon the work of the Caspian Concern Groups created under the CEP/GEG I to disseminate environmental information to local communities and will spare no efforts to involve the community leaders in its information and sensitization campaigns, which will inter alia target the youth and women. The project will attempt to preserve and make use of the endogenous knowledge on environment to the extent possible. Use of media including TV networks will be an essential part of these activities. Internet will be utilized to the maximum extent and will be fed by the CEP Website to disseminate information. However as many stakeholders do not have internet access, the public profile will also be extended through region wide distribution of a series of decorative and informative posters for display in local, and national offices, classrooms, public areas, private sector office space, and the like. Press briefings and informational articles on GEF-SAP activities would be provided regularly; GEF-SAP would contribute to the quarterly CEP bulletin that would be disseminated electronically and in print*

*ii) **Stakeholders involvement:** the stakeholder groups continue to play an important role in CEP. The NGO community that has begun to establish itself should be fostered and additional capacity should be built, where possible. NGOs should also be given an institutionalized mechanism for input into CEP. This has been done in several areas already, including the biodiversity initiative, but should be enhanced in order for CEP to be as inclusive as practically possible. The NGO community needs further support in creating and enhancing a region wide network and where appropriate CEP can serve as a venue for this. Additionally the inclusion of NGO representation on the CEP Steering Committee will enhance the scope of CEP and NGO involvement in CEP activities.. The CCGs will serve as the starting base for the design and development of small projects in the area of biodiversity protection, and other Project related activities. These groups will assist in identification of locally oriented solutions and will assist in the grant making process to support these.*

*The inclusion of local authorities in the Project will be paramount to its success. Many of the activities need to occur at the local level and should be strongly supported by local level policy makers. Additionally, there is a strong need to increase support among national level policy makers throughout the various Ministries that impact the Caspian environment. Therefore the Project will construct an environmental awareness training programme for policy makers at the local level that will focus on anthropogenic impacts on the environment and delineate feasible and effective actions that can be taken by the targeted groups. The Project will support a Caspian Mayors Conference to enable links to be established throughout the region and encourage local authorities to establish counterparts for sharing environmental management strategies while enhancing regional trade, and social exchanges.*

*The private sector will need to be involved. This sector of stakeholders groups includes individual shop owners up to the multinational corporations. Therefore establishment of a CEP private sector advisory board could include the International Petroleum Industry Environmental Conservation Association (IPIECA). This group would be especially helpful, given their experience with Health, Environment and Safety standards worldwide, and their dedication to minimizing environmental impacts of the extractive industry. Also the shipping companies and fish processing companies will be extremely helpful to the Project by contributing their unique insights to the Project*

*iii) **Enhanced access to Grants:** in the first phase of CEP micro grants were distributed for pilot projects. Some of these grants have led to the successful development of larger projects. For example the grants originally given in the first became the basis for the Eco-Net referred to in Outcome B. Solutions of many of the regional environmental problems will require creative solutions from those who are most closely linked to them, since their proximity to the environmental problems may allow them to understand them better than outside observers. Under the GEF II the Public Participation Advisors will be tasked to act as MSGP local representatives and will be required to inform the public on MSGP, encourage and assist in the development of MSGP proposals and assist in the monitoring of MSGP grants. This process will encourage the re-conceptualization of the environment and the community's ability to improve the conditions in which they live. In addition to the involvement in the MSGP the PPAS will also continue the involvement in the micro grant initiative that was introduced in the first phase .The PPAS will forge strong linkages with Sustainable Coastal Development Projects pilot projects to be executed in under the EU-Tacis project and ensure integration of the Coastal Concern Group activities.*

The strategy laid above should be followed through an evolving plan for encouraging public participation. This plan will need to be updated regularly so that it may be adapted to changing conditions and needs, while also being supported by the existing efforts of the Project. The basic activities of an initial plan are as follows:

<b>Activity G 1:</b> Enhanced participation of media through the development of a CEP media kit for local, national, and international journalists outlining mission objectives, projects, and programmes of the CEP. Develop database of media contacts; publication of CEP Bulletin.
<b>Activity G 2:</b> Strengthening of Caspian-wide NGO community building on the work already undertaken in the region with a view to promote NGOs regional outlook. Encourage NGO representation on the CEP Steering Committee and in CEP activities.
<b>Activity G 3:</b> Continued support of Caspian Coastal Concern Groups, established in the first project, and expand the network. Hold a conference of the Caspian Mayors and establish linkages with EU-Tacis Coastal Sustainable Development project through information exchange, joint activities, reciprocal representation/participation in meetings/activities.
<b>Activity G 4:</b> Creation and implementation of environmental awareness training programme for policy makers.
<b>Activity G 5:</b> Strengthened private sector participation in the CEP, perhaps through considering the establishment of a CEP private sector advisory body that could include the International Petroleum Industry Environmental Conservation Association (IPIECA), local oil and gas operators, shipping companies and fish processing companies.
<b>Activity G 6:</b> Creation and implementation of an evolving public participation plan that is updated frequently according to changing conditions and needs.

**OBJECTIVE III: To strengthen the environmental legal and policy frameworks operating at the regional and the national levels and where necessary improve implementation and compliance of those frameworks.**

***OUTCOME H: Preparation of ancillary agreements to the Framework Convention and drafts of the major protocols targeting priority transboundary issues (biodiversity, persistent organic pollutants, invasive species, land-based sources, marine and seabed pollution, and environmental impact assessment, data exchange).***

***Justification:*** The preparation of the Framework Convention for the Protection of the Marine Environment of the Caspian Sea was initiated in 1995, with UNEP's support and facilitation. Since 1998, support to the development of the Convention was provided also by GEF, during the first phase of the Caspian Environment Programme (CEP). Through consultations among the five littoral states of the Caspian Sea and through a series of eight expert and high-level policy specialists meetings the text of the Convention has been finalised as of mid-2003. The declared objective of the Convention is "the protection of the Caspian Sea environment from all sources of pollution, including the protection, preservation, restoration and sustainable and rational use of the living resources of the Caspian Sea". The scope of the Convention's application covers "the marine environment of the Caspian Sea, taking into account its water level fluctuations, and the land affected by the proximity to the sea".

The general obligations of the Convention require the Parties to take, individually or jointly, all appropriate measures to prevent, reduce and control pollution and to protect, reserve and restore the environment of the Caspian Sea; use the resources of the Caspian Sea in such a way as not to cause harm to marine environment of the Caspian Sea; and cooperate with each other and with competent international organisations for the achievement of the objective of the Convention.

