

Caspian Environment Programme

Stakeholder Analysis Revisit

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Executive Summary

In 2001 the initial Caspian Regional Stakeholder Analysis was commissioned with the objective of identifying major stakeholder groups, their interests and impact on the Caspian environment. Also identification of potential conflicts between stakeholder groups was a key task of the initial study. In summer 2004 this follow-up study was conducted in order to observe trends in stakeholder interests, perceptions and concerns as they pertain to activities of the Caspian Environment Programme.

Between July and November of 2004 225 surveys were collected from stakeholders in Azerbaijan, Kazakhstan Iran, Russia and Turkmenistan, as well as experts attending the Caspian Environment Programme Steering Committee Meeting and World Bank hosted Caspian Investment Forum held in Baku. These surveys were compiled in a database and statistically analysed. The analysis compares results from 2001 and provides insights into the shifts that have occurred among and within stakeholder groups over this time frame.

Six main issues are addressed in this analysis: improved fisheries; preservation of biodiversity; protection from invasive species; reducing pollution in Caspian waters; sustainable economic development with environmental care; and stronger civil society input into decision making. Stakeholders were asked to prioritize these issues and respond to a series of statements pertaining to these issues. These findings are summarized below.

Improved Fisheries:

The decline in certain fisheries is a predominant issue for the Caspian Environment Programme. The decline in sturgeon fisheries as well as the decrease in other commercially fished species, following the collapse of the former Soviet Union has drawn broad attention from the international community. This issue was the highest priority issue in the first survey where as now this has shifted significantly. This shift is reflected in the prioritization of the issue, the perceived causes, the new legal regime and the wider view of conservation of resources for future generations. There appears to be a deepening of understanding of the complexity of the fisheries issue among stakeholder groups who were previously more cohesive in their views. Additionally the shifting of the opinions may be a result of changes in circumstances for those dependent upon fisheries for food, who are now adjusting to fewer fish available. The perception of the legal regime, specifically an enforced system of mutually agreed upon limits on fishing has broad support, though there are groups who are not convinced of the effectiveness of such measures.

There is an overall decrease in the expected tensions between groups over fisheries compared to the earlier study, but there is more internal division within more groups. This bears watching, as measures are taken to improve the fish populations in the Caspian. The major division between stakeholder groups is with regards to the cause of the decline. Oil drilling and pollution are viewed by many as being a cause of declining fisheries currently. If fish populations continue to decline, and coastal economies do not improve, it is possible that efforts will lack support and the illegal harvests will continue, while blame is placed on those who are not responsible. There is also some division regarding the immediate economic needs faced by some stakeholder groups while donor and support groups have higher ideals for conditions in the region.

Recommendations:

- Continuation of public awareness building efforts focusing on the actual causes of decline.
- Targeting of public awareness building efforts to groups directly impacted by and impacting fisheries decline.
- Provide support and training materials for border guards and fisheries enforcement authorities.
- Assist national authorities in developing alternative income sources for coastal residents

- Develop and provide training materials for assistance organizations that emphasize sustainable development principles.
- Support consumer awareness campaigns with regional, national and international organizations.

Preservation of Biodiversity:

The protection of biodiversity is showing signs of garnering broader support in the Caspian region compared to the stakeholder analysis conducted in 2001. This issue is ranked as the second most important issue of the 6 addressed in the current study among all stakeholder groups. There is an indication that the regional population would be receptive to an informational campaign that focuses on the importance of biodiversity in the region, as a part of sustainable development efforts. There are concerns among stakeholder groups about the propensity to change behaviours of people in order to protect endangered species and important habitats. Yet there is also new and strong support for a top down approach that emphasizes limiting activities in certain areas of the coastal region. This puts additional responsibility on those charged with enforcement and protection of these areas and attention will need to be given to providing support and capacity building within these groups.

There are not expected to be strong tensions or conflicts across stakeholder groups regarding preservation of biodiversity. There is division within stakeholder groups as they come to grasp the complexity of biodiversity protection measures. This internal division within stakeholder groups may be alleviated by increased education and through drawing clear linkages between biodiversity protection and sustainable development throughout the region. Additionally, there may be frustration on behalf of the assistance community who may not fully appreciate the degree of economic challenges faced by some stakeholder groups. This could potentially stymie effective project implementation if not addressed with sensitivity to all groups involved. Over all there is strong consensus regarding preservation of biodiversity, though to maintain this trajectory, efforts to support responsible stakeholder groups should be made that facilitate concrete actions to improve environmental conditions in the region. This can be based on a series of efforts made by and supported through CEP.

Recommendations

- Develop informational materials for national press that emphasise the economic importance of biodiversity in the region and list steps that can be taken by stakeholders to help improve conditions
- Provide a short training course for journalist on the importance of biodiversity in the region
- Provide key stakeholder groups with examples of how small changes in human behaviour can induce concrete changes in biodiversity preservation with positive sum scenarios highlighted
- Provide enforcement groups such as fisheries enforcement/border guards and nature preserve staff with support through information exchanges, strategy workshops, and training by the authorities from other regions with similar challenges.
- Develop informational materials on the economic importance of protecting regional biodiversity for distribution through Interministerial Committees for related ministries.

Protection from invasive species:

The issue of the need for protection from invasive species remains a low priority over all for stakeholders. Awareness of this issue has increased in comparison other issues and from the previous study. Groups that now rank it as a high priority concern were not part of the previous study. There were some shifts among groups in terms of the prioritization which indicate a need for increased awareness building for the threat of invasive species in the Caspian. The study shows that the concern for the threat from invasive species is closely linked to geography rather than stakeholder group. Higher concern across stakeholders

groups is concentrated in Russia and Iran, while lower concern is evident in Azerbaijan, Kazakhstan and Turkmenistan. This is probably due to the higher concentrations of invasive species – jelly fish in the northern Caspian and invasive flora in the southern Caspian. This geographic trend is supported by sighting of invasive species in the northern and southern regions of the Caspian, and among groups directly in contact with Caspian waters, and affected by the impacts of invasive species.

There are not strong tensions among or between stakeholder groups regarding the concerns over invasive species. The lower prioritization of this issue among some groups such as agriculture and fishing ministries may be a result of misunderstanding the causes of environmental degradation. This could create a situation in which other causes of ecosystem decline are blamed while this issue goes unaddressed. As a result, the decline caused by invasive species could continue to occur at increasing rates as stakeholders focus on other issues. It is not anticipated in the short term that tensions will be increased by this, however, over the longer term, if invasive species create severe hardship for the ecosystem, stakeholders may become more agitated and could blame those who were aware of this problem and did not take steps to remedy this.

Recommendations

It is advisable that efforts to increase public awareness of the threats of invasive species. This could be done in conjunction with the increase in other concerns found in this study, such as increased concern for biodiversity. These include:

- Create targeted awareness build campaigns for ministries involved in this issue, including: agriculture and fisheries ministries, economic ministries, transportation ministries and environmental ministries, with support for and distribution through the Interministerial Committees.
- Develop an invasive species awareness campaign for stakeholders in the coastal area and who are active in the Caspian waters to focus on developing informal monitoring networks as part of the Caspian eco-net system with hotlines and information
- Enhancing public awareness of the threats of invasive species as part of an effort to increase awareness of the need for protection of biodiversity
- Develop curriculum activities through small scale pilot projects for school children to monitor the presence and impacts of invasive species

Reducing pollution in Caspian waters:

Reducing pollution in the Caspian waters is the highest priority issue for all stakeholder groups, especially those groups who are in closest contact with the Caspian waters. There is a wide perception that the waters of the Caspian are highly polluted despite recent studies that suggest this is the case in concentrated hotspots. These have reduced the level of concern among key stakeholder groups such as environmental ministries, and agriculture and fisheries ministries. There is a perception among many stakeholders that the Caspian is not cleaner today than it was 5 years ago, though groups such as coastal recreation industry stakeholders and fisheries related groups were most adamant about the recent decline in conditions.

Despite the perception that environmental quality is not improving there is general consensus among all stakeholder groups that there is adequate scientific knowledge about the causes of environmental decline in the Caspian. Groups that were internally divided about availability of information on the decline in environmental quality may not have benefited from recent information gathered in the past several years. There is a wide perception that pollution is caused by agricultural and industrial effluents, municipal wastes discharges and pollution from the oil extraction. Stakeholders continue to recognize that pollution in Caspian waters and low environmental conditions are taking a toll on human health in the region. The lack of information regarding causes of human health decline and environmental conditions sets the stage for emergent tensions if not addressed in a constructive manner in the short term.

The issue of pollution from oil is especially divisive though the trend appears to be towards more conciliatory attitudes among stakeholder groups regarding the presence of international oil companies than was present in the 2001 study. Nonetheless this trend should be monitored closely as steps are taken towards finding positive sum scenarios and continued improved dialogue among stakeholder groups.

In several issues involving there is a significant variation across the region. In general, the respondents from Iran were more vocal about their concern regarding pollution levels. Russian respondents tended to be more optimistic about environmental conditions pertaining to pollution. Respondents from Azerbaijan, Kazakhstan, and Turkmenistan were more neutral and lacked a broad consensus. This is discussed in more detail as it pertains to each subsection, though this variation is believed to be due mainly to cultural variation and current events.

Tensions between stakeholder groups regarding pollution have become less pronounced than they were in the previous study. There is tension between groups regarding the cause and effects of pollution as well as the responsibility for the conditions of the Caspian. In general the views tend to reflect economic interests. The softening of tensions between some major stakeholder groups, such as environmental ministries and agriculture and fishing ministries in opposition to multinational corporations and industry is significant and bodes well for the programme. However, steps should be taken to ensure that these positive trends will continue to emerge and are supported by mutually agreeable arrangements.

Recommendations

- Exploration of root causes of belief that the environmental quality of the Caspian is declining
- Make available information summarizing recent scientific studies and pollution to those dealing with water management issue in regional and municipal governments
- Provide information about broad trends in stakeholder perception regarding the consensus on pollution stemming from agriculture and industrial activities
- Continue to assist efforts to monitor municipal waste discharge rates into the Caspian waters
- Take steps towards empirically examining regional environmental conditions and the effects on human health.
- Improve dialogue opportunities for various stakeholder groups who are now in conflict over pollution efforts
- Provide information summarizing recent scientific studies to broad stakeholder groups, in simplified and accessible formats

Sustainable economic development with environmental care:

Improvement of environmental conditions and economic conditions are often viewed as contradictory aims. This unfortunate conception must be overturned in the region if sustainable development practices are to be developed, and it appears that stakeholders in the region is ready to consider these options at this time. Sustainable development with environmental care is an important priority for stakeholders over all, and the shift to higher prioritization of this among stakeholder groups is promising. The concept of using resources to meet current demand at the expense of future generations is increasing in the awareness of the stakeholders. Economic strains have also increased the realization of many stakeholder groups that the environment will not be protected if economic conditions are very low. Groups who had previously taken extreme positions on this appear to be recognizing the complexity of this and are softening their opinions in general.

A topic of particular concern within this issue is the perception that the environment can recover regardless of what human activities do to it. There is actually a significant portion of the population, especially coastal zone residents and agriculture and fisheries ministries who still seem to believe that technological solutions will resolve environmental problems and therefore sound stewardship is not needed. A significant majority of stakeholders recognise that poor environmental conditions impact human health; though no regional empirical studies

have been conducted. Access to potable water continues to be a high priority concern for many stakeholders. Establishing a clear link between low environmental quality and poor human health conditions are obstacles to economic development and may enable broader meaningful stakeholder support for sustainable development in the region. The responsibility of the government in regards to taking steps to improve environmental conditions has become a more polarized issue that could be addressed through development of a sustainable development agenda for targeted areas through pilot projects to serve as examples for the wider region.

Regarding the need to use economic resources in non-sustainable manner in order to meet demands for human consumption, there were disagreements between district water management officials and national press. This may reflect a realism faced by these district water management officials, versus the idealism of the press. This issue also was very divisive within stakeholder groups involved in fisheries issues. There has also been division among stakeholder groups regarding the responsibilities of government *vis a vis* social welfare programmes and environmental protection. This rift was starting to occur in the 2001 study and increasing polarization has been found particularly between groups with an active interest in environmental protection and those who are economically dislocated due to poverty.

Recommendations

- Examination of shifting trends in stakeholder perceptions of sustainable development
- Provide stakeholder groups with accessible models of sustainable development projects that have had concrete successes under comparable circumstances
- Create an information campaign linking improved environmental conditions with economic development focusing on grass roots efforts to protect habitats
- Provide workshops for regional, district and national level planning agencies, with CBOs, industries and NGOs to train groups how to develop sustainable development practices.
- Provide a basic ecology training course to targeted populations emphasising positive sum scenarios of sound environmental stewardship.
- In conjunction with other organizations develop a Caspian region environmental health atlas to pin point areas of environmentally induced human problems.
- Develop accessible materials demonstrating the linkages between low environmental conditions, poor human health and poor economic performance.
- Provide concrete examples of sustainable development projects that have been employed at local, national and regional levels to targeted stakeholder groups.

Stronger civil society input into decision making:

Overview

There has been an emphasis on civil society input into environmental decision making by international organizations. The concern for this among regional stakeholders is actually quite low. This issue is ranked as the lowest priority for all stakeholder groups in the region. As expected, some groups such as local and national NGOs see this as a higher priority issue, while most rank this as a much lower priority. This low ranking is probably due to other more specific concerns addresses elsewhere in this study. The cultural and political legacies of most of the Caspian countries also do not strongly encourage input from civil society into decision making processes. Further, this survey reveals that there is ambivalence among most stakeholders about how representative NGOs are of grassroots efforts in the region. Also the assumption that most environmental information comes from media such as TV and newspapers has been brought into question by the survey results.

There is positive support for continued collaboration among stakeholders, such as NGOs, private companies and scientists, and there is broad support for all members of society taking responsibility for environmental issues. Most stakeholders do not believe that only in the event of an environmental crisis will people be concerned about environmental issues which

portends well for increased awareness of issues. Again though, this may be most effectively addressed in relation to more specific issues discussed above.

There are relatively few tensions with regards to the importance of civil society input into decision making, at least according to stakeholder groups. The tensions may be more pronounced as groups attempt to assert influence on the decision making process. While channels have been established to facilitate this effort in international projects, there may be a need to carefully consider if civil society representatives are agents of broad coalitions of stakeholders or special interests claiming to represent a wider spectrum than perhaps they actually do.

Recommendations

- Consider examining the claims of organizations who profess to represent broad stakeholder groups in order to determine if they are in fact working as grassroots activists, and if so in what capacity are they doing this
- Conduct a wider investigation into sources of environmental information so that efforts to reach stakeholders can be more effective.
- Continue to encourage collaborative efforts between scientists, NGOs and the private sector
- Identify means for stakeholder groups to be involved in decision making processes at local, national and regional levels.

CASPIAN ENVIRONMENT PROGRAMME – STAKEHOLDERS ANALYSIS REVISIT

Introduction:

In 2001 the initial Caspian Regional Stakeholder Analysis was commissioned with the objective of identifying major stakeholder groups, their interests and impact on the Caspian environment. Also identification of potential conflicts between stakeholder groups was a key task of the initial study. In summer 2004 this follow-up study was conducted in order to observe trends in stakeholder interests, perceptions and concerns as they pertain to activities of the Caspian Environment Programme.

Between July and November of 2004 225 surveys were collected from stakeholders in Azerbaijan, Kazakhstan Iran, Russia and Turkmenistan, as well as experts attending the Caspian Environment Programme Steering Committee Meeting and World Bank hosted Caspian Investment Forum held in Baku. These surveys were compiled in a database and statistically analysed. The analysis compares results from 2001 with the current 2004 study and provides insights into the shifts that have occurred among and within stakeholder groups over this time frame.

Six main issues are addressed in this analysis: improved fisheries; preservation of biodiversity; protection from invasive species; reducing pollution in Caspian waters; sustainable economic development with environmental care; and stronger civil society input into decision making. Stakeholders were asked to prioritize these issues and respond to a series of statements pertaining to these issues.

The first objective of the analysis is to determine stakeholder priorities for issues. The respondents to the survey self selected the stakeholder group with which they most closely identified. Their attitudes and perceptions were then averaged for each group, and the findings were analysed. These findings are summarized graphically in Table 1 – Stakeholder Prioritization of Issues. The priority of each issue for each stakeholder group was ranked high, medium and low. Overall the stakeholder ranked the issues as:

1. Reducing pollution in Caspian waters
2. Preservation of biodiversity
3. Improved fisheries
4. Sustainable economic development with environmental care
5. Protection from invasive species
6. Stronger civil society input into decision making

Table 1 also shows the breakdown of how stakeholder groups individually prioritized these issues with a high, medium and low priority ranking based on group averages and the standard deviation from the mean within each of the stakeholder groups.

The second objective of the initial and this revisited stakeholder analysis is also to identify conflicts, tensions, or potential conflicts between stakeholder groups. Though direct conflicts have not emerged, it is the hopes that identification of these can allow CEP to take measures that will allow the region to avoid exacerbated tensions over regional environmental issues. Table 2 highlights the statements that elicited conflicting responses from stakeholder groups. Of 23 statements, 9 statements had stakeholder groups who were in strong agreement and disagreement with the statement. Of 35 stakeholder groups, only 6 were not involved in any potential conflicts. This is not to suggest that these conflicts are pending, but rather there should be sensitivity to these perceptions as programmes are developed and implemented. In some cases additional investigation into these issues may be warranted, as appropriate.

The 35 stakeholder groups in this survey were representative of select impacted groups identified in the initial 2001 survey and supplemented in the literature review in preparation for this stakeholder analysis revisit. Most of the groups are fairly self explanatory with further explanations of the composition of these groups in the literature review (ANNEX 3). An experts group was added during the CEP Steering Committee Meeting and Caspian Environment Investment Forum in November 2004. This objective was to gauge the

perceptions of experts as they pertain to the other stakeholder groups. Over all, the findings were much as expected, with experts being more progressive with regards to measures for environmental stewardship than most stakeholder groups. Comments on the perceptions of this group, and others are discussed below on an issue by issue basis.

It is expected that the information in this analysis will be used as a reference for those interested in addressing the main six issues of the CEP projects. The analysis is broken down by issue and conducted as the various stakeholders are impacted by this. Each stakeholder group is represented in each of the issues. In each section there is a table outlining which groups ranked the issue as a high, medium or low concern. Additionally, each question pertaining to that issue lists those who are in strong agreement, strong disagreement or have wide internal divisions regarding the statement. These are expanded upon as warranted throughout the report. Based on the analysis recommendations are made in each section for increasing stakeholder collaboration and understanding of these issues.

Those interested in addressing public involvement may use this study as a basis for additional efforts at awareness raising efforts pertaining to the specific issues addressed by CEP. This provides grounding in stakeholder attitudes to issues, and should be built upon through the public involvement component of the project. It is intended that all impacting or effected stakeholder groups should be considered in these efforts. This will probably be done best by different targeted efforts within the project, (i.e. ministerial level information campaigns or coastal zone residents awareness raising efforts), and could be coordinated at appropriate. Many of these issues have cross-cutting and inter-related stakeholder groups, and as such, stakeholder group involvement should be encouraged though linked objectives and initiatives.

Stakeholder involvement and inclusion in efforts will be critical to supporting the momentum of the Caspian Environment Programme. The long term objective of country and full regional ownership will be met by strengthening the bonds between and among these groups, and helping them to realize their dependence upon and responsibility for the local and regional environmental conditions. It is hoped that the analysis and subsequent recommendations presented here will assist this objective to be met.