Three "principles" are identified as underlying the implementation of the Convention: the precautionary principle, the "polluter pays" principle, and the principle of accessibility of information on the pollution of the marine environment.

The signing of the Convention will indicate an agreement of intent by the signatories, but only the ratification of the Convention by the required number of signatories will bring it into force. Signing of the Convention by the Caspian States is scheduled to take place in November 2003. Only those who have signed the document will be eligible for support under this project. Ratification of the Convention may pose various legal and technical problems for some countries. There is ample evidence that ratifications of signed international agreements are seriously delayed due to inadequate capacity and institutional weaknesses of some of the countries, which could be mitigated by advisory services of PCU and/or the Interim Secretariat of the Convention. Moreover, the general provisions of the Convention would require ancillary agreements, most probably in the form of protocols which would be integral parts of the Convention, in order to make these provisions effectively operational. These issues will be addressed by the following activities proposed for Outcome H.

The Convention is envisaging the development of seven protocols related to the general provisions of Convention articles. Four of these protocols are related to the prevention, reduction and control of pollution: (i) from land-based sources; (ii) from seabed activities; (iii) from vessels; and (iv) caused by dumping. The other three envisaged protocols are related to: (v) protection, preservation, restoration and rational use of marine living resources; (vi) sea-level fluctuation of the Caspian; and (vii) environmental impact assessment. The detailed coverage of these protocols is not defined but it is envisaged that they will encompass those priority areas identified in CEP's Strategic Action Programme and the National Caspian Action Plans; for example,

*Biodiversity and Invasive Species would be addressed under the protocol for protection, preservation, restoration and rational use – possibly alongside a Fisheries Agreement while persistent toxic substances would be addressed under the protocol for land-based sources.*

*The protocols named in the Convention text are not consistent with those identified as necessary by the countries while executing the CEP. This inconsistency has been the product of a general lack of knowledge of the priority issues facing the Caspian and the length, almost eight years, and difficulty of the Convention negotiations. Unfortunately changing the names of the protocols in the Convention to match more closely those proposed in the SAP is not an option and the opposite would only obscure the SAP objectives. Therefore when preparing the protocols the titles and coverage will have to be carefully discussed so that they encompass the priority actions proposed by both Convention and SAP, and other regional related agreements (Fisheries Agreement, Regional Cooperation plan for Oil Spill Response, CEP draft Biodiversity Strategy and Action Plan and CEP Mnemiopsis Action Plan).*

*Ratification is not likely to happen until the countries reach an agreement on the legal status of the Caspian Sea. During this interval the Project will offer legal assistance and advice to countries requesting help in preparing for ratification of the Convention. The nature of the assistance and advice may vary from country to country and may involve issues such as:*

- *analysis of the compatibility between the Convention and existing national laws, regulations and policies;*
- *advice on national laws, regulations and policies that would have to be modified prior to the ratification, acceptance, approval or accession to the Convention;*
- *procedures to be followed at national levels in the process of ratification of the Convention in accordance with national legislation;*
- *deposition of the instruments of ratification with the Convention's Depository.*

*The above legal assistance and advice will be provided either by the staff of UNEP or the PCU, or by experts mobilised by either of these.*

*Shortly after the Convention is signed, a meeting of national government-nominated experts will be organised jointly by UNEP and the PCU:*

- *to ascertain the needs and priorities for the development of ancillary agreements in the fields identified as priorities through the activities carried out during the first phase of CEP; tentatively, development of protocols corresponding to the key problem areas identified by SAP (biodiversity, invasive species and land-based sources) and the NCAPs is envisaged:*
- *to agree on the ways and means for the development of ancillary agreements, including the timetable for their development; and*
- *to identify the needs for and forms of capacity building at national levels in order to ensure full participation of national experts and institutions in the development of agreed ancillary agreements and in their eventual implementation.*

*UNEP and the PCU shall jointly prepare the necessary background documents for the meeting, including the rationale for the development of ancillary agreements and emphasising the advantages of such agreements for the effective implementation of the Convention and the CEP, with particular reference to SAP and the NCAPs.*

*As a follow-up to the meeting of national experts, arrangements will be made by PCU and the UNEP for:*

- *the establishment of drafting group(s) of national experts to prepare, in cooperation with and meaningful participation of relevant stakeholders (e.g., industry, transport and fishery sectors) the first outlines of the agreed ancillary agreements; and*
- *training of national experts participating in the drafting group(s), if the need for such training has been identified by the meeting of national experts.*

*The drafting groups and the trainees mentioned in the above paragraph will be substantively and logistically supported by UNEP and the PCU.*

*The drafting groups will initially work by correspondence and once the drafts are in a fairly advanced stage, the drafts will be considered, refined and finalised by meeting(s) of legal/technical working group(s) of national experts organised jointly by UNEP and the PCU. The final drafts of the ancillary agreements will be submitted for consideration and eventual adoption by the meetings of the Conference of the Parties to the Convention.*

*Aside from the financial rules and rules of procedure which will be prepared for the first meeting of the Conference of the Parties by UNEP (as the most likely body that will be entrusted to provide interim secretariat services for the Convention), UNEP jointly with the PCU and in consultation with the respective national focal points of the Convention and CEP will explore the feasibility and*

options for institutional and financial arrangements which may strengthen the links between the Convention and CEP, and provide CEP with stable and predictable financial support on a sustainable basis.

The first draft of this feasibility study, including the rationale and implications of various options, will be prepared jointly by UNEP and the PCU. The draft will be circulated to national focal points of the Convention and CEP for comments which will be used in the preparation of a revised version of the feasibility study. This revised version of the study will be submitted to a meeting of experts nominated by the focal points of the Convention and CEP for their consideration. The study, as revised by the meeting of experts, will be presented for consideration of the Conference of the Parties (or their subsidiary bodies, as appropriate) and the Steering Committee of CEP.

The success or otherwise of any new Convention depends on the motivation and quality of the personnel in the secretariat. As yet, the location and composition of the secretariat for the Caspian Convention is not decided, however, there is opportunity to begin training of likely secretariat staff from all countries in the duties and functions of the secretariat. It is proposed that a flexible working arrangement will be developed between UNEP and the PCU and the NCS, by which either UNEP staff are seconded to the PCU or the NCS for limited period to give guidance; or PCU and NCS are seconded to other regional seas Convention Secretariats, with the Project providing travel and accommodation support.