Table 1 Stakeholder Prioritization of Issues

Stakeholder group	Fisheries	Biodiversity	Invasive Species	Pollution	Sustainable Development	Civil Society
All Stakeholders/ all respondents (# priority)	# 3	# 2	# 5	# 1	# 4	# 6
Environmental Ministry						
Hydromet Officials						
Foreign Affairs Ministry						
Economic Ministry						
Agriculture and Fisheries Ministry						
Fisheries Commission						
State Owned Fisheries Industry						
Energy Ministry						
Regional Government						
District Water Management Official						
Municipal Government						
Ministry of Education						
State Scientific Research Center						
Private Scientific Research Center						
National NGO						
Nature Preserve Staff						
Coastal Zone Resident						
Public Healthcare Provider						
Educator/ Student						
Farmer / Water User						
Pastoralist/Animal Husbandry						
National or Local NGO						
Coastal Recreation Industry						
Community Based Organization						
Fishermen						
Fisheries Enforcement/ Border Guards						
Fishing Product Sales - National						
Fisheries Consumer and Value added consumers						
State Owned Industry						
Private Industry						
Oil Company Representatives						
National Press						
International Funding Institutions						
International NGOs, Bilateral Organizations						
Experts Group from CEP SCM, Investment Forum						

Level of importance

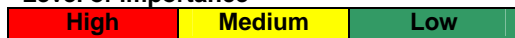


Table 2 Stakeholder Conflict Matrix

<p>Contented statements:</p> <p>Key:</p> <p>agree</p> <p>Internally divided</p> <p>disagree</p> <p>Groups with conflict</p> <p><i>Related issues</i></p> <p>Stakeholder Groups:</p>	12. use needed resources now, instead of environmental conservation	13. fewer fish because of oil drilling	14. multinational corporations and energy industry do not care about the environment	15. people will only care about environment if there is a crisis	16. people will not change lifestyles to protect endangered species	17. government should invest in social concerns before investing in the environment	18. more important to protect habitats than enhance economic development	25. private industry should take all responsibility for reversing environmental degradation	35. the Caspian is cleaner today than it was 5 years ago
	<i>fisheries, biodiversity, sustainable development</i>	<i>fisheries, pollution</i>	<i>pollution, sustainable development</i>	<i>sustainable development, civil society</i>	<i>biodiversity</i>	<i>sustainable development</i>	<i>biodiversity, sustainable development</i>	<i>pollution</i>	<i>pollution</i>
Environmental Ministry									
Hydromet Officials									
Foreign Affairs Ministry									
Economic Ministry									
Agriculture and Fisheries Ministry									
Fisheries Commission									
State Owned Fisheries Industry									
Energy Ministry									
Regional Government									
District Water Management Official									
Municipal Government									
Ministry of Education									
State Scientific Research Centre									
Private Scientific Research Centre									
National NGO (scientific)									
Nature Preserve Staff									
Coastal Zone Resident									
Public Healthcare Provider									
Educator/ Student									
Farmer / Water User									
Pastoralist/Animal Husbandry									
National or Local NGO									
Coastal Recreation Industry									
Community Based Organization									
Fishermen									
Fisheries Enforcement/ Border Guards									
Fishing Product Sales - National									
Fisheries Consumer and Value Added									
State Owned Industry									
Private Industry									
Oil Company Representatives									
National Press									
International Funding Institutions									
International NGOs									
Experts Group from SCM and CEP IF									

Methodology:

The methodology for the SAR has relied largely on that used in the initial 2001 SHA in order to maintain as much continuity between studies as possible. An initial literature review was conducted to assess changes that have occurred in the time frame following the initial SHA. This review was based on academic, journalistic, government and international organizations reports and articles. This led to an expansion of the number stakeholder groups from the original 18 to a larger 43 total. The literature review closely examined CEP literature, including the PFD-B, Project Document, and Strategic Action Programme, and identified six major distinct issues currently being addressed by CEP at this juncture in the programme. These issues are: improvement of fisheries; preservation of biodiversity; protection from invasive species; reducing pollution in Caspian waters; sustainable economic development with environmental care; and stronger civil society input into decision making.

Anticipated stakeholder interest for each of these issue areas was gauged based on how directly specific stakeholder groups were believed to be impacting or impacted by activities that pertains to these issues. This served as an initial guide for survey development and to determine how stakeholder groups could be combined or held distinct as warranted by different levels of input of active interests for particular issues. See Annex 3 for the full literature review.

Surveys were developed for the follow-up/revisit of the original stakeholder analysis. The initial study was significantly larger, both in terms of the time frame, budget and scope of questions. As a result a shorter survey was developed for the SAR. A total of 35 questions were developed. The initial demographic questions included self identification for specific stakeholder groups. The survey then asks respondents to rank order the six issues identified in the literature review by the level of importance. An additional nineteen survey statements were drawn from the original survey to provide a means for comparison from the initial analysis. An additional 5 questions were developed to gauge new perceptions. These questions were in the form of statements which the respondents were asked to agree or disagree with based on a scale from 9 to 1 with 9 representing strong agreement, and 1 representing strong disagreement. See Annex 1 for stakeholder analysis survey.

These surveys were distributed to CEP Public Participation Advisors in Azerbaijan, I.R. Iran, Kazakhstan, Russia and Turkmenistan. Additional surveys were distributed by the stakeholder analyst throughout the region via e-mail, and focused on Kazakhstan. Within the frame of 2.5 months from mid-July through September 2004, surveys were distributed and collected. Additional surveys were distributed and collected in October 2004 in Kazakhstan. And approximately 20 surveys were collected during the CEP Steering Committee Meeting and the CEP Investment Forum in November 2004, These were returned to the stakeholder analyst, and entered into a spread sheet for analysis. A total of 224 surveys were collected and analysed. The surveys were divided by stakeholder groups and the mean and standard deviation for each stakeholder group was calculated. Of the 43 groups listed on the survey, 35 groups are represented in this analysis. This is due to exceedingly low representation of some groups in the survey population, and combining of some related groups in order to have enough responses to warrant inclusion in the survey. An example of this is combining the international NGOs, bilateral organizations, and non-state international organizations into a single stakeholder group.

All stakeholders self selected the stakeholder category to which they belonged, and in some cases they selected more than one category. No survey was used in more than three categories. The stakeholder groups' size varied from 3 respondents to more than 30. This clearly limits the statistical validity of the responses. As a result, this survey does not meet the criteria for scientific polling and should not be treated as such. These responses and the analysis of them is based on interpretation of the survey results with the awareness that these criteria are not met, but that information from these surveys provide an important glimpse into the perceptions and attitudes of members of stakeholder groups. This information is intended to support the efforts of the Caspian Environment Programme, and additional studies may be warranted based on these findings, as appropriate.

The stakeholder analyst then assigned normative values of high, medium and low priority for the issues, for each stakeholder group, based on the mean and standard deviation. This assignment was based on the mean ranking of issues assigned by each stakeholder group.

Additionally responses to the statements were similarly evaluated for those groups who showed strong consensus on agreement or disagreement with a mean of above 7.0 for agreement and below 3.0 for disagreement. In cases where there was a wide variation within the particular stakeholder groups with a standard deviation above 2.6 – 3.0 depending on the size of the respondent pool, these were noted as having strong internal division within the stakeholder group. (See Table 2, and ANNEX 2 for the graphic representation of this)

Each issue was then assigned relevant questions, and comparisons of previous stakeholder responses were compared to the current set of responses. It should be noted that because this survey was not administered to a sizable portion of the population and that some stakeholder groups are much larger than others in the survey zone and in within the data base, that these finds are not statistically representative under scientific sampling criteria. However, they do provide an important gauge of shifts in attitudes, and the responses are informative for the purposes for which they were commissioned. It should also be noted that some groups, particularly experts, took some degree of exception to the form of the statements. Their concerns have been noted as appropriate, and their comments are appreciated.

Improved Fisheries:

The decline in certain fisheries is a predominant issue for the Caspian Environment Programme. The decline in sturgeon fisheries following the collapse of the former Soviet Union, as well as the decrease in other commercially fished species, has drawn broad attention from the international community. This issue was the highest priority issue in the first survey where as now this has shifted significantly. This shift is reflected in the prioritization of the issue, the perceived causes, the new legal regime and the wider view of conservation of resources for future generation. There appears to be a deepening of understanding of the complexity of this issue among stakeholder groups who were previously more cohesive in their views of this issue. Additionally the shifting of the opinions may be a result of changes in circumstances for those dependent upon fisheries for food, who are now adjusting to fewer fish available. The perception of the legal regime, specifically an enforced system of mutually agreed upon limits on fishing has broad support, though there are groups who are not convinced of the effectiveness of such measures.

There is an overall decrease in the expected tensions between groups over fisheries compared to the earlier study, but there is more internal division within more groups. This bears watching, as measures are taken to improve the fish populations in the Caspian. The major division between stakeholder groups is with regards to the cause of the decline. Oil drilling and pollution are viewed by many as being a cause of declining fisheries currently. If fish populations continue to decline, and coastal economies do not improve, it is possible that efforts will lack support and the illegal harvests will continue, while blame is placed on those who are not responsible. Additionally, there is a discrepancy between those who are not immediately dependent on coastal natural resources, but who are concerned about environmental conditions and those stakeholder groups that are more directly impacted by declining economic conditions in the coastal zone.

Recommendations for CEP regarding fisheries include:

- Continuation of public awareness building efforts focusing on the actual causes of decline.
- Targeting of public awareness building efforts to groups directly impacted by and impacting fisheries decline.
- Provide support and training materials for border guards and fisheries enforcement authorities.
- Assist national authorities in developing alternative income sources for coastal residents
- Develop and provide training materials for assistance organizations that emphasize sustainable development principles.
- Support consumer awareness campaigns with regional, national and international organizations.
- Conduct studies into the impact the decline in fisheries is expected to have on local and national economies, including an exploration of the challenges created by the informal underground sector.

Prioritization of Improved Fisheries

High	Medium	Low
<ul style="list-style-type: none"> • Agriculture and Fisheries Ministry • State Owned Fisheries Industry • Educator/ Student • Pastoralist/Animal Husbandry • Private Industry 	<ul style="list-style-type: none"> • District Water Management Official • Ministry of Education • Public Healthcare Provider • Farmer / Water User • Fishermen • Fishing Product Sales – National • Fisheries Consumer • State Owned Industry • Municipal Government • Nature Preserve Staff • Coastal Zone Resident • Oil Company Representatives • Regional Experts 	<ul style="list-style-type: none"> • Environmental Ministry • Economic Ministry • Foreign Affairs Ministry • Energy Ministry • Hydromet Officials • Fisheries Commission • Regional Government • State Scientific Research Centre • Private Scientific Research Centre • National or Local NGO • Farmers and Water Users • Coastal Recreation Industry • Community Based Organization • Fisheries Enforcement/ Border Guards • National Press • International Funding Institutions • International NGOs

In 2001, during the first survey period, 11 of the 12 stakeholder groups listed “decline in certain fisheries” as a high priority issue. This year, 2004, only 5 of 35 groups rank “improved fisheries” as a priority. This compares to 17 that rank improving fisheries as a low priority issue. The environmental ministries, regional and municipal governments, scientific community, and NGOs all ranked this as a top priority issue in 2001, where as now these groups rank this as a low priority. Even fisher men, and coastal zone residents rank this a medium level priority issues, down from high priority in 2001.

These changes may be a result of the implementation of the CITES ban and increased attention internationally to this issue. Many of the citizens of the Former Soviet Union tend to respond to surveys in a manner they believe they are expect to, rather than giving candid opinions. Since governments are now charged with taking steps toward improving fisheries, it is possible that these responses reflect what respondents feel they should respond. Alternately there may be a decline in priority of fisheries for groups because they now see that there are other issues that have more immediacy, and the concern over decline in fisheries peaked earlier, and now the perception is that adjustments have been made in regards to fisheries management in the region.

Also of note is that oil company representatives and regional experts both rank this as a mid-level concern, while international funding institutions, International NGOs, Economic Ministry Officials and Energy Ministry Officials rank this as a low priority concern. If these groups are to be supportive of efforts to rehabilitate fisheries stocks it may be prudent to address this lower level of concern among these groups with targeted efforts. Information on the role of fisheries in economic concerns for the countries, including the impact on diets of coastal communities and the potential role in development should be explored. Additionally, the impact of the informal underground sector, involved in illegal harvest of fish stocks should be calculated into this potential study for distribution to these groups.

The perceived cause of the decline in fish populations in the Caspian has shifted over time to some degree. The two questions that appeared in the original survey that were repeated in the revisit are:

13. “There are fewer fish in the Caspian than there used to be because of recent oil drilling.”

Disagree	Agree
<ul style="list-style-type: none"> • Oil Company Representatives • International Funding Institutions 	<ul style="list-style-type: none"> • Agriculture and Fishing Ministries • Ministry of Education • Educator/ Students • Pastoralist Animal Husbandry • Fisheries Consumer and Value added

Wide Division Within:	
<ul style="list-style-type: none"> • State Owned Fisheries Industry • Foreign Affairs Ministry 	<ul style="list-style-type: none"> • Nature Preserve Staff • Experts

19. "Pollution is the primary reason that there are fewer fish in the Caspian."

Agree	
<ul style="list-style-type: none"> • Agriculture and Fisheries Ministry • Regional Government • District Water Management Official • Municipal Government • Private Scientific Research Center 	<ul style="list-style-type: none"> • Public Healthcare Provider • Pastoralist/Animal Husbandry • Local NGOs • Fishermen • Fisheries Consumer
Wide Division Within:	
<ul style="list-style-type: none"> • Fisheries Commission • State Owned Fisheries Industry • Ministry of Education • Nature Preserve Staff 	<ul style="list-style-type: none"> • Coastal zone residents • Pastoralist/Animal Husbandry • Fisheries Enforcement/ Border Guards • International NGOs

In 2001, the statement "There are fewer fish in the Caspian than there used to be because of recent oil drilling." drew strong support from fishermen and the agriculture and fishing ministries. The multinational corporations were divided originally though tended to disagree. Now, the fishermen stakeholder group responses agree less strongly, though the agriculture and fishing ministries and the fisheries products and sales groups continue to agree strongly with this statement. Additionally, Education Ministries and educators and students do as well. Pastoralists agree as well, though the reason for this is not particularly clear. Also, Fisheries Consumers and those in the Value Added fisheries industry also agree with this statement.

Now, as before, we find that oil company representatives disagree strongly with this cause for the decline in fisheries as would be expected because the perceived lack of culpability for this decline. Additionally, the International Funding Institutions also are in strong disagreement with this statement. The state owned fisheries industries, Foreign Affairs Ministries, Nature Preserve Staff and Experts Groups are internally divided. It is worth noting that the coastal zone stakeholder group was not in strong agreement or disagreement with this statement. Also absent from this cohort is the environmental ministries. Both of these groups were in agreement 3 years ago, whereas now, they do not have either a clear consensus of strong internal variation within the groups. These discrepancies may represent a shifting in opinion or may be a statistical abnormality. If we assume it is a shift in opinion, it may be because of the realization and subsequent studies that decline in fisheries is caused in part by over fishing, rather than pollution levels.

In response to the statement "Pollution is the primary reason that there are fewer fish in the Caspian" none of the stakeholder groups disagreed strongly. We find similar trends in terms of agreement, but shifting groups. Previously the coastal zone residents, industries, environmental ministries and fishermen were in agreement with this statement while now, only the fisherman remain of this group. It is interesting to note that the other ministries, such as agriculture and fishing, as well as others listed above have now come to see pollution as a cause in for the decline in fisheries.

Internal disagreements within stakeholder groups such as coastal zone residents, fisheries commissions, fisheries enforcement/border guards, pastoralists, and International NGOs. This internal dissonance may be a result of the dependence of some communities on illegal fishing activities. Alternately, the decline in fisheries may be more noticeable as species numbers decline and the assumption is that this is due to pollution levels, combined with over fishing. Perhaps more public awareness building activities focusing on causes of decline would be helpful in this effort.

Both of these statements reflect a belief within the stakeholder groups of the cause of the decline in the fisheries. The exact causes of the decline is compounded, obviously, however, this suggests that regionally there is disagreement regarding cause and effect relationships for the decline of fish stocks. As stocks continue to decline, it is expected that these strains will increase and could become problematic. Steps to resolve this are reflected in the following statement.

20. "An enforced system of mutually agreed upon fishing limits would be effective for reducing over-fishing in the Caspian."

Agree	
<ul style="list-style-type: none"> • Environmental Ministry • Hydromet Officials • Economic Ministry • Foreign Affairs Ministry • Agriculture and Fisheries Ministry • Regional Government • District Water Management Official • Municipal Government • Ministry of Education • State Scientific Research Center • Private Scientific Research Center • Coastal Zone Residents • Public Healthcare Provider 	<ul style="list-style-type: none"> • Farmer / Water User • Pastoralist/Animal Husbandry • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Product Sales - National • Fisheries Consumer • State Owned Industry • Private Industry • National Press • International Funding Organizations • International NGOs • Experts Group
<p>Wide Division Within:</p> <ul style="list-style-type: none"> • Fisheries Commission • Coastal Recreation Industry • Oil Company Representatives 	

The stakeholder groups mostly agreed with this statement, though there were some discrepancies. The Oil Company Representatives, members of the Coastal Recreation Industry and members of the Fisheries Commission were more dubious about the effectiveness of such an agreement, where as, most of the other stakeholder groups agreed. There were not groups that on the whole disagreed with this statement, though there were a few random individuals.

Environmental ministries agreed that an enforced regime could quell the decline in fisheries stocks, as they did in the 2001 study. This may be in part faith in international environmental legislation that seems prevalent in many environmental ministries, and the trend towards these agreements to bolster national legislation and regulation, including financial assistance. Also the regional and municipal governments were consistent with their previous views on this issue in support of agreements.

It is interesting to note that there was strong agreement from the stakeholder group of fisheries enforcement and border guards, who are responsible for enforcing the existing legislation. Their support for this statement may be defensive, but it also may be due to the mutual agreement, and they may feel that their counterparts are not enforcing laws as well as they should be. Though it is difficult to determine here, this may warrant further exploration and possibly training support for these groups.

In 2001 the coastal zone residents were found to agree with this fairly strongly, where as now that agreement appears to have weakened somewhat. Again, because we are not dealing with the same individuals it is not clear if this is an abnormality. If we assume that the decline in support for mutually enforced agreements is an actual trend, this decline may be due to the implementation of the CITES ban not resulting in immediate increased fisheries, possible increases the illegal harvesting and the accompanying crime. Therefore this trend bears watching over time as steps are taken to reduce illegal harvest. Additionally, it may be advisable to empower coastal zone residents to not feel obliged to collude with the informal underground sector by enhancing other opportunities for them.

The poverty level of many coastal zone residents increases their incentives to participate in illegal fishing activities, or to avoid alienating those who are profiting from this. This creates a difficult cycle to break which is reflected in the statement: "It is more important for people to use the Caspian resources that they need than it is to leave them untouched because of environmental concerns".

12. "It is more important for people to use the Caspian resources that they need than it is to leave them untouched because of environmental concerns"

Disagree	Agree
<ul style="list-style-type: none"> • State Scientific Research Centers • Oil Company Representatives • International Funding Organizations • International NGOs • Experts Group 	<ul style="list-style-type: none"> • Economic Ministry • District Water Management Official • Educator/ Student • Fisheries Consumer
<p>Wide Division Within:</p> <ul style="list-style-type: none"> • Environmental Ministry • Hydromet Officials • Coastal Zone Resident • Public Healthcare Provider 	

- | | |
|--|--|
| <ul style="list-style-type: none">• Economic Ministry• Energy Ministry• Agriculture and Fisheries Ministry• State Owned Fisheries Industry• Regional Government• Municipal Government• Ministry of Education• State Scientific Research Center• Private Scientific Research Center• Nature Preserve Staff | <ul style="list-style-type: none">• Farmer / Water User• Pastoralist/Animal Husbandry• National or Local NGO• Coastal Recreation Industry• Community Based Organization• Fishermen• Fisheries Enforcement/ Border Guards• Fisheries Product Sales - National• State Owned Industry• Private Industry• National Press |
|--|--|

This statement is highly divisive, as the question of harvesting resources now at unsustainable rates in order to meet immediate human needs, or preserving these for future generations. In the 2001 survey there was also division between stakeholder groups with regard to this statement. While division continues to exist, it has shifted to division within stakeholder groups. In 2001, the environmental ministries, agriculture and fisheries ministries, regional and municipal governments, scientific communities, coastal zone residents, public health care providers and fishermen agreed with this statement. In contrast, NGOs both from local and national groups, and industry disagreed with this statement and again, they are also now divided over this issue. All of these groups now show strong internal division, though these trends do not appear to be strongly linked to geographic trends. Now the only groups that are in consensus on agreement this issue are the State Scientific Research Centers, Oil Company Representatives, International Funding Organizations, International NGOs and the Experts Group. This may be due to the relative distance from the coastal living conditions, which are fairly dire and dependent upon local natural resources to sustain existing populations. Additionally, these groups will be more inclined to have a conservationist agenda than other stakeholder groups. This statement is used in regards to several issue areas because of the relevance to several of the CEP activities and initiatives.

With regards to fisheries, this trend may be a result of awareness of diminishing resources, and the impact of human activities upon these resources. These groups may have an increased awareness that they are no longer able to depend upon fisheries resources as they become scarcer. This would be especially true for groups seeing a decline first hand, such as environment ministries, agriculture and fisheries ministries, municipal governments, state owned fisheries industries, nature preserve staff, coastal zone residents, community based organizations, fishermen, fisheries enforcement and border guards, and fisheries product sales. Alternately, groups who previously were in disagreement with this statement may have become more aware of the circumstances facing those in the region that depend on natural resources for survival, even if they are using these resources at unsustainable rates. CEP support for economic development projects that emphasize sustainable development may be helpful by providing information and training resources. CEP has regional presence and training materials for social and economic development would be supported by this authority in the region.

Most of the groups in agreement with this statement are benefiting from current extraction of resources. With regards to fisheries, the fisheries consumer group may be the most critical group advocating consumption of fisheries resources now, rather than making attempts to preserve these resources. Additionally, preservation of resources drives costs up for consumer groups. CEP may consider taking steps to inform end use consumers in conjunction with other efforts, such as Caviar Emptor and local level projects.

This may be especially important for end use sales. For instance in an informal interview the analyst was told by a manager at "Caviar House" that she was recently in a meeting of store managers and they were informed that "there are plenty of sturgeon in the Caspian and there is no risk of running out." She and her colleagues also agreed that if scarcity becomes an issue, people will pay more for the caviar as a status symbol and thus increasing prices will not deter consumption. CEP may wish to consider increasing information campaigns for caviar consumers as a result of this.

Conclusion:

The fisheries issue has lost the status as a top priority issue for many stakeholder groups. This may be a result of several factors and should be viewed as a deepening of understanding of the complexity of this issue among stakeholder groups. The imposition of

the CITES ban, awareness of other environmental issues and other socio-economic demands may also account for this shift. Overall, fisheries improvement will continue to be an important issue within the region, and further efforts toward interministerial collaboration, public awareness building, and targeting of specific stakeholder groups regarding causes of the decline in fisheries can support sustainable fisheries management under the CEP auspices.

Preservation of Biodiversity:

The protection of biodiversity showing signs of garnering broader support in the Caspian region compared to the stakeholder analysis conducted in 2001. This issue is ranked as the second most important issue of the 6 addressed in the current study among all stakeholder groups. There is an indication that the regional population would be receptive to an informational campaign that focuses on the importance of biodiversity in the region, as a part of sustainable development. There are concerns among stakeholder groups about the propensity to change behaviours of people in order to protect endangered species and important habitats. Yet there is also new and strong support for a top down approach that emphasizes limiting activities in certain areas of the coastal region. This puts additional responsibility on those charged with enforcement and protection of these areas and attention will need to be paid to providing support and capacity building within these groups.

There are not expected to be strong tensions or conflicts across stakeholder groups regarding preservation of biodiversity. There is division within stakeholder groups as they come to grasp the complexity of biodiversity protection measures. This internal division within stakeholder groups may be alleviated by increased education and through drawing clear linkages between biodiversity protection and sustainable development throughout the region. Over all there is strong consensus regarding preservation of biodiversity, though to maintain this trajectory, efforts to support responsible stakeholder groups should be made that facilitate concrete actions to improve environmental conditions in the region. This can be based on a series of efforts made by and supported through CEP.

Recommendations

- Develop informational materials for national press that emphasise the economic importance of biodiversity in the region and list steps that can be taken by stakeholders to help improve conditions
- Provide a short training course for journalist on the importance of biodiversity in the region
- Provide key stakeholder groups with examples of how small changes in human behaviour can induce concrete changes in biodiversity preservation with positive sum outcomes
- Provide enforcement groups such as fisheries enforcement/border guards and nature preserve staff with support through information exchanges, strategy workshops, and training by the authorities from other regions with similar challenges.
- Develop informational materials on the economic importance of protecting regional biodiversity for distribution through Interministerial Committees for related ministries.

Preservation of Biodiversity

High	Medium	Low
<ul style="list-style-type: none"> • Environmental Ministry • Foreign Affairs Ministry • Agriculture and Fisheries Ministry • State Owned Fisheries Industry • Regional Government • Municipal Government • Private Scientific Research Center • Coastal Zone Resident • Farmer / Water User • Pastoralist/Animal Husbandry • National or Local NGO 	<ul style="list-style-type: none"> • Hydromet Officials • Economic Ministry • District Water Management Official • Ministry of Education • State Scientific Research Center • National NGO • Community Based Organization • Nature Preserve Staff • Fishermen • Fishing Product Sales – National • Oil Company 	<ul style="list-style-type: none"> • Public Healthcare Provider • Educator/ Student • State Owned Industry

<ul style="list-style-type: none"> • Coastal Recreation Industry • Fisheries Enforcement/Border Guards • Fisheries Consumer • Private Industry • National Press • International NGOs 	<p>Representatives</p> <ul style="list-style-type: none"> • Fisheries Commission • International Finance Institutions • Experts Group 	
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On average the preservation of biodiversity was listed as the second highest priority for respondents to the survey. This is up significantly from the initial 2001 study, where biodiversity was ranked solidly in the middle of the 8 issues addressed. The increase awareness of preservation of biodiversity may also be an artefact of the survey sponsor. Nonetheless, while the ranking is higher over all there have been shifts among stakeholder groups. The regional and municipal governments as well as coastal zone residents now rank this as a high priority issue, while they ranked it as a lower priority issue in the initial study. State scientific researchers, national level NGOs, and fishermen now rank it as a medium level priority, which is down from their ranking in the initial study. Public healthcare providers, and state owned industries also dropped this issue from a medium to a lower priority. The environmental ministries and agriculture and fisheries ministries have not changed their high level prioritization of this, as would be expected. Foreign affairs ministry officials, coastal zone residents and coastal recreation industry members, as well as private industry, national press and international NGOs rank this as a high priority, suggesting an increased awareness of the importance of this issue to the region.

The general trend towards increasing the prioritization of preservation of biodiversity among stakeholders, suggests that this issue is becoming more relevant. It is difficult to determine if this is due to declining conditions which sparks concern, or if it is due to improved awareness efforts. Nonetheless, this relative boon for biodiversity awareness should be viewed favourably, in that it may also represent an increased awareness of the complexity and interdependence of ecosystems. This, in conjunction with the increased priority of the need to reduce pollution among all stakeholders, may indicate an increased understanding of cause and effects relationships in environmental degradation.

The division among stakeholder groups does not appear to represent significant divisions or tensions. Rather, those groups who would be expected to rank this as high priority, such as environmental ministries, nature preserve staff members, or coastal local NGOs continue to do this, while others such as public health care providers, educators and state owned industries rank it as a low priority issue. This may indicate receptiveness to educational materials for national level press agencies about the importance of preserving biodiversity in the region. Additionally, the high prioritization by economic ministries and foreign affairs ministries may indicate a source of support for biodiversity preservation, which CEP should continue to foster.

The challenge may be assisting stakeholder groups in identifying steps that they can take to preserve biodiversity now that awareness of it's importance seems to be growing. This need is reflected in several statements in the survey that had discrepancies both among and within stakeholder groups. Each of these statements ask respondents to consider what they are willing to do with regards to protect biodiversity.

16. "People will not change their lifestyles to protect endangered species."

Disagree	Agree
<ul style="list-style-type: none"> • Hydromet officials • Foreign Affairs Ministry • Oil Company Representatives 	<ul style="list-style-type: none"> • Nature Preserve Staff • Coastal Zone Residents • Public Healthcare Providers • Fisheries Enforcement/Border Guards
<p>Wide Division Within:</p> <ul style="list-style-type: none"> • Economic Ministries • Fisheries Commission • Regional Government • District Water Management Official • Municipal Government • Ministry of Education • Private Scientific Research Center 	

18. "It is more important to protect natural habitats than it is to enhance economic development."

Disagree	Agree
<ul style="list-style-type: none"> District Water Management Officials 	<ul style="list-style-type: none"> Fisheries Products and Sales National Press
<p>Wide Division Within:</p> <ul style="list-style-type: none"> Fisheries Commission Pastoralist/Animal Husbandry 	<ul style="list-style-type: none"> Community Based Organization Fishermen Fisheries Enforcement/ Border Guards

In response to the statement “**People will not change their lifestyles to protect endangered species**” there was division within many groups. In the 2001 initial study this statement did not draw strong support or opposition from any groups as a whole. In the 2004 survey critical division occur within the economic ministries, education ministries, regional governments, municipal governments, research centres, and international NGOs. This division may reflect an internal dialogue within stakeholder groups as to how much they can expect to induce change in behaviour. Providing targeted examples of how small changes in human activities have improved shown concrete results in conservation may bolster these groups and increase confidence in people’s ability to change.

Alternately, the hydromet officials, foreign affairs ministry officials, and oil company representatives feel that people are willing to change their behaviour to protect endangered species. This may reflect a wider global experience with conservation measures on behalf of the oil company representatives, and general optimism on behalf of the others. In contrast, there were several key groups who agreed that people will not change to protect endangered species. The coastal zone residents were in agreement with this, though not quite as strongly for this key group when it comes to economic development and the need for preservation of biodiversity. The nature preserve staff and fisheries enforcement/border guards may have felt that people are not willing to change because they have witnessed that people will prioritize economic interests over environmental concerns. These two groups are charged with protection of species and are facing very difficult challenges. Support for these groups may be warranted through specific CEP activities and within the initiatives developed through CEP including training and enforcement activities. These could include regional workshops for these groups to build support networks, information sharing and strategy development for protection measures.

In response to the statement “It is more important to protect natural habitats than it is to enhance economic development” there was some division within and among stakeholder groups. The only dissenting stakeholder group was the district water management officials. This would reflect the pressures on them to provide water for economic development even though they may be aware that it is done at the expense of natural habitats. In contrast, fisheries products and sales and national press agreed with this statement. This may be due to the awareness that failure protection of habitats will have broader repercussions, though it may also be reflective of the small sample of these groups, who may be predisposed to conservation activities.

The groups that had wide division within the stakeholder groups of note were fisheries commissions, fishermen and fisheries enforcement/border guards. These groups may be experiencing something of a crisis as populations of commercial species continue to decline, and the cause remains elusive to those not wishing to acknowledge the impacts of over fishing. In comparison, pastoralists and community based organizations may have realized that destruction of habitats is having economic ramifications as the impacts are felt by coastal communities. Perhaps an informational campaign linking improved environmental conditions with economic development would held to alleviate some of these divisions and could enhance grass roots efforts to protect habitats.

The conspicuous absence of groups such as the environmental ministries, economic ministries, oil company representatives, industry, international finance organizations, international NGOs and experts groups, from this is largely due to their relatively anaemic responses. Among all of these groups there was very weak disagreement with this statement, which was constant across all of these groups. Coastal zone residents as the largest stakeholder group had some variation but the average was almost exactly between agreement and disagreement, with a very low standard deviation. This suggests that the issue of active habitat protection could become more important, especially if stakeholders are taught about the beneficial linkages between habitat protection and sustainable economic

development. This raises the question of how this can be done in a manner that will be meaningful and supported in the region. A top down approach may be most readily accepted.

21. “There should be limits on some activities in certain zones of the coastal region.”

Agree	
<ul style="list-style-type: none"> • Environmental Ministry • Economic Ministry • Foreign Affairs Ministry • Agriculture and Fisheries Ministry • State Owned Fisheries Industry • Regional Government • District Water Management Official • Municipal Government • Ministry of Education • State Scientific Research Centre • Private Scientific Research Centre • National NGO • Nature Preserve Staff • Coastal Zone Resident • Public Healthcare Provider • Educator/ Student 	<ul style="list-style-type: none"> • Farmer / Water User • Pastoralist/Animal Husbandry • National or Local NGO • Coastal Recreation Industry • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Consumer • State Owned Industry • Private Industry • Oil Company Representatives • National Press • International Funding Institutions • International NGOs • Experts Group
Wide Division Within:	<ul style="list-style-type: none"> • Fisheries Commission

The 2001 study found regional variation in response to the statement: There should be limits on some activities in certain zones of the coastal region. This regional variation has evaporated, as Russia, I.R. Iran and Azerbaijan have very strong agreement; Turkmenistan has moderately strong levels of agreement; and Kazakhstan has strong agreement. The 2004 study also revealed very strong levels of support for limits on activities in certain zones of the coastal zone. A total of 28 of the 35 stakeholder groups had strong consensus of agreement on this issue. The only group that was represented as having strong agreement in the 2001 study was industries. Within the current study, there was wide division within the fisheries commissions, and no clear level of agreement or disagreement from fisheries products sales. These may be due to statistical aberrations due to a small sample size.

This shift suggests that a top down approach to habitat protection may be widely accepted in the region. The population in these countries are largely accustomed to governments that take a strongly directive approach to governance, and may be willing to be supportive of such an approach to habitat preservation. Again though, this brings to light the concerns raised by the enforcement officials charged with protecting species. They felt that people would not change to protect endangered species. Again, this suggests that support may be warranted for the increasing support and capacity building for these groups.

The issue of sustainable development by conserving resources for future generations is pertinent here. The following statement reflects this concern.

12. “It is more important for people to use the Caspian resources that they need than it is to leave them untouched because of environmental concerns”

Disagree	Agree
<ul style="list-style-type: none"> • State Scientific Research Centers • Oil Company Representatives • International Funding Institutions • International NGOs • Experts Group 	<ul style="list-style-type: none"> • Economic Ministry • District Water Management Official • Educator/ Student • Fisheries Consumer
Wide Division Within:	
<ul style="list-style-type: none"> • Environmental Ministry • Hydromet Officials • Economic Ministry • Energy Ministry • Agriculture and Fisheries Ministry • State Owned Fisheries Industry • Regional Government • Municipal Government • Ministry of Education • State Scientific Research Center • Private Scientific Research Center • Nature Preserve Staff 	<ul style="list-style-type: none"> • Public Healthcare Provider • Farmer / Water User • Pastoralist/Animal Husbandry • National or Local NGO • Coastal Recreation Industry • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Product Sales - National • State Owned Industry • Private Industry • National Press

- Coastal Zone Resident

The statement above is highly divisive as noted earlier, as the rate of use of resources now is unsustainable in order to meet human needs, or preserving these for future generations. In the 2001 survey there was much wider division between stakeholder groups with regard to this statement. While division continues to exist, it has shifted to division within stakeholder groups. In 2001, the environmental ministries, agriculture and fisheries ministries, regional and municipal governments, scientific communities, coastal zone residents, public health care providers and fishermen agreed with this statement. In contrast, NGOs both from local and national groups, industry and multinational corporations disagreed with this statement and again, they are also now divided over this issue. All of these groups now show strong internal division, though these trends do not appear to be strongly linked to geographic trends. Now the only groups that have consensus on this issue are state scientific research centers, oil company representatives, international funding institutions, the international NGOs and the experts group. This may be due to these groups relative distance from the coastal living conditions, which are fairly dire and dependent upon local natural resources to sustain existing populations. Additionally, these groups will be more inclined to have a conservationist agenda than other stakeholder groups. This may indicate a source of rising frustration on behalf of those groups who would like to assist in bringing about positive change however, may be limited in effectiveness because of a potential lack of the immediate challenges facing some stakeholder groups. This statement is used in regards to several issue areas because of the relevance to several of the CEP activities and initiatives.

As this issue pertains to protection of biodiversity, it suggests that there is an increased awareness in the need to develop more sustainable practices, while reducing impacts on renewable resources. There is a high correlation between those stakeholder groups who have prioritized protection of biodiversity with those groups who agree strongly and who have wide division within stakeholder groups. This suggests that the budding awareness of need to change behaviours in order to protect the environment. It may be advisable to develop a broad spectrum stakeholder awareness campaign that clearly links sustainable development to practices emphasizing protection of biodiversity in the region. This can be through habitat protection as well as sustainable harvests of commercial species.

Conclusion:

The protection of biodiversity shows signs of increasing in importance in the region. This trend should be supported by CEP who has the clear regional authority and interministerial linkages that can build on recent shifts in attitude. Protection of biodiversity must be linked to sustainable economic development for it to be most effective in the region over the long term. Further, projects should be developed that enhance people's awareness of the importance of biodiversity to their livelihoods and to the quality of life in the Caspian region. This will be more challenging in some areas, but demonstration projects, public awareness campaigns and support for protection and enforcement personnel may bring about significant improvements in the region. It appears that stakeholder groups are ready for these efforts and would be receptive to them, especially if presented in a manner that emphasises win-win situations.

Protection from invasive species:

The issue of the need for protection from invasive species remains a low priority over all for stakeholders. Awareness of this issue has increased in comparison other issues and from the previous study. Groups that rank it as a high priority concern now were not part of the previous study. There were some shifts among groups in terms of the prioritization which indicate a need for increased awareness building for the threat of invasive species in the Caspian. The study shows that the concern for the threat from invasive species is closely linked to geography rather than stakeholder group. Higher concern across stakeholders groups is concentrated in Russia and Iran, while lower concern is evident in Azerbaijan, Kazakhstan and Turkmenistan. This is probably due to the higher concentrations of invasive species – jelly fish in the northern Caspian and invasive flora in the southern Caspian. This geographic trend is supported by sighting of invasive species in the northern and southern

regions of the Caspian, and among groups directly in contact with Caspian waters, and affected by the impacts of invasive species.

There are not very strong tensions among or between stakeholder groups regarding the concerns over invasive species. The lower prioritization of this issue among some groups such as agriculture and fishing ministries may be a result of misunderstanding the causes of environmental degradation. This could create a situation in which other causes of ecosystem decline are blamed while this issue goes unaddressed. As a result, the decline caused by invasive species could continue to occur at increasing rates as stakeholders focus on other issues. It is not anticipated that in the short term that tensions will be increased by this, however, over the longer term, if invasive species create severe hardship for the ecosystem, stakeholders may become more agitated and could blame those who were aware of this problem and did not take steps to remedy this.

Recommendations

It is advisable that efforts to increase public awareness of the threats of invasive species. This could be done in conjunction with the increase in other concerns found in this study, such as increased concern for biodiversity. These include:

- Create targeted awareness build campaigns for ministries involved in this issue, including: agriculture and fisheries ministries, economic ministries, transportation ministries and environmental ministries, with support for and distribution through the Interministerial Committees.
- Develop an invasive species awareness campaign for stakeholders in the coastal area and who are active in the Caspian waters to focus on developing informal monitoring networks as part of the Caspian eco-net system with hotlines and information
- Enhancing public awareness of the threats of invasive species as part of an effort to increase awareness of the need for protection of biodiversity
- Develop curriculum activities through small scale pilot projects for school children to monitor the presence and impacts of invasive species in impacted areas

Protection from Invasive Species

High	Medium	Low
<ul style="list-style-type: none"> • Hydromet Officials • Economic Ministry • Fisheries Commission • Farmer/ water user • 	<ul style="list-style-type: none"> • Environmental Ministry • Foreign Affairs Ministry • Economic Ministry • State Owned Fisheries Industry • Energy Ministry • Municipal Government • State Scientific Research Center • Pastoralist/Animal Husbandry • Coastal Recreation Industry • Fishermen • Private Industry 	<ul style="list-style-type: none"> • Agriculture and Fisheries Ministry • Regional Government • District Water Management Official • Ministry of Education • National NGO • Private Scientific Research Center • Nature Preserve Staff • Coastal Zone Resident • Public Healthcare Provider • Educator/ Student • National or Local NGO • Community Based Organization • Fisheries Enforcement/ Border Guards Fishing Product Sales – National • State Owned Industry • Fisheries Consumer • Oil Company Representatives • State owned industry • National Press • International Finance Institution • International NGOs • Experts Group

The issue of invasive species remains a lower overall priority issue for stakeholders, though it has gained some in comparison to other issues such as fisheries and civil societies. In

comparison to the previous study the prioritization has shifted to different stakeholder groups. Environmental ministries have listed this as medium priority issue, while this was a low priority issue in the 2001 study. The groups that now list this as a high priority issue – hydromet officials, farmers/water users, and fisheries commission members, were not specifically included in the previous studies. It is possible that these groups that rank this as a high priority issue may be becoming aware of this as a real threat to the Caspian waters.