The successful and effective implementation of any international convention first and foremost depends on actions taken at national levels. These actions, in turn, are shaped by national environmental, social and economic policies and priorities, and depend on the adequacy of national legislation, regulations, law enforcement and institutional capabilities. Therefore, while fostering the negotiation of the Framework Convention, and in order to steer the Convention to the real and perceived needs, capabilities and aspirations of the Caspian countries, UNEP was instrumental in bringing up the technical capabilities of the countries in the legal, institutional and economic areas, in particular through the preparation of two regional reviews published in 2001: one dealing with the legal, regulatory and institutional measures for the protection and sustainable management of the Caspian Sea ecosystems in the littoral states; and the other on economic instruments which may be used to mitigate the environmental problems of the Caspian Sea. The latter review analyses the application and effectiveness of economic instruments in each of the Caspian littoral state and assesses, inter alia, the existing economic tools and instruments and their effectiveness, including non-compliance fines, charges for pollution, pollution permits, and administrative charges. The potential for introducing levies on bioresources and tourism serving a regional environmental fund will again be considered as a means of sustaining CEP and implementation of transboundary SAP components. The review also develops recommendations for linking economic instruments with environmental solutions in the Caspian region and contains recommendations for further technical assistance to be provided to the Caspian governments under the CEP. As a follow-up, two meetings of national economic experts have been organised to further discuss the concept of the report and the status of application and effectiveness of economic instruments at national levels.

In addition, two workshops have been organised for experts from the region: one in Baku (December 2001) to review the legal and institutional implications of adherence to three multilateral agreements (CITES, Espoo and Aarhus); and the other in Moscow (November 2002) to consider environmental impact assessment in transboundary context and obtain a consensus for the development and establishment of harmonised procedural guidelines for environmental impact assessment in transboundary context, focusing on specific issues, such as cross-border notification and consultation. The procedural guidelines are presently being drafted and a follow-up workshop is scheduled for mid-2003 in Tehran to review the guidelines.

Valuable information was generated by the two reviews and the two workshops mentioned above about the status of national policies and practices relevant to the international environmental conventions, including the Framework Convention. Furthermore, the reviews and workshops revealed a number of inadequacies and gaps that would have to be corrected and filled in order to make the implementation of these conventions easier and fully meaningful at national levels.

Two or more workshops/seminars for national experts and policy-makers will be organised by the Project to familiarise them with the scope and major provisions of selected international environmental conventions and programmes, including the benefits and obligations associated with participation in these conventions and programmes.

The workshops/seminars will be organised in cooperation with and financial support of the secretariats of the relevant conventions and programmes. Conventions and programmes tentatively envisaged to be covered by the workshops/seminars include:

- United Nations Convention on the Law of the Sea (UNCLOS);
- Convention on Biological Diversity;
- Ramsar Convention;
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal;
- the group of conventions adopted under the aegis of the International Maritime Organisation (IMO) and the UN Economic Commission of Europe;
- Stockholm and the Rotterdam Conventions; and
- Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA/LBA).

Within the available budgetary allocation and as a follow-up of activities undertaken during the first GEF support project to CEP: the practice of environmental impact assessment in transboundary context will be promoted; and the use of economic instruments in enhancing the environmental protection of the Caspian Sea will be encouraged.

The activities to be overtaken under this outcome are listed below and described in more detail in Annex B.

<b>Activity H1:</b> provide assistance that may be needed by some countries in the process leading to the ratification of the Framework Convention.
<b>Activity H2:</b> develop ancillary agreements to the Framework Convention, most likely in the form of protocols that will become integral parts of the Convention.
<b>Activity H3:</b> strengthen the capacity of the countries and their institutions to participate fully in the implementation of the Framework Convention, including the functioning of an active secretariat.
<b>Activity H4:</b> delivery workshops/seminars reviewing the salient features of selected international environmental agreements and programmes, including the legal obligations of the parties to these conventions and activities expected from countries participating in these programmes.
<b>Activity H5:</b> promote the regional practice of environmental impact assessment and the use of economic instruments contributing to improved environmental management. This activity will include conducting a feasibility study on introduction of fees/levies on sturgeon exports and /or on oil/gas to ensure sustainability of the programme and to generate revenues for environmental projects.

**OBJECTIVE IV: To achieve tangible environmental improvements in priority areas by implementation of small-scale investments supported by a matched small grants programme**

***OUTCOME I: Matched funding of small-scale investments from the NGO, public and private sectors, which target common or transboundary Caspian issues identified as priorities in the TDA/NCAPs/SAP and will result in tangible environmental improvements. This activity will be a continuation of the Matched Small Grants Programme currently being executed by the World Bank as part of the first GEF support project to the CEP.***

***Justification:*** The purpose of this project component is to assist in the identification, partial finance and implementation of small investment projects that address a national priority as identified in the NCAPs, that have a positive and transboundary impact or address a common problem within one of the four major areas of environmental concern as indicated in the SAP, and are socially and economically beneficial. This component essentially reflects the continuation of the Matched Small Grant Programme (MSGP) implemented under the first GEF support project to CEP. The component however has been modified to note the transfer of execution responsibility from World Bank to UNOPS and a new management team based in the Tehran PCU for MSGP II. Implementation will build on the lessons learnt during the MSGP I. The MSGP has been one of the most successful components of GEF's Priority Investment Portfolio Project (PIPP) in the CEP with a surprisingly strong demand shown for grants from a range of applicants. Projects that have received support include:

- Drinking water purification projects for use in coastal areas in Azerbaijan, Kazakhstan and Russia
- Sturgeon fisheries management projects in Azerbaijan and I.R. Iran
- Oil contamination remediation projects in Azerbaijan, Russia and Turkmenistan
- Waste treatment projects in I.R. Iran, Kazakhstan and Russia
- Alternate energy source projects in Turkmenistan
- Biodiversity protection projects in Turkmenistan
- Channel cleanup and restoration projects in Turkmenistan and Kazakhstan

The total value of grants disbursed to date is approximately \$ 917, 000., which has managed to leverage further \$ 1, 115,000 of small investment funds.

Eligible beneficiaries will include all legally registered entities in the Caspian littoral states (e.g., national and local governments, NGOs, firms, scientific institutions, or combinations of these in consortia]. It is hoped that coastal and neighbouring inland communities including fishing and aquaculture communities will participate actively in the program. It will also benefit the local authorities committed to environmental safeguarding of the Caspian coastal areas and be a benefit to the region through coastal community ownership of the process, involvement in resolving environmental degradation, and enhanced skill development. The coastal communities and authorities throughout the region are struggling with environmental stresses in many cases. By providing a means of focus, small tangible environmental investments can become a beacon of hope in coastal areas. These then can be translated and/or duplicated in other communities and areas facing similar stresses. And in the event that projects fail to be completely successful they provide valuable learning experiences for all involved.