Other groups that have shifted their prioritization of this issue include agriculture and fishing ministries which shifted from medium priority in 2001 to low priority in 2004. This may indicate that there is a lack of knowledge regarding the threat posed by the invasive jellyfish in the waters. This may warrant an informational strategy to help those involved in fisheries management and regulators understand the problems that may emerge as a result of this threat. Though these groups may not be able to take steps to address this problem directly it would help to have them understand the impacts of these invasive species and include them in monitoring, evaluation and other efforts to increase awareness of this threat. In regards to presence of invasive flora species additional efforts to inform agricultural and fisheries ministries of the challenges may enable them to assist the lobbying efforts of other ministries, and the CEP Interministerial committees. Additionally, increasing awareness among oil company HSE representatives, national press, international finance institutions, and international NGOs may be beneficial for coordinated activities in the region.

It should also be noted that this issue is listed as a higher concern in the Russia and Iran, and a lower priority in Azerbaijan, Kazakhstan and Turkmenistan. This may suggest that there the prevalence of invasive species are gaining attention of stakeholders more than areas where populations are believed to be growing as a result of importation from other water bodies, or where invasive species of flora have become notably problematic. An awareness building campaign for those on or near the Caspian waters could assist in monitoring and increase stakeholder understanding of the challenges that the region faces if these issues are not dealt with.

Stakeholder groups are becoming more aware of the presence of invasive species. This suggests that their impact is spreading, as studies suggest, and that the population may be ready for more information on this topic especially in conjunction with other areas of concern, such as biodiversity. Additionally, by enhancing awareness of the impacts of invasive species, the cause and effect relationship of environmental degradation can reduce negative attention from other issues that may be being blamed unjustly for changes in the ecosystem. Two statements in the current study have demonstrated a growing awareness of invasive species.

28. “I have seen unusual creatures in the Caspian that were not there ten years ago.”

Agree	
<ul style="list-style-type: none"> • Environmental Ministries • Fisheries Commission • State Owned Fisheries Industry • Nature Preserve Staff 	<ul style="list-style-type: none"> • Coastal Recreation Industry • Fisheries Enforcement/ Border Guards • National Press
Division Within: <ul style="list-style-type: none"> • Hydromet Officials • Ministry of Education • Fisheries Product Sales - National • International NGOs 	

29. “Invasive species are creating significant environmental degradation in the Caspian.”

Agree	
<ul style="list-style-type: none"> • Foreign Affairs Ministry • Agriculture and Fisheries Ministry • State Owned Fisheries Industry • Energy Ministry • Regional Government • Public Healthcare Provider 	<ul style="list-style-type: none"> • Educator/ Student • Coastal Recreation Industry • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • National Press
Division Within: <ul style="list-style-type: none"> • Environmental Ministry • Hydromet Officials • Fisheries Commission • Nature Preserve Staff • Pastoralist/Animal Husbandry • Fisheries Product Sales – National 	

These statements represent the awareness that stakeholders have of the presence and impacts of invasive species in the region. The awareness of these creatures, in the case of jelly fish, or the invasive flora is important to gauge in order to determine where to target

efforts and how to address these. Though there is more active awareness building regarding other issues such as biodiversity, this issue should be included in those efforts.

In response to the statement "I have seen unusual creatures in the Caspian that were not there ten years ago" environmental ministries have continued to be in strong agreement with this compared to the 2001 study. In that 2001 study fishermen agreed strongly as well. Now fishermen do not show strong agreement, though this may be as a result of a longer term presence of these species in the waters. In the 2001 study there was division among environmental ministries stakeholders, where as now that division has been reduced and there seems to be more cohesion within the group, though there is not very strong agreement at this stage. Other groups who were not directly measured previously are showing stronger signs of agreement, including the fisheries commissions, state owned fisheries industries, nature preserve staff, and fisheries enforcement/border guards. These groups are probably becoming aware of the invasive jellyfish populations. Other groups such as recreation industry officials may be more aware of floral species that are clogging water ways, canals, irrigation and lagoons.

There is division within other stakeholder groups, which may be a reflection of geography more than anything else. As noted above this issue was a much higher concern issue for stakeholders in Iran and Russia and lower in the other Caspian states. This trend is also reflected throughout the responses to this question, with the highest levels of agreement from Russian stakeholder groups.

This holds true as well to the responses to the statement "Invasive species are creating significant environmental degradation in the Caspian." Strong agreement from stakeholders from Russia is more predominant in response to this statement. The environmental ministries had a very similar level of agreement with this statement as they did in the 2001 study. The agriculture and fisheries ministries are in strong agreement with this statement, though they did not rank protection from invasive species highly in the over all prioritization. Other groups associated with fishing and the fisheries industry have either come to realise the impacts of the invasive species, or are divided amongst themselves regarding the impacts. This may indicate an opening for incorporating these stakeholders into CEP activities, including monitoring of impacts and public awareness building.

In the 2001 study there was a higher level of agreement regarding the impact of invasive species than is revealed in the current analysis, which shows more variation among coastal zone residents. This is in large part due to the large number of surveys from coastal zone residents in Turkmenistan, in comparison to the other countries. As noted above, the responses to this statement are geographically determined so it would be logical this would account for a lower prioritization among this group. However, once this variation is controlled for, there is actually much higher level of agreement across this population. This suggests that there is an increasing awareness of these impacts and that the damages are becoming more wide spread though they continue to dominate the northern Caspian waters. This may indicate an opening for increased awareness building and establishing linkages to other environmental concerns in the region. If tied into the increased concerns for biodiversity, it may be possible to develop broader public awareness of this issue while incorporating coastal zone residents in efforts to monitor these species. In conjunction with Caspian eco-net projects, hotlines for identification could be established that would provide stakeholders with numbers to call when species are spotted, and information on what to do with these could be provided to those communities.

Conclusion

The presence of invasive species in the region remains a low priority issue, though it is continuing to become more important to stakeholders as they witness the impacts of this on the ecosystem. Further, it may be that other issues, such as pollution levels are being blamed for degradation that is actually a result of the presence of invasive species. At this time, it is difficult to determine this link definitively, though with targeted efforts for increased awareness among specific stakeholder groups, such as those involved with fisheries, and coastal zone residents may improve this understanding, while also increasing awareness of the problems facing the ecosystem because of the presence of these invasive species.

Reducing pollution in Caspian waters:

Reducing pollution in the Caspian waters is the highest priority issue for all stakeholder groups, especially those groups who are in closest contact with the Caspian waters. There is a wide perception that the waters of the Caspian are highly polluted despite recent studies that suggest this is the case in concentrated hotspots. These have reduced the level of concern among key stakeholder groups such as environmental ministries, and agriculture and fisheries ministries. There is a perception among many stakeholders that the Caspian is not cleaner today than it was 5 years ago, though groups such as coastal recreation industry stakeholders and fisheries related groups were most adamant about the recent decline in conditions.

Despite the perception that environmental quality is not improving there is general consensus among all stakeholder groups that there is adequate scientific knowledge about the causes of environmental decline in the Caspian. Groups that were internally divided about availability of information on the decline in environmental quality may not have benefited from recent information gathered in the past several years. There is a wide perception that pollution is caused by agricultural and industrial effluents, municipal wastes discharges and pollution from the oil extraction. Stakeholders continue to recognize that pollution in Caspian waters and low environmental conditions are taking a toll on human health in the region. The lack of information regarding causes of human health decline and environmental conditions sets the stage for emergent tensions if not addressed in a constructive manner in the short term.

The issue of pollution from oil is especially divisive though the trend appears to be towards more conciliatory attitudes among stakeholder groups regarding the presence of international oil companies. Nonetheless this trend should be monitored closely as steps are taken towards finding positive sum scenarios and improved dialogue among stakeholder groups.

In several issues involving there is a significant variation across the region. In general, the respondents from Iran were more vocal about their concern regarding pollution levels. Russian respondents tended to be more optimistic about environmental conditions pertaining to pollution. Respondents from Azerbaijan, Kazakhstan, and Turkmenistan were more neutral and lacked a broad consensus. This is discussed in more detail as it pertains to each subsection, though this variation is believed to be due mainly to cultural variation and current events.

Tensions between stakeholder groups regarding pollution have become less pronounced than they were in the previous study. There is tension between groups regarding the cause and effects of pollution as well as the responsibility for the conditions of the Caspian. In general the views tend to reflect economic interests. The softening of tensions between some major stakeholder groups, such as environmental ministries and agriculture and fishing ministries in opposition to multinational corporations and industry is significant and bodes well for the programme. However, steps should be taken to ensure that these positive trends will continue to emerge and are supported by mutually agreeable arrangements.

Recommendations

- Exploration of root causes of belief that the environmental quality of the Caspian is declining
- Make information summarizing recent scientific studies and pollution available to those dealing with water management issue in regional and municipal governments
- Provide information about broad trends in stakeholder perception regarding the consensus on pollution stemming from agriculture and industrial activities
- Continue to assist efforts to monitor municipal waste discharge rates into the Caspian waters
- Take steps towards empirically examining regional environmental conditions and the effects on human health.
- Improve dialogue opportunities for various stakeholder groups who are now in conflict over pollution efforts
- Provide information summarizing recent studies to broad stakeholder groups, in simplified and accessible formats

Reducing Pollution in Caspian Waters

High	Medium	Low
<ul style="list-style-type: none"> • Environmental Ministry • Foreign Affairs Ministry • Economic Ministry • State Owned Fisheries Industry • Energy Ministry • District Water Management Official • Municipal Government • Ministry of Education • State Scientific Research Centre • National NGO • Coastal Zone Resident • Nature Preserve Staff • Public Healthcare Provider • Educator/ Student • National or Local NGO • Coastal Recreation Industry • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Product Sales - National • Fisheries Consumer • State Owned Industry • Oil Company Representatives • International Funding Institutions • International NGOs • Experts Groups 	<ul style="list-style-type: none"> • Hydromet Officials • Agriculture and Fisheries Ministry • Fisheries Commission • Regional Government • Private Scientific Research Centre • Farmer /water user • Pastoralist/Animal Husbandry • Private Industry • National Press 	<ul style="list-style-type: none"> • (no groups)

Reducing pollution in Caspian waters is the highest priority concern of respondents to the stakeholder analysis. The issue of reducing pollution in Caspian waters was not directly addressed in the 2001 study, though issues overall environmental decline and potential damages from oil and gas activities were included. The decline in the over all environmental was the highest priority issue for stakeholders in the 2001 study, while concern regarding potential damage from oil and gas activities was at a much lower level concern.

The current high level prioritization of pollution in the Caspian waters appears partially due to the expansion in stakeholder groups included in this analysis. Some groups have maintained their high priority concern compared to the previous study. These include: all NGOs, public healthcare providers, fishermen, and coastal zone residents. These groups are closely involved in or directly impacted by environmental issues in the Caspian. Other groups that rank this as a high priority include those who are linked to fisheries, or directly involved with concerns of coastal residents. The high level of prioritization among the ministry of education and the educators/students may be as a result of increased awareness of the water quality in the Caspian as a result of more available educational materials. Also of interest are the energy ministries, oil company representatives, foreign affairs ministries which previously did not rank this as a high priority concern. The groups that rank this as a high level priority include industry and oil company representatives. This suggests a willingness to acknowledge the concerns regarding this issue, though specific responsibility for this condition can not be deduced from this prioritization. The following statements below provide insight into perceptions of environmental conditions, the understanding of the causes of the environmental decline in the Caspian, the human impacts of a degraded environment, specific causes of and impacts for pollution of the Caspian waters, and perception of who is responsible for these conditions.

35. "The environment of the Caspian is cleaner today that it was 5 years ago."

Disagree	Agree
<ul style="list-style-type: none"> • Foreign Affairs Ministry • Fisheries Commission • State Owned Fisheries Industry 	<ul style="list-style-type: none"> • Community Based Organizations • Oil Company Representatives

<ul style="list-style-type: none"> • Private Scientific Research Centre • National NGO • Educator/student • Farmer / Water User • Coastal Recreation Industry • Educator/Student • Pastoralist/Animal Husbandry • Fisheries Enforcement/ Border Guards • Fisheries Product Sales – National • Fisheries Consumer 	
<p>Division Within</p> <ul style="list-style-type: none"> • Environmental Ministry • Hydromet Officials • Economic Ministry • Fisheries Commission • Regional Government • District Water Management Official • Municipal Government 	<ul style="list-style-type: none"> • Ministry of Education • State Scientific Research Centre • Pastoralist/Animal Husbandry • State Owned Industry • Private Industry • National Press

The statement “the environment is cleaner today than it was 5 years ago” had only two groups in strong agreement – the community based organizations, and the oil company representatives. This statement was not used on the 2001 study. Those groups in strong disagreement are those who are involved directly in industries that are economically dependent upon environmental quality, and living close to the water. Those in the fisheries industry may be focusing blame for decreased fish stocks on pollution, rather than acknowledging the decline is a result of over fishing. The coastal recreation industry may be aware that poor environmental conditions limit the attraction their business. Others such as the educators/students, farmer/water user group, and pastoralist/animal husbandry groups may be seeing more pollution, or may be learning more about the pollution than they had previously been aware of. The foreign affairs ministry may be willing to admit that this is a problem due to the recent signing of the Tehran Convention and their awareness that it is now time to address this problem collectively. Alternately, this may be due to an increased concern over management of the shared waters.

The stakeholder groups that have division internal division were largely in disagreement and it is the degree to which they disagree that precipitated their division. This is not to say that there are some individuals who do feel that the environment is cleaner, but they are significant minority of those surveyed in almost every stakeholder group.

When measured based on geography there was some variation across the region. Russian respondents had the most positive view of the environmental quality over the past 5 years, though there was only minute agreement that was strongly diluted by a high standard deviation. In contrast the Iranian responses rated the environmental quality as significantly more degraded in the past 5 years, as did the respondents from Kazakhstan, though there was disproportionate responses from specialist in the Kazakh cohort, which may account for this. Respondents from Azerbaijan and Turkmenistan were in weak disagreement with the statement. This variation among countries may be due to cultural variations more than any other factor, though the Iranian population may be more sensitive to these pressures.

The above statement does not directly address why there is a decline in environmental quality, but rather gauges the over all perception of stakeholders. The general ferocity of responses suggests that root cause of this perception of environmental decline should be explored further.

23. “There is adequate scientific knowledge about the causes of environmental decline in the Caspian.”

Agree	
<ul style="list-style-type: none"> • State Owned Fisheries Industry • Nature Preserve Staff • Pastoralist/Animal Husbandry • Coastal Recreation Industry 	<ul style="list-style-type: none"> • Fisheries Enforcement/ Border Guards • Fisheries Consumer • International Finance Organization
<p>Division Within:</p> <ul style="list-style-type: none"> • Hydromet Officials • Economic Ministry 	<ul style="list-style-type: none"> • Regional Government • District Water Management Official • Municipal Government

There are currently no groups that have disagreement with the statement "There is adequate scientific knowledge about the cause of environmental decline in the Caspian" though the level of agreement varies significantly. In the 2001 study there was division between environmental ministries who were in weak agreement with this, and fishermen who were in strong disagreement with this statement. Now fishermen are in very weak agreement with this, and the environmental ministries maintain their agreement. This weakness in both fishermen and environmental ministry officials was such that it did not warrant inclusion in the table above. There is no geographic variation among the responses.

This shift from some disagreement before to stronger agreement now suggests that scientific knowledge is reaching stakeholder groups. Those in strong agreement, such as the state owned fisheries industry and others dependent upon fishing may be basing their comments on the increase scientific evidence regarding the decline of the fisheries. Those groups with internal divisions may not be receiving information pertaining to their concerns regarding the causes of environmental decline. This may warrant additional information being made available to these groups, specifically those dealing with water management issues and in regional and municipal governments.

The specific causes of environmental decline are often difficult to pinpoint. The survey asked several questions pertaining to this decline: agriculture and industrial waste; municipal wastes; and oil pollution. These provide pertinent information regarding how groups view these issues.

22. "Agricultural and industrial wastes flowing into the Caspian threaten marine and coastal species."

Agree	
<ul style="list-style-type: none"> Economic Ministry Foreign Affairs Ministry Agriculture and Fisheries Ministry State Owned Fisheries Industry Regional Government District Water Management Official Municipal Government Ministry of Education State Scientific Research Center Private Scientific Research Center National NGO Nature Preserve Staff Coastal Zone Resident Public Healthcare Provider Educator/ Student 	<ul style="list-style-type: none"> Farmer / Water User Pastoralist/Animal Husbandry National or Local NGO Coastal Recreation Industry Community Based Organization Fishermen Fisheries Enforcement/ Border Guards Fisheries Consumer State Owned Industry National Press Oil Company Representatives International Finance Institutions International NGOs Experts Group
Wide Division Within: <ul style="list-style-type: none"> Hydromet Officials Fisheries Product Sales – National 	

32. "Municipal wastes make the Caspian waters unpleasant."

Agree	
<ul style="list-style-type: none"> Environmental Ministry Economic Ministry Agriculture and Fisheries Ministry State Owned Fisheries Industry Regional Government District Water Management Official Municipal Government Officials Ministry of Education Nature Preserve Staff Coastal Zone Resident Public Healthcare Providers Educator/ Student 	<ul style="list-style-type: none"> Pastoralist/Animal Husbandry National or Local NGO Coastal Recreation Industry Community Based Organization Fishermen Fisheries Enforcement/ Border Guards Fisheries Product Sales - National Fisheries Consumer State Owned Industry Private Industry Oil Company Representatives National Press
Division Within: <ul style="list-style-type: none"> Fisheries Commissions Hydromet Officials 	

13. "There are fewer fish in the Caspian than there used to be because of recent oil drilling."

Disagree	Agree
<ul style="list-style-type: none"> Oil Company Representatives International Finance Institutions 	<ul style="list-style-type: none"> Agriculture and Fishing Ministries Ministry of Education Educator/ Students Pastoralist Animal Husbandry

	<ul style="list-style-type: none"> • Fisheries Products and Sales
Wide Division Within: <ul style="list-style-type: none"> • State Owned Fisheries Industry • Foreign Affairs Ministry • Nature Park Staff • Experts Group 	

The statement “Agricultural and industrial wastes flowing into the Caspian threaten marine and coastal species” has drawn very high levels of agreement from stakeholders in the Caspian. On average most stakeholder groups tended to agree strongly with this statement. In the 2001 study, there was strong agreement from many stakeholder groups, especially the fishermen and coastal zone residents. In 2001 the multinational corporations were in disagreement with this statement, though now the agreement of the oil company representatives are in agreement. This suggests that the awareness that the pollution of the Caspian is due to local causes, though it is difficult to pinpoint specifically. Environmental ministries were in agreement, but it was not as strong as it was among many other groups. It should be noted that the highest level of agreement was in countries with coastal industries: Azerbaijan, Iran, Kazakhstan and Russia, while there was lower level agreement from Turkmenistan. This high level of awareness of the problems of agricultural and industrial pollution suggests that there is broad support for reducing effluents into the Caspian waters. Inclusion of this broad trend in public awareness campaigns may help others recognize the wide spread nature of this concern and could contribute to increased action based on the support for remedying the situation. The awareness of the international finance institutions, international NGOs, and experts groups also suggests that this issue is ripe for more concerted attention and action.