The current MSGP is scheduled to finish in December 2004. The Project will continue the execution of the programme from the new PCU in Tehran. The World Bank will provide training in the programme management to staff in the new PCU beginning in autumn 2003 in order to achieve a smooth transfer of management, and will continue monitoring and grants disbursement for MSGP projects approved under the first GEF CEP support project. It is hoped that the first round of grants can be agreed and issued within eight months of the start of the Project, and that the costs of re-establishment of the programme can be kept to a minimum. As previously,

the MSGP will administer a specified amount of GEF funds to be matched by the beneficiaries for the implementation of demonstration or pilot-scale investment projects in line with the overall objectives of the CEP. The grants would be available in all the five littoral countries, and will comply with the following specific criteria:

- (i) the project addresses the SAP Environmental Quality Objectives (EQO) and is in line with the pertinent NCAP
- (ii) special consideration will be given to projects addressing pollution from Persistent Toxic Substances, Protection of Biodiversity and Combating Invasive Species
- (iii) the project produces a tangible improvement in environmental quality or bioresources management
- (iv) the GEF matched grant in support of the project would be between US\$10,000 and US\$50,000
- (v) 100% matching by the applicant is required for each grant
- (vi) the demonstration or pilot project is replicable or expandable to a full-scale investment project.

Consideration will be given to research based proposals if they are shown to be directly applicable to implementation of transboundary elements of the SAP and NCAPs. Grants will be awarded on project merit only and there will be no preset country allocations. There will be two grant rounds of approximately \$200K each. Selection of grantees will be made by an Evaluation Committee comprising the National Focal Points from the five countries, or their selected representatives; representatives from each of the four International Partners; and the Programme Coordinator. Projects will be pre-screened for conformity with the specified criteria and graded by the MSGP management staff before presentation to the Evaluation Committee, which will meet at twice during the Project.

These grants are intended to provide local stakeholders with the means to address environmental concerns through active participation in the CEP. The recipient groups will be encouraged to seek additional funding from other organizations, agencies and ministries to increase project impact and enhance the cooperative nature of the Project. In this way, it is hoped that other organizations develop awareness of the Project and the collaborative nature of CEP and become active in the programme.

In its capacity as the Executing Agency PCU/UNOPS will be responsible for all project management/execution aspects and will assume a leading participatory role in all decision-making activities. UNOPS will approve all documentation required for the component including, Application Forms and Evaluation forms, using those developed MSGP I as models. The MSGP team at the PCU will prepare all forms and materials for review and approval by UNOPS. These forms will be standardized throughout the region in order to maximize outcome, and minimize complexity. UNOPS will contract consultants [the PPAs] to provide appropriate training on proposal development in the region; training will consider broad-spectrum application guidelines to enhance general grant writing skills. UNOPS, in consultation with the Programme Coordinator, will recruit and appoint a Grants Manager and an assistant who will work under the auspices of the PCU as the MSGP management team. The Grants Manager and Assistant will be responsible for organizing the grant rounds, preview and pre-selection of projects for Evaluation Committee, negotiating contracts and monitoring project execution. Both the Grants Manager and Assistant will have a good command of English, at least one the two will have fluent Russian and the other fluent Farsi. The GEF CTA will delegate responsibility for oversight of MSGP II management team to the Programme Coordinator. However, all disbursement shall remain the responsibility of UNOPS in accordance with their guidelines. The beneficiaries will execute the MSGP projects. The Programme Coordinator at PCU will assume a pivotal role in liaising with the region and stakeholders on all MSGP II activities. PPAs will play a major role in MSGP information campaigns, seeking applications, assisting applicants in preparing proposals and in monitoring grants implementation.

The Programme Coordinator will closely liaise with the World Bank to learn lessons from MSGP I through training and capacity building efforts

The activities under Outcome I are summarized below and listed in more detail in Annex B.

<b>Activity 1:</b>	establishment and training of the new MSGP team in Iran
<b>Activity 2:</b>	development of application, evaluation, implementation and monitoring documents/procedures by the new MSGP team for approval by UNOPS, in consultation with the World Bank whenever required
<b>Activity 3:</b>	grants awareness campaign conducted in the coastal region/applications sought for grants; applications for 1 <sup>st</sup> grant round received
<b>Activity 4:</b>	evaluation meeting conducted and grants disbursed
<b>Activity 5:</b>	grant projects executed, monitored and reported on.
Activities 3, 4 and 5 are repeated for the 2 <sup>nd</sup> grant round	

## **VII. ASSUMPTIONS AND RISKS**

The following key assumptions have been made in the development of this proposal:

**ASSUMPTION 1:** *The political climate in the region is likely to be unstable in a number of countries but this will not substantially impact the project progress.*

### **Risks:**

- All Caspian states to a degree are marked by political instability and within the life of the project any of the five states could experience a period of political unsteadiness. This risk is Medium to High.

**ASSUMPTION 2:**            *The Framework Convention will be signed and ratified during the Project time.*

**Risks:**

- Without a legal basis the CEP has only a limited term of feasibility and will soon be replaced (before the end of the project) by a ratified Convention and a secretariat, with the SAP being adopted as the Convention's action plan. The risk is however abandonment of the SAP. This risk is Low to Medium.
- The Convention and the legal status of the Caspian are perceived by some stakeholders as closely linked and the Convention might not be not be ratified until an agreement on the legal status is reached. This risk is Medium to High.
- A Legal Status Convention has been proposed under which agreements of fisheries, shipping, seabed resources and the environment are addressed. It is envisaged that the UNEP Environmental Convention will form the environmental agreement, although this is not yet certain. This risk is low.
- An agreement on the location of the secretariat is likely only after ratification and the first meeting of the Conference of the Parties. If there is an agreement on the location before that time there may be a call to establish an interim secretariat. This may complicate the proposed project management structure and its relationship with CEP. This risk is Low to Medium

**ASSUMPTION 3:**            *The CEP will continue to receive support of the bilateral donors and private sector in addition to the International Partners including the UN agencies.*

**Risks:**

- The presence of I. R. Iran as a member of CEP and the re-location of the PCU to Tehran may cause difficulties in the short to medium term regarding participation of bilateral donors and private sector firms. The trade sanctions imposed by the United States of America under the Iran Libya Sanctions Act and administered by OFAC (Office of Foreign Assets Control, Department of the Treasury), severely limit the contact American firms can have with I.R. Iran. For this reason American oil companies are extremely wary of the CEP and their influence is exceptionally wide since most, if not all, of the oil production consortia have American members. This risk is Medium to High risk. It could impact the leverage capacity of the project.
- If the appointed CEP Programme Coordinator has a political rather than a technical/management background, this could deter involvement of some organizations and hamper implementation of the Project and progress under the CEP generally. This risk is Low to Medium. It can be dealt with if the CEP Steering Committee ensures an appropriate person is appointed.

**ASSUMPTION 4:**            *The countries will meet their commitment to support the CEP management structure including the PCU and NCS.*

**Risks:**

- If the financial support to the CEP management structure, especially the PCU, is lost then so is the credibility of CEP, and the Project will have to be suspended until financial support to CEP could once again be assured. This is probably the biggest risk associated with implementation of the Project.

**ASSUMPTION 5:**            *Data is made available freely to the Project wherever national legislation allows.*

**Risks:**

- The beneficiaries fail to make available critical data and block any meaningful analysis. Often it is individuals and institutions that withhold the data and information rather than the beneficiaries, who are often powerless when trying to release it. In these cases, the Project will assume that the data do not exist. Failure by a littoral state to provide data from a government institute or agency, that can be provided consistent with national laws and regulations, would be grounds for suspension or cancellation of Project activities in that country. This risk is Medium to High

**ASSUMPTION 6:**            *The good relations and coordination between the International Partners and other agencies continue.*

**Risks:**

- The timetables of the two main CEP support projects, GEF and EU-Tacis, might run at different speeds, making coordination difficult. One reason why this might happen is the slightly different conditionality imposed on the countries for Project implementation, with GEF conditions being stricter. This risk is Low; at present, the three key International partners are very much in synchrony in their respective project preparation activities. Considerable efforts have been made in the last 18 months by the International Partners to ensure good coordination, both at the project and implementing agency level. In addition to the Steering Committee meeting the International Partners meet every six months to discuss project execution and development. The CEP PCU team is confident that there is maximum synergy and minimum overlap between the planned EU-Tacis projects on fisheries and sustainable coastal development, and the new GEF project. With the separation of the GEF CTA role from that of Programme Coordinator the potential for friction between the International Partners has been lessened considerably.

- Failure of the PCU to successfully coordinate activities, or failure of supporting projects to recognize and be subject to the coordinating role of the PCU. This risk is Medium to High. It can be mitigated if the IPs work together to support the programme and meet regularly with the PC outside the CEP Steering Committee meetings.

- Overlaps in project ToRs. The International Partners have worked hard over the last eighteen months to ensure that there is minimal overlap and maximum synergy between the two main CEP projects. This risk is a Low.

Second order assumptions and risks for each outcome are listed in the logframe presented in Annex B.

## **VIII. Project Implementation Strategy**

### **a: Project Strategy and Sustainability**

**Linkage to SAP and NCAPs** is an essential element of the project strategy towards sustainability. The Project is designed to consolidate and give momentum to SAP implementation. The Caspian Sea is under threat from a number of factors; there is not one single priority issue but a complex set of issues that could bring about instability in the ecosystem. The Caspian is not in catastrophic decline compared to the Black Sea and Aral Sea, the other two major Seas in the region, but rehabilitation of some areas and strengthened protective measures in all Caspian states need to be implemented as quickly as possible to ensure ecological security and sustainable development in the region. The Project is designed to give impetus to full SAP and NCAP implementation in conjunction with the EU-Tacis project. The GEF project will assist implementation of Biodiversity, PTS and Invasive Species SAP interventions, whilst EU-Tacis will assist implementation of Fisheries and Sustainable Coastal Development interventions. At the same time, it is expected that the countries will begin implementation of their endorsed NCAPs. The NCAPs indicate their national commitments to legal, policy and institutional reforms, and investments, addressing both national and transboundary environmental priorities. Real momentum and sustainability will only be achieved if the SAP and the NCAPs are implemented in tandem. This is the reason that endorsement of the NCAPs is a pre-condition for approval of the Project. A sense of trust has formed between the Caspian countries and International Partners during the first CEP phase and it is critical that this mutual trust is maintained and strengthened if the programme is to enjoy long-term success. It is also necessary that new International Partners are attracted to CEP at both the regional and national levels. The NCS will be encouraged to approach the resident missions of international agencies, bilateral funding agencies and international NGOs to request assistance with implementation of the NCAPs to supplement national funding of priority measures.

**Conducting strategic studies** is another major element of this strategy. During the TDA/NCAP/SAP four major areas of concerns have been identified but there are still questions to be answered regarding the situation and root causes in each area of concern, and their overall interconnectivity. Failure of the research and regulatory institutions in the region since the break-up of the Soviet Union resulted in a knowledge gap that has hampered effective decision-making. This gap was only partially filled by work done in the first phase of CEP. With the assistance of this GEF project and the new EU-Tacis project (see below) the CEP plans to fill a number of critical information gaps in the fields of biodiversity, persistent toxic substances, invasive species and fisheries.

The strategy also evolves around **enhanced stakeholder involvement**. Implementation of the Project will rely on the inclusion of an array of stakeholders in as many facets of the programme as possible. The stakeholder analysis undertaken as part of the TDA identified numerous conflicts between the major stakeholder groups that were not being addressed by the appropriate authorities. Stakeholder involvement necessarily includes various government sectors, as well as the private and civil sectors. In order to improve sustainability CEP must ensure early, frequent and broad stakeholder involvement in all its activities. To assist in the endeavour the Project proposes the establishment and support of inter-sectoral coordination bodies in each Caspian state. Stakeholder involvement, with enhanced intersectoral and public awareness and participation, will encourage a more mature civil society in the region, and facilitate broader participation in decision-making, thereby encouraging long-term sustainability.

Participation of the private sector in the first phase of CEP has been a significant success, with nearly \$500k of co-funding secured. The oil and gas industry in particular has become a full and active stakeholder in the Caspian Environment Programme, rather than an environmental opponent. Their participation benefits both the CEP and regional states, and also provides an enhanced opportunity for industry to improve its environmental record and reputation of improved corporate citizenry. By contributing to the activities of the CEP, they are taking a significant role in development of a sustainable mechanism for long-term improvement of the environment, in spite of historical suspicions and concerns about their proper roles. One such example that the Project is proposing is the establishment of a CEP – Oil and Gas working group in recognition of the industry's importance in the region.