In a similar vein, the statement “municipal wastes make the Caspian waters unpleasant” was met with broad general agreement. The issue of untreated municipal wastes in the Caspian was not addressed in the previous study however, this demonstrate that there are serious concerns with this in the region. The concern over municipal wastes in Caspian waters is wide spread among stakeholder groups, with only fisheries commissions and hydromet officials being internally divided about this issue. Alternately, the district water management officials were in the highest agreement with this statement of any stakeholder group. There was strong geographic variation in response to this question. The highest level of agreement was among stakeholders from Iran, with Russia also in strong agreement. Azerbaijan and Turkmenistan were somewhat less adamant in their agreement. The clean-up efforts in Baku Bay may be one reason the responses in Azerbaijan were lower, while the lower coastal population in Turkmenistan may explain their lower level of agreement over all. Continued monitoring of municipal wastes should be included in efforts to improve the water quality of the Caspian waters. Though this is generally more of a local and nation level concern, a possible perception of transboundary waste flows does not serve to improve regional relations.

Though industrial and agricultural runoff, and municipal wastes are viewed as harming the environment, there is not strong tensions between stakeholder groups regarding these perceptions. Tensions do remain over oil pollution in Caspian waters among some stakeholder groups. In 2001, the statement “There are fewer fish in the Caspian than there used to be because of recent oil drilling” drew strong support from fishermen and the agriculture and fishing ministries. The multinational corporations were divided originally though tended to disagree. Now, the fishermen stakeholder group responses agree much less strongly than in 2001, though the agriculture and fishing ministries and the fisheries products and sales groups continue to agree strongly with this statement. Additionally, education ministries and educators and students do as well. Pastoralists agree as well, though the reason for this is not particularly clear.

Now we find that the international finance institutions and oil company representatives disagree strongly with this cause for the decline in fisheries as would be expected because the perceived lack of culpability for this decline. The experts group, nature park staff, foreign affairs ministries and the state owned fisheries industries are internally divided. The division within these groups may signal an awareness of the challenge of this issue or a perception that there are multiple causes for the decline in certain fish stocks. This may warrant further investigation among these groups.

It is worth noting that the coastal zone stakeholder group was not in strong agreement or disagreement with this statement. Also absent from this cohort is the environmental ministries. Both of these groups were in agreement 3 years ago, whereas now, they do not have either a clear consensus or strong internal variation within the groups. These discrepancies may represent a shifting in opinion or may be a statistical abnormality. If we assume it is a shift in opinion, it may be because of the realization and subsequent studies that decline in fisheries are caused in part by over fishing, rather than pollution levels.

Though out the survey respondents seem to link pollution to the oil industry and therefore to the decline in fish stocks, the pollution is generally seen as creating conditions that are not healthy for life in the Caspian. Both statements below reflect the belief that there is a correlation between pollution in the Caspian and health of those in the region.

19. "Pollution is the primary reason that there are fewer fish in the Caspian."

Agree	
<ul style="list-style-type: none"> Agriculture and Fisheries Ministry Regional Government District Water Management Official Municipal Government Private Scientific Research Center Public Healthcare Provider 	<ul style="list-style-type: none"> Farmer / Water User Local or National NGOs Pastoralist/Animal Husbandry Fishermen Fisheries Consumer
<p>Wide Division Within:</p> <ul style="list-style-type: none"> Fisheries Commission Municipal Government Ministry of Education Pastoralist/Animal Husbandry 	<ul style="list-style-type: none"> Community Based Organization Fisheries Enforcement/ Border Guards Fisheries Products sales State Owned Industry International NGOs

27. "People would be healthier if the environment were cleaner."

Agree	
<ul style="list-style-type: none"> Environmental Ministry Economic Ministry Agriculture and Fisheries Ministry Fisheries Commission State Owned Fisheries Industry Regional Government District Water Management Official Municipal Government Ministry of Education State Scientific Research Center Private Scientific Research Center National NGO Coastal Zone Resident Nature Preserve Staff Public Healthcare Provider 	<ul style="list-style-type: none"> Educator/ Student Farmer / Water User Pastoralist/Animal Husbandry National or Local NGO Community Based Organization Fishermen Fisheries Enforcement/ Border Guards Fisheries Product Sales - National Fisheries Consumer State Owned Industry Private Industry National Press International NGOs International Finance Organizations Experts Group
<p>Division Within:</p> <ul style="list-style-type: none"> Hydromet Officials 	<ul style="list-style-type: none"> Coastal Recreation Industry

In response to the statement "Pollution is the primary reason that there are fewer fish in the Caspian" none of the stakeholder groups disagreed strongly. We find similar trends in terms of agreement, but shifting groups. Previously the coastal zone residents, industries, environmental ministries and fishermen were in agreement with this statement while now, only the fisherman remain of this group. It is interesting to note that the other ministries, such as agriculture and fishing, as well as other stakeholder groups listed above have now come to see pollution as a cause in for the decline in fisheries. This suggests that there is an understanding between pollution impacting declining fish populations. Though thr

Perhaps more telling is the statement "People would be healthier if the environment were cleaner". This was one of the most widely agreed to statements in the survey. This statement was also widely supported by almost all stakeholder groups in the initial study. This only groups with internal dissent was the hydromet officials and coastal recreation industry. The hydromet officials may have some awareness of other issues that endanger human health, such as low economic conditions. The environmental conditions in the Caspian region are believed to contribute to human health decline, though to date no region-wide studies have been conducted. This creates a gap in information about the Caspian environment that should be addressed in the future, either through targeted pilot studies or through a broader scaled

evaluation of public health in the region. Environmental issues continue to be a hot topic with regards to the health of the human population and empirical evidence of cause and effect relationships will be particularly helpful towards motivating stakeholders to actively work to improve conditions in the region.

As it stands now, the stakeholder appear to link low human health conditions to environmental degradation, and when environmental degradation is conceptualized it seems to be primarily in the form of pollution from industries and agriculture and from the extractive industries in particular. If stakeholders believe that there are fewer fish in the Caspian because of pollution from oil drilling, and they believe that a degraded environment reduced human health, it is possible that oil industry activities are being blamed for conditions which they did not create. The perception that these stakeholders do not care about the environment or about their impacts on the environment is difficult to counter. Two statements gauge this issue with varying results.

14. “Multinational corporations and the energy industry do not care about the environment.”

Disagree	Agree
<ul style="list-style-type: none"> Hydromet Officials State Owned Fisheries Industry Nature Park Staff Oil Company Representatives 	<ul style="list-style-type: none"> Nature Preserve Staff Agriculture and Fisheries Ministry
<p>Wide Division Within:</p> <ul style="list-style-type: none"> Environmental Ministry Economic Ministry Foreign Affairs Ministry Fisheries Commission Regional Government Municipal Government Ministry of Education 	<ul style="list-style-type: none"> Pastoralist/Animal Husbandry Coastal Recreation Industry Fisheries Enforcement/ Border Guards Fisheries Product Sales - National Fisheries Consumer State Owned Industry

25. “Private industry should take all responsibility for reversing environmental degradation of the Caspian.”

Disagree	Agree
<ul style="list-style-type: none"> Fisheries Commission Oil Company Representatives 	<ul style="list-style-type: none"> Fisheries Enforcement/ Border Guards
<p>Wide Division Within:</p> <ul style="list-style-type: none"> Hydromet Officials Energy Ministry District Water Management Official Private Scientific Research Center 	<ul style="list-style-type: none"> Coastal Zone Resident Pastoralist/Animal Husbandry Community Based Organization Fishermen Private Industry

The statement “multinational corporations and the energy industry do not care about the environment” is widely divisive within stakeholder groups. It is also a divisive issue between stakeholder groups. In the 2001 study the main division was between industry, multinational corporations, and regional and municipal governments that were in disagreement with this statement, in opposition to agriculture and fisheries ministries and fishermen who strongly agreed with this statement. These divisions remain 3 years later, though the agriculture and fishing ministries has a weaker level of agreement than before. The fishermen stakeholder group is also much weaker than before. In comparison the regional and municipal governments are now more divided than they had been previously which portends some concern for this issue. This shift in opinion suggests that there is softening in views of stakeholder groups, but this issue continues to warrant attention.

It should be noted that there is wide variation across the region regarding this statement. The stakeholders from Russia disagreed, while those in Iran tended to agree. Azerbaijan, Kazakhstan, and Turkmenistan were almost entirely neutral on this issue. The variation between Russia and Iran is believed to be culturally based, with the current events in Russia regarding the state seizure of privately owned oil companies may also account for some of this variation. Follow up studies on this with more in-depth discussions between stakeholders and oil companies may server to reduce these tensions over all throughout the region.

The statement “private industry should take all responsibility for reversing environmental degradation in the Caspian” is also divisive among stakeholder groups, though less so than it was in 2001. In 2001, environmental ministries, agriculture and fisheries ministries, regional and municipal governments and public healthcare providers were in strong agreement with

this statement. Now each of these groups has significantly diluted opinions and generally tends towards very weak agreement. On the other hand, the oil company representatives maintain a strong disagreement with this statement. The fisheries commissions also disagree, probably because they recognize that private industry is not responsible for the decline in certain fisheries. This is in contrast to the fisheries enforcement/border guards who strongly agree that private industry should take responsibility for environmental decline. This may be a defensive response on their part, and goes with blaming the decline in fisheries on pollution rather than lack of effective enforcement. Assigning blame for environmental conditions has matured to acceptance that this is a very complex problem and is addressed in subsequent sections of this report.

Assignment of blame for environmental conditions continues to be a precarious situation for oil companies. Studies suggesting that the mass seal and kilka die-offs were due in part to the presence of toxins in the water may have led some stakeholder groups to believe that this is due specifically to oil pollution, rather than pollution levels present in the region for longer term. It is common that the extractive industries are blamed when they are seen as profiting while pollution continues to create environmental problems. The challenge is to determine what impacts the extractive industries pollution is having on the ecosystem, and also to determine what other sources of environmental degradation are. It is clear that there are concerns about the pollution in the environment; however it may be useful to identify those sources as closely as possible in order to avoid creating a scapegoat industry that attracts national and international attention while the actual causes of degradation are not addressed. Once these causes are more closely defined, a public awareness campaign to distribute this information may be useful in avoiding the vilification of a single industry at the expense of meaningful remedial action.

Conclusion:

The challenge of pollution reduction is one of the most prevalent in this Caspian region. Perceptions of causes, effects and responsibility vary widely. This variation suggests that there are potential areas of conflict between stakeholder groups. The tensions are not as severe as they were 3 years ago, however they do remain and work to absolve these should certainly continue. This may require more aggressive information exchange, creative solutions to entrenched ideas and increased dialogue among stakeholder groups in order to bring about a more effective set of actions that has broad stakeholder support.

Sustainable economic development with environmental care:

Improvement of environmental conditions and economic conditions are often viewed as contradictory aims. This unfortunate conception must be overturned in the region if sustainable development practices are to be developed, and it appears that stakeholders in the region is ready to consider these options at this time. Sustainable development with environmental care is an important priority for stakeholders over all, and the shift to higher prioritization of this among stakeholder groups is promising. The concept of using resources to meet current demand at the expense of future generations is increasing in the awareness of the stakeholders. Economic strains have also increased the realization of many stakeholder groups that the environment will not be protected if economic conditions are very low. Groups who had previously taken extreme positions on this appear to be recognizing the complexity of this and are softening their opinions in general.

A topic of particular concern within this issue is the perception that the environment can withstand whatever human activities do to it. There is actually a significant portion of the population, especially coastal zone residents, and the agriculture and fisheries ministries who still believe that technological solutions will resolve environmental problems and therefore sound stewardship is not needed. A significant majority of stakeholders recognise that poor environmental conditions impact human health; though no regional empirical studies have been conducted. Access to potable water continues to be a high priority concern for many stakeholders. Establishing a clear link between low environmental quality and poor human health conditions as obstacles economic development may enable broader meaningful stakeholder support for sustainable development in the region. The responsibility of the

government in regards to taking steps to improve environmental conditions has become a more polarized issue that could be addressed through development of a sustainable development agenda for targeted areas through pilot projects to serve as examples for the wider region.

There has been division among stakeholder groups regarding the responsibilities of government *vis a vis* social welfare programmes and environmental protection. This rift was starting to occur in the 2001 study and increasing polarization has been found particularly between groups with an active interest in environmental protection and those who are economically dislocated due to poverty.

Recommendations

- Examination of shifting trends in stakeholder perceptions of sustainable development
- Provide stakeholder groups with accessible models of sustainable development projects that have had concrete successes under comparable circumstances
- Create an information campaign linking improved environmental conditions with economic development focusing on grass roots efforts to protect habitats
- Provide workshops for regional, district and national level planning agencies, with CBOs, industries and NGOs to train groups how to develop sustainable development practices.
- Provide a basic ecology training course to targeted populations emphasising positive sum scenarios of sound environmental stewardship.
- In conjunction with other organizations develop a Caspian region environmental health atlas to pin point areas of environmentally induced human problems.
- Develop accessible materials demonstrating the linkages between low environmental conditions, poor human health and poor economic performance.
- Provide concrete examples of sustainable development projects that have been employed at local, national and regional levels to targeted stakeholder groups.

Sustainable economic development with environmental care

High	Medium	Low
<ul style="list-style-type: none"> • Hydromet Officials • Economic Ministry • Fisheries Commission • State Owned Fisheries Industry • District Water Management Official • Municipal Government • State Scientific Research Center • Private Scientific Research Center • Coastal Zone Resident • Nature Preserve Staff • Public Healthcare Provider • Fishermen • Fisheries Product Sales - National • Fisheries Consumer • State Owned Industry • Oil Company Representatives • International Finance Institutions • Experts Group 	<ul style="list-style-type: none"> • Environmental Ministry • Foreign Affairs Ministry • Agriculture and Fisheries Ministry • Energy Ministry • Regional Government • National NGO • Educator/ Student • Farmer / Water User • National or Local NGO • Coastal Recreation Industry • Community Based Organization • Fisheries Enforcement/ Border Guards • International NGOs 	<ul style="list-style-type: none"> • Ministry of Education • Pastoralist/Animal Husbandry • Private Industry • National Press

The issue of sustainable economic development with environmental care has risen as a priority for stakeholders in the Caspian region. In 2001 this issue was not a high priority issue overall as a root cause, and yet now is very close to preservation of biodiversity as a second highest priority. Many of the stakeholder groups from the first study have shifted their priority of this issue which carries some important implications. Of these groups, only officials from environmental ministries have not changed their prioritization of this issue.

Those groups that have downgraded this issue include regional governments and NGOs who previously ranked this as a high level concern and now rank it as a mid level priority now. This

may be because of the increased importance economic development, and the need to create opportunities in the region, even at the expense of environmental protection. This downward trend is also a found with regards to private industry who now rank this as a low priority concern. For each of these groups, economic priorities are probably outweighing environmental concerns, or there is a lack of understanding of environmentally friendly development trends.

Those groups who have increased the prioritization are significant as well. State and private scientific research centers now rank this as higher, perhaps because of increased awareness that environmental care in the region can not be effectively developed when there is not economic incentives for this. This trend is repeated with oil company representatives, and fishermen. The most interesting shift is among the coastal zone residents who ranked this as a medium to low level priority 3 years ago and now rank it quite soundly as a high level priority. This suggests that there is a trend towards recognizing the importance of sustainable development practices among those in the coastal areas who are affected by low environmental conditions and face the need for improved economic opportunities. This trend should be examined further and built upon through concerted efforts involving combining economic and environmental benefits for coastal zone residents, perhaps through demonstration projects supported through small grants if these are available.

There are several issues within the concept of sustainable development that were addressed within the survey. The first group is the issue of economic use versus environmental protection concerns. The second pertains to human health impacts of environmental degradation. The third addresses the role of government in sustainable development.

12. “It is more important for people to use the Caspian resources that they need than it is to leave them untouched because of environmental concerns”

Disagree	Agree
<ul style="list-style-type: none"> • State Scientific Research Centers • Oil Company Representatives • International Funding Institutions • International NGOs • Experts Group 	<ul style="list-style-type: none"> • Economic Ministry • District Water Management Official • Educator/ Student • Fisheries Consumer
<p>Wide Division Within:</p> <ul style="list-style-type: none"> • Environmental Ministry • Hydromet Officials • Economic Ministry • Energy Ministry • Agriculture and Fisheries Ministry • State Owned Fisheries Industry • Regional Government • Municipal Government • Ministry of Education • State Scientific Research Center • Private Scientific Research Center • Nature Preserve Staff 	<ul style="list-style-type: none"> • Coastal Zone Resident • Public Healthcare Provider • Farmer / Water User • Pastoralist/Animal Husbandry • National or Local NGO • Coastal Recreation Industry • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Product Sales - National • State Owned Industry • Private Industry • National Press

18. “It is more important to protect natural habitats than it is to enhance economic development.”

Disagree	Agree
<ul style="list-style-type: none"> • District Water Management Officials 	<ul style="list-style-type: none"> • Fisheries Products and Sales • National Press
<p>Wide Division Within:</p> <ul style="list-style-type: none"> • Fisheries Commission • Pastoralist/Animal Husbandry 	<ul style="list-style-type: none"> • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards

21. “There should be limits on some activities in certain zones of the coastal region.”

Agree	
<ul style="list-style-type: none"> • Environmental Ministry • Economic Ministry • Foreign Affairs Ministry • Agriculture and Fisheries Ministry • State Owned Fisheries Industry • Regional Government • District Water Management Official • Municipal Government • Ministry of Education 	<ul style="list-style-type: none"> • Educator/ Student • Farmer / Water User • Pastoralist/Animal Husbandry • National or Local NGO • Coastal Recreation Industry • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Consumer

<ul style="list-style-type: none"> • State Scientific Research Center • Private Scientific Research Center • National NGO • Nature Preserve Staff • Coastal Zone Resident • Public Healthcare Provider 	<ul style="list-style-type: none"> • State Owned Industry • Private Industry • Oil Company Representatives • National Press • International Funding Institutions • International NGOs • Experts Group
Wide Division Within:	<ul style="list-style-type: none"> • Fisheries Commission

The statement “It is more important for people to use the Caspian resources that they need than it is to leave them untouched because of environmental concerns” is highly divisive within many stakeholder groups, as the rate of use of resources now is unsustainable in order to meet human needs, or to preserve them for future generations. In the 2001 survey there was much wider division between stakeholder groups with regard to this statement, whereas now the division is within stakeholder groups. In 2001, the environmental ministries, agriculture and fisheries ministries, regional and municipal governments, scientific communities, coastal zone residents, public health care providers and fishermen agreed with this statement. In contrast, NGOs both from local and national groups, and industry disagreed with this statement and again, they are also now divided over this issue. All of these groups now show strong internal division, though these trends do not appear to be strongly linked to geographic trends. Now the only groups that had consensus on this issue were the state scientific research centers, oil company representatives, international funding institutions international NGOs and the experts group. This may be due to the relative distance from the coastal living conditions of these groups’ members, while realities for local populations are direr and often dependent upon local natural resources to sustain existing populations. Additionally, of those in disagreement with this statement will be more inclined to have a conservationist agenda than other stakeholder groups.

As this statement pertains to sustainable development, the shift towards a more midline sentiments suggests that previously held opinions are now being reshaped by the awareness of the need to care for natural resources while developing economically. Division within key stakeholder groups, such as environmental ministries, agriculture and fisheries ministries, energy ministries, regional and municipal governments, national and local NGOs, scientists, coastal zone residents and others suggests that there is a stronger awareness that low economic conditions are not conducive to environmental stewardship, as resources are used at rates that degrade the environment. In contrast, this also suggests the awareness that poor environmental conditions do not support economic growth. Additional examples of environmentally sound economic development should be provided to stakeholder groups as models for development.

In response to the statement “It is more important to protect natural habitats than it is to enhance economic development” there was some division within and among stakeholder groups. The only dissenting stakeholder group was the district water management officials. This would reflect the pressures on them to provide water for economic development even though they may be aware that it is done at the expense of natural habitats. In contrast, fisheries products and sales and national press agreed with this statement. This may be due to the awareness that failure protection of habitats will have broader economic repercussions, though it may also be reflective of the small sample of these groups.

The groups that had wide division within the stakeholder groups of note were fisheries commissions, fishermen and fisheries enforcement/border guards. These groups may be experiencing something of a crisis as populations of commercial species continue to decline, and the cause remains elusive to those not wishing to acknowledge the impacts of over fishing. In comparison, pastoralists and community based organizations may have realized that destruction of habitats is having economic ramifications as the impacts are felt by coastal communities. Perhaps an informational campaign linking improved environmental conditions with economic development would held to alleviate some of these divisions and could enhance grass roots efforts to protect habitats.