**Capacity building in the PCU and NCS** is seen as a very important element of the strategy because it will enable them to implement and execute regional projects. There is a great desire in the region and amongst the International Partners for the countries to take more responsibility for implementation of the regional CEP activities and cement country ownership of the programme. This includes implementation of any future GEF project beyond the one currently envisaged. However, as the International Partners are all too aware, early transition to regional implementation/execution can go seriously awry unless the project management capacity is first put in place and accountability can be assured.

Another step towards sustainability supported by the Project is **the establishment of a legal framework for environmental governance of the Caspian**. All countries and many international organization now recognize the CEP as the environmental policy

and management framework for the Caspian; however, it is also recognized that the CEP is a transitory structure and that the signing and ultimate ratification of a Framework Convention for the Protection of the Marine Environment of the Caspian Sea is the only means of securing the CEP's advances. The CEP continues as long as the littoral states want it and support it. It is quite possible that CEP will continue within the framework of the Convention. This is the structure envisioned in the CEP Concept Paper, which is still the basic document for the program. The Project will continue to support the Convention process and encourage early ratification through the offices of UNEP Regional Office for Europe. The Project will focus on developing associated documents to the Framework Convention, including protocols, and building capacity in the region to establish, and staff, a secretariat once the Convention is ratified. Efforts will also be made to enhance the environmental legislative framework in each of the Caspian states and to promote its implementation. In the absence of a Framework Convention encouragement to sign, ratify and implement multilateral environmental agreements will help to improve regional environmental stewardship.

**Commitment to the financial sustainability** of the management structure of the CEP was made by the countries at the March 2003 extra-ordinary Steering Committee Meeting and is a pre-condition of this Project. It is hoped that similar commitment will be given to the Convention structures once ratified. Financing of the SAP and NCAPs will depend upon the mobilization of an array of resources, including national, private sector, and regional resources. Accessing national revenues derived from bioresources and mineral products may generate national resources for implementation of the SAP and NCAPs. It has been stressed, however, by all the International Partners, that the overwhelming majority of NCAP funds will have to be derived from national sources.

**Replicability is sought as part of the strategy**, it will come, for instance, from some of the Public Awareness and Participation activities (outcome G) and the Matched Small Grants Programme (outcome I), serving as models for other projects elsewhere in the region. The Project structure and process, from the initial phases through ratification of the Framework Convention to complete country ownership of CEP cannot be duplicated. However, the key lessons learned, strategies developed for addressing challenges, and mechanisms for eliciting positive outcomes throughout the region has served as guideposts for other projects. A careful review of the processes and evaluations at critical junctures that focus on the components of success as well as the reasons for failures can serve to direct this, and other Project developments in the future.

**b. International Agency coordination and linkages to other GEF and IA programs and activities**

Transition to implementation of the SAP will require a variety of support measures and financial mechanisms. Accordingly, as with other international waters projects, implementation of the SAP will rely on strong coordination and cooperation amongst the GEF and other donors. Specifically, UNDP, the World Bank, UNEP and EU/Tacis have been the major International Partners contributing to the Caspian Environment Programme, and their support is expected to continue. The World Bank currently is completing the execution of the GEF first CEP support: Priority Investment Portfolio, Training, and Matched Small Grants Project (MSGP). The World Bank project will culminate in a donors' conference or other appropriate forum to seek partnering for identified investment projects with the international community. The World Bank-executed Matched Small Grants Project will transition to a PCU (see outcome F) executed Matched Small Grants Project, under a suitable arrangement with UNOPS. Prior to regional execution, the World Bank and UNOPS will provide training to the PCU Staff (financial management, procurement and contracting, and technical and financial reporting), and the GEF Project will assist the PCU to execute the MSGP. In line with the GEF Operational Strategy, it is expected that the World Bank will take the lead in any subsequent GEF-supported investments targeting priority transboundary issues in the Caspian.

The EU/Tacis projects will be coordinated by CEP and its PCU in I.R. Iran. It will begin in early 2004 and will have a three year duration. Regular meetings have been held to ensure that the EU-Tacis and GEF projects complement each other and that is no appreciable overlap. The EU/Tacis projects and the GEF project will share same website, will freely exchange information and will endeavour to ensure participation by all the littoral countries in their activities to the extent possible.

Interagency Agreements will be developed during the bridging phase with FAO (integrated pest management and fisheries), IMO (GloBallast), IAEA (Marine Environmental Laboratory), UNEP (GPA and World Conservation Monitoring Centre) and others, where there is a strategic advantage to enlist their specific expertise. A special MoU will be signed between UNOPS and UNEP in order to execute the Convention and legal framework activities under Outcome I.

In recent years, a broad body of experience and knowledge of preparing and implementing SAPs and enhancing regional cooperation on international waters has developed, much of it with GEF support. The project will build on the experience and findings of the GEF International Waters focal area and other projects, particularly those involved in the preparation of SAPs. In particular, this project will liaise closely with the Global International Waters Assessment (GIWA), the Global Programme for Action, the River Basins Initiative, and IW LEARN.

The Project will also strengthen its links and those of CEP with the major GEF biodiversity projects, both on-going (Lower Volga, Russia Federation; Ural Wetlands, Kazakhstan) and planned. CEP already has strong communication with the secretariats of the POPs, Aarhus, Espoo Conventions, and during the Project these linkages will be strengthened as joint activities are developed. CEP has excellent collaboration with the IMO and this will continue through Glo-ballast and implementation of the Regional Oil Spill Cooperation Plan and other various IMO Conventions.

## **IX. STAKEHOLDER PARTICIPATION**

Stakeholder inclusion and participation is a vital component of the Project that bases its strategy on enhanced stakeholder involvement. From the initiation of CEP there has been a pervasive belief that success will not be met unless the broadest range of stakeholders are included in the CEP.

The full array of stakeholders expected to participate in the Project include officials from Environmental Ministries/Agencies, Agriculture and Fishing Ministries, Foreign Affairs Ministries, Economic/Finance Ministries, Energy Ministries, Transportation Ministries, and other relevant national ministries, local and regional government officials, oil and gas industry officials, fishermen and fishing industry managers, nature park staff, educators, students, scientists, NGO representatives, public healthcare providers, coastal zone residents, and international organization representatives. By including these wide ranging groups as stakeholders, CEP has enabled broader and more comprehensive participation within the Project.

For the project there are many cross cutting activities within the Outcomes that encourage increased stakeholder participation. This orchestrated participation is not only for the standard stakeholders, such as NGOs and educators, but includes inter-sectoral cooperation, industry input and coordination of relevant stakeholders for particular issues. It is crucial that as many stakeholders as possible have access to Project Activities for particularly relevant issues, and that their input is considered throughout the implementation process.