The conspicuous absence of groups such as the environmental ministries, economic ministries, oil company representatives and industry from this is largely due to their relatively anaemic responses. Among all of these groups there was very weak disagreement with this

statement, which was constant across all of these groups. Coastal zone residents as the largest stakeholder group had some variation but the average was almost exactly between agreement and disagreement, with a very low standard deviation. This suggests that the issue of active habitat protection could become more important, especially if stakeholders are taught about the linkages between habitat protection and sustainable economic development.

The 2001 study found high levels of regional variation in response to the statement "there should be limits on some activities in certain zones of the coastal region". This regional variation has evaporated, as Russia, I.R. Iran and Azerbaijan have very strong agreement; Turkmenistan has moderately strong levels of agreement; and the limited response from Kazakhstan has strong agreement. The 2004 study also revealed very strong levels of support for limits on activities in certain areas of the coastal zone. A total of 31 of the 40 stakeholder groups had strong consensus of agreement on this issue. The only group that was represented as having strong agreement in the 2001 study was industries. Within the current study, there was wide division within the fisheries commissions, and no clear level of agreement or disagreement from hydromet officials or fisheries products sales. These may be due to statistical aberrations due to a small sample size.

Overall these responses suggest that a top down approach to sustainable development may be widely accepted in the region. The population in these countries are largely accustomed to governments that take a strongly directive approach to resource governance, and may be willing to be supportive of such an approach to social and economic planning. Again, this suggests that support may be warranted for the increasing support and capacity building for these groups to advocate for sustainable development practices. This support may be in the form of planning workshops for municipal, district and regional governments, industries, community based organizations and NGOs. Additional information for ministerial officials may also be helpful for increasing sustainable development trends.

34. "The environment can fully recover no matter what humans do to it."

Disagree	
<ul style="list-style-type: none"> • Environmental Ministry • Economic Ministry • Foreign Affairs Ministry • Fisheries Commission • State Owned Fisheries Industry • Regional Government • District Water Management Official • Municipal Government • Private Scientific Research Center • National NGO • Nature Preserve Staff • Educator/ Student • Farmer / Water User 	<ul style="list-style-type: none"> • National or Local NGO • Coastal Recreation Industry • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Product Sales - National • Fisheries Consumer • State Owned Industry • Private Industry • Oil Company Representatives • National Press • International NGOs • Experts Group
<p>Division Within</p> <ul style="list-style-type: none"> • Hydromet Officials • Agriculture and Fisheries Ministry 	
<ul style="list-style-type: none"> • Ministry of Education • Coastal Zone Residents 	

The issue of limits of the environment to absorb human activities and still replenish itself is new to the current study with the statement "The environment can fully recover no matter what humans do to it." This question emerged following independent discussions with stakeholders in the region who repeatedly said that regardless of what they do to the environment, it will recover. While a majority of stakeholder groups are in strong disagreement with this statement there are several groups that have strong divisions. These divisions suggest that there continues to be mentality that no matter what humans do to the environment, technological solutions can be found to remedy the damages. This mentality, especially among coastal zone residents may create significant challenges to efforts to improve environmental conditions. A possible means of addressing this problem is to create a basic and accessible set of examples drawing on cases where long term environmental damages were caused by human activities. This will be most effective if economic costs of these damages can be demonstrated through examples for those groups who may be holding these outdated conceptions. Another group which had internal division that is of concern to CEP is the agriculture and fisheries ministry officials. Unexpectedly, they were widely divided in response to this question, which suggests that there are some officials in this key ministry

who may not fully appreciate the precarious balance of ecosystems, and the severity of human impact on these shared resources.

The impacts on human health could also be used as a key example of the problems that result from environmental degradation. In the Caspian region there is awareness of this relationship though it is not as developed as it may need to be as demonstrated by the statements below.

27. “People would be healthier if the environment were cleaner.”

Agree	
<ul style="list-style-type: none"> • Environmental Ministry • Economic Ministry • Agriculture and Fisheries Ministry • Fisheries Commission • State Owned Fisheries Industry • Regional Government • District Water Management Official • Municipal Government • Ministry of Education • State Scientific Research Center • Private Scientific Research Center • National NGO • Coastal Zone Resident • Nature Preserve Staff • Public Healthcare Provider 	<ul style="list-style-type: none"> • Educator/ Student • Farmer / Water User • Pastoralist/Animal Husbandry • National or Local NGO • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Product Sales - National • Fisheries Consumer • State Owned Industry • Private Industry • National Press • International Finance Institutions • International NGOs • Experts Group
<p>Division Within:</p> <ul style="list-style-type: none"> • Hydromet Officials 	<ul style="list-style-type: none"> • Coastal Recreation Industry

26. “In the Caspian region, the biggest threat to the human population is the lack of safe drinking water.”

Agree	
<ul style="list-style-type: none"> • Environmental Ministry • Foreign Affairs Ministry • State Owned Fisheries Industry • Energy Ministry • Regional Government • District Water Management Official • Ministry of Education 	<ul style="list-style-type: none"> • Nature Preserve Staff • Public Healthcare Provider • Educator/Student • Community Based Organization • Fisheries Enforcement/Border Guards • Fisheries Consumer
<p>Wide Division Within:</p> <ul style="list-style-type: none"> • Hydromet Officials • Economic Ministry • Fisheries Commission • Private Scientific Research Center • Coastal Zone Residents • Farmer / Water User 	<ul style="list-style-type: none"> • Coastal Recreation Industry • State Owned Industry • Oil Company Representatives • National Press

The more general statement is “People would be healthier if the environment were cleaner”. This was one of the most widely agreed to statements in the survey. This statement was also widely supported by almost all stakeholder groups in the initial study. This main group with dissent was the hydromet officials, who have some internal division possibly due to the awareness of other issues that endanger human health, such as low economic conditions. Also there was variation in the coastal recreation industry, which may indicate a division between those who recognize this issue and those who realize that formal recognition could decrease economic opportunities for their industry. The environmental conditions in the Caspian region are believed to contribute to human health decline, though to date no region-wide studies have been conducted. This creates a gap in information about the Caspian environment that should be addressed in the future, either through targeted pilot studies or through a broader scaled evaluation of public health in the region. Environmental issues continue to be a hot topic with regards to the health of the human population and empirical evidence of cause and effect relationships will be particularly helpful towards motivating stakeholders to actively work to improve conditions in the region. This may suggest that a regional health atlas project could be warranted, building on work of other organizations, and possibly incorporating WHO assistance.

The second statement is “In the Caspian region, the biggest threat to the human population is the lack of safe drinking water.” In the current study, there was no disagreement with this from stakeholder groups. When asked in the 2001 study, there was strong agreement from public

health care providers, and agreement from environmental ministries, coastal zone residents, and NGOs. These groups has all become somewhat less adamant in their agreement perhaps because they realize that there are other serious concerns facing the human population, including lack of economic development. Nonetheless 13 of 35 groups were in strong agreement with this statement, suggesting that there is an awareness of the challenge of accessing clean water sources.

These perceptions of low environmental conditions impacting human health can actually work in favour of implementing sustainable development plans and projects. By linking improved environmental conditions to improved economic circumstances there are doubled incentives for stakeholders to support these efforts. A relationship exists between low environmental conditions and poor human health. As noted before, it is difficult to draw a direct link between environmental causes of human illness; however empirical trends do support this general relationship. As human health declines, the investment climate is also degraded both as workers become ill and as other members of the labour force and revenues go to care for those with illnesses. As a result of this diversion of money and labour, there is less economic activity, which in turn increases poverty in a region. As poverty increases, dependence upon non-sustainable environmental practices increase, and the cycle repeats itself. While this is a very cursory overview of this issue, presenting it to targeted stakeholders in conjunction with assessments of current environmental conditions may garner support for the implementation of sustainable development projects.

In political systems such as those around the Caspian, the expectation of government to meet basic needs is fairly high, especially in the Former Soviet States. The role of government in environmental stewardship is not particularly clear, when measured against other more traditional demands.

17. “The government should spend money on the basic needs of people, like housing, health care and good jobs, before it spends money on protecting the environment.”

Disagree	Agree
<ul style="list-style-type: none"> • Environmental Ministries • Nature Preserve Staff • Educators/students • National Press • International Funding Institutions • International NGOs 	<ul style="list-style-type: none"> • Fishermen • Fisheries Enforcement/Border Guards
<p>Wide Division Within:</p> <ul style="list-style-type: none"> • Economic Ministry • State Owned Fisheries Industry • District Water Management Official • Municipal Government • Ministry of Education • Private Scientific Research Center 	<ul style="list-style-type: none"> • Coastal Zone Resident • Public Healthcare Provider • Pastoralist/Animal Husbandry • Farmer / Water User • Fisheries Product Sales - National • Fisheries Consumer • State Owned Industry

The statement above “The government should spend money on the basic needs of people, like housing, health care and good jobs, before it spends money on protecting the environment.” When used in the 2001 study this failed to generate a strong reaction from any stakeholder group though polarization was beginning to occur as groups tended towards agreement and disagreement. Now there is much more division between and within stakeholder groups regarding this issues. The groups we see in each of these are those we would expect to see the division in, with environmental ministries arguing for more resources dedicated to environmental stewardship, and those groups who are most immediately economically dislocated in agreement with this. Nonetheless, this division may continue to become more extreme if linkages between economic improvements and environmental stewardship are not developed. Divisions within groups also represent the internal ambivalence that stakeholder groups face. In all the groups listed the division was significant enough that this split may be worth monitoring over time. Discussions of sustainable development ideals must be supported by concrete examples. If cases where steps were taken by governments and other stakeholder groups to reverse degradation trends while improving environmental conditions could be demonstrated to those in the region it is possible to bring about changes that could have lasting and meaningful impacts on the region as a whole.

Conclusion:

The challenge of sustainable development will be to clearly demonstrate the benefits and to show that these benefits will outweigh the long term costs to stakeholder groups. Generally there is agreement on the need to improve environmental conditions, but it needs to be done in conjunction with economic development. The Caspian states can not afford to devote significant resources to traditional environmental practices that limit economic growth. Rather, new solutions need to be employed that will improve environmental conditions while also improving economic opportunities in the region.

Stronger civil society input into decision making:

Overview

There has been an emphasis on civil society input into environmental decision making by international organizations. The concern for this among regional stakeholders is actually quite low. This issue is ranked as the lowest priority for all stakeholder groups in the region. As expected, some groups such as local and national NGOs see this as a higher priority issue, while most rank this as a much lower priority. This low ranking is probably due to other more specific concerns addresses elsewhere in this study. The cultural and political legacies of most of the Caspian countries also do not strongly encourage input from civil society into decision making processes. Further, this survey reveals that there is ambivalence among most stakeholders about how representative NGOs are of grassroots efforts in the region. Also the assumption that most environmental information comes from media such as TV and newspapers has been brought into question by the survey results.

There is positive support for continued collaboration among stakeholders, such as NGOs, private companies and scientists, and there is broad support for all members of society taking responsibility for environmental issues. Most stakeholders do not believe that only in the event of an environmental crisis will people be concerned about environmental issues which portends well for increased awareness of issues. Again though, this may be most effectively addressed in relation to more specific issues discussed above.

There are relatively few tensions with regards to the importance of civil society input into decision making, at least according to stakeholder groups. The tensions may be more pronounced as groups attempt to assert influence on the decision making process. While channels have been established to facilitate this effort in international projects, there may be a need to carefully consider if civil society representatives are agents of broad coalitions of stakeholders or special interests claiming to represent a wider spectrum than perhaps they actually do.

Recommendations

- Consider examining the claims of organizations who profess to represent broad stakeholder groups in order to determine if they are in fact working as grassroots activists, and if so in what capacity are they doing this
- Conduct a wider investigation into sources of environmental information so that efforts to reach stakeholders can be more effective.
- Continue to encourage collaborative efforts between scientists, NGOs and the private sector
- Identify means for stakeholder groups to be involved in decision making processes at local, national and regional levels.

Stronger Civil Society input into decision making

High	Medium	Low
<ul style="list-style-type: none"> • Regional Government • Ministry of Education • National NGO • National or Local NGO • Coastal Recreation Industry • Fishermen • Fisheries Enforcement/ Border Guards 	<ul style="list-style-type: none"> • State Owned Fisheries Industry • District Water Management Official • Public Healthcare Provider • State Owned Industry • National Press • International Funding Institutions 	<ul style="list-style-type: none"> • Environmental Ministry • Economic Ministry • Foreign Affairs Ministry • Hydromet Officials • Agriculture and Fisheries Ministry • Fisheries Commission • Municipal Government • State Scientific Research Centre

	<ul style="list-style-type: none"> International NGOs 	<ul style="list-style-type: none"> Private Scientific Research Centre Coastal Zone Resident Nature Preserve Staff Educator/ Student Farmer / Water User Pastoralist/Animal Husbandry Community Based Organization Fisheries Product Sales - National Fisheries Consumer Private Industry Oil Company Representatives Experts Group
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Concerns over civil society involvement in decision making have been relatively weak among stakeholders in the Caspian region. In the 2001 study, this was ranked as one of the lowest priority root causes, and again in the current analysis it comes up as the lower priority issue among all stakeholders surveyed. There are several groups that list this as a high priority issue, such as NGOs, both local and national level, as well as the ministry of education. This would be widely expected since these groups would benefit from higher levels of civil society input into environmental concerns. Coastal recreation industry and regional government also rank this as a high priority concern. Other groups such as fishermen and fisheries enforcement/border guards rank this as a high priority, though this appears to be mainly a statistical abnormality due to unclear ranking procedures among this group.

Other groups rank this as a lower, or as the lowest priority, probably because there are other more immediate concerns, such as pollution, loss of biodiversity and need for economic development with environmental care. The lower prioritization perhaps mostly reflects a dubious concern about the role of civil society involvement in political systems where civil society remains nascent after only a dozen years out from under the constraints of the Soviet Union. With the exception of Iran, the role of civil society in government decision making has not been given precedence by either those in charge or the society as a whole. This is not to dismiss its importance, but rather to provide the context for the lower prioritization of this issue among stakeholders.

The issue of stakeholder support for civil society is reflected in questions with three main themes: the role of civil society in broader society; the responsibilities of civil society pertaining to environmental issues; and how to increase public concern for environmental issues.

30. "NGOs represent the interests of most coastal zone residents."

Agree	
<ul style="list-style-type: none"> District Water Management Official Municipal Government Public Healthcare Provider 	<ul style="list-style-type: none"> Pastoralist/Animal Husbandry Fishermen Fisheries Enforcement/ Border Guards
<p>Division Within:</p> <ul style="list-style-type: none"> State Owned Fisheries Industry Ministry of Education Private Scientific Research Center Nature Preserv Staff Fisheries Commission Oil Company Representatives 	

31. "Most information about environmental conditions in the Caspian comes from media like TV or newspapers."

Agree	
<ul style="list-style-type: none"> Economic Ministry Agriculture and Fisheries Ministry Fisheries Commissions State Owned Fisheries Industry Public Healthcare Provider 	<ul style="list-style-type: none"> Farmer / Water User Pastoralist/ Animal Husbandry Fishermen Fisheries Enforcement/ Border Guards
<p>Division Within:</p> <ul style="list-style-type: none"> Energy Ministry District Water Management Official Fisheries Consumer State Owned Industry National Press International NGOs 	

The two statements above were not used in the first stakeholder analysis so there can be no comparison over time. The first statement “NGOs represent the interests of most coastal zone residents” was intended to gauge the level of stakeholder identification with NGOs. Interestingly, the NGOs were in weak agreement with this statement, while other groups were in stronger agreement. There have been assertions that NGOs in fact do not adequately represent the grassroots movements they often claim to, but instead are made up of specialists who are more focused on gaining benefits from donors, than improving environmental conditions. This statement neither confirms nor denies that assertion, though it does shed interesting light on the concept of NGOs as being widely representative. This may warrant further investigation into NGOs in the region who are claiming to be representative of wider populations in the region. While some may in fact be involved in grassroots efforts, this would suggest that many are not.

The second statement “most information about environmental conditions in the Caspian comes from media like TV or newspapers” was developed to determine where stakeholders get their information about the environment. The common assumption has been that media actually was a major source of environmental information, though based on the results of this survey this does not seem to be entirely correct. While some groups were in strong agreement with this statement, many were not. This may be either because there is not information about environmental issue in the news papers, or because stakeholders have other sources where environmental information is obtained. It may be prudent to conduct a wider investigation into sources of environmental information so that efforts to reach stakeholders could be more effective.

24. “There should be more environmental monitoring projects that involve NGOs, scientists and private sector collaboration.”

Agree	
<ul style="list-style-type: none"> • Environmental Ministry • Hydromet Officials • Foreign Affairs Ministry • Economic Ministry • Fisheries Commission • State Owned Fisheries Industry • Regional Government • District Water Management Official • Municipal Government • Ministry of Education • State Scientific Research Center • Private Scientific Research Center • National NGO • Coastal Zone Resident • Public Healthcare Provider • Educator/ Students 	<ul style="list-style-type: none"> • Farmer / Water User • Pastoralist/Animal Husbandry • National or Local NGO • Coastal Recreation Industry • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Product Sales - National • Fisheries Consumer • State Owned Industry • Oil Company Representatives • National Press • International Funding Institutions • International NGOs • Experts
Division Within:	<ul style="list-style-type: none"> • Nature Preserve Staff

33. “It is important that everyone take responsibility for the environmental conditions, not just the specialists.”

Agree	
<ul style="list-style-type: none"> • Environmental Ministry • Hydromet Officials • Economic Ministry • Agriculture and Fisheries Ministry • Energy Ministry • State Owned Fisheries Industry • Regional Government • District Water Management Official • Municipal Government • Ministry of Education • State Scientific Research Center • Private Scientific Research Center • National NGO • Coastal Zone Resident • Nature Preserve Staff • Public Healthcare Provider • Educator/ Student 	<ul style="list-style-type: none"> • Farmer / Water User • Pastoralist/Animal Husbandry • National or Local NGO • Coastal Recreation Industry • Community Based Organization • Fishermen • Fisheries Enforcement/ Border Guards • Fisheries Product Sales - National • Fisheries Consumer • State Owned Industry • Private Industry • Oil Company Representatives • National Press • International Funding Institutions • International NGOs • Experts
Division Within:	<ul style="list-style-type: none"> • Fisheries Commission

In response to the statement “there should be more environmental monitoring projects that involve NGOs, scientists and private sector collaboration” stakeholders were overwhelmingly in agreement. This was the case in the 2001 study as well, though at that time there were fewer such projects. It appears that recent experiences with these combined projects have been positive for the most part. The only group that had division regarding this issue was the nature preserve staff who may be leery of these projects for reasons of potential economic displacement. This level of stakeholder support suggests that these types of projects should continue to be supported by CEP activities when possible.

The strong support for the statement “it is important that everyone take responsibility for the environmental conditions, not just the specialists” suggests that most stakeholder groups have a sense that environmental problems can not be left to specialist to handle and that instead all members of society must work together to alleviate environmental problems. The internal division within the fisheries commission may be as a result of their wariness that some environmental problems should be handled by experts. However, the over all consensus on this issue also suggests that stakeholders understand that there is a need for collective action to alleviate environmental problems. This may warrant emphasising activities to include groups as much as possible in environmental activities, even if they are not directly involved in decision making practices.

15. “Unless there is a severe environmental crisis, care for the environment will not be a priority for the people.”