Objective II specifically focuses on capacity building and within that Outcome G calls for enhanced and informed stakeholder and inter-sectoral participation in the management of the Caspian environment. Specific Activities are designed to establish the mechanisms to increase stakeholder participation as part of capacity building efforts. The themes of these activities include: increasing access to information; strengthening civic society relating to CEP issues; increasing coordination of coastal authorities throughout the region; training of various stakeholder groups; institutionalising the mechanisms for stakeholder input through support for Caspian Concern groups; establishing public and private sector advisory bodies and developing ongoing public participation plans.

## **X. IMPLEMENTATION AND EXECUTION ARRANGEMENTS**

UNDP will be the implementing agency with the Principal Project Resident Representative in I.R. Iran having overall responsibility. The project will be implemented under the umbrella of the CEP and will collaborate with the Programme Coordination Unit in Tehran, I.R. Iran. The PCU will provide the project with operational premises and will assist with country coordination when required. It is assumed that most contact will be directly with countries through their National Coordinating Structures (NCS). To ensure donor coordination and cooperation, the lead international agencies (UNDP, The World Bank, UNEP, and EU/Tacis) will meet regularly and keep each other fully informed of their respective activities. The CEP Steering Committee will provide the forum through which national representatives, donors, and other relevant actors will coordinate their activities. In addition to the Steering Committee, Project guidance and coordination will also be provided by the CEP Thematic Advisory Boards which will be supported by the National Coordinating Structures and will meet twice each year. The Inter-sectoral Coordinating Function in each of the Caspian countries will be provided by a CEP inter-sectoral body established by the NCS and supported by the Project. For each country a SAPIC will be supported by the project to assist this body, which will ensure coordination with a wide range of national institutions and organizations directly responsible for the implementation of the SAP and NCAP at the national level. The relations between the various bodies and their tasks are defined in the CEP Institutional Arrangement document.

The executing agency will be UNOPS and the UNOPS project office support will be based in the UNOPS Geneva offices. Where at all possible at the country level, the UNDP country offices will share responsibility for execution of the project with UNOPS. The full-time international project staff will comprise of a Chief Technical Advisor (CTA), a biologist and a chemist/data management expert. An International Public Awareness consultant will be engaged on a part-time basis. All other project staff will be sourced from the region or in country. Every effort will be made to maximise the input by local experts. Applicants from the region will be encouraged to apply for the international posts and the CEP National Focal Points will be informed of when and where the posts are to be advertised. When seeking consultants to prepare national reports the Project will ask the NFPs for nominees through the NSC, and when seeking local consultants to prepare regional reports the Project will be advised by the PCU.

The Project staff will work very closely with the PCU and it will be important to maintain a good professional relationship with the Programme Coordinator. The Programme Coordinator (PC) will be regularly informed about Project progress and consulted on all matters relating to inter-project coordination and public relations. The Programme Coordinator should approve any changes to or expansion of the CEP web site. Any coordination problems with any of the five countries will be reported to the PC and his/her advice will be acted upon. The PC is to be given considerable role in the management of the Match Small Grant Programme (MSGP) (Outcome I), with the MSGP Administrator and assistant reporting directly to the PC; however, this Project component will be executed by UNOPS and the ultimate responsibility for its successful delivery will remain with the CTA. The purpose of this arrangement is to provide the PCU with experience in execution of regional projects, but it will need to be carefully monitored to ensure that it does not jeopardize the relationship between the PC and CTA.

UNEP's Regional Office for Europe will execute outcome H, dealing with preparation of ancillary documents to the Framework Convention and serving the Framework Convention process through an inter-agency agreement with UNOPS. To operate successfully, it is important that UNEP has a degree of autonomy in execution of this outcome. Inter-agency agreements will also be made with the following UN agencies and programmes as stated in the text:

- International Atomic Energy Agency, Marine Environmental Laboratory.

- Food and Agriculture Organisation
- International Maritime Organisation
- Global Plan of Action against pollution to the marine environment from land based sources
- IUCN
- UNEP World Conservation Monitoring Centre

The CTA will have final responsibility for the products delivered under these inter-agency agreements.

## **XI. INCREMENTAL COSTS AND PROJECT FINANCING**

### **a. Incremental cost**

The co-funding by the littoral countries to the project will include two components namely i) interventions in support of the SAP and ii) support to the implementation of the present project. Type (i) support, i.e., interventions in support of SAP are activities that each country will carry out towards full implementation of SAP and will be inclusive of investments, research and monitoring and institution building and capacity building activities over the GEF project period. These are essentially covered in the NCAPs. Type (ii) support are, on the other hand, activities that each country will need to carry out to enable an effective and timely implementation of the project. These will include provision of adequate venue and office space for the operation of the project, making services of required professional and administrative staff available to the project to assist the project work, covering cost of travel to and participation in the project activities and events, supply required data and information and provision of governmental services required for the implementation of the project.

#### **i) Support to SAP component:**

The total cost of interventions in support of SAP, as covered in the five NCAPs pertaining to the first five years of SAP implementation for which a clear earmarking and/or budget provision has been made, amount to approximately \$119-120 millions. A detailed breakdown of the costs by interventions and countries is provided in the pertinent SAP Appendix. In calculating the costs that could be assumed as co-funding for the present project a number of assumptions have been made:

- only those interventions which directly link with the objectives of the present project have been considered. These are interventions that correspond with the Environmental Quality Objectives II, III and V, i.e. Improvement in Water Quality, Biodiversity protection and Strengthened Stakeholders Participation.
- the costs for three years have been considered as co-funding to reflect the ratio of project duration to the SAP duration.
- only those intervention for which a clear budgetary earmarking or budgetary provision has been made have been taken into consideration

On the basis of the above assumption the regional co-funding for item (a) is estimated at \$ 19.2 millions.

#### **ii) Support to the Implementation of the project**

The figure is arrived at on the basis of following assumptions:

- each country will provide services of a National Focal Point, will host one Caspian Advisory Group and will establish own Caspian Coordination Structure. Therefore each country will at least need to provide services of NFP and an assistant as well as adequate office space for their work. Based on CEP/GEF I salaries the cost can be as much as between \$60,000 to \$ 100,000 for each country.
- each country will need to support participation by its own experts in regional events including annual Steering Committee meetings. Assuming participation in one regional meeting in each quarter the total cost for each country can be as much as \$ 10,000 for the duration of the project.
- each country will need to host at least two meetings during the duration of the project at the approximate cost of \$ 10,000.
- cost pertaining to the salary and work of the Programme Coordinator and the Programme Assistant is estimated at \$ 100,000- 170,000.
- the estimated cost of the rental of the Project Management Unit to the host country can be estimated at \$ 300,000 to the intended host Iran.
- the cost of governmental services that will need to be provided on gratis basis as well as cost of data and information to be made available to the project can be as much as \$ 200,000-300,000 to each country.