Disagree	Agree
<ul style="list-style-type: none"> • Hydromet Officials • Foreign Affairs Ministry • State Owned Fisheries Industry • Nature Preserve Staff 	<ul style="list-style-type: none"> • Energy Ministry • Pastoralist/Animal Husbandry • Fisheries Products and Sales
<p>Wide Division Among:</p> <ul style="list-style-type: none"> • Environment Ministry • Economic Ministries • Fisheries Commission • Regional Government • Ministry of Education • District Water Management Official • Educator/Student • Local or National NGOs 	<ul style="list-style-type: none"> • Coastal Recreation Industry • Fishermen • Fisheries Enforcement/Border Guards • Fisheries Consumer • State Owned Industry • Private Industry • National Press • Experts Group

One issue of concern to many environmental activists is how to increase public awareness of environmental issues. Many believe that the statement “Unless there is a severe environmental crisis, care for the environment will not be a priority for the people” reflects the general lack of interest among most stakeholders. In the previous study this was supported by statement was agreed to by the environmental ministries, coastal zone resident stakeholder group, and healthcare providers, and strongly agreed to by the agriculture and fisheries ministries, regional and municipal governments, the NGOs, the multinational corporation stakeholder group, and fishermen. In contrast, the Energy Ministry stakeholder group and the industries did not agree with this statement. It is interesting to note that of these groups only the energy ministry officials are now in agreement with this statement. There is some weak agreement with regards to this comment, these groups seem to be much less adamant about this proposition.

Alternately, groups who are in disagreement now are those who may have experiences that would lead them to believe that people have more concern for environmental issues than they are often given credit for. In contrast, those who are in strong agreement now are those who would be very directly affected by an environmental crisis. This suggests that there is a perception of broader environmental concern, though this is not pinpointed in this issue, it is referred to in previous sections where levels of concern are rising. The question of how to raise awareness of environmental issues without a crisis remains, though earlier sections may have addressed this more effectively than civil society has at this juncture, and these should be built upon.

Conclusion:

Civil society involvement in the decision making process remains a relatively low priority for stakeholders in the region. This is at odds in many ways with international and bilateral organizations who want to increase civil society input into decision making. This may warrant further investigation within the region to determine how supportive stakeholders are of civil society involvement in decision making and how it can be emphasised and encouraged among stakeholder groups.

ANNEX 1

Questionnaire for CEP II Regional Stakeholder Analysis

This survey is an important contribution to the Caspian Environment Programme. The Caspian Environment Programme (CEP) is a regional programme established by the Caspian littoral states and international agencies including The World Bank, United Nations Environment Programme (UNEP), and United Nations Development Programme (UNDP). A goal of the Caspian Environment Programme is to improve the lives of the people in the Caspian region by improving the environment of the Caspian Sea.

The Caspian Environment Programme is eager to develop a set of realistic, achievable objectives that enhance the condition of the Caspian Sea. In order to best serve the Caspian community, it is important to identify its stakeholders.

In order to determine what groups have interests in the environment of the Caspian Sea, what these interests are, and how these interests relate to other interests in the region, your assistance with this survey is needed. Your answers will be tabulated with others from the region and analyzed to determine those environmental interests that are most pervasive in the region. No individual survey or participant will be identified in any report. Please answer the questions below to the best of your ability, by writing the number or letter of your response in the space provided.

1. _____ Country (AZ, IR, KZ, RF, TK or other)
2. _____ Urban or Rural (U, R)
3. _____ Male or Female (M, F)
4. _____ Age
5. _____ Please indicate which group you most closely represent from the box below. If more than one, please indicate rank

Government officials/ ministries	Scientists or other specialists
1. Environmental Ministry 2. Hydromet official 3. Foreign Affairs Ministry 4. Economic Ministry 5. Agriculture/Fisheries Ministry 6. Fisheries Commissions 7. State owned fisheries industry 8. Energy Ministry 9. Regional Government 10. District water management official 11. Municipal Government 12. Municipal waste manager 13. Ministry of Education	14. State Scientific Research Center 15. Private Scientific Research Center 16. National NGO 17. Nature preserve staff
	Coastal community members
	18. Coastal Zone Resident 19. Public health providers 20. Educator Student 21. Farmer/ water user 22. Pastoralist/animal husbandry 23. National or local NGO 24. Coastal recreation industry 25. Community Based Organization
Fisheries issues	Industry officials
26. Fishermen 27. Fisheries processing industry 28. <i>Fisheries investor</i> 29. <i>Caspian fisheries alternatives</i> 30. Fisheries enforcement/ border guards 31. Fisheries product sales - national 32. <i>Fisheries product sales - International</i> 33. Fisheries Consumer	34. State owned industry 35. Private industry 36. Health, Environment and Safety Manager for international oil company
	Others
	37. National press 38. <i>International press</i> 39. <i>Other IWP staff</i> 40. <i>International Funding Inst</i> 41. Bilateral agency 42. <i>Non-State international organization</i> 43. <i>International NGO</i>

Environmental Concerns

Please rank each issue below (number 6- 11) by priority for the Caspian environment with 1 being most important to you and 6 being the least important.

- 6. _____ Improved fisheries
- 7. _____ Preservation of biodiversity
- 8. _____ Protection from invasive species
- 9. _____ Reducing pollution in Caspian Waters
- 10. _____ Sustainable economic development with environmental care
- 11. _____ Stronger civil society input into decision making

Environmental Attitudes

Below are a series of statements designed to gauge how people think about the environment. We would like to know how strongly you agree or disagree with these statements. Please assign a number to each statement based on this scale of agreement:

- | | Strongly agree | No opinion | | | | | Strongly disagree | | | |
|-----------|----------------|------------|---|---|---|---|-------------------|---|---|--|
| | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |
| 12. _____ | | | | | | | | | | It is more important for people to use the Caspian resources that they need than it is to leave them untouched because of environmental concerns. |
| 13. _____ | | | | | | | | | | There are fewer fish in the Caspian than there used to be because of recent oil drilling. |
| 14. _____ | | | | | | | | | | Multinational Corporations and the energy industry do not care about the environment. |
| 15. _____ | | | | | | | | | | Unless there is a severe environmental crisis, care for the environment will not be a priority for the people. |
| 16. _____ | | | | | | | | | | People will not change their lifestyles to protect endangered species. |
| 17. _____ | | | | | | | | | | The government should spend money on the basic needs of people, like housing, health care and good jobs, before it spends money on protecting the environment. |
| 18. _____ | | | | | | | | | | It is more important to protect natural habitats than it is to enhance economic development. |
| 19. _____ | | | | | | | | | | Pollution is the primary reason that there are fewer fish in the Caspian. |
| 20. _____ | | | | | | | | | | An enforced system of mutually agreed upon fishing limits would be effective for reducing over-fishing in the Caspian. |
| 21. _____ | | | | | | | | | | There should be limits on some activities in certain zones of the coastal region. |
| 22. _____ | | | | | | | | | | Agricultural and industrial wastes flowing into the Caspian threaten marine and coastal species. |
| 23. _____ | | | | | | | | | | There is adequate scientific knowledge about the causes of environmental decline in the Caspian. |
| 24. _____ | | | | | | | | | | There should be more environmental monitoring projects that involve NGOs, scientists and private sector collaboration. |
| 25. _____ | | | | | | | | | | Private industry should take all responsibility for reversing environmental degradation of the Caspian. |
| 26. _____ | | | | | | | | | | In the Caspian region, the biggest threat to the human population is the lack of safe drinking water. |
| 27. _____ | | | | | | | | | | People would be healthier if the environment were cleaner. |
| 28. _____ | | | | | | | | | | I have seen unusual creatures in the Caspian that were not there ten years ago. |
| 29. _____ | | | | | | | | | | Invasive species are creating significant environmental degradation in the Caspian. |
| 30. _____ | | | | | | | | | | NGOs represent the interests of most coastal zone residents. |
| 31. _____ | | | | | | | | | | Most information about environmental conditions in the Caspian comes from media like TV or newspapers. |
| 32. _____ | | | | | | | | | | Municipal wastes make the Caspian waters unpleasant. |
| 33. _____ | | | | | | | | | | It is important that everyone take responsibility for the environmental conditions, not just the specialists. |
| 34. _____ | | | | | | | | | | The environment can fully recover no matter what humans do to it. |
| 35. _____ | | | | | | | | | | The environment of the Caspian is cleaner today that it was 5 years ago. |

Thank you for your participation in this survey!

If you have questions or comments, please contact Mary M. Matthews at:
E-mail: mary.matthews@tethysconsultants.com

ANNEX 2

		Survey Question Number																																		
		12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35											
SHG 1	Environmental Ministry	Disagree		Disagree	Disagree	Disagree	Disagree			Agree	Agree				Agree	Agree	Agree	Agree	Agree				Agree	Agree	Agree	Disagree	Disagree									
SHG 2	Hydromet Officials			Disagree	Disagree	Disagree			Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree				Agree	Agree	Disagree	Disagree										
SHG 3	Foreign Affairs Ministry		Agree		Disagree	Disagree				Agree	Agree		Agree			Agree	Agree		Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 4	Economic Ministry	Agree								Agree	Agree		Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 5	Agriculture and Fisheries Ministry		Agree	Agree						Agree	Agree					Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 6	Fisheries Commission								Agree	Agree			Agree	Disagree			Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree									
SHG 7	State Owned Fisheries Industry			Disagree	Disagree				Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 8	Energy Ministry				Agree				Agree	Agree					Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 9	Regional Government									Agree	Agree				Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 10	District Water Management Official	Agree						Disagree					Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 11	Municipal Government									Agree	Agree				Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 13	Ministry of Education		Agree						Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 14	State Scientific Research Center	Disagree								Agree	Agree			Agree		Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 15	Private Scientific Research Center					Agree			Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 16	National NGO						Disagree						Agree			Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 17	Nature Preserve Staff		Agree	Disagree	Disagree				Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 18	Coastal Zone Resident					Agree			Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 19	Public Healthcare Provider					Agree			Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 20	Educator/ Student	Agree	Agree				Disagree						Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 21	Farmer / Water User								Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 22	Pastoralist/Animal Husbandry		Agree						Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 23	National or Local NGO								Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 24	Coastal Recreation Industry	Agree							Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 25	Community Based Organization								Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 26	Fishermen						Agree		Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 30	Fisheries Enforcement/ Border Guards								Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 31	Fishing Product Sales - National		Agree						Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 33	Fisheries Consumer and Value Added								Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 34	State Owned Industry								Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 35	Private Industry								Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 36	Oil Company Representatives	Disagree	Disagree	Disagree		Disagree			Agree	Agree			Agree	Disagree		Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 37	National Press						Disagree		Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG40	International Funding Institutions	Disagree	Disagree				Disagree			Agree	Agree			Agree		Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
SHG 43	International NGOs	Disagree					Disagree		Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										
	Experts Group from SCM and CEP IF	Disagree	Agree						Agree	Agree			Agree		Agree	Agree	Agree	Agree	Agree			Agree	Agree	Disagree	Disagree	Disagree										

Disagree Divided Agree

ANNEX 3

Stakeholder Analysis Revisit Literature Review

July 2004

Mary M. Matthews, Ph.D.

Executive Summary

The Stakeholder literature review is based on a desk-study evaluation of the available information regarding the changes in the perceptions, influence and concerns of the stakeholders of the Caspian Environment Programme. The findings here are not conclusive and are intended to direct the development of the stakeholder analysis revisit (SAR).

The Stakeholder Analysis (SHA) for CEP I was originally conducted in order to identify Stakeholder Groups (SHGs) and to determine areas of potential conflict between SHGs. This current Stakeholder Analysis Revisit (SAR) will empirically gauge changes or shifts that are apparent based upon the situational analysis conducted here. The main finding thus far suggest that there are four areas of significant change pertaining to stakeholder involvement in CEP.

The first is the proliferation of stakeholder groups associated with the bioresources/fisheries activities. This proliferation was initiated in part by extra-regional influences and the increasing scarcity in certain fish stocks. As a result, these new groups will need to be included in the SAR, and may need to be included in the activities of the CEP projects addressing the issue.

The second is the increased attention to the impact of invasive species. Though not particularly salient among the broader stakeholder population, the scientific community, international financial community and others interested in maintaining biodiversity in the region are becoming much more active in the efforts to minimize the impacts of invasive species on the ecology of the region.

The third major finding of this review is the increase in international media attention to the Caspian region and concerns over the impacts of oil development. In the past four years, international press has become more aware of the Caspian region, and the ecological challenges facing the Caspian waters linked to the oil exploitation and transportation. This has been fostered by the influence of INGOs and has drawn more attention to the issues of PTS than existed previously.

The fourth significant development is the increasing activities of NGOs in the region as a result of support from the INGO community and bilateral assistance organizations who have sought to build regional civil society through support of NGO activities. These increases have linked the NGOs together and created an enhanced expectation of the voice of civil society in the development of resource management in the region.

Overall there are six main new issues addressed in this full report: Bioresources/fisheries, preservation of biodiversity, invasive species, persistent toxic substances, sustainable coastal development and increased civil society input into natural resource management. Each of these has newly identified stakeholder groups from the original groups identified in the first SHA. These groups are both impacted by and impacting the specific issues. Further, the interrelated nature of some of these issues, leads to overlap in stakeholder groups. The original SHA identified 18 stakeholder groups; the current literature identifies 46 different groups who are stakeholders in the activities of CEP II.

These groups are outlined in Table I of this review. This table identifies the degree of involvement in the CEP II Activities, the deeper the blue, the more involved the stakeholder group is in the issue. Conversely, the lighter the blue the less involved the stakeholder group

is believed to be. Mid-range blue signifies latent groups who are believed to be either peripherally impacting or impacted by the issue.

Introduction

The review of the literature for the SAR is to examine the shifts in roles, perceptions and influence of various stakeholder groups impacted or impacting the activities of the Caspian Environment Programme. At the time of the first SHA, there were fewer groups identified, because they were more latent and less influential. This was due in part to the early stages of CEP. During the Transboundary Diagnostic Analysis (TDA) the SHA was tasked with examination of the perceptions of SHGs on the Major Perceived Problems and Issues (MPPIs) and their root causes. In the 4 years since this initial undertaking, CEP has evolved to identify specific issues of concern and to recommend means to address these concerns. As a result, the focus on specific stakeholder groups has become more specific compared to the earlier study. Additionally, more stakeholder groups have become mobilized as a result of geopolitical changes, transitional political and economic systems and increased awareness of stakeholder groups. Therefore, in order to most effectively address the changes of the SHG attitudes, roles and influence, this review has involved examination SHG activities since 2001.

The most predominant change in the stakeholder groups since the 2001 SHA is the proliferation of groups with an active interest in the environmental issues of the Caspian region. These groups range from scientific research centres, to social welfare groups interested in monitoring social impacts of natural resource exploitation, to international groups with stake in environmental impacts of human activities in the Caspian region. Many of these groups are supported by external actors, through various international, bilateral and private assistance organizations. They have emerged to address areas that often link to one or more of the main activity areas of the Caspian Environment Programme. While this is a boon for stakeholders in some sense, it also can create broader chasms between groups regarding views of management approaches. This will be addressed in specific sections of this review.

The methodology employed in the review involved gathering data from news sources from the national and international press, organizational reports, press releases, web pages, book reviews, and academic journals. Though not exhaustive, this review provides a summary of the findings of this data collection to inform the development of the SAR survey and interview directions to be developed subsequently. This literature review also builds upon the findings of the original SHA, and the many reports produced for CEP over the past 4 years which have served as the grounding for this review.

This review will address the new players or stakeholder groups active in the region for each major issue to be addressed. The shifts in sway over strategic development and control of issues will be discussed, as will the anticipated shifts in the perceptions of the stakeholder groups. Each section will conclude with a set of recommendations for how CEP can engage these groups in a constructive dialog toward the aims of the project.

1. Fisheries

The concern over the sustainable use of renewable resource in the Caspian region has spurred a significant increase in attention from multiple groups in the region. During the first SHA the most prevalent concern among stakeholders was the "Decline in Certain Fisheries". This decline has potential to emerge as a conflict issue because the vastly different perceptions of causality held by different stakeholder groups. Fishermen and those involved in the fisheries industry blamed the activities of the oil industry for the decline, while the oil industry and others pointed to severe over fishing as the cause. CEP has taken steps, in conjunction with the international community to address these divergent perceptions. In the past 3 years there has been a very notable increase in stakeholders who are actively interested in this issue, particularly relating to the sturgeon fisheries. While other fisheries, including kilka, salmon, sprat and others have declined, the commercial decline in the sturgeon fisheries has attracted the most attention because of the international trade in Caspian caviar.

The new stakeholder groups emerged in conjunction with the CITES ban placed on Caspian Caviar exports for all states except for I.R. Iran. I. R. Iran was shown to be sustainably harvesting the Caspian sturgeon, improving hatcheries technologies and meeting the standards set by CITES for compliance. The CITES ban affected many stakeholder groups, within the NIS. These groups include the ministries of environment and natural resources, foreign affairs, economic development, agriculture and fishing, energy, scientific community, multinational corporations, international organization and the fishing industries, identified in the initial SHA. However the number of stakeholder groups with active interests in fisheries has increased. The expanded groups, who were not identified in the initial SHA, emerged as a result of the decline in these fisheries and the international ban placed on the NIS countries. These groups and their stake include:

- **Hydro-met officials** dealing with water flow regimes, water pollution levels and dams that impact spawning.
- **Regional governments and district water management officials** charged with economic development within their districts and licensing of water usage for agricultural and industrial usage.
- **Border guards** charged with protecting national waters from poachers, often arresting nationals for illegal fishing and confiscating their catch and equipment.
- **Illegal underground sector** who benefit from sales of illegally harvested fish. It must be noted that identification of members of this group is expected to be difficult and potentially dangerous.
- **Fisheries enforcement monitors** including national and international organizations, such as TRAFFIC who monitor compliance with CITES bans.
- **Fisheries research centres both in and outside of the region** who seek to develop means of sustaining Caspian fisheries harvests through breeding programmes, new roe harvesting techniques and genetic alternatives for aquaculture development. These organizations are funded by both government and private interests.
- **Investors in fisheries and aquaculture, including Caspian fisheries alternatives** have blossomed in the past several years. These groups seek to produce caviar from genetically engineered fish raised through aquaculture in the US and other areas. They are aggressively searching for alternatives to Caspian caviar with the assumption that these fisheries will become commercially extinct in the near future. Revival of Caspian fisheries would imply a significant loss on their investment.
- **Fisheries processing industries** are adversely impacted by the decline in certain fisheries. These include facilities such as the state owned Caspian Fish Company, opened near Baku.
- **National and international fish product sales firms** seek to stabilize the fisheries stocks, in order to maintain revenues. Significant increases in fish stocks may reduce profits.
- **National fish product consumers** who are often the primary consumers of fish products such as sturgeon meats etc. and have an interest in maintaining regular supplies at reasonable prices.
- **International caviar consumers** include both those who rely upon high prices and scarcity to increase prestige and those who are actively seeking alternatives for philosophical or price-based reasons such as gourmet chef associations affiliated with Caviar Emptor.
- **Governments of consumers** who determine if imports will be banned or permitted such as the US Fish and Wildlife Agency.
- **International environmental NGOs** maintain an interest in preservation of biodiversity and endemic species.
- **Journalist** focusing on the complicated interests, multiple stakeholders and environmental interests associated with fisheries decline.

In general the interests of these groups involve sustainable consumption of the fisheries. However, there is wide variation in the approaches to meeting this objective.

Those groups identified in the original SHA have altered their perceptions as a result of recent developments in transboundary fisheries management as well. These include:

- **Ministries of environment and natural resources** who have increased awareness of the importance of collaborative ecosystem management pertaining to bioresources.
- **Ministries of economic development** who have a (marginal) increase in awareness in the importance of dedicating revenues to environmental management lest economic sanctions are imposed internationally.
- **Ministries of agriculture and fishing** who have an increased appreciation of the influence of the international community on their activities.
- **The scientific community** who have benefited from an increase in support from international agencies interested in supporting work related to fisheries management.
- **Multinational corporations** who continue their project support and to strive to improve their public image by addressing concerns related to ecosystem management and fisheries, particularly the HSE officials within the corporations.
- **International organizations** who have sought to invest in improvement of the fisheries management capacity of the region, including close cooperation with EU/TACIS activities pertaining to sustainable development.
- **The fishing industries** who have contended with the decline in fisheries stocks while also dealing with the increase in international attention.

CEP may be able to assist the coordination of these groups by taking on the role of the clearinghouse for many of these groups. It seems that there is a lack of coordination amongst these stakeholder groups and that even within general their common interest to preserve the fisheries, the lack of collaborative efforts may result in redundant efforts, working at cross purposes and inefficient activities. Therefore it may be suggested that CEP take steps to serve as a regional body that can start a forum for discussion amongst the groups listed above.

- ▶ Clearly articulate the purpose of CEP pertaining to protection of bioresources to avoid further redundancy of efforts with other activities, and offer training for journalist on the issues.
- ▶ Create a forum for dialogue between stakeholder groups, such as newsletters, information services and networking opportunities. Develop linkages between CEP and stakeholder groups in all Caspian states and the international community.
- ▶ Increase stakeholder awareness of the interdisciplinary approach needed for sustaining fisheries management and challenges facing the Caspian ecosystem that will impact the health of the fisheries.

2. Biodiversity preservation

The issue of preserving Caspian biodiversity is closely tied to issues impacting the fisheries, though is much broader in scope, and tends to be more latent due to a lack of recent high profile events such CITES bans or the mass seal die off of 2001. However, it is anticipated that as the CEP SAP and BSAP are implemented, there will be an increase in the stakeholder awareness of this issue and increase in stakeholder involvement.

The proliferation of stakeholder groups related to fisheries is also associated with the challenges facing biodiversity in the region. A significant disturbance in the make-up of the ecosystem can have an impact on all species, including those who have commercial value. Many of the stakeholder groups who have emerged in regards to the fisheries issues are also impacted by a decline in biodiversity in the region, though they may not yet be aware of this relationship. Therefore, though they are listed in the previous section, they are also impacted by the stresses put on the overall biodiversity of the region, and need to preserve it. See Table 1 for a graphic illustration of this relationship.

Unlike fisheries, there has not been a large increase in the number of stakeholder groups who are directly impacted by or impacting the loss of biodiversity. In the original SHA, threats to biodiversity was generally a mid-range concern for the stakeholder with only environmental

ministry officials, agriculture and fishing ministries, the scientific community, NGOs and fishermen ranking this as a high priority concern. These groups are expected to have maintained their level interest in this issue, though it is expected that their engagement will evolve during this phase of CEP.

CEP activities involving database creation and pilot project implementation increase the directly involved stakeholder groups. Many of these groups were present in the previous study, though their roles are changing. Specifically the interests of these groups include:

- **Environment and Natural Resource Ministry officials** who are charged with supporting biodiversity database development.
- **Regional government officials** who are involved in the approval of specific areas for selection for pilot project implementation.
- **The national and international scientific community** whose expertise is key to project development, analysis and implementation.
- **Multinational corporations**, specifically those in the oil industry who are asked to assist in the development of database as part of the Regional Oil Spill Cooperation Plan.
- **International NGOs** who assist with the creation of the biodiversity database, and provide training and expertise.
- **National NGOs** who assist with the creation and maintenance of the database, and assist with the Eco-net around the Caspian, as well as provide training.
- **National preserves/park staffs** are critical to the development and monitoring of biodiversity database.
- **Community Based Organizations** asked to assist with pilot project development, monitoring of conditions and coordinate with NGOs.
- **Educators and students** to be involved in the maintenance of the biodiversity database and Eco-net.
- **International Funding Organizations, and other funding organizations** to support project development and implementation, and include biodiversity sensitivity in ESIA.
- **National and international press** asked to take part in training sessions to increase the awareness of biodiversity issues. The recent lack of high profile crises in biodiversity has led to a decline in interest, though it is expected that this would peak again quickly if a new crisis emerged.
- **Project managers and staff of other IWP and national waters projects** to coordinate efforts and input into biodiversity action plants. These groups were not existent during the original SHA.

CEP has the challenge of raising awareness of the importance of biodiversity in the region. Stakeholder interests are generally low, and biodiversity is often taken for granted. However, efforts of CEP can increase multi-stakeholder awareness through education and defining linkages between biodiversity and other more salient issues. These include:

- ▶ Increase information regarding the importance of maintaining biodiversity to the sustainability of fisheries
- ▶ Clearly articulate the threats to biodiversity through PTS and invasive species through press releases
- ▶ Partner with oil companies, INGOs and NGOs to develop educational materials specifically for the Caspian ecosystems for fisheries stakeholders, national and

international press, policy makers, international assistance and development organizations, and others not currently targeted by SAP interventions.

3. Invasive Species

The issue of invasive species has received relatively little attention from the stakeholder community outside of those directly addressing the problem, or those few journalists who are beginning to recognize the impacts that invasives may have on commercial fishing stocks. However, this issue has increased in salience among immediately interests stakeholder groups, and if populations of invasive species increase, it is expected that more stakeholder groups will develop an active interest in this issue. The most notorious invasive species the jellyfish *Mnemiopsis Leiyedi* (ML) poses the most significant immediate threat to the Caspian ecology, if it follows the patterns it set in the Black Sea.

There are new stakeholder groups associated with this threat, though these groups do not seem to be particularly mobilized at this point. If commercial fisheries are impacted, as they are forecasted to be, all of the fisheries stakeholders will become stakeholders in this issue, as will the stakeholder groups identified for biodiversity. It should be noted that 4 years ago, in the initial SHA, threats from invasive species was the lowest priority issue at that time. It can be expected that despite this initially low ranking, that if LM populations explode, this issue will become a much higher priority. (See Table 1 for a graphic illustration of this relationship)

The specific issue of importation of invasives through the ballast waters of ships coming through the Don-Volga canal leads to a new groups of stakeholders who were previously not included in the initial SHA, or the TDA. This group includes:

- **Transportation ministries** these groups will need to develop enforceable monitoring protocols for ballast discharges and will need to collaborate to develop a region wide strategy to minimize impacts of infected ballast waters.
- **Port authorities** who will need to implement the ballast water protocols and assist in the monitoring for invasive species.
- **The shipping industry** will bear the brunt of the media exposure for inadvertently importing the ML from the Black Sea and beyond.
- **Hydromet officials** specifically in Russia for oversight of the Don-Volga canal and coordination with transportation ministries.
- **Multinational corporation** workers to assist with monitoring in the waters and through the HSE officials.

Other groups previously identified with shifting perceptions include:

- **Environment and natural recourse ministries** who have increased monitoring demands and increased responsibility for linking invasive species to impacts on biodiversity and fisheries.
- **Fisheries ministries, fishermen, and commercial fishing industry** are expected to be impacted by ML's degradation of the ecosystem by reducing available nutrients within the food chain.
- **Research centres** have begun to address the issue and have developed an increased awareness of the threats posed by endangered species, as well as solutions to these threats.
- **International funding organizations** who need to pay special attention to the threats caused by ML and other invasive species.

CEP could take steps to increase the awareness of the ML, and increase pressure on the shipping industry and transportation ministries to take immediate steps to reduce the further importation of ML in ballast waters, through GloBallast and other organizations. Perhaps the most effective means to accomplish this is to inform the sectors who will be most direly threatened by ML

- ▶ Inform fisheries related stakeholders of the threats from ML to the sustainability of commercial fisheries

- ▶ Provide oil industry HSE officials with literature on ML impacts and ask for assistance in reducing impacts through pressuring governments to act.
- ▶ Develop invasive species monitoring guides for coastal zone residents, oil rig workers, fishermen, port authorities, educators, NGOs, INGOs, international assistance organizations and others.

4. Persistent Toxic Substances

Stakeholder groups with an active and vocal interest in PTS have increased significantly since the first SHA. These groups were present but comparably latent during the initial SHA. It was expected that the concern of potential damage from oil and gas would be a high priority concern for stakeholders during the first SHA. Yet the results showed that it was a mid level concern with only fishermen and the scientific community ranking this as a high priority issue. Always an issue to attract international attention, the oil development in the region, combined with transportation issues has served to fuel the fires of emergent stakeholder groups. Since this study was initiated, international NGOs, international finance institutes, and some national NGOs have become more involved in the debate over the environmental impacts of petroleum resource development in the region. Other PTS issues, such as heavy metals, industrial pollution and agricultural runoff have been largely overshadowed by the debate regarding the impacts of oil extraction and transportation, though they are no less important.

This debate regarding the oil exploitation is often polarized between those who support the development as a means to increased revenues for cash starved countries and those who view the exploitation of the petroleum resources as a continuation of environmental degradation and supporting non-democratic (or marginally democratic) regimes. Though the debate has raised the profile of the environmental issues facing the Caspian region, the regional stakeholders have not yet mobilized strongly in one direction or the other. This lack of mobilization may actually bode well for CEP, allowing the project to foster positive sum partnerships between the stakeholders by taking steps to address the environmental and development related concerns in the region.

The presence of the international oil industry has brought forth social and environmental concerns that are common to petroleum development in developing countries. However, unlike other areas, there are a number of factors that may positively influence the partnerships in Caspian region. Though public opinion has been largely latent about this issue, the high literacy rates and the telecommunications revolution suggest that information exchange can enhance stakeholder group dialog. Also the trend among the extractive industry to actively invest in the social and environmental development of the region also supports CEP objectives. These factors combine with the empowerment of national and local NGOs from the extensive lobbying efforts of the international environmental and human rights groups. These INGOs have created a presence in the region that increases the public awareness of the issues, both within and outside of the region.

Bilateral and private non-state investors in the region are more aware of environmental issues as a result of these combined factors. For instance many USAID social projects feature environmental awareness as part of their development projects and support for civil society. These groups were largely nascent in the early phases of CEP but are now reaching maturity and taking steps to address environmental management in the region. Also, privately funded groups that focus on monitoring extractive industry in the Caspian region have emerged to further increase accountability of the multinational corporations in the region- such as "Crude Accountability". Unlike the issues discussed above, this issue of PTS and the related stakeholders is the most highly charged and most likely to draw attention and support to CEP from multiple stakeholder groups.

The groups identified previously with an interest in the PTS issues include:

- **Environmental and natural resource ministries** responsible for monitoring and enforcement of regulations of the polluting industries. Often these groups lack resources, capacity and influence to carry out their duties. Increased international support for environmental stewardship, in combination with NCAPs may improve these circumstances.
- **Agriculture and fishing ministries** are both contributing to the problem through excessive use of agro chemicals and they are impacted by the presence of PTS in the food chain of the Caspian fisheries
- **The Energy ministries** that are responsible for negotiating PSAs with the oil companies and the state owned oil companies. Their involvement in CEP seems to be latent at this point, though may be more active as the NCAPs are implemented, especially with ESIAs in the region.
- **NGOs**, as noted above, have become more active, though the local NGOs tend to focus more on social issues pertaining to oil development rather than environmental issues.
- **State and privately owned industry** that are responsible for effluents discharged in the region may be more aware of environmental concerns because of environmental impact assessments required by international lending organizations.
- **Public healthcare providers** in some areas are receiving training from INGOs on monitoring for exposure to PTSs. This is expected to expand as CEP activities increase.
- **International funding institutions** have been under tight scrutiny for their support of the extractive industry, and it may be expected that as a result of intensive lobbying efforts by INGOS that environmental projects may be supported by these organizations.
- **Fisheries industry** may be more aware of the benefits of the oil industry presence as support for environmental projects emerges.

New stakeholder groups that have emerged since the initial SHA include the following:

- **Hydro-met officials** who have increased their activities to monitor effluents in the river basins feeding into the Caspian.
- **Transportation ministries** facing increased regulation on the suitability of fleets for transportation on rivers and open waters.
- **International NGOs** have emerged in force since 2001, and have developed linkages in the region in an effort to empower local environmental NGOs.
- **Non-state international organizations** who have resources to fund INGO and NGO activities in the region concerned with the impacts of PTS in the Caspian waters.
- **Farmers and water users** relying on agro chemicals to increase crop yields at the expense of the Caspian waters.
- **Other IWP staff** who will be working to address these issues in river basins feeding into the Caspian waters.
- **Press and journalist** who continue to cover PTS issues at the local, regional and international level.
- **Coastal recreation industry** who are eager to minimize the negative impacts on resource exploitation on their industry.

The challenges of PTS for CEP will be to serve as a regional mediating body in many senses. The authority of CEP as an international programme can help CEP facilitate constructive dialogues among stakeholders. Means to do this include:

- ▶ Emphasize the transparency of the CEP process and the importance of inclusion of all stakeholders in decision making progress.
- ▶ Develop clear partnership literature focusing on positive sum situations of stakeholder cooperation in the region for journalists, LNGOs and coastal zone residents.
- ▶ Increase dialogue forum for INGOs, NGOs, public health care providers and others with the HSE representatives in the oil industry.

5. Sustainable Development

Sustainable development encompasses many of the efforts of CEP to enhance regional ownership of the programme, including linking NCAPs and the SAP efforts, development of protocols for the Tehran Convention, development of a regional human development index, continued implementation of the matching small grants programme, and efforts to reduce impacts on the Caspian waters through pilot projects aimed at improving human development conditions while reducing negative environmental impacts. This encompasses a wide array of stakeholders who are generally latent at this point, but are expected to become more involved as the project develops.

Integrated coastal zone development involves linkages between multiple stakeholder groups and increases awareness of the interdependence of these groups. Therefore, those groups who are likely to be directly affected by the sustainable development efforts of CEP include:

- **Environmental ministries**, who will bear the responsibility of developing protocols for the Tehran Convention, take an active role in the pilot project development; provide training and monitoring services, link with other ministries and stakeholder groups.
- **Economic ministries** called upon to support activities of CEP, including revenues for coastal development and upgrading of industry and waste systems.
- **Regional governments** asked to approve many of the projects and to provide support for coastal communities.
- **Municipal governments and municipal waste managers** asked to mitigate waste impacts and to become involved in select pilot projects.
- **International NGOs, National NGOs and Community Based Organizations** have an increased roll in training, education, and implementation of sustainable development projects.
- **Public healthcare providers** asked to provide critical monitoring services.
- **International and bilateral funding agencies** whose support for sustainable development efforts will be critical.
- **Pastoralists, forestry officials, and farmers** asked to be receptive to altering current practices to reduce impacts on the Caspian environment.
- Other **IWP staff** who seek to improve conditions in river basins feeding into the Caspian.
- **Coastal zone residents** impacted by sustainable development projects and who may be asked to contribute to these projects through investment of time and efforts.
- **Coastal recreation industry**, specifically in the Southern Caspian who will need to take environmental impacts under consideration the development of their industry.
- **International organizations**, specifically UNEP and other convention secretariats provide training to CEP affiliates on the development and enforcement of protocols.

Recommendations for engaging these stakeholders in constructive dialogues will depend largely upon the individual issue being addressed. Meeting with stakeholder groups early in the process to obtain their feedback on the challenge and gather their opinions will be critical. Over all the following recommendations may be useful:

- ▶ Provide stakeholders with clear, concise summaries of what the project will entail, why it is important and how it will benefit them, in multiple media formats.
- ▶ Hold multi-stakeholder forums to answer questions and address concerns raised by stakeholders prior to implementation of projects.
- ▶ Clearly articulate the anticipated benefits of the projects and the expected outcomes so that all stakeholder groups are aware of the objective of the project and why they should have an interest or investment in it.

6. Civil Society Inclusion

The inclusion of civil society in the governance of CEP and regional, national and environmental governance creates new challenges for the programme. Though not widely

addressed in the media, specifically pertaining to CEP, the increase in stakeholder involvement is a phenomenon brought on by the factors mentioned above regarding the INGO and oil industry debate. Civil society awareness and NGOs have been supported by international organizations and predominantly through bi-lateral donor agencies, such as USAID in the region. As noted above these groups are now reaching institutional maturity and are taking on issues in conjunction with larger, more practiced INGOs.

The impact of this is a democratizing impact on stakeholder inclusion in the resource management process. Large companies such as British Petroleum and Exxon include Environmental and Social Impact Assessments (ESIAs) in their project development, and INGOs with NGOs in the region have begun to more aggressively make demands for inclusion in the decision making process. This is tempered by the restrictions placed on NGOs in the CIS countries, by the NGO registration process. In some cases NGOs are required to remain apolitical, though the issues they address are politically charged.

This puts the NGOs in a precarious position as they push for influence in an issue area that has traditionally been closed to indigenous input. The lack of public information available, the endemic abuse of power and unrealistic expectations of the international NGO community stymie the progress of the NGOs to successfully induce change.

However several advancements have been noted and bode well for the future. The accession to the Aarhus Convention by Azerbaijan and Turkmenistan and the ratification by Kazakhstan suggest that the norm of inclusion and transparency is beginning to emerge in the region. Though compliance may be delayed, the attention to this is promising. Russian support for increased transparency, in line with Aarhus is anticipated, and I.R. Iran appears to be supportive of this approach as well.

The support for NGOs and civil society development by the multinational corporations as part of their social investment projects is also promising, and if supported by the international community may increase the profile of NGOs in environmental governance. The anticipated inclusion of NGO representation in the CEP Steering Committee will further enhance these developments.

The stakeholders who will be directly involved in this issue include:

- **Environmental Ministries** benefit from assistance in environmental management and monitoring from NGOs.
- **Municipal governments** receive training and monitoring support from NGOs.
- **National NGOs** who will serve as representatives to the Steering Committee and assist in the support of CEP activities.
- **International NGOs** continue to assist and advise NGOs, and may use the Caspian as an example for other regions.
- **IFIs and Bilateral organizations** interested in increased democratization in the region.
- **Multinational corporations** benefit from improved public relations in the region and globally by supporting increased civil society.
- **Journalists** benefit from increased transparency, access to information and expertise of the NGO community.

Recommendations for engaging in further dialog with these stakeholders include:

- ▶ Hold workshops or training sessions for NGOs on CEP activities specifically outlining where their input will be most welcome.
- ▶ Support and publicize the inclusion of an NGO representative on the CEP Steering Committee, elected to this position by democratic means across the region.
- ▶ Liaise with bilateral donors to increase their awareness of CEP activities involving enhanced civil society.

Conclusion and steps for future action

The literature review provides a preliminary overview of change in circumstances for CEP implementation. Many anticipated shifts in attitude are not verifiable until the survey has been conducted, yet through conducting this exercise it is possible to identify emerging trends that will inform and be informed by the SAR Survey and Interviews. These initial findings indicate that as CEP develops, SHGs and their interests have also evolved and it is expected that they will be increasingly important as CEP projects commence implementation.

The initial review of literature suggests that the SAR Survey will need to address a wide variety of issues and targeted interviews through ground truthing reports will further supplement these findings. The development of the survey will be based largely on the information garnered here, as well as informed by the previous SHA findings. The inclusion of stakeholder input into the CEP activities can enhance the effectiveness of project implementation and improve the sense of ownership of the programme. The recommendations made here are tentative.

Table I –SHG Involvement levels - anticipated

	Fisheries	Biodiv	Invasives	PTS/POPS	Sus Dev	Civil Soc
1. Environmental Ministry						
2. Hydromet official						
3. Foreign Affairs Ministry						
4. Economic Ministry						
5. Agriculture/Fisheries Ministry						
6. Fisheries Commissions						
7. State owned fisheries industry						
8. Energy Ministry						
9. Transportation Ministry						
10. Port authorities						
11. Shipping industry						
12. Regional Government						
13. District water management official						
14. Municipal Government						
15. Municipal waste manager						
16. Nature preserve staff						
Non-Governmental Organization (NGO)						
17. National NGO						
18. International NGO						
19. Community Based Organization						
20. State owned industry						
21. Private industry						
Multinational corporation						
22. HSE Rep for MNC						
Scientific community						
23. State Scientific Research Centre						
24. Private Scientific Research Centre						
25. Educator						
26. Ministry of Education						
27. Public health providers						
International organization						
28. International Funding Inst						
29. Bilateral agency						
30. Non-State international organization						
31. Student						
Fishing large industry						
32. Fishermen						
33. Fisheries processing industry						
34. Fisheries investor						
35. Caspian fisheries alternatives						
36. Fisheries enforcement/ border guards						
Fishing artisanal industry						
37. Fisheries Sales national						
38. Fisheries Sales International						
39. Fisheries Consumer						
40. Farmer/ water user						
41. Pastoralist/animal husbandry						
42. National press						
43. International press						
44. Other IWP staff						
45. Coastal Zone Resident						
46. Coastal recreation industry						

Legend – colour	Degree of involvement in issue
	Directly involved – Major stakeholder
	Involved and impacted directly
	Impacted or involved indirectly
	Peripheral to issue
Bold Text	Original SHG from first analysis
Regular text	Expanded SHGs based on Literature Review