The total cost of item (ii) that is the support to the implementation of the project during its 30 months of planned operation is estimated at \$ 1.7 to 2.3 millions. In short the total regional co-funding is approximately \$ 21.1 million.

**b. Co funding by others:**

The possible co- funding by others is estimated at \$ 4,660,000. This includes:

**b.1. Support by EU/Tacis :**

The next phase of CEP will receive support from EU/Tacis, approximately Euro 3.4 million which at ongoing rate of exchange of Euro 1.1 \$ amounts to \$ 3,740,000. The EU-Tacis programme has two components:

- Caspian fisheries support with a value of 1 million Euro will include technical assistance to undertake stock assessments; to set scientifically based fish quotas; and to develop a regional fisheries agreement,
- Coastal Sustainable Development with a value of 2.4 million Euro, involving the establishment of pilot projects to demonstrate good coastal governance and alternative sustainable coastal livelihoods. The pilot project in the I.R. Iran looking at wetland adaptation (outcome B) will be linked to the EU-Tacis programme.

**b.2. Support by FAO**

The FAO will provide technical assistance worth approximately \$0.4 m to their Caspian Sea state members to help with technical issues relating to fishery management, in particular the sturgeon fishery. UNDP, FAO, CITES, the World Bank, an international NGO and EU-Tacis met in Rome in April 2003 to coordinate activities, project objectives and content. As this assistance is yet to be confirmed pending official request from at least three littoral countries it has not been included as confirmed co-finance.

**b.3. Support by BTC**

The Azerbaijan UNDP country office, with a grant from the BTC pipeline company, is to implement a project to conserve the sturgeon in the River Kura and combat desertification in the coastal region of Gobustan. The project has been through first review and is expected to be positively considered in near future. Total budget is \$ 720,000.

**b.4. Support from World Bank**

It is hoped that two projects will emerge from the UNDP-implemented WB-executed Priority Investment Portfolio Project, a component project of the first GEF CEP support:

- A Kura River Delta Rehabilitation and Protection Project seeks to restore the Delta's irreplaceable role in migration of anadromous and semi-anadromous fish to their natural upstream spawning grounds, to preserve biodiversity by protecting the wetland ecosystem, to reduce poverty in the local communities and to establish a funding mechanism for sustainable fisheries management targeting the valuable sturgeon stocks. Estimated value of the project is \$ 6 million.
- A medium sized biodiversity GEF project in Turkmenistan, to be implemented by UNDP Turkmenistan. The estimated value of the project is between \$ 700,000 to \$ one million (since these are GEF funds this is not counted as project co-finance).

The Kura project and the Turkmenistan projects are still in identification phase and have not been included in the co-funding calculation. The Turkmen project cannot be considered as co-funding as it might be for most part funded from GEF.

The World Bank also continues to finance implementation of projects in the Caspian region, including, for instance, activities in support of Azerbaijan's National Environmental Action Plan (NEAP). The World Bank is also continuing efforts to mobilize resources to fund ECOTOX II and the ESMAP.

**b.4. Support from others**

Bilateral efforts are expected to continue and private sector financing will continue to be discussed with BP, Shell, Agip KCO and others. EBRD is already providing over \$200,000 towards formulation of a national emergency plan for Azerbaijan.

**XII. Monitoring and Evaluation**

1. Project strategy and objectives, intended outcomes, implementation structure, work plans and emerging issues will be regularly reviewed and evaluated annually the Project Steering Committee. Extraordinary SCM meetings can also be organized *ad hoc* at the request of the coordinator of the PCU and/or upon request by one of the participating countries. Periodic Status Reports would be prepared at the request of the Steering Committee for presentation at key meetings associated with the Project.

2. Thematic monitoring and evaluation will be made through the thematic Advisory Groups to be formed under the project. The RAGs will be required to include in their work-plans periodic evaluation of their progress against predetermined objectives and timelines. RAGs evaluations will feed into the SCM evaluation process.

3. In line with UNDP procedures, the project will also be subject to Tripartite Review (TPR) once every twelve months. An Annual Project Report (APR) will be submitted two months in advance of the TPR meeting. The project will also participate in the GEF's Project Implementation Review (PIR) process.

4. The CEP inter-agency coordination meetings will be required to evaluate coordination and synergy, or lack of it, between the CEP constituting components including that of the present project. These meetings will need to take place once every six months.

5. Particular emphasis will be given to the GEF policy with regards to monitoring and evaluation in the context of GEF International Water projects. Extensive use will be made of the project Logframe to develop Process Indicators, Stress Reduction Indicators and Environmental Status Indicators that can be cost effectively measured. These indicators will feed into the M&E process. The project will also participate in the UNDP-GEF International Water (IW) LEARN Project through information exchange and sharing lessons learned with GEF and other regional waters projects.

6. Towards the end of year 2, project evaluation specialists selected by UNDP-GEF will carry out an in-depth independent evaluation of the project. The evaluation will be carried out in accordance with the GEF requirements and will cover all aspects of the project. The evaluation will include: an assessment of (a) the outcomes generated, (b) the processes used to generate them, (c) project impacts using indicators included in the logical framework matrix, and d) lessons learned. Advice will be given on how the M&E results can be used to adjust the work if needed and on how to replicate the good results in the region.

7. In order to enhance and encourage stakeholders participation in the project and also to enhance transparency in the region, all reports will be posted on the CEP website for public inspection and comments. A survey of public comments will be shared with the SCM.

### **LEGAL CONTEXT**

For all five participating countries, Azerbaijan, I.R. Iran, Kazakhstan, Russian Federation and Turkmenistan, this Project Document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement (SBAA) between these governments and the United Nations Development Programme, signed by the parties previously. The host countries' implementing agencies shall, for the purpose of the SBAA, refer to the governments' cooperating agencies described in that Agreement.

The following types of revisions may be made to this Project Document with the signature of the Principal Project Representative (PPR) only, provided he or she is assured that the other signatories of the Project Document have no objection to the changes:

1. Revisions in, or addition of, any of the annexes of the Project Document.
2. Revisions that do not involve significant changes in the immediate subcomponents, objectives, outcomes, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation.

Mandatory annual revisions that re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility.