

FINAL VERSION

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EXECUTIVE SUMMARY

The Second National Report of Lebanon was developed to give a comprehensive perspective of Lebanon's status in implementing the Convention on Biological Diversity. Taking into consideration the nature of the report template and the absence of a formal national body that monitors and guides biodiversity related activities in Lebanon, the authors decided to adopt a participatory approach for the completion of this report to include all stakeholders' inputs and ensure a representative national perspective. The report includes documented and verbally relayed information, in addition, it reflects prevalent perspectives of 54 stakeholders who were interviewed from various sectors of the society and who currently constitute the bulk of individuals involved in biodiversity related activities in Lebanon.

Lebanon is deficient in the following areas: taxonomy, monitoring, alien species, *ex-situ*, sustainable use, incentive measures, genetic resources, technology transfer, technical and scientific cooperation, biotechnology and information exchange. On the other hand, progress was noted in the following areas: *in-situ*, traditional knowledge, research, training, awareness and education and EIA. In summary, Lebanon has many programs and initiatives in place that address the first objective of the CBD, "conservation of biodiversity", however the second objective "sustainable use" has received less attention while the third objective "fair and equitable sharing of the benefits" is severely lacking.

The increase, in the past few years, in biodiversity related programs, training and workshops was evident to all. The majority of these activities are supported by international donors, while the Lebanese contribution has been minimal both in terms of direct financial assistance and infrastructure support. Accordingly, some of these activities were perceived as obligations to signed conventions rather than a genuine desire to address national priorities. This perceived top down approach, accompanied with inadequate follow up measures is believed to have led to a lack of coordination and collaboration at the national level. In addition, the nation lacks an efficient coordination and information exchange mechanism. This has significantly hampered progress and is often reflected by the fact that many institutions are working and/or competing on the same issues and projects.

Recently, environmental legislation including a biodiversity component, has been officially released. This new Law for the Protection of the Environment will provide the Ministry of Environment with more legal power to enforce and implement biodiversity related initiatives.

Please provide summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report

This report was prepared by Salma N. Talhouk (Associate Professor), Maya Abboud (MSc.), and Mireille Andre Akl (MSc.) (Table 1) within the context of the Biodiversity Enabling Activity Project Top Up Funding financed by GEF and executed by the Ministry of Environment (MoE) and United Nations Development Program (UNDP).

Given the close ended nature of the questions in the template document, and the absence of a national body responsible for guiding and monitoring biodiversity related activities, the team decided to adopt a participatory approach for completing the report to avoid subjective inputs by the consultant team and to ensure a sense of ownership of the document at the national level. For this, the largest possible number (considering time and financial constraints) of individuals actively involved in biodiversity related activities were asked to participate in the completion of the document by first responding to the close ended questions and by giving additional information where possible. The information provided in this document is therefore the result of 54 individuals including the consultants.

The report was developed in five phases

Phase I

A literature and web search was performed to generate a backbone of national information for this report. Some references are provided in the sections. All articles with their CoP6 decisions were summarized and this information was shared with individuals participating in the completion of the report in cases when they were not familiar with a CBD article and the related decisions.

Phase II

A list of stakeholders actively involved in biodiversity in Lebanon was compiled. Stakeholders included individuals representing government agencies, NGOs, universities, and research stations. A total of 54 stakeholders participated in the completion of the report (Table 1). This was achieved by setting up individual meetings with the stakeholders.

Phase III

Responses to the questions, information, comments and input were solicited from all stakeholders through private consultation meetings. The obtained information was consolidated into the document.

Phase IV

An expert consultation workshop was held at the Ministry of the Environment during which the process for preparing this document was elaborated. Stakeholders contributed to the discussion by providing their views, comments and suggestions on how to improve the report output and highlighted main issues to be addressed at the national level.

Phase V

A first draft was circulated to all stakeholders who expressed interest in reviewing the document. The comments and feedback of the reviewers were incorporated in the report.

WRITING THE REPORT

The approach adopted in the completion of the report was participatory whereby current knowledge and views of all stakeholders involved in biodiversity related activities in Lebanon were taken into account. With respect to the close ended questions, those that were comprehensive (at the beginning of every CBD article) were addressed by all stakeholders while specific answers were generally tackled by experts in the different fields (Table 2). Despite the diverse background of stakeholders there was little discrepancy and a general consensus in the compiled responses to the close ended questions. The survey indirectly revealed the percentage of stakeholders involved in the various CBD articles.

In many cases the questions were found to be confining or some available information was not easily assigned to any of the provided questions. To ensure the comprehensiveness of the information shared, comments and answers that were not directly relevant were included in clarification boxes.

A list of documents that were used as the basis for this report is provided in Appendix 1. This list includes the main documents that were consulted for the preparation of the report and does not constitute a comprehensive list of all biodiversity related activities and/or research in Lebanon.

Table 1. The following is a list of all stakeholders that contributed to the completion of this report

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Table 2 : Frequency of responses to specific questions under each articles (refer to text for further information) (N=Total number of stakeholders interviewed)

Article		Percent Respondents (N=54)
5	Cooperation	79
12	Research and Training	79
13	Public Education and Awareness	76
6	General measures for conservation and sustainable use	74
7	Identification and Monitoring	74
8j	Traditional Knowledge and Related Provisions	71
14	Impact Assessment and Minimizing Adverse Impacts	71
8	In situ Conservation	69
	Decisions on Taxonomy	67
9	Ex-situ Conservation	64
11	Incentive Measures	62
8h	Alien Species	60
10	Sustainable use of biological diversity	52
20	Financial Resources	52
15	Access to Genetic Resources	45
16	Access to and Transfer of Technology	45
17	Exchange of Information	45
21	Financial Mechanism	45
18	Technical and Scientific Cooperation	43
19	Handling of Biotechnology and Distribution of its Benefits	33
	Ecosystem Approach	29
	Agriculture Biological Diversity	14
	Forest Diversity	14
	Biological Diversity and Inland Waters	7
	Biological Diversity of Dry and Sub-humid Lands	5
	Marine and Coastal Biological Diversity	2

Please provide information on any particular circumstances in your country that are relevant to understanding the answers to the questions in this report

Located at crossroads between Europe, Asia and Africa, the Mediterranean Basin provides a variable wealth of habitats with its islands, coastal lands, rivers and high mountains. Four principal factors have interacted in this region to produce an exceptionally rich and unique biodiversity: biogeography, geology, ecology and historic human settlements in the Mediterranean area (Blondel and Aronson 1999). More than any other region in the world, the Mediterranean region best exemplifies the environmental change in response to man-environment interactions. Lebanon is an integral region in the Mediterranean Basin it falls within a recognized center of plant diversity and is considered a global hotspot (Myers et al. 2000).

Lebanon has a total surface area of only 10,425 km², it is highly mountainous with a mosaic of biotopes and natural environments, dominated by a typical Mediterranean climate (Blondel and Aronson 1999). The topography of the country imposes various micro-environments for both terrestrial and fresh water biodiversity, most ecosystems, however, have narrow ranges and their biotypes are struggling for existence against a changing environment. There are five geomorphological regions in Lebanon (CDR/ECODIT-IAURIF, 1997):

1. **Coastal zone**, 250 km long, included the shoreline and continental shelf, the coastal plains and the foothills of Mount Lebanon up to elevations of 250 meters.
2. **Mount Lebanon range**, about 160 km long and 25-40 km wide, includes middle and high elevation zones above 250 meters. It rises from Akkar in the North and extends South to the hills of Jabal Amel. Mount Lebanon peaks at 3,088 meters at Kornet es-Saouda in the north
3. **Beqaa plain**, a land depression separating the Mount Lebanon and Anti- Lebanon ranges. It comprises an 8-12 km wide fertile corridor and is about 120 km from North to South. The Beqaa plain is drained by the Aassi River from the North and by the Litani River from the South
4. **Anti-Lebanon range**, extends across the Lebanese-Syrian borders. It peaks at 2,600 meters (Tallat Moussa). Slopes are generally more gentle compared to Mount Lebanon. The southern sections of the Anti-Lebanon range include Jabal el Cheikh (Mount Hermon), which intercepts rainwater and redistributes water into at least three main watersheds across Lebanon, Syria and Israel
5. **South Lebanon**, an elevated plateau that extends a short distance inland from the western shores of South Lebanon to the Mount Hermon foothills in the East. This region is intersected by many seasonal streams flowing from west to east and discharging into the Mediterranean Sea.

The Lebanese natural landscape is rich, offering 9,119 species of which 4,633 are plants and 4,486 animals (NBSAP 1998). Floristic richness is estimated to include 2,600 vascular plant species of which 311 are endemic (12%) (Davis et al.1994). However, there are tremendous threats on the future prospects of this diversity. Lebanon has signed most international agreements to safeguard the rich biodiversity it harbors. The nation ratified the CBD on December 14, 1994. To satisfy Article 7 (Identification and Monitoring), a country study on biodiversity was conducted and it currently serves as a valuable source of information of local biodiversity. In addition, Lebanon has made progress in fulfilling its national biodiversity strategy and action plan (NBSAP) obligations. National efforts towards the conservation of biodiversity have progressed as evidenced by the variety of projects undertaken by all institutions including academic, government, non-governmental and public.

In light of this exceptional biodiversity Lebanon faces numerous challenges to conserve this resource. Primarily, the country lacks training and specialists in the fields of taxonomy, genetic resources, conservation, ecology, resource management, forestry and planning. In addition, there is a lack of co-ordination and law enforcement incentives as well as insufficient integration of environment and development in national planning and project execution. Furthermore, existing communication between the scientific community and policy makers is very insufficient.

The National Biodiversity Strategy and Action Plan for Lebanon represents the only national agenda and provides the basic framework for biodiversity initiatives. A review of the NBSAP was conducted to determine the extent of incorporation of CBD articles into the NBSAP and estimate the progress in the implementation of activities as stipulated in the various action agendas. For this purpose, all short term and medium term actions which are expected to be completed by 2003 were placed under the appropriate CBD article (refer to table below). The long term actions were only reviewed for the extent of their incorporation into CBD articles since these are projected for the year 2008. In some cases it was difficult to categorize activities outlined in the NBSAP under a particular CBD article because the strategy did not adhere to the CBD but rather focused on ecosystems and specific issues.

The following actions were stated in the Lebanese NBSAP and relate only remotely to biodiversity or do not fall in any of the CBD template questions of the second national country report:

Short term:

- Legislate to eliminate the conflict of interests between the governmental institutions
- Creating land-zoning maps
- Establish a water quality control system and implement safe water use programmes
- Well-drilling should be managed to conform to aquifer capacity
- Water sources polluters should be asked to reduce pollution, pay to rehabilitate or

encouraged to alleviate pollution pressure

- Implement public awareness programmes in water use, quality, saving
- Identify hot spots and land based sources of pollution in addition to man-caused maritime sources of pollution such as petroleum
- Limit further industrial development along the coast
- Introduce incentives for a clean industry and legislate for “polluter pays” principle
- Study the fishing sector scientifically (practices, needs, potential, and stocks)
- Lease lands for use and avoid ex-appropriation

Medium Term

- Establish land use and zoning standards and policies
- Enhance law enforcement authorities and put into place a co-ordination mechanism. Introduce the concept of the environment police

Further analysis showed that three CBD articles were not addressed in the entire NBSAP: Taxonomy, ecosystem approach and access to and transfer of technology. In addition, the actions that were aligned with CBD articles (75 actions) the majority were either completed (3%) or in progress (68%), while a third have not been initiated (29%).

Several conclusions could be drawn from this comparative exercise: Three of the CBD articles were not directly addressed by the NBSAP. The remaining proposed activities (short, medium and long term) partially covered the CBD articles. In order to standardize its strategy, Lebanon will need to revise its NBSAP and generate a document where priorities and proposed action plans relate clearly to the CBD objectives and articles.

An important project which has been recently launched in the Ministry of the Environment The “Top-up Biodiversity Enabling Activity Project” addresses the majority of articles that were not covered by the NBSAP. This project will also cover several other actions reported as in progress or uninitiated. This project will allow the Ministry of Environment to further assess national capacity building needs and priorities, analyse institutional and functional capabilities and determine the necessary mechanisms to protect national biodiversity. There are several measures that will be undertaken through this initiative:

- Initiate a national biosafety framework project
- Review and update the NBSAP as per the CBD strategic plan
- Report on national taxonomic management capabilities and needs
- Revive the National Biodiversity Committee
- Set up an institutional structure for biodiversity unit at the MoE which would be

responsible for following up on financial and institutional support to all organizations and institutions concerned with biodiversity conservation

- Develop and follow on the necessary legislation for biodiversity conservation such as the official endorsement of the NBSAP, official declaration of the National Biodiversity Committee and laws relating to access and benefit sharing
- Provide open access to information relevant to biological diversity through a clearing house mechanism
- Develop and compile indicators to monitor the status of biodiversity in Lebanon.

Another milestone in Lebanon's plight for biodiversity is the recently adopted Law for the Protection of the Environment law (law n°444, date 8/8/2002) which calls for the creation of the National Council for the Environment. The Council will be formed from 14 experts from various fields, who will be responsible for defining objectives and priorities, evaluating environmental results from each activity, coordinating institutional, administrative, and ministerial approaches related to environmental protection, and finally recommending law updating or any measure or indicator related to biodiversity.

Table 3: Review of Lebanon's National Biodiversity Strategy and Action Plan

Article	Completed	In Progress	Uninitiated
Article 5: Cooperation			
Short Term (1999-2001)			
Review all international and regional conventions, protocols and agreements regarding biodiversity to determine their relevance to the State of Lebanon, and prepare a framework for effective participation.			X
Medium term (2001-2003)			
Develop partnership and co-ordinate action with all concerned parties such as the government, the industry, and NGO's, and conduct public awareness campaigns targeting society at large.		X	
Establish a service to facilitate the exchange of material between farms, and disseminate local or regional collection to appropriate sites.			X
Article 6: General measures for conservation and sustainable use			
Medium term (2001-2003)			
Develop appropriate institutional arrangements for effective strategy and action plan.			X
Article 7: Identification and Monitoring			
Medium term (2001-2003)			
Develop, finalize and monitor an exhaustive database. Regular updating of this data bank would ensure a preventive approach towards the moderation of the impacts of natural hazards as well as a quick response to anthropogenic environmental changes (terrestrial & natural habitats).		X	
Establish a data base system for fresh water richness and endangered species.			X
Conduct a comprehensive survey of the situation of the coastal zone and review land use maps and legislation. Legislate for the necessity of co-ordination within the public sector in particular.		X	
Establish a national database for crops, weeds and livestock, including a database for tracking livestock migration and immigration.			X
Decisions on Taxonomy was not addressed in the NBSAP			

Article 8: In situ Conservation			
Short Term (1999-2001)			
Protection of remarkable natural habitats , characterised by their ecology (endemic species, uniqueness...) , their historical and /or socio-cultural and background (cedar forests , the valley of Qannoubine called “the valley of the Saints” , Aammig wetlands		X	
Regulating hunting, including obligatory tests for acquiring necessary permits.		X	
Recruit locals to work on site (guards, technicians, etc.) and provide suitable training.		X	
Characterise and classify protected areas. (mapping, protection, rehabilitation , updating inventories) .		X	
Establish core (Biodiversity warehouses) and buffer zones with access to fire-fighters and restricted vehicles.		X	
Medium term (2001-2003)			
Establish nature reserves on several sites representing the major eco-geographical areas of Lebanon, that have a wide diversity of naturally growing plants and animals, and with as many wild relatives of agricultural crops as possible.		X	
Collect entry fees, and reduce prices for the local population.		X	
Locate rehabilitation nurseries within the protected areas and use indigenous species.		X	
Article 8 H: Alien Species			
Short Term (1999-2001)			
Exercise very close and strict conditions on introducing new species.			X
Encourage the use of native rather than introduced species for aquaculture, mariculture and agriculture.		X	
Establish environmental screening procedures for importation of plant and animal species. Ban or strictly control the import of potentially invasive species, and establish quarantine controls on all imports.			X
Article 8 J: Traditional Knowledge and Related Provisions			
Medium term (2001-2003)			
Create partnerships with the local population, particularly the fishermen and local municipalities. NGK’s could play a catalytic role in this.		X	
Identify all types of traditional industries that were marine oriented such as salt production and sponge fishing		X	

Article 9: Ex-Situ Conservation			
Short Term (1999-2001)			
Help in establishing zoos and aquaria		X	
Medium term (2001-2003)			
Expand fresh water fish farms to reduce pressure on natural habitats.		X	
Strengthen plant aquaculture to produce protein and organic matter efficiently.		X	
Establish traditional farms to maintain and propagate the traditional or "heritage" varieties or breeds that are being replaced by "modern" varieties.			X
Establish at least one botanical garden for <i>ex-situ</i> conservation of perennial crops including cultivated trees, annuals and biennials.			X
Establish botanical gardens in cities , national parks			X
Article 10: Sustainable use of biological diversity			
Short Term (1999-2001)			
Establishing ecological tourism associated with public awareness and environmental education.		X	
Identification of the potentialities of the Lebanese natural habitats and terrestrial ecosystems.		X	
Enhance the economic impact of monitoring programmes such as coastal quality monitoring for bacterial indicators, in order to enhance the market value of the local beaches and produce.			X
Implement legislation for the sustainable use of natural resources.			X
Introduce sustainable harvesting into some protected areas like honey production.		X	
Articles 11: Incentive Measures			
Medium term (2001-2003)			
Develop incentives, taxation measures and penalties.		X	
Article 12: Research and Training			
Short Term (1999-2001)			
Develop agrobiodiversity extension programs and training centers.	X		
Support environmental and socio-economic research.		X	
Support all institutions involved in environmental and biodiversity conservation including municipalities.		X	
Develop a national GIS lab.			X
Article 13: Public Education and Awareness			
Short Term (1999-2001)			
Implement environmental education in schools.		X	
Develop an education campaign on biodiversity conservation, to increase public awareness of the threats to agrobiodiversity.		X	
Expand public awareness and qualities of local Biodiversity		X	
Medium term (2001-2003)			
Develop training programmes and awareness campaigns, particularly as regards the importance of conservation of biodiversity.		X	
Article 14: Impact Assessment and Minimizing Adverse Impacts			
Short Term (1999-2001)			

Impact assessment of projects dealing with water storage (dams, lakes) is needed prior to project execution.			X	
Conduct environmental impact assessment surveys prior to construction of treatment plants.			X	
Conduct environmental/economic assessments for new construction projects, buildings, roads, etc., in agricultural areas.			X	
Medium term (2001-2003)				
Establish contingency plans to combat pollution or mitigate their harmful effects.			X	
Article 15: Access to Genetic Resources				
Short Term (1999-2001)				
Apply regulations on imported germplasm (plant, animals , fish , birds)				X
Article 16: Access to and Transfer of Technology was not addressed in the NBSAP				
Article 17: Exchange of Information				
Short Term (1999-2001)				
Co-ordinate and minimise overlap in reporting.				X
Article 18: Technical and Scientific Cooperation				
Short Term (1999-2001)				
Establish a national biodiversity committee or department to oversee agrobiodiversity policies and programmes			X	
Review bilateral and multilateral development and technical assistance programmes related to biodiversity or having biodiversity components, and prepare a framework to optimise participation.				X
Establish a centralised co-ordinating body (National Biodiversity Unit).			X	
Strike a National Biodiversity Committee to oversee strategy and action plan implementation.			X	
Establish a National Biodiversity Unit to co-ordinate, oversee and organise activities related to the conservation, study and use of Biodiversity.			X	
Medium term (2001-2003)				
Organise a network of observation stations centred around the National Centre for Marine Sciences or the NCSR , and assist in the rehabilitation of research centres in general				X
Integrate action with international activities and pool expertise.			X	
Article 19: Handling of Biotechnology and Distribution of its Benefits				
Short Term (1999-2001)				
Investigate potential linkages with the Biotrade Initiative, the ICGB Program and other international initiatives, particularly with regard to controlling bioprospecting and ensuring sustainable benefits.			X	
Establish an expert committee on biotechnology and genetic engineering to advise on regulatory requirements for dealing with biotechnology and genetically engineered organisms.			X	
Develop biosafety policy, legislation and regulations dealing with the handling, release and disposal of exotic or genetically engineered organisms.			X	
Article 20: Financial Resources				
Short Term (1999-2001)				
Ensure that all development assistance agencies with				X

programmes in Lebanon are aware of the Biodiversity strategy and Action Plan, and develop a framework for inter-ministerial co-ordination to prevent conflicting externally supported development activities.				
Article 21 Financial Mechanism				
Short Term (1999-2001)				
Explore and implement funding arrangements for both priority and long-term activities identified in the strategy and action plan.				X
Ecosystem Approach was not addressed in the NBSAP				
Biological Diversity and Inland Waters				
Short Term (1999-2001)				
Wetland conservation areas should be established and aquaria set-ups must be implemented.			X	
Medium term (2001-2003)				
Forest control programmes should expand to cover river basin habitats.				X
Marine and Coastal Biological Diversity				
Short Term (1999-2001)				
Develop National Action Plan within the framework of Mediterranean Action Plan.			X	
Develop new legislation or modernise existing ones as regards fishing periods, fishing technology, gear, etc. to protect turtles and marine mammals			X	
Agriculture Biological Diversity				
Short Term (1999-2001)				
Provide more executive authority to the Ministry of Environment to protect agrobiodiversity.				X
Support research on sustainable use of resources, applied agrobiodiversity, grazing pressure and biological diversity, and encourage research on native forage crops.			X	
Reduce excessive use of agrochemicals through publications on integrated pest management, broad-spectrum pesticides, multiple cropping/season, extension programmes, etc.			X	
Issue guidelines for the conservation of agrobiodiversity.	X			
Assess the present status of agrobiodiversity at the national level.			X	
Medium term (2001-2003)				
Rehabilitation of abandoned or degraded zones.				X
Develop a framework to assess the potential impact of agrochemical on biodiversity, and to identify the levels of biodiversity that are likely to be affected.			X	
Join efforts with municipalities and NGO's to use and conserve local germplasm.			X	

Forest Diversity			
Short Term (1999-2001)			
Preventing and combating forest fires.		X	
Medium term (2001-2003)			
Reforestation, along with related issues as forest management, plant nurseries , choice of species to be used in this process.		X	
Biological Diversity of Dry and Sub-humid Lands			
Medium term (2001-2003)			
Regulate grazing.		X	
Develop guidelines and standards for designing and implementing an agrobiodiversity-monitoring network on arable land.		X	

The CoP has established programmes of work that respond to a number of Articles. Please identify the relative priority accorded to each theme and the adequacy of resources. This will allow subsequent information on implementation of each Article to be put into context. There are other questions on implementation of the programmes of work at the end of these guidelines.

Inland water ecosystems

1. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	
c) Low	X
d) Not relevant	
2. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	
c) Limiting	X
d) Severely limiting	

Marine and coastal biological diversity

3. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	X
c) Low	
d) Not relevant	
4. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	
c) Limiting	X
d) Severely limiting	

Agricultural biological diversity

5. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	X
c) Low	
d) Not relevant	
6. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	X
b) Adequate	
c) Limiting	
d) Severely limiting	

Forest biological diversity

7. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	X
c) Low	
d) Not relevant	
8. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	
c) Limiting	X
d) Severely limiting	

Biological diversity of dry and sub-humid lands

9. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	
c) Low	X
d) Not relevant	
10. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	
c) Limiting	X
d) Severely limiting	

Further comments on work programmes and priorities

Water systems are considered as a priority for the country, efforts for conservation of marine and freshwater biodiversity, however, have not been adequate. Considerable blame falls on academic institutions that do not generate enough research outputs in comparison to other fields. Research and projects on inland water ecosystems are still at early stages of development, and there is a lack of common vision and a lack of human resources in terms of skilled individuals. In addition, the majority of work undertaken on the coastal zone is not directly aimed at conservation of biodiversity. The Lebanese National Council for Scientific Research is currently in the process of developing a comprehensive action plan for both marine and inland water ecosystems in collaboration with the Ministry of Environment to direct scientific research. Furthermore, two marine reserves are conserved and managed through international funding. There are two projects currently in progress dealing of water systems, the first is the Coastal Area Management Program (CAMP-Lebanon) aims at conserving coastal resources in the framework of sustainable development. The other project is the MedWet Coast Project which aims at the development of national policies and capacities for the conservation of Tyre nature reserve and Ammiq wetland, undertaking actions for the conservation of threatened biodiversity, developing the framework for socioeconomic viability and building the capacities of concerned parties for the sustainable management of these sites.

With respect to terrestrial plant biodiversity, the Darwin Initiative funded a collaborative project between the American University of Beirut, the Royal Botanic Gardens, Kew and the University of Reading for this purpose. This project characterized the floristic richness of typical coastal vegetation communities. A recently published book *A Thousand and one Flowers of Lebanon* (Tohme & Tohme 2002) reports about plant species currently found in Lebanon and serves as a user-friendly guide for identifying over 1000 flower species. Dryland agrobiodiversity was tackled through a regional UNDP five-year project with Lebanese Agricultural Research Institute as the executing agency (Jordan, Palestine, Lebanon, Syria) in which many experts were involved to characterize the floristic richness and study the genetic diversity and potential uses of selected species. All remaining projects in dry and sub-humid lands have focused on development rather than biodiversity conservation.

Biodiversity in forests has been indirectly addressed through projects implemented by governmental and non-governmental bodies. Such projects include combating forest fires in Lebanon (EC-LIFE Project) and encouraging the production of non-wood forest products and regulating grazing activities in areas adjacent to the Al Shouf Reserve (a SMAP Project). Both projects are currently under implementation by a local NGO, namely the Association for Forest Development and Conservation (AFDC). Biodiversity in forests has been indirectly addressed by the Ministry of Agriculture that has launched reforestation activities while the Ministry of Environment focused on the establishment and coordination of protected forests that have been assigned as nature reserves. More recently, the ministry of Environment has, initiated a 5 year reforestation project throughout the country to increase vegetation cover to 140,000 ha (20% of total area of the country).

Article 5 Cooperation

11. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		X		c) Low	
12. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	X	d) Severely limiting	
Further comments on relative priority and on availability of resources							
<p>One of the objectives of Lebanon's National Biodiversity Strategy and Action Plan emphasizes effective participation in international and regional conventions, protocols, agreements and technical programs related to biodiversity. Since the publication of this latter document, several initiatives have been launched to promote local, regional and international cooperation. The outputs generated and the degree of success of these collaborations is variable.</p> <p>In terms of international cooperation, Lebanon has signed and ratified the majority of conventions related to biodiversity. As a signatory of the various conventions, the country has initiated several collaborative projects. In addition, scientists, researchers and government officials have been actively supported to attend regional as well as international meetings, conference and workshops dealing with various aspects of biodiversity. However, the increased involvement of different stakeholders such as ministries, NGO's, private and academic institutions in biodiversity related projects and activities has not been accompanied by a systematic coordination of all these efforts. As a result, there is a general consensus for the need to coordinate and channel current and future plans into a concrete agenda that fits within the CBD articles. As a response to this need the Ministry of Environment is currently recommending the establishment of a Biodiversity Advisory Group composed of representatives from government, NGOs, private sector, academic and research institutions. This group will meet on a regular basis to elaborate a common vision for biodiversity in Lebanon and promote a consensus among ministries and academic institutions and coordinate projects related to biodiversity.</p> <p>CBD articles are often not all well recognized or understood at the government, NGO and decision-makers levels. In fact there is a prevalent belief that despite all the ongoing awareness efforts, the importance of biological diversity among the different sectors is still minimal.</p> <p>Main problems that have been experienced by local stakeholders, who have been involved in many international and regional programs, include (1) extensive administrative procedures, and (2) outputs limited to the generation of studies and reports rather than field implementation. In addition, (3) the top down approach adopted by many internationally funded programs has made it difficult for Lebanon to successfully implement its own agenda. Moreover, the fact that (4) participation in international conferences is restricted by the availability of funding within existing projects, coupled with the absence of national funding which has limited the possibilities to initiate collaboration in activities that fall within the strategy of the country but have not yet received any formal financial support. (5) At the national level, most collaborations are based on personal contacts and efforts rather than on an organization or institutional level.</p>							

13. Is your country actively cooperating with other Parties in respect of areas beyond national jurisdiction for the conservation and sustainable use of biological diversity?	
a) bilateral cooperation (please give details below)	X
b) international programmes (please give details below)	X
c) international agreements (please give details below)	X

Decision IV/4. Status and trends of the biological diversity of inland water ecosystems and options for conservation and sustainable use

14. Has your country developed effective cooperation for the sustainable management of transboundary watersheds, catchments, river basins and migratory species through bilateral and multilateral agreements?	
a) no	
b) yes - limited extent (please give details below)	X
c) yes - significant extent (please give details below)	
d) not applicable	

Decision IV/15. The relationship of the CBD with the CSD and biodiversity-related conventions, other international agreements, institutions and processes or relevance

15. Has your country developed management practices for transboundary protected areas?	
a) no	X
b) yes - limited extent (please give details below)	
c) yes - significant extent (please give details below)	
d) not relevant	

Decision V/21. Co-operation with other bodies

16. Has your country collaborated with the International Biodiversity Observation Year of DIVERSITAS, and ensured complementarity with the initiative foreseen to be undertaken by the United Nations Educational, Scientific and Cultural Organization and the Secretariat of the Convention on Biological Diversity to increase scientific knowledge and public awareness of the crucial role of biodiversity for sustainable development?	
a) no	X
b) to a limited extent	
c) to a significant extent	

Decision V/27. Contribution of the Convention on Biological Diversity to the ten-year review of progress achieved since the United Nations Conference on Environment and Development

17. Is your country planning to highlight and emphasize biological diversity considerations in its contribution to the ten-year review of progress since the Earth Summit?	
a) no	
b) yes	X

Further comments on implementation of this Article

Q 13:

International agreements or conventions

Convention on Biological Diversity

The Basle Convention

The Montreal Protocol

The Barcelona Convention for the Protection of the Mediterranean and related protocols

Protocol concerning Mediterranean Specially Protected Areas

Ramsar Convention on Wetlands of International Importance

United Nations Framework Convention on Climate Change

Convention to Combat Desertification

African Eurasian Water Bird Agreement (AEWA)

River Basin Initiative

International Programs

Specific projects pertaining to the programs mentioned below are addressed in detail in the various sections of this report

Bird Life International

The Council for Environmental Education (CEE)

Darwin Initiative

Friends of the Earth (FOE)

French Research Institute for Exploitation of the Sea (IFREMER)

The World Conservation Union (IUCN)

Mediterranean Higher Education (CIHEAM)

World Wild Fund (WWF)

Many projects have been conducted in collaboration with international institutions

Specific projects pertaining to the institutions/organizations mentioned below are addressed in detail in the various sections of this report

United Nation Development Program (UNDP)

United Nation Environment Program (UNEP)

International Center for Agricultural Research in Dry Areas (ICARDA)

International Fund for Agricultural Development (IFAD)

International Plant Genetic Resources Institute (IPGRI)

Food and Agricultural Organization (FAO)

Arab Organization for Agricultural Development (AOAD)

Regional Projects

Conservation and Sustainable Use of the Dryland Agrobiodiversity of the Near East (Agrobiodiversity Project)

Coastal Area Management Program (CAMP)

Conservation of Wetlands and Coastal Zones in the Mediterranean region (MedWet Coast project)

Regional Programs

Mediterranean Action Plan (MAP)

Royal Society for Conservation of Nature (RSCN)

Regional Activity Center for Specially Protected Areas (RAC/SPA)

West /Central Asia and North Africa Program (WESCANA)

Bilateral cooperation:

The Lebanese government has made an agreement with France for a program for evaluating and developing research (CEDRE) which provided a significant funding for research activities related to biodiversity.

Lebanon and Syria have a well established bilateral cooperation agreement which covered several environmental agreements ranging from agriculture, water safety., coastal areas management and marine ecology.

Q 14 – 15:

Currently, there are no transboundary projects being implemented directly for biodiversity related issues. However, there are several projects in place that indirectly address biodiversity issues. A project for a common protected areas between Lebanon and Syria in Haramon Mountain is currently in the development stage. Another measures includes suitability studies have been initiated based on ecogeographic parameters to identify target areas for reforestation with *Ceratonia siliqua* and *Pinus* species along the Lebanese- Syrian coast. A study entitled "Preparation of an Environmental Master Plan and Short-to-Medium Term Action Plan for the Al- Kabir River between Lebanon and Syria" has utilized remote sensing as a background to assess the various environmental impacts on the river Basin between both countries. Furthermore, a regional soaring birds project will soon be initiated by the Bird Life International and SPNL, a local NGO, and the Ministry of the Environment, which will focus on migratory species.

Q 17:

The Ministry of Environment prepared a Rio +10 report to document Lebanon's status, progress and constraints since the Earth Rio Summit. The issue of biological diversity was very briefly dealt with as a direct matter. In terms of direct review of biological diversity, the report mentioned the NBSAP, CBD and protected areas programs. The report documented other issues such as legislation, projects and programs that are indirectly related to biological diversity. Another review report was prepared as a collaboration between various NGOs in Lebanon to document the situation from the perspective of the public sector. The review included an update on the management of natural resources for economic and social development, the threats facing the environment, the constraints that faced the implementation of the CBD convention in Lebanon followed by conclusions and recommendations.

Article 6 General measures for conservation and sustainable use

18. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		X		c) Low	
19. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	X	d) Severely limiting	
Further comments on relative priority and on availability of resources							
<p>Conservation and sustainable use of biodiversity has become an important issue in Lebanon as illustrated by the various projects and studies undertaken, by the changes in the institutional and legal capacity in favor of biodiversity conservation, and by the adoption of international conventions, agreements and protocols (refer to article 5). The National Biodiversity Strategy and Action Plan completed in 1998 was an essential basis on which biodiversity conservation and its sustainable utilization has been structured. Today there is a need to build on the existing NBSAP by including actions that address more directly articles of the CBD and devising a monitoring mechanism to assess the extent of implementation of the proposed actions.</p> <p>Lebanon suffers from a significant divergence between the willingness to address biodiversity related issues and their effective implementation which is illustrated on several levels:</p> <ul style="list-style-type: none"> • At the governmental level there is the intellectual willingness address biodiversity related issues, however the current infrastructure does not permit enforcement and implementation • Many studies and research conducted on biodiversity are not implemented • Significant difference in level of awareness and knowledge regarding biodiversity issues exists between the scientific community and all other institutions involved in biodiversity on one hand and the general public and private sector and government on the other hand. <p>A general consensus among the stakeholders interviewed in this report stated that conservation and sustainable use of biodiversity are still at their early stages of development in Lebanon due to the following constraints: The economic crisis as well as the increased emphasis on construction and development following the civil war has shifted priorities away from environmental issues in general and biodiversity issues more specifically. The result is an overall lack of incentives and insufficient funding for biodiversity. Lebanon is also suffering from the “tragedy of the commons” whereby there is no stewardship for the protection of the biological resources of the country. Furthermore, there is a lack of training and awareness at the government level and with decision makers. This has translated into inadequate integration of legislation and a lack of enforcement for existing laws and regulations. Apart from the national-based constraints, the top down approach of projects are hindering efforts because they are ignoring immediate priorities and concerns biodiversity stakeholders in Lebanon.</p>							

20. What is the status of your national biodiversity strategy (6a)?	
a) none	
b) early stages of development	
c) advanced stages of development	
d) completed ¹	
e) completed and adopted ²	X
f) reports on implementation available	
21. What is the status of your national biodiversity action plan (6a)?	
a) none	
b) early stages of development	
c) advanced stages of development	
d) completed ²	
e) completed and adopted ²	X
f) reports on implementation available	
22. Do your national strategies and action plans cover all articles of the Convention (6a)?	
a) some articles only	
b) most articles	X
c) all articles	
23. Do your national strategies and action plans cover integration of other sectoral activities (6b)?	
a) no	
b) some sectors	X
c) all major sectors	
d) all sectors	

Decision II/7 and Decision III/9 Consideration of Articles 6 and 8

24. Is action being taken to exchange information and share experience on the national action planning process with other Contracting Parties?	
a) little or no action	X
b) sharing of strategies, plans and/or case-studies	
c) regional meetings	X

^{1/} Please provide information requested at the end of these guidelines.

25. Do all of your country's strategies and action plans include an international cooperation component?	
a) no	X
b) yes	
26. Are your country's strategies and action plans coordinated with those of neighbouring countries?	
a) no	X
b) bilateral/multilateral discussions under way	
c) coordinated in some areas/themes	
d) fully coordinated	
e) not applicable	
27. Has your country set measurable targets within its strategies and action plans?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) programme in place	X
e) reports on implementation available	
If a developing country Party or a Party with economy in transition -	
28. Has your country received support from the financial mechanism for the preparation of its national strategy and action plan?	
a) no	
b) yes	X
If yes, which was the Implementing Agency (UNDP/UNEP/World Bank)?	UNDP

Decisions III/21. Relationship of the Convention with the CSD and biodiversity-related conventions

29. Are the national focal points for the CBD and the competent authorities of the Ramsar Convention, Bonn Convention and CITES cooperating in the implementation of these conventions to avoid duplication?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	

Further comments on implementation of this Article

Q 20-23

The NBSAP has been completed and adopted by the Ministry of Environment since 1998 and is currently pending official endorsement by the Council of Ministries. A scientific addendum framework with defined objectives, activities, action time, budget indicator has been developed and will be used as the format to update the NBSAP.

Even though, the NBSAP was commended as good starting point for Lebanon, the majority of stakeholders interviewed expressed dissatisfaction on several fronts:

- Lack of an implementation plan
- Covering only some articles of the CBD
- The adoption is function of the political will.
- Some proposed actions are too generic and not well elaborated
- Only adopted by the Ministry of Environment
- Little or no action has been done regarding dissemination of information which would have made its acceptance more prevalent.

However the Top Up Biodiversity Enabling Activity Project will address those issues raised by the stakeholders interviewed as it will work for the official endorsement of the NBSAP, review and update the NBSAP as per the CBD strategic plan as well as organize awareness campaigns about the importance of biodiversity to the decision makers.

Q 24:

Exchange of information with other contracting parties has taken place to a limited extent mainly through regional meetings, conferences and workshops. The reported limitation for a more extensive interaction is the lack of human resources. Other means of exchange include newsletters, reports and websites. However, these exchanges are inconsistent and in some cases unsustainable, therefore, their effectiveness is questionable.

The Biodiversity Planning Support Program which was initiated in the year 2000 formed as an important unit for exchanging information and experiences related to biodiversity planning among the various countries in the Middle East through newsletters, workshops and the bioplan list server.

Q 26:

The coordination of Lebanon's strategies and action plans with neighboring countries has mainly been conducted through seminars, workshops, preparation of the national biodiversity study and through regional projects such as the Agrobiodiversity, CAMP and Soaring birds projects. Many workshops have been done in collaboration with Syria, Jordan and Kuwait.

Q 27:

The NBSAP defined for each of the nine goals outlined below an action agenda with short, medium and long term targets and indicators.

1. To protect Lebanon's terrestrial biodiversity from degradation and ascertain their availability for environmental and economic benefits
2. To conserve freshwater biodiversity through sustainable management and wise use of freshwater resources
3. To protect Lebanon's coastal and marine biodiversity and develop their resources in a sustainable way
4. To protect Lebanon's agricultural biodiversity from degradation and secure its availability while minimizing both environmental and economic benefits
5. To conserve biodiversity under natural conditions and established a balanced ecosystem where plants and animals evolve naturally
6. To conserve biodiversity *ex-situ* and utilizing existing capacities
7. To protect natural ecosystems from invading species
8. To share global responsibilities in the use, conservation and management of biodiversity
9. To share knowledge, costs, and benefits with individuals and communities.

Q 28:

The NBSAP was prepared with the financial support of GEF and implemented through the UNDP

Q 29:

Lebanon ratified the Ramsar Convention in 1999. Even though The Bonn convention has not yet been ratified by Lebanon, the AEWa agreement was ratified in June 2002. In addition, Lebanon is not yet involved in CITES. There is cooperation between the implementation of the CBD and Ramsar as a result of having both focal points in the Ministry of Environment, furthermore the Ministry of Environment will be the focal point for AEWa and is following the issue related to the Bonn convention on migratory species. In terms of biodiversity related conventions, there is an urgent need to elaborate on a clear definition of each convention, understand the interrelatedness with other conventions as well as comprehend the implementation of each on the grassroots level.

Article 7 Identification and monitoring

30. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low		X	
31. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	X
Further comments on relative priority and on availability of resources							
<p>There is no current national program for comprehensive surveys and monitoring programs of the biological diversity on the ecosystem, species or genetic level. The National Biodiversity Strategy and Action Plan did not include any objectives directly related to identification and monitoring. The comprehensive species lists that were produced in the national biological diversity report relied mostly on data that was generated in the fifties and sixties. Current efforts at characterizing and monitoring the biological diversity is taking place in the protected areas. Inventories in the other areas are rather scattered and limited by the lack of taxonomists, as well as the severe lack of financial support for species identification and monitoring activities.</p> <p>In essence characterizing and monitoring of biological diversity is a long term procedure requiring continuous research, observation and sustainable financial resources. The general approach in Lebanon, which is primarily donor driven, is based on short term activities that generate quick results and outputs. Accordingly progress in this area is severely impeded.</p>							
32. Does your country have an ongoing inventory programme at species level (7a)?							
a) minimal activity							
b) for key groups (such as threatened or endemic species) or indicators							
c) for a range of major groups						X	
d) for a comprehensive range of species							
33. Does your country have an ongoing inventory programme at ecosystem level (7a)?							
a) minimal activity						X	
b) for ecosystems of particular interest only							
c) for major ecosystems							
d) for a comprehensive range of ecosystems							
34. Does your country have an ongoing inventory programme at genetic level (7a)?							
a) minimal activity						X	
b) minor programme in some sectors							
c) major programme in some sectors							
d) major programme in all relevant sectors							

35. Does your country have ongoing monitoring programmes at species level (7a)?	
a) minimal activity	X
b) for key groups (such as threatened or endemic species) or indicators	
c) for a range of major groups	
d) for a comprehensive range of species	
36. Does your country have ongoing monitoring programmes at ecosystem level (7b)?	
a) minimal activity	X
b) for ecosystems of particular interest only	
c) for major ecosystems	
d) for a comprehensive range of ecosystems	
37. Does your country have ongoing monitoring programmes at genetic level (7b)?	
a) minimal activity	X
b) minor programme in some sectors	
c) major programme in some sectors	
d) major programme in all relevant sectors	
38. Has your country identified activities with adverse affects on biodiversity (7c)?	
a) limited understanding	
b) threats well known in some areas, not in others	X
c) most threats known, some gaps in knowledge	
d) comprehensive understanding	
e) reports available	
39. Is your country monitoring these activities and their effects (7c)?	
a) no	
b) early stages of programme development	X
c) advanced stages of programme development	
d) programme in place	
e) reports on implementation available	
40. Does your country coordinate information collection and management at the national level (7d)?	
a) no	
b) early stages of programme development	X
c) advanced stages of programme development	
d) programme in place	
e) reports on implementation available	

Decision III/10 Identification, monitoring and assessment

41. Has your country identified national indicators of biodiversity?	
a) no	
b) assessment of potential indicators underway	X
c) indicators identified (if so, please describe below)	
42. Is your country using rapid assessment and remote sensing techniques?	
a) no	
b) assessing opportunities	
c) yes, to a limited extent	
d) yes, to a major extent	X
e) reports on implementation available	
43. Has your country adopted a "step-by-step" approach to implementing Article 7 with initial emphasis on identification of biodiversity components (7a) and activities having adverse effects on them (7c)?	
a) no	X
b) not appropriate to national circumstances	
c) yes	
44. Is your country cooperating with other Contracting Parties on pilot projects to demonstrate the use of assessment and indicator methodologies?	
a) no	X
b) yes (if so give details below)	
45. Has your country prepared any reports of experience with application of assessment methodologies and made these available to other Contracting Parties?	
a) no	X
b) yes	
46. Is your country seeking to make taxonomic information held in its collections more widely available?	
a) no relevant collections	
b) no action	X
c) yes (if so, please give details below)	

Decision V/7. Identification, monitoring and assessment, and indicators

47. Is your country actively involved in co-operating with other countries in your region in the field of indicators, monitoring and assessment?	
a) no	
b) limited co-operation	X
c) extensive co-operation on some issues	
d) extensive co-operation on a wide range of issues	

48. Has your country made available case studies concerning the development and implementation of assessment, monitoring and indicator programmes?	
a) no	
b) yes - sent to the Secretariat	
c) yes - through the national CHM	
d) yes - other means (please specify)	X
49. Is your country assisting other Parties to increase their capacity to develop indicator and monitoring programmes?	
a) no	X
b) providing training	
c) providing direct support	
d) sharing experience	
e) other (please describe)	

Further comments on implementation of this Article

Q 32 - 40:

The majority of surveys and inventories conducted recently lack vital information pertaining to the distribution, status and frequency of species. In addition the species lists that are generated are usually not readily available to stakeholders responsible for the implementation of protection and monitoring activities. There is a need to render survey data in a format that is readily accessible to all those concerned to ensure suitable mechanism for the effective implementation of monitoring.

The stakeholders interviewed indicated several criticism related to the current status of inventorying and monitoring activities in Lebanon:

- Reports published about the biodiversity status in Lebanon are characterized by discrepancies in the data documented which is attributed to the lack of updated and/or systematic field surveys.
- Information gained from the inventories conducted are typically retained by the person or organization rather than being disseminated for everyone to utilize and build upon. Information exchange is based and limited to personal contact.
- There is discrepancy between academic institution and NGOs; where academia focuses on specific species of interest with little regard to a holistic approach while NGO initiatives focusing on biodiversity of an entire area with no real scientific knowledge of species diversity.

Q 32:

Several inventories on the species level have been conducted in various Lebanese universities

and research centers. Below is a sample of the various studies/research/projects that have either been undertaken and/or currently in progress.

1. Inventories of both faunistic and floristic species have conducted in the protected areas which threatened, endemic and species of economic value were identified by the Lebanese Council for Scientific Research.
2. Several studies have been undertaken to study and characterize avifauna populations in Lebanon at the Lebanese University such as “L’avifaune nicheuse du Liban “(1995-2001) and L’avifaune du Liban: etude faunistique et caracterisation des peuplements and the determination de l’origine des especes migratrices par utilisation du baguage (2001-2004). Other inventories include soaring birds of Lebanon and the ongoing bird survey conducted by A Rocha in the Ammiq marshes, along the hillsides and in the surrounding fields (census count once a week since 1999).
3. A joint CEDRE project between National Council for Scientific Research, American University of Beirut and INRA-France is currently in progress. This project entitled “Etude d’un complexe de nouveaux insectes ravageurs et dévastateurs en cédraies libanaises. Approche vers une lutte intégrée en cédraie ou une intervention curative d’urgence” has two main objectives: (i) Biological and ecological studies of the new insects pests of the Lebanese cedar forests and (ii) Study the insect biodiversity of the Lebanese cedars as a major component of the silviculture and forest sustainability in Lebanon and the Mediterranean region.
4. A study was undertaken to investigate amphibian and reptile species present in Lebanon and their potential utilization entitled “Amphibiens et reptiles du Liban, etude biographique, taxonomique, ecologique et etude histologique (Lebanese University 1995-2001)
5. Several studies have been conducted on the insect biodiversity at the Lebanese University such a two year analyzes of the history and of Lebanon’s insect biodiversity entitled "Histoire et crise de la biodiversite des insectes: la faune entomologique de l’ambre cretace du liban (1999-2001) and the study on the insect species found in Lebanon and an assessment of their impact on natural and cultivated vegetation (1995-1998). Insect diversity on typical coastal vegetation was completed within the context of a Darwin Initiative sponsored collaboration between the American University of Beirut, the Royal Botanic Gardens at Kew, England and the University of Reading UK.
6. A one year study at the National Center for Marine Sciences identified a list of zooplanktonic species with a description of their distribution and population studies as well as taxonomy (1996-1997). So far the Center has inventoried 218 marine fish species from 140 genera and 25 species in freshwater.

7. The National Marine Center has conducted comprehensive inventories of a range of species (Phytoplankton, Zooplankton Bentoplankton), ecosystems and genetic resources, whereas monitoring activities have only been done for various species. National center for Marine sciences has inventoried 218 marine fish species from 140 genera. 25 species in freshwater. In addition the center is monitoring the trends several benthic species.
8. Within the Agrobiodiversity Project several surveys were conducted on cherry and peaches to determine the diversity of these species based on morphological data.
9. A comprehensive forestry survey with a prime emphasis on Cedar forest was conducted throughout Lebanon in the 1970's by a French scientist from university of Marseille in collaboration with local experts.
10. Several studies were completed at the American University of Beirut to characterize the genetic diversity of native fruit trees namely almond, pistachio, and carob at the morphological and molecular level in collaboration with the International Plant Genetic Resource Institute. An EU funded collaboration between the American University and CIHEAM (MAICH) and various other regional partners is in progress to assess the genetic diversity of olive species using molecular and morphological markers.
11. Floristic richness of typical vegetation communities on the Lebanese coast has been characterized within the context of a Darwin Initiative sponsored collaborative project between the American University of Beirut, the Royal Botanic Gardens, Kew, England and the University of Reading.
12. The genetic diversity of *Cedrus libani* has been assessed at the morphological and molecular level as part of an EU funded project between the American University of Beirut and the University of Reading in addition to other regional partners.

Q 33.

Inventories conducted on the ecosystem level have been limited to projects as outlined below

1. The national biodiversity study of Lebanon produced in 1996 by the Ministry of Agriculture lists 9,119 species with 4,633 floral species and 4,486 fauna species. The purpose of this document was to compile species lists from published lists and documents. Accordingly today this document constitutes a basic document for Lebanon's biodiversity but these lists need to be updated following field investigations.
2. A biodiversity assessment and monitoring program for protected areas which included two phases, the first for inventories and the second for monitoring. A local NGO,

Greenline set up the framework for the inventory and conducted training workshops for the protected areas personnel to follow up with the inventory activities. But the resulting outputs did not meet the intended expectations. Al Shouf Cedar Nature Reserve recently initiated a monitoring program, however, efforts are still at the early stages.

3. A three year inventory of the coastal zone in Lebanon was conducted at the American University of Beirut in collaboration with Royal Botanic Gardens, Kew and the University of Reading in the project Coastal Vegetation Survey and Conservation for Lebanon Project under the Darwin. Several studies were conducted during this project which focused on both floristic and faunistic inventories. Two research studies were based in a floristic assessment of selected communities along the both the Lebanese Inner and Littoral zone during which an inventory was compiled in selected communities along the coast. Another study was undertaken to survey insect diversity along the Lebanese coast in selected plant communities which produced an inventory of selected insect groups that are of special interest as indicators of diversity. A fourth study investigated vegetation patterns along a river system and produced a list of species that inhabit riparian ecosystems.
4. A Rocha has been very active in inventory and identification activities in the Ammiq wetland, considered a Ramsar site and an international important bird area. An ongoing bird survey in the marsh, along the hillsides and in the surrounding fields has been in progress since 1999 with once a week censuses count. A small survey on mammals was conducted recently as well as a two year survey on butterflies. An inventory of plant species in the marshland was accomplished with the assistance of local expertise as well as a professional taxonomist who was a visiting professor at American University of Beirut during the study timeframe. The group has recently initiated a new survey on dragonflies and fresh water invertebrates.
5. Outside the Ammiq A Rocha group is also involved in two other projects: (i) baseline bird survey upon the request of the local community in the Mlikh forest which has been left intact as result of the regions occupation (ii) Study of birds across Lebanon.
6. In the “Conservation and Sustainable Use of Dryland Agro-biodiversity in the Near East” Project various surveys were conducted in the Bekaa Region of Lebanon such as ecological, indigenous knowledge and vegetation surveys.
7. A professor at the Lebanese University and a researcher in the National Council for Scientific Research conducted a full inventory of 17 rivers in Lebanon however the results have not been published due to financial constraints.
8. A study is currently in progress at National Council for Scientific Research on the coastal environment and marine biodiversity along the Lebanese coast: inventory and making use of a set of material and human expertise for the observation and analysis of their evolution; degree of alteration of coastal benthic communities (1999-2003). In

addition, the National Council for Scientific Research has carried out monthly monitoring activities of about 25 sites along the Lebanese coast whereby bacteriologic and chemical tests are done to determine the level of toxicity.

9. A study at the Lebanese University was conducted to investigate the fauna, ecology and community structure of benthic species in the various Lebanese Rivers
10. Monitoring activities have been initiated in three protected areas, Horsh Ehden nature reserve, Tyre nature reserve and Ammiq wetland.

Q 34.

Inventories at the genetic level have been primarily addressed by the academic and research institutions. The American University of Beirut has been leading in this front and has assessed the genetic diversity of many species including *Cedrus libani*, wheat landraces collected from Baalbek Caza in Lebanon, Safflower germplasm (*Carthamus Tinctorius* L.), *Amygdalus* spp, *Pistacia* spp, *Panocratium maritimum*, *Vagaria parviflora*, *Olea* spp. The Lebanese Agriculture Research Institute is also conducting genetic diversity studies in *Prunus* species. A study was conducted at the National Council for Scientific Research on the marine flora and fauna to assess the taxonomy of marine organisms and floristic and faunistic aspects of marine plants and animals (1987-1995)

Q35:

There are no national initiatives for large scale monitoring activities; however, several informal measures have been undertaken. Examples include the ongoing monitoring of sea turtles nesting on the Tyre Coast in the South of Lebanon. Another effort has been taken by the National Marine Center which is monitoring several benthic species of ecological interest. In terms of animal resources, there is an agreement or protocol of collaboration between Al Shouf Reserve and Balamand University to manage small mammals' population through a monitoring and assessment program. In addition, the Lebanese National Council is currently sponsoring a PhD research on hyena's ecology and conservation in Lebanon. Fauna monitoring in the three protected areas (Palm Island, Shouf and Ehden nature reserves) was also performed by a local NGO (Greenline) within the context of the protected areas project.

Q36:

Currently, there has not been any measures taken to monitor entire ecosystems on the biodiversity level. A project undertaken by the marine center does not directly focus on biodiversity, however, the data collected have an indirect impact on biodiversity. The center has been continuously monitoring the physical and chemical marine environment. In addition, bacteria and other lower organisms on a monthly basis for the past 15 years.

Q 38-Q 39:

The management team in the three protected areas, Horsh Ehden, Al Shouf Cedar and Palm Island, have identified as well as monitored various adverse activities such as grazing, impact of the visitors and trails on plants as well as the pest *Cephalcia tannouriens* in Tannourine Forest.

Q 41:

The only attempt for the establishment of national indicators were developed by the Lebanese Environment and Development Observatory (LEDO) program which elaborated a set of 90 indicators at the national level based on those of the 130 indicators of the blue plan: From the 90 indicators which fall into four categories: Population and socio-economics, economic activities, environment and sustainable development activities and policies, only four indicators directly related to biodiversity issues (i) Forest's protection rate (ii) Protected coastal area (iii) Threatened species (iv) Burnt forest area.

Several small initiatives were undertaken by various institutes: in the Ehden Nature Reserve six species selected as plant indicators of degradation and clean air are being monitored. The National Marine Center use abundant species of algae and fish as indicators of water pollution and presence of heavy metals.

The MEDERMIS project implemented at Balamand University and funded by the University of Athens (Greece) and the Ministry of Environment aims to enhance sustainable development by training municipalities to introduce scientific indicators into their framework. For this purpose, surveys are being conducted to assess local communities' distribution and aspirations and established computerized databases and control facilities. Even though, this initiative is not directly related to biodiversity the outcome will be very useful in the future if a taxation measure was introduced for environmental degradation or biodiversity degradation.

Within the CAMP, several indicators will be produced for the coastal area extending from Damour to Naqoura, the Southern borderline of Lebanon. These indicators will be directly or indirectly concerned with coastal resources.

A study is currently in progress at National Council for Scientific Research into the characterization of the meiofauna of the Lebanese coasts and their utilization as bioindicators of anthropogenic perturbations (2001-2004)

Q 42:

There has not been any rapid assessments nor remote sensing techniques targeted at biodiversity. However, several studies have been conducted on various environmental attributes. A study currently in progress at the National Council for Scientific Research involves the use pigment measurements and satellite imagery to study the coastal environment which is intended to serve for the national oceanographic database. The study entitled "Preparation of an Environmental Master Plan and Short-to-Medium Term Action Plan for the Nahr-Al- Kabir in Lebanon and Syria" conducted in partnership with Syria, utilized remote sensing as a background to assess

the various environmental impacts on the river Basin between both countries.

Q 46:

Through the taxonomic survey which will be administrated in the near future by the Ministry of Environment , the needs and priorities of Lebanon's taxonomic capabilities will be assessed and an action plan will be prepared including measures to disseminate and exchange information between institutions.

Q 47:

Cooperation with neighbouring countries is limited to projects and/or personal contacts and efforts. Please refer to question 42 above.

Q.48:

The LEDO programme can be considered as a case-study among other observatories in the Mediterranean region working with the Blue Plan for the development of assessment, monitoring and indicators programme.

Decisions on Taxonomy

**Decision IV/1 Report and recommendations of the third meeting of SBSTTA
[part]**

50. Has your country carried out a national taxonomic needs assessment, and/or held workshops to determine national taxonomic priorities?	
a) no	
b) early stages of assessment	X
c) advanced stages of assessment	
d) assessment completed	
51. Has your country developed a national taxonomic action plan?	
a) no	X
b) early stages of development	
c) advanced stages of development	
d) action plan in place	
e) reports on implementation available	
52. Is your country making available appropriate resources to enhance the availability of taxonomic information?	
a) no	X
b) yes, but this does not cover all known needs adequately	
c) yes, covering all known needs	
53. Is your country encouraging bilateral and multilateral training and employment opportunities for taxonomists, particularly those dealing with poorly known organisms?	
a) no	
b) some opportunities	X
c) significant opportunities	
54. Is your country investing on a long-term basis in the development of appropriate infrastructure for your national taxonomic collections?	
a) no	X
b) some investment	
c) significant investment	
55. Is your country encouraging partnerships between taxonomic institutions in developed and developing countries?	
a) no	X
b) yes - stated policy	
c) yes - systematic national programme	

56. Has your country adopted any international agreed levels of collection housing?	
a) no	X
b) under review	
c) being implemented by some collections	
d) being implemented by all major collections	
57. Has your country provided training programmes in taxonomy?	
a) no	
b) some	X
c) many	
58. Has your country reported on measures adopted to strengthen national capacity in taxonomy, to designate national reference centres, and to make information housed in collections available to countries of origin?	
a) no	X
b) yes - in the previous national report	
c) yes - via the clearing-house mechanism	
d) yes - other means (please give details below)	
59. Has your country taken steps to ensure that institutions responsible for biological diversity inventories and taxonomic activities are financially and administratively stable?	
a) no	X
b) under review	
c) yes for some institutions	
d) yes for all major institutions	
60. Has your country assisted taxonomic institutions to establish consortia to conduct regional projects?	
a) no	X
b) under review	
c) yes - limited extent	
d) yes - significant extent	
61. Has your country given special attention to international funding of fellowships for specialist training abroad or for attracting international experts to national or regional courses?	
a) no	X
b) under review	
c) yes - limited extent	
c) yes - significant extent	
62. Has your country provided programmes for re-training of qualified professionals moving into taxonomy-related fields?	

a) no	X
b) some	
c) many	

Decision V/9. Global Taxonomy Initiative: Implementation and further advance of the Suggestions for Action

63. Has your country identified its information requirements in the area of taxonomy, and assessed its national capacity to meet these requirements?	
a) no	X
b) basic assessment	
c) thorough assessment	
64. Has your country established or consolidated taxonomic reference centres?	
a) no	X
b) yes	
65. Has your country worked to increase its capacity in the area of taxonomic research?	
a) no	X
b) yes	
66. Has your country communicated information on programmes, projects and initiatives for consideration as pilot projects under the Global Taxonomy Initiative to the Executive Secretary?	
a) no	X
b) yes	
67. Has your country designated a national Global Taxonomy Initiative focal point linked to other national focal points?	
a) no	
b) yes	X
68. Has your country participated in the development of regional networks to facilitate information-sharing for the Global Taxonomy Initiative?	
a) no	X
b) yes	
If a developing country Party or Party with economy in transition -	
69. Has your country sought resources through the financial mechanism for the priority actions identified in the decision?	
a) no	X
b) applied for unsuccessfully	
c) applied for successfully	

Further comments on implementation of these decisions

Q 50:

Lebanon has not conducted an assessment of taxonomic needs on the national level nor developed an action plan for capacity building. However, the newly enacted Top-up Biodiversity Enabling Activity Project includes an assessment of the capacity building needs in biodiversity monitoring including special emphasis on taxonomy. The Ministry of Environment is administrating a survey on taxonomic status and needs in Lebanon through a questionnaire concerning: training, human resources, research and collection. Specifically, the questionnaire will focus on the following issues: (i) assessment of gaps, needs and parameters, (ii) assessment of the availability of taxonomic knowledge, (iii) assessment of the availability of taxonomic infrastructure, (iv) assessment of the availability human resources supporting taxonomy and (v) assessment of national priorities for taxonomic information.

At the conclusion of the survey, the Ministry will be able to determine the main areas lacking in taxonomic expertise, designate priorities as well as devise a strategy plan for capacity building. Until, the questionnaire is conducted, taxonomic initiatives remain scattered and limited by the lack of experts in various areas as well as restricted financial contributions from both donors as well as national sources. This lack in taxonomic capacity is acting as a major constraint for all other activities relating to biodiversity.

Some organizations and institution have conducted their own taxonomic assessment. The A Rocha group working in the Ammiq Wetland and identified so far a major taxonomic deficiency in species areas such as bats and plants. The marine science center are satisfied with the taxonomic capacity in Phytoplankton and Zooplankton. The main area of dire need of professional taxonomists is at the flora level. Lebanese Agricultural Research Institute assessed need and found out that taxonomists expert in Quercus and Juniperus species were needed. There is a need for taxonomists at the level of field as well at the level of molecular identification to upgrade the national strategy.

Q 51:

Based on the results obtained from the taxonomic survey mentioned in question 51, a taxonomic action plan will be prepared accordingly.

Q 52:

A database of the nine volume National Biodiversity Study has been posted on the website of the Ministry of Agriculture (<http://www.agriculture.gov.lb/info.html>).

The American University of Beirut included a list of species collected along the coast during the three-year Coastal Vegetation Survey and Conservation for Lebanon Project under the Darwin Initiative in an interactive CD developed to include all the outputs of the project and to be disseminated to both the private and public sector.

A website has been developed for the Post Herbarium housed at the American University of Beirut database of the specimens preserved in the herbarium (<http://ddc.aub.edu.lb/projects/biology/herbarium>)

A Rocha, currently conducted research in the Ammiq Wetland over the past five years has

compiled several species lists and are available on their website. The lists include Birds.. Butterflies Amphibians Reptiles Mammals (<http://www.arochoa.org/liban/en/index.htm>).

Q 53 & Q 55:

Lebanon has not encouraged nor developed any permanent partnerships with other countries for taxonomic training and employment. Bilateral training agreements, however, have been established between various institutions.

The Lebanese Agricultural Research Institute and IPGRI have collaborated in training and capacity building.

The American University of Beirut collaborated with the University of Reading in England and Kew Royal Botanic Gardens during the three year "Coastal Vegetation Survey and Conservation for Lebanon" projects for taxonomic training both in Lebanon as well as England. The species collected during the study were identified with the assistance of expert taxonomists from reading university.

The marine center has developed individual contacts with taxonomic experts in various areas for training and capacity building for studies undertaken in Lebanon.

The American University of Beirut offered the first course in plant taxonomy after 10 years of interruption. The course was taught by a foreign visiting professor and the university has had difficulty in recruiting qualified faculty in the field of taxonomy.

Lebanon and France are collaborating in taxonomic training through the CEDRE.

Q 56:

Lebanon has yet to develop nationally adopted standards for housing collection, therefore, existing collections are either based on individual efforts or have adopted the IUCN-UNDP set guidelines.

Q 57:

The majority of stakeholder interviewed indicated that there is great responsibility on biologists to integrate taxonomy into the university level and designing a degree in taxonomy. Current taxonomic initiatives are either on the academic, institutional or personal level. In house training has been limited to workshops, short term sessions as part of projects or on personal contacts. The agrobiodiversity project held a one training workshop on taxonomic for all interested participants without any restriction to professional background. A herbarium techniques workshop was administrated at the American University of Beirut and targeted nature reserves managers, local scientists and NGO members. The workshop aimed at developing the technical skills of the participants such as the preparation, storage, preservation and organization of herbarium specimens.

Scientists and researchers from Lebanon have attended several workshops and conferences in taxonomic such as the SBSTTA that was held in Montréal regarding the issue of taxonomy;

workshop was held at Sharm el Sheikh in collaboration with UNESCO.

Q 65:

In terms of current taxonomy capacity, Lebanon is still at the beginning level in terms of identification techniques and neither basic studies about the relationship among species systematic studies have not yet been conducted.

Q 67:

Dr. Nelly Arnold was designated as the national Global Taxonomy Initiative focal point

Article 8 In situ conservation [excluding Articles 8h and 8j]

70. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	<input checked="" type="checkbox"/>	b) Medium	<input type="checkbox"/>	c) Low	<input type="checkbox"/>
71. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good	<input type="checkbox"/>	b) Adequate	<input type="checkbox"/>	c) Limiting	<input checked="" type="checkbox"/>
				d) Severely limiting	<input type="checkbox"/>
Further comments on relative priority and on availability of resources					
<p>Goal 5 of Lebanon's National Biodiversity Strategy and Action Plan calls for biodiversity conservation under natural conditions and for the establishment of a balanced ecosystem where plants and animals evolve naturally. A major component of this goal is the expansion and management of protected area systems in terrestrial, marine and fresh water environments. To meet the latter objective an In-Situ Biodiversity Conservation Project was launched in 1996 by the Ministry of Environment in collaboration UNDP with the financial assistance of GEF. The protected area initiative is considered as a major milestone for conservation efforts in Lebanon as it awakened decision makers and sensitised the public about the importance of biodiversity. Concern for conservation has increased in Lebanon over recent years which is reflected by an increase in the number of protected areas as well as individual and private initiatives brought up to the Ministry of Environment from individuals to protect important sites in their local communities. Apart from the protected areas project, <i>in-situ</i> conservation efforts have been limited to small scale projects, private initiatives and research studies, all of which are reported in this document.</p> <p>Even though Lebanon has witnessed an increase in awareness and priority devoted to conservation, there are several issues hindering further progress in this field. In terms of financial support for <i>in-situ</i> conservation, government funding is only one source of funding, there is a national need to exert more effort to mobilize resources from various potential sources such as municipalities, sponsors, donations and international donors.</p> <p>The management teams within the protected areas are beginning to integrate an ecosystem perspective for biodiversity and conservation issues. Aside from the protected area, the majority of projects deal with one dimension of the environment rather than focusing on the entire ecosystem and its interrelated processes. In terms of legislation, there are several measures in place that offer positive change for <i>in-situ</i> conservation such the recent Law for the Protection of the Environment passed in August 2002 and the law of the protected areas currently pending endorsement. The current laws in Lebanon are adequate; however, the problem rests on national willingness to comply to these laws and the country's ability to enforce them.</p>					

72. Has your country established a system of protected areas which aims to conserve biological diversity (8a)?	
a) system under development	X
b) national review of protected areas coverage available	
c) national protected area systems plan in place	
d) relatively complete system in place	
73. Are there nationally adopted guidelines for the selection, establishment and management of protected areas (8b)?	
a) no	
b) no, under development	X
c) yes	
d) yes, undergoing review and extension	
74. Does your country regulate or manage biological resources important for the conservation of biological diversity with a view to ensuring their conservation and sustainable use (8c)?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) programme or policy in place	
e) reports on implementation available	
75. Has your country undertaken measures that promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings (8d)?	
a) no measures	
b) some measures in place	X
c) potential measures under review	
d) reasonably comprehensive measures in place	
76. Has your country undertaken measures that promote environmentally sound and sustainable development in areas adjacent to protected areas (8e)?	
a) no measures	
b) some measures in place	X
c) potential measures under review	
d) reasonably comprehensive measures in place	
77. Has your country undertaken measures to rehabilitate and restore degraded ecosystems (8f)?	
a) no measures	
b) some measures in place	X
c) potential measures under review	
d) comprehensive measures in place	

78. Has your country undertaken measures to promote the recovery of threatened species (8f)?	
a) no measures	
b) some measures in place	X
c) potential measures under review	
d) comprehensive measures in place	
79. Has your country undertaken measures to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology (8g)?	
a) no measures	
b) some measures in place	X
c) potential measures under review	
d) comprehensive measures in place	
80. Has your country made attempts to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and sustainable use of its components (8i)?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) programme or policy in place	
e) reports on implementation available	
81. Has your country developed and maintained the necessary legislation and/or other regulatory provisions for the protection of threatened species and populations (8k)?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) legislation or other measures in place	
82. Does your country regulate or manage processes and categories of activities identified under Article 7 as having significant adverse effects on biological diversity (8l)?	
a) no	
b) under review	
c) yes, to a limited extent	X
d) yes, to a significant extent	

If a developed country Party -

83. Does your country cooperate in providing financial and other support for in- situ conservation particularly to developing countries (8m)?

If a developing country Party or Party with economy in transition -

84. Does your country receive financial and other support for in situ conservation (8m)?

a) no	
b) yes (if so, please give details below)	X

Decision II/7 Consideration of Articles 6 and 8 of the Convention

85. Is action being taken to share information and experience on implementation of this Article with other Contracting Parties?

a) little or no action	
b) sharing of written materials and/or case-studies	X
c) regional meetings	X

Further comments on implementation of this Article

Q 72:

In total there are thirty six areas or sites legally protected in Lebanon which fall into the following categories: (i) fifteen protected forests under the amended forest code, which bans grazing, felling and harvesting activities as declared by the Ministry of Agriculture, (ii) seven protected nature reserves declared by parliament under the management of the Ministry of Environment, (iii) five rivers, one valley, two mountains and an entire region protected by ministerial decisions, (iv) four Ramsar sites which include coastal as well as wetlands areas and (v) three new natural sites on which various studies will be conducted in order to declare them as natural reserves.

Under the project entitled “Strengthening of National Capacity and Grassroots in situ conservation for sustainable biodiversity protection” a managed system of protected areas was developed to protect endemic and endangered species of both flora and fauna, conserve their habitats as well as incorporate conservation into the sustainable human development agenda for three nature reserves, Al Shouf Cedars, Horsh Ehden and Palm Island. Each of the three nature reserves represents one or more ecological zones in Lebanon. The Protected Areas Project was initiated with a specific goal of developing management plan for the three protected areas, conducting species inventories, assessment and monitoring while involving the local communities and building capacity for three sites:. Detailed information concerning the protected areas can be obtained from the GEF Lebanon website (www.undp.org.lb/GEF/)

A management plan has been developed for each protected area, emphasizing the specific situation, needs and constraints of the area. The success in conserving biodiversity differs among

the three protected areas for several reasons ranging from the management plan, integration of the local communities and access to areas. The local political atmosphere in the various areas was shown to play a significant role in affecting the success of the nature reserve management.

During the participatory consultations conducted for this report, the general consensus of all the stakeholders interviewed revealed that the project did not generate clear indicators for the establishment of protected areas, that the emphasis was disproportionately placed on interpretation and guided tours rather than on biodiversity awareness and knowledge, and that the management teams were not successful in implementing an ecosystem approach.

Despite the aforementioned drawbacks, this project allowed to test whether the government and NGOs can work together to manage a protected area (the answer was no) and whether NGOs are capable of doing it on their own (also no). It was also instrumental for the initial establishment of a set of standards and management plans on which to build a better protected area system in Lebanon.

The protected areas project has led to many positive impacts on the biodiversity status because had the reserves not been established, the rich biodiversity harbored in Lebanon would have been degraded further. The protected areas have been successful to a certain extent in sensitizing the public about biodiversity and conservation issues and the program has served as model for biodiversity conservation on a regional and global level. The initiation of the project has subsequently lead to the establishment of many other protected areas across the country.

Q 73:

The Ministry of Environment has set guidelines for the selection and establishment of future protected areas. In addition the Ministry stipulated that the management plan of each reserve must include five sub-management plans: Financial and personnel, cultural heritage, natural heritage, visitors and users and community relations managements. However, the majority of interviewed stakeholders indicated the potential difficulty that will be encountered in fulfilling these management strategies. Indicating that technical support will be needed to develop management plans within the required guidelines.

The Framework Law for the Protected Areas is still pending endorsement, and once passed, will provide the basis for sound in-situ conservation. The Law will also give the Ministry of Environment full authority to provide guidelines for the establishment of protected areas at the national level. The Ministry of Environment has already established various criteria for the selection of sites as nature reserves and in its final stages awaiting adoption by Parliament.

The Protected Areas Framework Law includes several important issues which will help the protected areas initiatives. The law would allow the natures reserves to charge entrance fees, sustainable use will be allowed in selected zones in the protected areas, it will allow for the establishment of protected areas on private property and will simply the process by which new protected areas are established to an approval by the Council of Ministers.

Q 75.

The measures undertaken by Lebanon consist mainly of the Protected Areas Project, Conservation and Sustainable Use of Dryland Agrobiodiversity of the Near East Project,

Conservation of Wetlands and Coastal Zones in the Mediterranean project and the Coastal Area Management Program. Aside from these formal projects, there are several small scale and informal initiatives. Several initiatives have been taken by NGOs such 'Byblos Ecologia' which has taken a leading role in protecting the local coastal environment in the city of Byblos. Other individual efforts have been made for conservation by privately protecting small areas.

A joint CEDRE project between National Council for Scientific Research, American University of Beirut and INRA-France is currently working on biological and ecological studies of the new insects pest n *Cephalcia tannouriens* of the Lebanese Tannourine cedar forests.

A dendrochronology project at the Lebanese Agricultural Research Institute in collaboration with Touson University has been recently launched in an effort to control the early decay of many tree species.

NGOs across Lebanon have played an important role in promoting and conserving natural habitats and ecosystems. Among these NGOs are AFDC (Shouf forests), Greenline (Al-Rihane), Guards of the Environment targeting newly liberated areas in South Lebanon and individual private initiatives.

Q 76.

An integral component of the Protected Areas Project is the integration of the local communities in the decision making, implementation and benefit sharing. Practically, the level of measures taken to promote development in local communities has not satisfied the initial expectations. Better results could have been achieved had there been more organized and effective efforts to increase awareness and prepare people for the new concept of biodiversity, conservation and sustainable use prior to project initiation. The integration of the local communities and effort for sustainable development are best illustrated in the Al Shouf Cedar Reserve where a rural development project was funded by the Canadian Embassy. The project focused on the area surrounding the reserve and aimed at creating jobs, encouraging eco-tourism, building the capacity of local women and marketing local products to be sold in the protected area. The project did not only encourage sustainable development but also helped change the local perception of the importance of biodiversity from a luxury to an important tool for development and economic progress.

Q 77:

In the Ammiq Wetland in the Bekaa area personal effort of both the landowners and A Rocha over the past five years have increased the marshland by 20% habitat area as well as increased flood duration by re-flooding agriculture land and directing water flow. As a direct result of the expansion of the habitat area of the wetland, there was an increase in both the flora and fauna especially noted was the significant increase in the amount of birds using the marsh rather than only passing through.

Within the project "Conservation and Sustainable Use of Dryland Agrobiodiversity of the Near

East” efforts were undertaken to rehabilitate and restore degraded drylands.

A study is currently underway for the conservation of migratory birds in the Beirut Central District. The project plan involves the assessment of bird migration patterns and the historical status of gardens areas within the Central District and the development of a landscape plan for Beirut Center District in order to regain it’s traditional role as a major area for migratory birds.

Various measures were undertaken across the nature reserves such as: (i), adopt a tree program in a joint effort between the private sector and municipalities in Al Shouf Nature Reserve, (ii) Efforts were taken to control of the pest in Tannourine affecting the cedar forest, (iii) In the Palm Island nature reserve, efforts were undertaken to remove all the rabbits from Palm Island nature reserve which was affected the vegetation cover and (iv) charcoal burning activities were halted in Tyre nature reserve.

Q 78:

In all the protected areas, activities that threatened species are forbidden by law which will create a more suitable for the recovery of species. In the Al Shouf Nature Reserve a management plan was implemented which banned grazing in all areas inhabited by the threatened gazelle species thereby allowing for natural recovery. An informal private initiative was lead by a local resident in the coastal City of Tyre to conserve the threatened sea turtles who used the Tyre beach for nesting. The NGO Greenline joined efforts with the local resident for the recovery of the threatened sea turtles in Lebanon.

Animal encounter is hosting 43 species of native animals and migratory birds as well as some reptiles and offsprings of animals that breed successfully in captivity are released in the wild.

Under the RAC/SPA an expert was consulted to assess the status of marine turtle nesting in Lebanon.

Within the soaring birds project, a management plan will be developed for every site designated as a bottleneck area in Lebanon.

The banning of hunting and grazing in the nature reserve has significantly aided the recovery of the natural fauna and flora.

Q 79:

The “National Biosafety Framework” project to be launched very soon will address the issue of modified organism resulting from biotechnology.

Q 81:

Lebanon has taken several legal and provisionary measures related to threatened species. The Ministry of Agriculture has made several decisions concerning Cedar forest protection and placing restrictions on fishing. There are three laws awaiting endorsement: (i) the establishment of a managerial unit to deal with common lands (ii) ecotourism and sustainable management of

protected areas (iii) The updated hunting law. In addition to the international conventions, agreements and protocols adopted by Lebanon outlined in Article 5, Lebanon has taken several national decisions pertaining to the protection of threatened species such as:

- Decision 108/1 by the Ministry of Agriculture bans the import and introduction of all cedar seeds, seedlings and plants
- Decision 35 renewed the ban hunting over the entire country till further notice
- Decision 92/1 by the Ministry of Agriculture prohibits the export of all medicinal and aromatic plants, including thyme, myrtle and chamomile
- Ministerial Decision issued by the Ministry of Agriculture banning the fishing of whales, monk seals and marine turtles
- Law for the Protected areas which prohibits all activities having negative effects on the biodiversity in the protected areas.
- The Ministry of Agriculture has declared that all Juniper, Firs and Cedar forests as protected areas by Law.
- Within the SAP-BIO project, an action plan was prepared on the Lebanese legislation for the Marine and coastal zone and was submitted to RAC/SPA to secure the necessary funds for its implementation.

Q 84:

Both the Protected Areas Project and Conservation and Sustainable Use of Dryland Agrobiodiversity of the Near East Project are funded by the UNDP and GEF

The French GEF is funding the Conservation of Wetlands and Coastal Zones in the Mediterranean project

The Coastal Area Management Program is funded by the UNEP- MAP

Furthermore, the following financial support were given to the protected areas:

Donation from UAE for Al-Shouf Cedars Nature Reserve (\$90,000 USD)

Donation from Japanese Embassy in Lebanon (\$101,000 USD)

Donation from Canadian Fund (\$25,000 USD)

Fundraiser dinners for Al-Shouf Cedars Nature Reserve (\$190,000 USD)

UNESCO gave \$5000 USD to a local NGO in Tripoli

FFEM for the management of the Tyre Beach Reserve and Ammiq Wetland (\$400,000)

Ramsar has provided funds for the Ammiq wetland to develop the economic viability of the wetland.

GEF/UNEP funded a project entitled “ The Integrated Management of Cedar Forests in Lebanon in Cooperation with other Mediterranean Countries” with particular emphasis on pest control in

Tannourine Cedars Nature Reserve.

WWF contributed to Arz-Al Chouf Nature reserve (12000 Euros) and \$ 3000 USD to Horth Ehden Nature reserve.

A local private industry provided \$ 4000 USD for Al-Shouf Cedars Nature reserve.

Article 8h Alien species

86. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low		X	
87. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	X
Further comments on relative priority and on availability of resources							
<p>The issue of alien species was not directly addressed in the National Biodiversity Strategy and Action Plan. Furthermore, this issue has not been the focus of any of the reports submitted from Lebanon. In addition, the majority of information available concerning alien species is based on outdated national literature or information from international sources which have proved to be impractical for the Lebanese situation. There has been small scale and scattered initiatives, mainly on the project level. Due to the lack of data about alien species on both the fauna and flora level one can not determine if Lebanon does in fact have a problem with alien species even through this problem is expected to be present.</p> <p>The issue of alien species has not yet been considered as a priority area deserving immediate attention. As a result, there is no financial support devoted for this issue which in turn translates to very superficially and scattered measures taken to identify the status of alien invasive species in Lebanon. Another factor hindering progress in this area, relates to the lack of taxonomic experts in various fields. Among the stakeholders interviewed, the majority indicated two main sources most likely contributing to a problem of alien plant species: (i) introduction through nurseries and (ii) reforestation techniques that aims for fast growing species without any regard for alien species.</p> <p>The National Marine Center in Lebanon is associated with CIESM Atlas of exotic species which provides a comprehensive survey on recent marine “immigrants” in the Mediterranean. CIESM covers various aspects of the marine science such as geo-physical, chemical and biological processes around six committees including living resources and marine ecosystem and coastal ecology.</p>							
88. Has your country identified alien species introduced?							
a) no							
b) only major species of concern						X	
c) only new or recent introductions							
d) a comprehensive system tracks new introductions							
e) a comprehensive system tracks all known introductions							
89. Has your country assessed the risks posed to ecosystems, habitats or species by the introduction of these alien species?							
a) no							
b) only some alien species of concern have been assessed						X	
c) most alien species have been assessed							

90. Has your country undertaken measures to prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species?	
a) no measures	
b) some measures in place	X
c) potential measures under review	
d) comprehensive measures in place	

Decision IV/1 Report and recommendations of the third meeting of SBSTTA

91. Is your country collaborating in the development of projects at national, regional, sub-regional and international levels to address the issue of alien species?	
a) little or no action	X
b) discussion on potential projects under way	
c) active development of new projects	
92. Does your national strategy and action plan address the issue of alien species?	
a) no	X
b) yes - limited extent	
c) yes - significant extent	

Decision V/8. Alien species that threaten ecosystems, habitats or species

93. Is your country applying the interim guiding principles for prevention, introduction and mitigation of impacts of alien species in the context of activities aimed at implementing article 8(h) of the Convention, and in the various sectors?	
a) no	X
b) under consideration	
c) limited implementation in some sectors	
d) extensive implementation in some sectors	
e) extensive implementation in most sectors	
94. Has your country submitted case-studies to the Executive Secretary focusing on thematic assessments?	
a) no	
b) in preparation	
c) yes	X

95. Has your country submitted written comments on the interim guiding principles to the Executive Secretary?	
a) no	X
b) yes	
96. Has your country given priority to the development and implementation of alien invasive species strategies and action plans?	
a) no	X
b) yes	
97. In dealing with the issue of invasive species, has your country developed or involved itself in mechanisms for international co-operation, including the exchange of best practices?	
a) no	X
b) trans-boundary co-operation	
c) regional co-operation	
d) multilateral co-operation	
98. Is your country giving priority attention to geographically and evolutionarily isolated ecosystems in its work on alien invasive species?	
a) no	X
b) yes	
99. Is your country using the ecosystem approach and precautionary and biogeographical approaches as appropriate in its work on alien invasive species?	
a) no	X
b) yes	
100. Has your country developed effective education, training and public-awareness measures concerning the issue of alien species?	
a) no	
b) some initiatives	X
c) many initiatives	
101. Is your country making available the information which it holds on alien species through the CHM?	
a) no	X
b) some information	
c) all available information	
d) information available through other channels (please specify)	

102. Is your country providing support to enable the Global Invasive Species Programme to fulfil the tasks outlined in the decision and its annexes?	
a) no	X
b) limited support	
c) substantial support	

Further comments on implementation of this Article

Q 88:

A national inventory has not yet been conducted to identify alien species across Lebanon, however several individual initiatives have been undertaken. More inventories on alien species have been carried out on terrestrial ecosystems as compared to aquatic systems, mainly due to the fact that aquatic ecosystems are significantly more difficult to study and monitor, requiring expensive equipments and facilities, in addition to experts in various fields. Despite the challenges facing the marine ecosystem in Lebanon, the National Marine Center has identified several alien species based on informal information such as a consensus about the natural invasion of marine species coming from the Suez Canal and from Gibraltar, another source of information are the local fishermen who indirectly monitor changes in the composition of their harvest. Several fish species are known to have been introduced since the 1960 and these are thought to be naturalized, posing no threat on natural ecosystems. However, the Center has not taken any formal measures to monitor these alien species.

Two studies on alien species, one dealing with birds and the other with algae. The studies revealed the presence of one alien specie of algae, another bird species introduced for hunting purposes and an insect species introduced through exotic ornamental plants.

One of the objective in the management plan for the protected areas relates to the development of a program for the removal of identified introduced species. As a first step for establishing the latter program, a preliminary inventory of alien species was conducted in the protected areas.

A research study conducted at the American University of Beirut determined 22 invasive plant species on the Lebanese coast. However, the scope of this study only covered the presence of these species and not on their status and degree of invasiveness.

In term of agro biodiversity, the majority of species are known to have been introduced which is attributed to the policy of the Ministry of Agriculture that is promoting the import of high yielding varieties at the expense of indigenous species. It is known that all cultivated cherries have been introduced from abroad. The identification and monitoring of invasive species is not included within the agenda of this project

Q 90:

The issue of alien species was not addressed in the new Law for the protection of the environment. The Ministry of Agriculture declared a law in 1995 (decision 108/1) prohibiting the importation and introduction of all cedar seeds, seedlings and plants, however compliance to this law is not complete. There are several laws concerned with the importation of specific trees however these policies are political measures rather than biodiversity related. Another measure was taken by the protected areas which prohibits by law the introduction of any species into the reserves.

Q 94:

A thematic report on alien species was prepared by the CBD focal point at the Ministry of Environment in October 2000 indicating a general lack of awareness, insufficient studies and impact assessment except as scattered and individual efforts for certain species of interest.

Q 100:

Awareness and knowledge of alien species is limited to the scientific community who lacks baseline data while on the public and government level there is severe lack of awareness. In general, education and training initiatives for alien species have been integrated as a minor part of management plans and have been dealt with indirectly through other workshops and meetings. The only workshop to focus alien species will be held by National Council for Scientific Research in collaboration with the INOCLE on December 2002 to elaborate on alien species and threats facing the establishment of marine terraces along the Lebanese coastline. Furthermore, the issue of alien species was addressed during the consultation meetings conducted for the amending the hunting law. During these consultations, the threats imposed from alien bird species were discussed with all concerned stakeholders thereby increasing the awareness level of the general public.

Article 8j Traditional knowledge and related provisions

103. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	X	b) Medium		c) Low	
104. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	X
				d) Severely limiting	
Further comments on relative priority and on availability of resources					
<p>Traditional knowledge and the integration of local communities was not addressed in the National Biodiversity Strategy and Action Plan. However, high priority has been given for this issue in the majority of biodiversity related projects and was addressed in the law for the Protection of the Environment. This issue has been included in all projects and reports in many cases out of obligation to fulfill the requirements of international donors. It is believed that Lebanon lacks a strategy and “know how” to effectively incorporate traditional knowledge and local communities in biodiversity related activities. The main question lies into the appropriateness and effectiveness of changing the local concepts or beliefs for the sake of biodiversity conservation. In essence Lebanon suffers from a deficiency in trained experts that analyse both the direct and indirect consequences of integrating the traditional history of indigenous people with a modern philosophy of biodiversity and conservation.</p> <p>The majority of work undertaken for this initiative is conducted by NGOs with a main focus on the utilization of herbal plants. Therefore the scope of research and involvement should be expanded to include ethnobotanic studies on a national scale. Such studies have been initiated in academic institutions and constitute the basis for bioprospection projects such as the one initiated at the American University of Beirut. In addition to the lack of national strategy to address this issue, legislation to safeguard this knowledge and secure shared benefits needs to be developed and information dissemination needs to include findings of indigenous knowledge.</p> <p>In general the wealth of traditional knowledge encompassed in Lebanon is gradually but surely disappearing and unfortunately very few scientific institutions that are responsible for the integration of this knowledge are not taking suitable steps toward the implementation of this task.</p>					
105. Has your country undertaken measures to ensure that the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity are respected, preserved and maintained?					
a) no measures					
b) some measures in place					X
c) potential measures under review					
d) comprehensive measures in place					

106. Is your country working to encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) programme or policy in place	

Decision III/4 and Decision IV/9. Implementation of Article 8(j)

107. Has your country developed national legislation and corresponding strategies for the implementation of Article 8(j)?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) legislation or other measures in place	
108. Has your country supplied information on the implementation of Article 8(j) to other Contracting Parties through media such as the national report?	
a) no	
b) yes - previous national report	
c) yes - CHM	
d) yes - other means (please give details below)	X
109. Has your country submitted case-studies to the Executive Secretary on measures taken to develop and implement the Convention's provisions relating to indigenous and local communities?	
a) no	X
b) yes	
110. Is your country participating in appropriate working groups and meetings?	
a) none	
b) some	X
c) all	
111. Is your country facilitating the active participation of representatives of indigenous and local communities in these working groups and meetings?	
a) no	X
b) yes	

Decision V/16. Article 8(j) and related provisions

112. Has your country reviewed the programme of work specified in the annex to the decision, and identified how to implement those tasks appropriate to national circumstances?	
a) no	X
b) under review	
c) yes (please provide details)	
113. Is your country integrating such tasks into its ongoing programmes, taking into account the identified collaboration opportunities?	
a) no	X
b) not appropriate to national circumstances	
c) yes - to a limited extent	
d) yes - to a significant extent	
114. Is your country taking full account of existing instruments, guidelines, codes and other relevant activities in the implementation of the programme of work?	
a) no	X
b) not appropriate to national circumstances	
c) yes - to a limited extent	
d) yes - to a significant extent	
115. Has your country provided appropriate financial support for the implementation of the programme of work?	
a) no	X
b) not appropriate to national circumstances	
c) yes - to a limited extent	
d) yes - to a significant extent	
116. Has your country fully incorporated women and women's organizations in the activities undertaken to implement the programme of work contained in the annex to the decision and other relevant activities under the Convention?	
a) no	
b) yes	X
117. Has your country taken measures to facilitate the full and effective participation of indigenous and local communities in the implementation of the Convention?	
a) no	X
b) not appropriate to national circumstances	
c) yes - to a limited extent	
d) yes - to a significant extent	

118. Has your country provided case studies on methods and approaches concerning the preservation and sharing of traditional knowledge, and the control of that information by indigenous and local communities?	
a) no	
b) not relevant	
c) yes - sent to the Secretariat	
d) yes - through the national CHM	
e) yes - available through other means (please specify)	X
119. Does your country exchange information and share experiences regarding national legislation and other measures for the protection of the knowledge, innovations and practices of indigenous and local communities?	
a) no	X
b) not relevant	
c) yes - through the CHM	
d) yes - with specific countries	
e) yes - available through other means (please specify)	
120. Has your country taken measures to promote the conservation and maintenance of knowledge, innovations, and practices of indigenous and local communities?	
a) no	
b) not relevant	
c) some measures	X
d) extensive measures	
121. Has your country supported the development of registers of traditional knowledge, innovations and practices of indigenous and local communities, in collaboration with these communities?	
a) no	X
b) not relevant	
c) development in progress	
d) register fully developed	
122. Have representatives of indigenous and local community organizations participated in your official delegation to meetings held under the Convention on Biological Diversity?	
a) not relevant	X
b) not appropriate	
c) yes	

123. Is your country assisting the Secretariat to fully utilize the clearing-house mechanism to co-operate closely with indigenous and local communities to explore ways that enable them to make informed decisions concerning release of their traditional knowledge?	
a) no	X
b) awaiting information on how to proceed	
c) yes	
124. Has your country identified resources for funding the activities identified in the decision?	
a) no	X
b) not relevant	
c) partly	
d) fully	

Further comments on implementation of this Article

Q 105:

On the national level, measures taken for this initiative are limited to two initiatives by the Ministry of Agriculture and Ministry of Environment. The Ministry of Agriculture has facilitated the marketing of many traditional products. As for the Ministry of Environment, a main component of the management plan of the protected areas calls for the involvement of local communities in the management measures. However, in practice the integration has not meet the original expectations when the project was conceived. The main initiative implemented by the reserves is the involvement of volunteers from local communities, employment of local individuals for managing the reserve, awareness activities and visitor centers. Furthermore traditional food and handicrafts produced by local communities are sold at the entrances of the protected areas. For example, In the Arz al Shouf Reserve, the local communities have been included in handicraft activities, measures were taken to collect old stories and document oral history of the region. Overall, the protected areas have helped highlight the importance of protecting traditional knowledge.

In addition to the governmental initiatives outlined above, other measures have been made through projects:

- In the Ammiq Wetland project led by the A Rocha initiated an art community program which involved the local community through arts and crafts with an environmental theme. The group integrates the locals by hiring volunteers to perform various tasks on the wetland. Furthermore, the local municipalities were involved in the project and sent to France for training about wetlands and came back with a report which has been used as an advocacy tool for politicians.
- There are no direct measures for the integration of local communities in the management plans of the costal zones however high priority is given to traditional knowledge

integration as reflected in the cooperation with fishermen for identifying different fish varieties and in holding many workshops to launch awareness among fishermen about seasons of fishing.

- Within the CAMP Project, traditional knowledge is addressed through various thematic activities such as cultural heritage, ecotourism, participatory programme, and establishment of marine conservation areas.
- The YMCA in Lebanon has initiated a program for the rural development for local community in which the locals determine the projects to implement depending on their priority rather than the typical top down project approach.
- With the agrobiodiversity project, a local knowledge survey was conducted.
- Within the Bioprospecting project at AUB, scientific research is being conducted to investigate the scientific validity of traditional use of selected indigenous plants which offer medicinal, aromatic and ornamental values.

Q 106:

Currently in Lebanon, the issue of equitable sharing of benefits arising from traditional knowledge is mainly focused on the sales of local products which is demonstrated in the several project initiatives. A project was launched in Arz El Shouf Nature Reserve with the support of a Canadian fund whereby local food products are marketed and sold across Lebanon. Similarly, within the Mashreq Maghreb project there is integration of local communities in projects and Lebanese Agricultural Research Institute is acting as a mediator between farmers and private sector to provide markets for traditional products in various Lebanese villages. The Yammouneh technology Transfer and Extension Project implemented at the American University of Beirut aims at enhancing organic farming by ensuring markets and economic return to local communities in the Yammouneh Region of Lebanon.

Q 107:

Lebanon has not developed a national strategy to implement this article, however the recently adopted Law for the Protection of the Environment signals an importance first step in the right direction. The Law addressed the importance of traditional knowledge in rural areas and stipulates that indigenous information must be taken into consideration in the absence of available scientific information.

Q 108:

The agrobiodiversity project has included information on the surveys undertaken on the local knowledge of the project areas in their project reports.

Q 109:

A case study was conducted on the Al-Shouf Cedar Reserve to illustrate the implementation of a protected areas management system with the integration of the local community. The

communities were indirectly involved in many stages of the management plan such as the production of local products, sustainable use of non-timber forest products, crafts and artisan patchwork. The case study demonstrated that the incorporation of local stakeholders was an integral key for the success of the reserve in conserving biodiversity as the managers benefited from the traditional knowledge, history and experience in the area.

Q 110-Q111:

Lebanon has not participated in any working groups or workshops specifically tailored for traditional knowledge. Indirectly, traditional knowledge was discussed in the AFDC's non-utilized species project.

Q 115:

Lebanon has not provided direct financial support for implementing the program of work relating to traditional knowledge. These initiatives are supported in part through international funding for development or conservation projects. In addition, the Lebanese contribution to the protected areas projects indirectly filters into traditional knowledge initiatives.

Q 116:

The majority of activities related to traditional knowledge is undertaken by various NGOs across Lebanon. Women comprise a significant proportion of participants in these organizations, therefore, women's role has been adequate in this area.

Q 120:

Refer to questions 105 and 107.

Article 9 Ex situ conservation

125. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low		X	
126. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	X
Further comments on relative priority and on availability of resources							
<p>Lebanon has not adopted any national measures for <i>ex-situ</i> conservation and in comparison to <i>in-situ</i> conservation, it has received significantly less priority and resource allocations. While the Ministry of Environment has considered <i>in-situ</i> conservation as a national priority through the large scale Protected Areas Project, the Ministry of Agriculture has not considered so far <i>ex-situ</i> conservation as one of its objectives. As a direct result of low priority in the national agenda, progress in this areas has been severely hindered by financial constraints and inadequate infrastructure for the implementation of this article. In addition, land is expensive in Lebanon thereby hindering some <i>ex-situ</i> projects from transpiring into real action.</p>							
127. Has your country adopted measures for the <u>ex situ</u> conservation of components of biological diversity native to your country (9a)?							
a) no measures							
b) some measures in place							X
c) potential measures under review							
d) comprehensive measures in place							
128. Has your country adopted measures for the <u>ex situ</u> conservation of components of biological diversity originating outside your country (9a)?							
a) no measures							X
b) some measures in place							
c) potential measures under review							
d) comprehensive measures in place							
129. If the answer to the previous question was yes, is this being done in active collaboration with organizations in the other countries (9a)?							
a) no							
b) yes							
130. Has your country established and maintained facilities for the <u>ex situ</u> conservation of and research on plants, animals and micro-organisms that represent genetic resources native to your country (9b)?							
a) no							
b) yes - limited extent							X
c) yes - significant extent							

131. Has your country established and maintained facilities for the <u>ex situ</u> conservation of and research on plants, animals and micro-organisms that represent genetic resources originating elsewhere (9b)?	
a) no	X
b) yes - limited extent	
c) yes - significant extent	
132. If the answer to the previous question was yes, is this being done in active collaboration with organizations in the other countries (9a)?	
a) no	
b) yes	
133. Has your country adopted measures for the reintroduction of threatened species into their natural habitats under appropriate conditions (9c)?	
a) no measures	X
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
134. Has your country taken measures to regulate and manage the collection of biological resources from natural habitats for <u>ex situ</u> conservation purposes so as not to threaten ecosystems and <u>in situ</u> populations of species (9d)?	
a) no measures	X
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
If a developed country Party -	
135. Has your country cooperated in providing financial and other support for <u>ex situ</u> conservation and in the establishment and maintenance of <u>ex situ</u> conservation facilities in developing countries (9e)?	
If a developing country Party or Party with economy in transition -	
136. Has your country received financial and other support for <u>ex situ</u> conservation and in the establishment and maintenance of <u>ex situ</u> conservation facilities (9e)?	
a) no	X
b) yes	

Further comments on implementation of this Article

Q 127:

The Lebanese Agricultural Research Institute is willing to implement national measures for *ex-situ*, however, it requires the policy framework from the Ministry of Agriculture. Even though, a national framework and policy have not yet been implemented, the Lebanese Agricultural Research Institute has been involved in several initiatives related to *ex-situ* conservation. There are two objectives driving Lebanese Agricultural Research Institute's policy regarding *ex situ* conservation which are the conservation of genetic resources and the conservation of varieties adapted to the local environment.

Seed Banks

The current in-house capacity of Lebanese Agricultural Research Institute for storing seeds is limited to grapes and cereals, however the infrastructure is inadequate. Therefore, through an international agreements with ICARDA and Royal Botanic Gardens Kew, collections are sent to Kew for storage and there are discussions for the establish a gene bank in collaboration with the Lebanese Agricultural Research Institute.

Within the context of the Agrobiodiversity Project the Lebanese Agricultural Research Institute focused on wild relatives and land races of cereals mainly wheat and barley for seed increasing in defined plots. Part of the resulting seeds were distributed to farmers while the rest were conserved.

The American University of Beirut has established a Biodiversity Seed Bank for Lebanon. The facility is located at the University's Agricultural Research and Education Center (AREC) and consists of two rooms with a total of 74 square meters: one room is environmentally controlled and the other will serve to receive, clean, and package seeds prior to their storage. In addition ASHA USAID funds were sought to purchase the equipment needed for the seed bank.

Nurseries

The AFDC has established a large scale nursery in Ramlieh for its reforestation campaigns. Lebanese Agricultural Research Institute has established nurseries for grapes, almonds, and figs. Another small scale tree nursery in the Ammiq Wetland used mainly for demonstration purposes. The American University of Beirut initiated a USDA funded collaboration with the Ohio State University (USA) to investigate the propagation and production of native trees with potential ornamental value. Within the same project, several wild plants with potential medicinal value are being researched for propagation and production purposes. Private nursery owners are participating in these activities.

Herbaria

Several herbaria exist for the preservation of plant species. These have been established at the American University of Beirut, Lebanese Agricultural Research Institute, Ammiq Wetland and

within the protected areas. The most significant herbarium is the one at the American University of Beirut. The herbarium was founded by George E. Post at AUB from 1869. The Post herbarium contains valuable collection of plants more than 20 000 specimens which represent some 4 200 plant species belonging to more than 950 genera and 178 families. The specimens have been collected over the past 125 in Lebanon and parts of Syria, Palestine and Jordan. The herbarium including all species listed in 'The Flora of Syria, Palestine and Sinai' by George Post

The three protected areas, Horsh Ehden, Al Shouf Cedar and Palm Island, have created small herbarium within the nature reserves.

Propagation

Ex-situ propagation measures have been limited to project initiatives undertaken at academic institutions. The American University of Beirut is in the process of developing sexual and asexual propagation protocols for selected indigenous plants as well as the establishment of both experimental and demonstration field plots to evaluate production alternatives for selected indigenous species in various regions.

Marine Diversity

In terms of marine resources the Balamand University is planning to establish a public aquarium, and an aquaculture pilot station to replenish resources and to provide industry with fish. The National Council for Scientific Research is planning to establish a marine aquarium in along the Northern Coast in the near future.

Fauna

Animal encounter, a non-profit educational facility began was conceived in 1993 as a commitment to preserve Lebanese Wildlife. The center has assisted in the conservation of mammals, birds and reptiles. For example more than 100 birds were cured and released, twenty squirrels, six porcupines, 150 quails and 25 partridges have either been born or hatched in the center and then released in the wild. There are several small initiatives that serve more as source of awareness and entertainment rather than *ex-situ* conservation such as small marine museums, a program entitled Fista in which children are exposed to various animals, small parks more like petting zoos.

Q 130:

Please refer to question 127

Article 10 Sustainable use of components of biological diversity

137. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium		c) Low	X
138. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	X
				d) Severely limiting	
Further comments on relative priority and on availability of resources					
Both private and public institutions involved in nature conservation activities have realized the importance of this issue, however, in general low priority is given to this field due to the lack of incentives mostly related to funding dedicated for the exploration of possible venues to enhance sustainable use of biodiversity. There is no clear understanding of what constitute sustainable utilization and this is directly related to a lack in awareness and common vision concerning this issue. Sustainable use has not been integrated into the national decision making framework, therefore, this issue is further hindered by a lack a clear policy, laws and insufficient follow up. The majority of projects undertaken for biodiversity issues do not integrated sustainable utilization. Sustainable utilization of biodiversity has focused primarily within the context of protected areas and to a lesser extent ecotourism activities.					

139. Has your country integrated consideration of the conservation and sustainable use of biological resources into national decision making (10a)?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) programme or policy in place	
e) review of implementation available	
140. Has your country adopted measures relating to the use of biological resources that avoid or minimize adverse impacts on biological diversity (10b)?	
a) no measures	
b) some measures in place	X
c) potential measures under review	
d) comprehensive measures in place	
141. Has your country put in place measures that protect and encourage customary use of biological resources that is compatible with conservation or sustainable use requirements (10c)?	
a) no measures	
b) some measures in place	X
c) potential measures under review	
d) comprehensive measures in place	

142. Has your country put in place measures that help local populations develop and implement remedial action in degraded areas where biological diversity has been reduced (10d)?	
a) no measures	X
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
143. Does your country actively encourage cooperation between government authorities and the private sector in developing methods for sustainable use of biological diversity (10e)?	
a) no	X
b) early stages of development	
c) advanced stages of development	
d) programme or policy in place	
e) review of implementation available	

Decisions IV/15. Relationship of the Convention with the Commission on Sustainable Development and biodiversity-related conventions

144. Has your country submitted to the Secretariat information on tourism and its impacts on biological diversity, and efforts to effectively plan and manage tourism?	
a) no	X
b) yes - previous national report	
c) yes - case-studies	
d) yes - other means (please give details below)	
145. Has your country submitted to the Secretariat information on biodiversity-related activities of the CSD (such as SIDS, oceans, seas and freshwater resources, consumption and production patterns)?	
a) no	X
b) yes - previous national report	
c) yes - correspondence	
d) yes - other means (please give details below)	

Decision V/24. Sustainable use as a cross-cutting issue

146. Has your country identified indicators and incentive measures for sectors relevant to the conservation and sustainable use of biodiversity?	
a) no	
b) assessment of potential indicators underway	X
c) indicators identified (if so, please describe below)	

147. Has your country assisted other Parties to increase their capacity to implement sustainable-use practices, programmes and policies at regional, national and local levels, especially in pursuit of poverty alleviation?	
a) no	X
b) not relevant ⁷	
c) to a limited extent	
d) to a significant extent (please provide details)	
148. Has your country developed mechanisms to involve the private sector and indigenous and local communities in initiatives on sustainable use, and in mechanisms to ensure that indigenous and local communities benefit from such sustainable use?	
a) no	X
b) mechanisms under development	
c) mechanisms in place (please describe)	
149. Has your country identified areas for conservation that would benefit through the sustainable use of biological diversity and communicated this information to the Executive Secretary?	
a) no	X
b) yes	

Decision V/25. Biological diversity and tourism

150. Has your country based its policies, programmes and activities in the field of sustainable tourism on an assessment of the inter-linkages between tourism and biological diversity?	
a) no	
b) to a limited extent	X
c) to a significant extent	
151. Has your country submitted case-studies on tourism as an example of the sustainable use of biological diversity to the Executive Secretary?	
a) no	X
b) yes	
152. Has your country undertaken activities relevant to biodiversity and tourism in support of the International Year of Ecotourism?	
a) no	
b) yes	X
153. Has your country undertaken activities relevant to biodiversity and tourism in support of the International Year of Mountains?	
a) no	X
b) yes	

154. Has your country undertaken activities relevant to biodiversity and tourism in support of the International Coral Reef Initiative?	
a) no	X
b) yes	
155. Has your country established enabling policies and legal frameworks to complement voluntary efforts for the effective implementation of sustainable tourism?	
a) no	
b) to a limited extent	X
c) to a significant extent (please describe)	

***Further comments on implementation of this Article**

Q 139:

Lebanon has not fully integrated conservation and sustainable use into national decision-making, however, several important steps have been done in an attempt to mainstream conservation into the legal framework of the country as well as with other Ministries. The Law for the Protection of Environment passed in June 2002, was a major milestone for biodiversity. However, the major focus of the Law was on conservation, with considerably less emphasis on sustainable use. The National Biodiversity Strategy and Action Plan is mainly adopted by the Ministry of Environment and in other circumstances, the strategy is mainly implemented as a result of political or personal interference.

Q 140:

Lebanon has taken several legal measures to minimize negative impact created by the use of biological resources such as Ministry of Agriculture's decision to prohibit any cutting of medicinal plants, as well as banning all export of medicinal without a permit. Other laws include the ban on hunting, forest cutting and harvesting of wild Thyme and Sage. The new hunting currently pending endorsement, regulates hunting as well as promotes the sustainable use of species.

The Ministry of Environment has played a role in promoting sustainable use through (i) the Law for the Protection of the Environment which stipulates that incentives measures be given to actions that avoid or minimize impact on the environment including biodiversity issues, (ii) the new framework law for the protected areas will divide the reserves into two zones, one zone as strict conservation area and the other zone will be designated for sustainable use and (iii) the Law for the protected areas which prohibits all activities with adverse impacts on the reserves.

In addition to legal measures, the AFDC in Ramileh offers a yearly 10 day course including lectures and field exercises in collaboration with WWF on the management of non-timber use of forest. YMCA-Lebanon has established a proper framework for eco-tourism planning and incorporate all aspect such as income generation, suitability, sustainability, etc.

Q 141:

Several measures have been taken in Lebanon to protect and encourage customary use of biological resources including large scale project, organization programs and individual research projects as outlined below.

The reforestation efforts by the Ministry of Agriculture with carob and pine tree, will allow the local communities harvest them for marketable resources.

The Lebanese Agricultural Research Institute has initiated a study on under utilized and over exploited species such as *Juniper excelsa*, *Laurus nobilis*, *Pinus brutia* and *Pistacia lentiscus*. The project aims to increase awareness and utilization of indigenous Lebanon species that offer great economic returns.

The current protected areas framework is not very supportive of sustainable utilization. The basic measures taken include marketable products from the local communities surround the reserves. However, the new framework law for the protected areas which is pending endorsement allows for sustainable use.

An American University led project in Yammouneh focused a pilot study in organic farming.

A research study at the American University of Beirut in collaboration with the Agrobiodiversity project, assessed the potential uses of wild fruit trees.

A USDA funded collaborative project at American University of Beirut has focused on the sustainable utilization of native plant species. For this purpose propagation and on farm trials have been initiated with the intent to domesticate those species that prove to be with market value and to avoid overexploitation of wild species with medicinal and ornamental potential.

An ongoing research project at the American University of Beirut in collaboration with the University of Reading is addressing the economic valuation of forests in Lebanon.

The local NGO, AFDC, is enhancing its activities to cover sustainable use through encouraging communities to control grazing and to deal with Beekeeping.

A three year FAO funded study in currently in progress to assess the utilization of selected plant species as a source of natural products to control plant pests. This project is a collaboration between the American University of Beirut and the Ministry of Agriculture.

Q143:

The private sector has not yet participated officially in any sustainable use initiatives. This has limited efforts to ensure a broader social base accepting and adopting sustainable use measures which in turn could translate into conservation efforts. The majority of stakeholders interviewed emphasized that the involvement of the private sector will have positive impacts on the conservation and sustainable use measures. Cooperation between government and the private sector are few but have resulted in positive outputs. These initiatives include: eco-tourism providers in the protected areas, adopt a cedar tree program, marketing of products from rural communities and the cooperation between Ministry of Agriculture and bees keepers to initiate silk production

Q 150:

Lebanon has established an ecotourism national committee composed of members from the Ministry of Tourism, Ministry of Environment, CDR and UNDP. This committee held a workshop in January 2002 during which five sub-committees were established to handle awareness campaigns, activities, legal aspects, develop case studies and mobilize financial resources. However, a nation wide assessment of the inter-linkage between tourism and biodiversity has not yet been conducted. However, the Ministries of Environment and of Tourism are developing joint programs and activities for ecotourism. In addition, the protected areas' management teams have conducted some preliminary studies to assess the impact of tourism activities on the reserve.

Q 152:

The Ministry of Tourism was involved in several activities in support of the International Year of Ecotourism. A representative from the Ministry attended the international conference on Ecotourism held in Canada in June 2002 . The Ministry was involved in many awareness campaigns across Lebanese villages as well as administrated workshops involving NGOs and municipalities. Other activities include video clip on the potential of ecotourism in Lebanon in affiliation with sport providers, brochures and posters.

The Ministry of Environment has been involved in many activities to promote ecotourism in Lebanon such as brochures, posters, TV spots and interviews as well as several trips to potential ecotourism sites targeted at international donors, embassies, ministries and the media. An exposition was held in Lebanon in 27 September 2002 on the international ecotourism day to promote ecotourism and the economic benefits associated with such activities. The event was administrated by various tourism promoters, NGOs, Ministry of Environment and Ministry of Tourism participated in the event. The Ministry of Environment developed an environmental auditing manual for hotels in Lebanon as well as provided financial support for projects related to ecotourism.

In October of 2002, a regional workshop was held in Lebanon by the Ministry of Environment with the collaboration of UNEP to promote networking among the various countries in the Middle East on sustainable tourism. A regional strategy for sustainable tourism for the Arab World was discussed and a regional committee was recommended. From the recommendations submitted to the Arab League for adoption two guidelines came out: one on the concept of sustainable tourism and its application and the other for hotels.

Q 155:

Under the Mediterranean Action Plan, a national action plan and strategy framework was developed for sustainable tourism development in Lebanon. Furthermore, the CAMP Project will elaborate within the National Strategy on integrated coastal zone management (ICZM) a chapter related to tourism and sustainable development. In addition, the legislation related to ICZM will tackle tourism and conservation of coastal resources.

Article 11 Incentive measures

156. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low			X
157. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	X
Further comments on relative priority and on availability of resources							
<p>Incentives measures for biodiversity conservation is a new field for Lebanon and currently there is no clear vision on how to generate and implement such incentives through a national program. A major step forward in this area, however, was accomplished through the Law for the Protection of the Environment issued in August 2002 which dedicated an entire article for incentive measures.</p> <p>A study to assess the needs of the Lebanese society would be essential to identify benefits perceived as incentives by the Lebanese, which in turn will promote biodiversity conservation. The lack of awareness and knowledge of how to develop incentive measures related to biodiversity conservation coupled with inadequate lobbying capabilities within this context have so far resulted in weak or inexistent incentive measures.</p> <p>Many stakeholders interviewed contended that incentive measures for biodiversity conservation will not occur in Lebanon unless biodiversity is given a priority as an economic asset. However, studies about economic returns from biodiversity are very limited.</p>							
158. Are programmes in place to identify and ensure the adoption of economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity?							
a) no							
b) early stages of development						X	
c) advanced stages of development							
d) programmes in place							
e) review of implementation available							
159. Do these incentives, and the programmes to identify them and ensure their adoption, cover the full range of sectoral activities?							
a) no						X	
b) some sectors							
c) all major sectors							
d) all sectors							

Decision III/18. Incentive measures

160. Has your country reviewed legislation and economic policies to identify and promote incentives for the conservation and sustainable use of components of biological diversity?	
a) no	
b) reviews in progress	
c) some reviews complete	X
d) as far as practically possible	
161. Has your country ensured the development of mechanisms or approaches to ensure adequate incorporation of both market and non-market values of biological diversity into plans, policies and programmes and other relevant areas, inter alia, national accounting systems and investment strategies?	
a) no	
b) early stages of identifying mechanisms	X
c) advanced stages of identifying mechanisms	
d) mechanisms in place	
e) review of impact of mechanisms available	
162. Has your country developed training and capacity building programmes to implement incentive measures and promote private-sector initiatives?	
a) no	X
b) planned	
c) some	
d) many	
163. Has your country incorporated biological diversity considerations into impact assessments as a step in the design and implementation of incentive measures?	
a) no	X
b) yes	
164. Has your country shared experience on incentive measures with other Contracting Parties, including making relevant case-studies available to the Secretariat?	
a) no	X
b) yes - previous national report	
c) yes - case-studies	
d) yes - other means (please give details below)	

Decision IV/10. Measures for implementing the Convention [part]

165. Is your country actively designing and implementing incentive measures?	
a) no	X
b) early stages of development	
c) advanced stages of development	
d) measures in place	
e) review of implementation available	
166. Has your country identified threats to biological diversity and underlying causes of biodiversity loss, including the relevant actors, as a stage in designing incentive measures?	
a) no	X
b) partially reviewed	
c) thoroughly reviewed	
d) measures designed based on the reviews	
e) review of implementation available	
167. Do the existing incentive measures take account of economic, social, cultural and ethical valuation of biological diversity?	
a) no	X
b) yes - limited extent	
c) yes - significant extent	
168. Has your country developed legal and policy frameworks for the design and implementation of incentive measures?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) frameworks in place	
e) review of implementation available	
169. Does your country carry out consultative processes to define clear target-oriented incentive measures to address the underlying causes of biodiversity loss?	
a) no	X
b) processes being identified	
c) processes identified but not implemented	
d) processes in place	

170. Has your country identified and considered neutralizing perverse incentives?	
a) no	X
b) identification programme under way	
c) identified but not all neutralized	
d) identified and neutralized	

Decision V/15. Incentive measures

171. Has your country reviewed the incentive measures promoted through the Kyoto Protocol to the UN Framework Convention on Climate Change?	
a) no	X
b) yes	
172. Has your country explored possible ways and means by which these incentive measures can support the objectives of the Convention on Biological Diversity in your country?	
a) no	X
b) under consideration	
c) early stages of development	
d) advanced stages of development	
e) further information available	

Further comments on implementation of this Article

Q 158:

The protected areas have initiated several incentive measures for the protection of the biological resources within the reserve. Some reserves are proposing to deduct taxes for those individuals who donate to protected areas. In other instances, the management teams have proposed to hire the herders' children if they stop grazing within the reserve. In another reserve, incentives given to herders to stop grazing include efforts by the reserve to help market their products, give them medications, train them in proper rangeland management to increase their productivity.

Within the context of the agrobiodiversity project, small grants are awarded to local communities to conserve species of global importance such as *Triticum dicoccoides*. Another measure was launched by the Ministry of Environment, by which it provides annual financial support to the management bodies of protected areas. In addition the Ministry administrates a yearly contest for all NGOs to submit proposals related to biodiversity. According to the agenda unit of planning and awareness the best proposal is granted funds to implement the project.

Q 160:

The Law for the Protection of the Environment mentions environmental tax incentives for the first time in Lebanese legislation; however the application of tax incentives will require further decrees. Incentive measures are included in two chapters of the new law for the protection of the environment. In the chapter for funding environmental protection, incentive measures are discussed in addition to an entire chapter that is dedicated to incentive measures. Chapter 3 of the Law stipulates three important issues; (i) Each citizen making use of environmentally friendly technologies will benefit from discounts on tariffs and taxes (ii). Every citizen that undertakes activities for the protection of the environment will benefit from discounts on taxes (iii) The government must determine economic incentives based on proposals submitted to the Minister of the Environment.

Q 162:

The interviewing process revealed that many stakeholders interchangeably use incentive measures and awareness efforts. This is possibly due to the fact that in the absence of incentives as those described by the CBD, the stakeholders have resorted to awareness raising as the main incentive for biodiversity conservation. For example the AFDC considers social ownership of an issue and the incentive for conservation. In this context, units were established in different regions in Lebanon as “conservation areas”. These areas serve an important role in launching awareness in schools about biodiversity and fire prevention, about reforestation with productive trees such as Pine and Carob, and on the economic importance of ecotourism.. In another example, the Lebanese Agricultural Research Institute which is not allowed to develop financial incentives to local communities continuously strives to spread awareness about the importance of local varieties, which it believes will serve as an incentive to the communities to conserve them.

Q 168:

Please refer to question 160

Article 12 Research and training

173. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High	X	b) Medium		c) Low			
174. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate	X	c) Limiting		d) Severely limiting	
Further comments on relative priority and on availability of resources							
<p>The majority of research and training activities undertaken within governments, NGOs, academic institutions and research centers in Lebanon, are conducted within the time frame and scope of specific projects. A significant increase in research in this field can be attributed to the fact that Lebanon is committed to its obligations to conventions signed and activities supported donors. Ongoing research and training activities in Lebanon are limited by a lack of a sustainable source of funding, experts in specific fields as well as by an inadequate basic information and data.</p> <p>The bulk of training activities have been initiated within the context of the protected areas project. Many of the training modules are offered by foreign consultants and are therefore not based on local expertise. There is a need to build national capacity and ensure the presence of a basic networks of national experts that can offer training modules. This is especially important in light of the fact that the majority of consultants are non-Arabic speakers and can therefore only reach those individuals who are literate in a second language namely English and / or French.</p>							

175. Has your country established programmes for scientific and technical education and training in measures for the identification, conservation and sustainable use of biological diversity and its components (12a)?	
a) no	
b) early stages of development	
c) advanced stages of development	X
d) programmes in place	
176. Has your country provided support to other Parties for education and training in measures for the identification, conservation and sustainable use of biological diversity and its components (12a)?	
a) no	X
b) yes	
177. Does your country promote and encourage research which contributes to the conservation and sustainable use of biological diversity (12b)?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	

178. Does your country promote and cooperate in the use of scientific advances in biological diversity research in developing methods for conservation and sustainable use of biological resources (12c)?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	

If a developed country Party -	
179. Does your country's implementation of the above activities take into account the special needs of developing countries?	
a) no	
b) yes, where relevant	

Further comments on implementation of this Article

Q 175:

In house training and technical education have already been initiated in Lebanon. Various Lebanese institutions, NGO's, universities as well as governments are providing training workshops in various fields related to biodiversity such as fire protection, species identification, field collections, herbarium techniques, species preservation and protected areas management. Almost every project initiated in Lebanon involves training component for the staff which is usually conducted in collaboration with international organizations and another component is dedicated to train relevant stakeholders. At the ministry of Environment, most training workshops have focused on the protected areas for the following issues: nature interpretation, guided tours, environmental assessment and business plans.

A Rocha working in the Ammiq Wetland, has provided training in bird identification for various NGOs. The National Marine Center, offer training mainly through projects funded by MEDPOLE or through collaboration with the French embassy. The National Council for Scientific Research has taken in charge many students from Europe working on their PhD in the field of marine sciences and by supervising their research, has greatly benefited from technical coordination and sharing of experience with foreign partners. The Lebanese Agricultural Research Institute has collaborated with the Royal Botanic Gardens at Kew that provided training in identification. LARI has also established technical collaboration with ICARDA and IPGRI. CIHEAM receives many Lebanese students and trains them in biodiversity conservation in arid lands and the application of bio-information for the conservation and management of biodiversity.

The majority of universities in Lebanon offer a variety of environmentally oriented programs. Faculties of engineering, sciences, and agriculture provide biodiversity oriented programs and courses. Furthermore, these academic institutions are constantly engaged in biodiversity research either through graduate students' thesis as well as through large scale projects. Many universities have devoted great efforts toward applied technology related to biodiversity such as the American University of Beirut who has established a collaboration with IPGRI to offer a graduate program in Plant Genetic Diversity. The American University has also supported many

graduate students through research funds focusing on biodiversity related studies.

Q 177-Q 178:

Lebanon's role in promoting and cooperating in the use of scientific advances for the conservation and sustainable use is limited to the participation of national stakeholders in international collaborative activities mostly based on foreign donations. Lebanon's share of contributions includes limited financial assistance, administrating workshops and training sessions as well as providing infrastructure if available. The Lebanese National Council for Scientific Research encourages and financially supports research in the field of biodiversity and nature conservation.

Article 13 Public education and awareness

180. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High	X	b) Medium		c) Low			
181. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate	X	c) Limiting		d) Severely limiting	
Further comments on relative priority and on availability of resources							
<p>Lebanon does not have a national education and awareness program focusing on biodiversity issues. As a result, this task has been fulfilled within the context of collaborative activities between government, NGO, national and academic institutions. The majority of internationally funded projects in Lebanon include a component related to public education and awareness.</p> <p>The Ministry of Environment created a few years ago a service of guidance and awareness which initiated many campaigns about the importance of environment including biodiversity and produced and disseminated awareness material</p> <p>In comparison the past few years, Lebanon has witnessed a significant increase in awareness and education efforts related to biodiversity. However, an assessment of these efforts would most likely indicate that a large gap still prevails and that a suitable level of awareness has not yet been achieved. This gap is due to the lack of funds and personnel available to carry out more effective awareness efforts especially in term of funding that sponsors mass production of educational and awareness material. Another cause for this gap relates to the fact that the majority of these activities are limited to the same topics, attended by the same people as well as targeted to the same areas. A result, there is an urgent need to expand the scope of the awareness and reach out for the largest number possible of stakeholders and beneficiaries.</p> <p>Another gap resides in the discrepancy between the willingness by educators and NGO to include biodiversity topics in their programs and their actual capabilities. Many NGOs and teachers expressed their distress in not having access to key data, information and training regarding various issues in biodiversity. The scientific community must become aware of this gap and bestow their effort to translate the scientific jargon of biodiversity into comprehensible information for the general public.</p>							
182. Does your country promote and encourage understanding of the importance of, and the measures required for, the conservation of biodiversity (13a) through media?							
a) no							
b) yes - limited extent						X	
c) yes - significant extent							

183. Does your country promote and encourage understanding of the importance of, and the measures required for, the conservation of biodiversity (13a) through the inclusion of this topic in education programmes?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
184. Does your country cooperate with other States and international organizations in developing relevant educational and public awareness programmes (13b)?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	

Decision IV/10. Measures for implementing the Convention [part]

185. Are public education and awareness needs covered in the national strategy and action plan?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
186. Has your country allocated appropriate resources for the strategic use of education and communication instruments at each phase of policy formulation, implementation and evaluation?	
a) limited resources	X
b) significant but not adequate resources	
c) adequate resources	
187. Does your country support initiatives by major groups that foster stakeholder participation and that integrate biological diversity conservation matters in their practice and education programmes?	
a) no	
b) yes	X
188. Has your country integrated biodiversity concerns into education strategies?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) yes	

189. Has your country made available any case-studies on public education and awareness and public participation, or otherwise sought to share experiences?	
a) no	
b) yes	X
190. Has your country illustrated and translated the provisions of the Convention into any local languages to promote public education and awareness raising of relevant sectors?	
a) not relevant	
b) still to be done	
c) under development	
d) yes	X
191. Is your country supporting local, national, sub-regional and regional education and awareness programmes?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
If a developing country Party or Party with economy in transition -	
192. When requesting assistance through the GEF, has your country proposed projects that promote measures for implementing Article 13 of the Convention?	
a) no	X
b) yes	

Decision V/17. Education and public awareness

193. Does your country support capacity-building for education and communication in biological diversity as part of the national biodiversity strategy and action plans?	
a) no	
b) limited support	X
c) yes (please give details)	

Further comments on implementation of this Article

Q 182:

The Ministry of Environment has produced many brochures, posters, children booklets, TV spots, documentary films and workshops on several environmental issues with a main emphasis on the protected areas. Operation Big Blue was established in 1998 by the Ministry of Environment to raise awareness on coastal and marine conservation on a yearly basis. The Ministry of Agriculture initiated capacity building workshops in forest management, on ways to encourage local community in forest protection, and it held several workshops for schools and NGOs about forest use, marketing of traditional products and pine protection. The Ministry of

Tourism developed several television programs, brochures, poster and pamphlets concerning eco-tourism.

An EU funded project will be initiated in the Ministry of Environment in the near future. The main objective of the project is the enhancement of the permanent environmental awareness unit at the Ministry of Environment. Another objective of the project is the capacity building of NGOs, media and Ministries to promote environmental awareness in Lebanon.

On the National level, the National Council for Scientific Research has been publishing environmental awareness booklets since 1984 about birds, urban development, water. The National Marine Center has administrated conferences, workshops and repeated meetings with fishermen to launch awareness about the necessity to sustainable utilize marine resources and to assess their needs. The IUCN thematic center in Lebanon has initiated a bioplan posting program which is an information sharing mechanism about environmental issues including biodiversity. Electronic information is sent to all registered participants. The IUCN also held several workshops on the protected areas.

Many newspapers have introduced a daily page for environment. For example, one of Lebanon's leading daily newspapers Al-Nahar has been publishing environmental articles since 1970 and recently introduced a daily page for environment and heritage issues. In addition a monthly magazine "Environment and Development" started in 1997 documents on a variety of environmental and development issues and is the best magazine of this nature in the Middle East.

A Rocha are very active in raising public awareness and education programs in the Ammiq Wetland: (i) Students from school to university level including scout groups visit the Ammiq marshes to give informative lectures, slide show and field work activities (ii) the group visits the schools around Bekaa area for educational lectures (iii) the group provides training for teachers to teach them to integrate environmental issues into their teaching .

The SPNL-Environment Information Center has been very active in increasing the public's awareness and knowledge. They have launched awareness campaigns in the Protected Areas within the GEF-UNDP/MOE "Protected Areas Project" through visits, guided tours, brochures, posters, pamphlets, video, photography and display at exhibits. In addition to the protected areas, the center has worked on a wetland program and Important Bird Areas (IBA) awareness research. The center has published several books mainly focused on educating children about the environment. The EIC has also developed brochures and posters on hunting, protected areas, forest and a slide show on birds in Lebanon. The SPNL had prepared within the GEF-UNDP/MOE "Protected Areas Project" a documentary on protected areas shown on TV. The SPNL-EIC has created a web page to document general information on the environment and activities and programs initiated by the center. (<http://www.spnl.org>)

The NGO Green Line has been involved in many education and awareness programs such as "The School Gardens" in which they coordinate training and development of nurseries in schools to be managed by the students. Other initiatives have been taken by local NGO across Lebanon. For example, the local NGO "Byblos Ecologia" has initiated localized awareness campaigns. The NGO has initiated, among others, several Environmental Clubs in schools across the region of Byblos .

Awareness and education initiatives have been taken through various projects. Within CAMP project are conducted awareness programs in areas targeted at the farmers, also doing

exploration trips between the various municipalities. Within the agrobiodiversity project awareness were launched on different levels. The project held regular meeting for local communities, workshops and training courses. For general public the project held lectures and TV spots and distributed brochures and posters. For universities: training lectures were given and for schools they trained teachers on extra curricular activities such as drawing pictures about biodiversity.

With respect to universities the American University of Beirut has offered several workshops to disseminate all information generated from biodiversity research project including bioprospection in which the university has received major funding to identify plants with potential economic value.

Q 183:

The Law for the Protection of the Environment indicates that every educational institute must integrate in its new curriculum environmental issues and that each new concept must be reviewed by the Ministry of Environment.

There is a plan between the Ministries of Environment and Education to collaborate in promoting education and awareness in schools. In 2002 a new educational component has been introduced into the curriculum where environmental issues are incorporated into all subjects of the curriculum. The issue of biodiversity and conservation constitutes a very minor part of the environmental agenda introduced to schools.

Concerning higher education, many universities are currently offering both undergraduate and graduate degrees in various fields related to environment. Many stakeholders interviewed agree that proper integration of biodiversity related issues into the national curriculum must be a joined effort by scientist, material developers, curriculum developers, NGO and educators

Q 184:

All projects implemented by international organizations include public awareness programs. At the regional level, the agrobiodiversity project has prepared the basic requirements for a curriculum about biodiversity by preparing a comprehensive list of concepts to be covered and they have selected the curricular levels suitable for each concept. Upon completion, the program will be submitted to the educational center in Lebanon to be adopted nationally.

Hienz Seidel Organization has been providing the Ministry of Environment with financial support for workshop activities since late 1998.

Q 188:

Please refer to question 183

Q 189:

The Ministry of Environment is currently working on a survey to assess the level of awareness in

public and private institutions of environmental issues as well as their needs. The first phase is focuses on government institutions followed by the public sector. After completing the first draft for the strategy, participatory consultations will be conducted for feedback and recommendations. Upon completion, the Ministry of Environmental will set a national strategy for more effective awareness campaigns targeted at the issues and stakeholder in need of urgent attention in accordance to the results of the survey.

Q 190:

The following documents are available in both English and Arabic:

NBSAP

Convention text

National reports

Many brochure and posters

Q 191:

Please refer to question 189

Q 192:

GEF has funded several biodiversity related projects which include education and awareness components.

Article 14 Impact assessment and minimizing adverse impacts

194. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		X		c) Low	
195. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	X	d) Severely limiting	
Further comments on relative priority and on availability of resources							
<p>The Ministry of Environment has prepared an EIA draft decree which is in the process of being endorsed. This will establish the legal framework by which all major development, infrastructure and industrial projects will have to undergo an EIA before receiving approval.</p> <p>Between 30-60 EIAs have been conducted over the past two years, mostly for wastewater treatments systems, soil waste, marinas, quarries, building centers, and hospital waste treatment. In the first year, the EIAs received by the Ministry were very superficial with very limited background information and mitigation measures. Improvements have been made over the past year as the reports received have become more professional, transparent and comprehensive. In addition, the Ministry has established a committee by a ministerial decision to review each report and make its recommendations and decisions.</p> <p>The majority of EIA have been undertaken within a limited framework of specific projects namely international projects sponsored by international donors especially the World Bank. Implementation of EIA across all sectors in Lebanon has been hindered by a severe lack of both human and financial resources, as well as legal obligations. Even though, a deadline is set for submitting all reviews, comments and results from the assigned committee, Many EIA consultants have stated that the Ministry of Environment is taking a long time to review the EIA thereby delaying the entire project. The latter is primarily attributed to the hierarchy and bureaucracy processes in the Ministry.</p>							

196. Is legislation in place requiring an environmental impact assessment of proposed projects likely to have adverse effects on biological diversity (14 (1a))?	
a) no	
b) early stages of development	
c) advanced stages of development	X
d) legislation in place	
e) review of implementation available	
197. Do such environmental impact assessment procedures allow for public participation (14(1a))?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	

198. Does your country have mechanisms in place to ensure that the environmental consequences of national programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account (14(1b))?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) fully compliant with current scientific knowledge	
199. Is your country involved in bilateral, regional and/or multilateral discussion on activities likely to significantly affect biological diversity outside your country's jurisdiction (14(1c))?	
a) no	X
b) yes - limited extent	
c) yes - significant extent	
200. Is your country implementing bilateral, regional and/or multilateral agreements on activities likely to significantly affect biological diversity outside your country's jurisdiction (14(1c))?	
a) no	X
b) no, assessment of options in progress	
c) some completed, others in progress	
b) yes	
201. Has your country mechanisms in place to notify other States of cases of imminent or grave danger or damage to biological diversity originating in your country and potentially affecting those States (14(1d))?	
a) no	X
b) early stages of development	
c) advanced stages of development	
d) mechanisms in place	
e) no need identified	
202. Has your country mechanisms in place to prevent or minimize danger or damage originating in your State to biological diversity in other States or in areas beyond the limits of national jurisdiction (14(1d))?	
a) no	X
b) early stages of development	
c) advanced stages of development	
d) fully compliant with current scientific knowledge	
e) no need identified	

203. Has your country national mechanisms in place for emergency response to activities or events which present a grave and imminent danger to biological diversity (14(1e))?	
a) no	X
b) early stages of development	
c) advanced stages of development	
d) mechanisms in place	
204. Has your country encouraged international cooperation to establish joint contingency plans for emergency responses to activities or events which present a grave and imminent danger to biological diversity (14(1e))?	
a) no	X
b) yes	
c) no need identified	

Decision IV/10. Measures for implementing the Convention [part]

205. Has your country exchanged with other Contracting Parties information and experience relating to environmental impact assessment and resulting mitigating measures and incentive schemes?	
a) no	X
b) information provided to the Secretariat	
c) information provided to other Parties	
d) information provided on the national CHM	
206. Has your country exchanged with other Contracting Parties information on measures and agreements on liability and redress applicable to damage to biological diversity?	
a) no	X
b) information provided to the Secretariat	
c) information provided to other Parties	
d) information provided on the national CHM	

Decision V/18. Impact assessment, liability and redress

207. Has your country integrated environmental impact assessment into programmes on thematic areas and on alien species and tourism?	
a) no	
b) partly integrated	X
c) fully integrated	

208. When carrying out environmental impact assessments does your country address loss of biological diversity and the interrelated socio-economic, cultural and human-health aspects relevant to biological diversity?	
a) no	
b) partly	X
c) fully	
209. When developing new legislative and regulatory frameworks, does your country have in place mechanisms to ensure the consideration of biological diversity concerns from the early stages of the drafting process?	
a) no	
b) in some circumstances	X
c) in all circumstances	
210. Does your country ensure the involvement of all interested and affected stakeholders in a participatory approach to all stages of the assessment process?	
a) no	
b) yes - in certain circumstances	X
c) yes - in all cases	

211. Has your country organised expert meetings, workshops and seminars, and/or training, educational and public awareness programmes and exchange programmes in order to promote the development of local expertise in methodologies, techniques and procedures for impact assessment?	
a) no	
b) some programmes in place	
c) many programmes in place	X
d) integrated approach to building expertise	
212. Has your country carried out pilot environmental impact assessment projects, in order to promote the development of local expertise in methodologies, techniques and procedures?	
a) no	
b) yes (please provide further details)	X
213. Does your country use strategic environmental assessments to assess not only the impact of individual projects, but also their cumulative and global effects, and ensure the results are applied in the decision making and planning processes?	
a) no	
b) to a limited extent	X
c) to a significant extent	

214. Does your country require the inclusion of development of alternatives, mitigation measures and consideration of the elaboration of compensation measures in environmental impact assessment?	
a) no	
b) to a limited extent	X
c) to a significant extent	
215. Is national information available on the practices, systems, mechanisms and experiences in the area of strategic environmental assessment and impact assessment?	
a) no	
b) yes (please append or summarise)	x

Further comments on implementation of this Article

Q 196:

The Ministry of Environment developed a draft environmental impact assessment (EIA) decree and procedures which is pending endorsement. An important step toward the implementation of this article has been taken through the elaboration of EIA in the new Law for Protection of the Environment.

Q 197:

The draft EIA decree requires full public participation however the actual implementation is still quite limited.

Q 198:

The draft decree stipulates that an EIA should be conducted for any project that may pose a threat on sensitive habitats such as: reserves, streams, rivers, forests, public parks, tourism sites, archeological and historical sites, habitats for endangered species, swamps and/or coastal areas

The Ministry of Agriculture gives high priority to assess the impact of development projects on forests. Within the context of a collaboration with the French Office National des Forêts (ONF), staff of the ministry received a training in France regarding this issue.

Many EIA have been conducted in the past two years few examples of projects with potential impact on biodiversity are outlined below:

- There is a collaborative project with Japan to study the feasibility of conducting EIA for marine projects.
- An entertainment center was planned for the harbor in Tripoli. An EIA was performed and the project was rejected due to significant impact on the marine ecosystem.
- An EIA was conducted for the proposed visitor center in Horsh Ehdén Nature Reserve and the project was approved

- An EIA was conducted to determine the impact of the construction of a road within close vicinity to the internationally recognized wetland in Ammiq. The road was built with major modification based on the EIA, thereby minimizing the impacts in the marsh and surrounding areas.

Q 201-204:

Lebanon has formed a national committee, composed of members from the various ministries such as defense, environment, transport, interiors and civil defense, to combat oil spill pollution in the Mediterranean Sea. The committee receives its financial support from the Lebanese government; however, international institutions provide technical assistance. Lebanon and Syria have collaborated in combating oil spills this year by exchanging information and training.

Furthermore, Lebanon has signed all Mediterranean protocols, therefore all provisions are there to deal with issues outside national jurisdictions. However, Lebanon has not establish a mechanism for emergency response nor any contingency plans.

Q 207:

The majority of tourism developments occur along the coast and in essence the draft decree stipulates an EIA to be conducted in any project that may threatened coastal ecosystems. Unfortunately, in many instances developers have used political pressures to override the request for an EIA.

Q 211:

A three year project “ Establishment of the EIA System in Lebanon” was funded by the World Bank and implemented by the Ministry of Environment. Capacity building was a main objective of the project during which many training sessions, workshops and seminars were conducted for government, municipalities, NGOs universities and private companies. Training sessions were also conducted for other Middle East and North African Countries based on real case studies of the experiences gained in Lebanon.

Q 212:

All workshops and training sessions outlined in question 211 were based on case studies from Lebanon.

Q 213:

ESA are in their infancy stage in Lebanon, they are not yet required and there are no legislative provisions to address them. Any progress in ESA cannot be accomplished unless EIA draft decree becomes endorsed and EIA studies become mandatory. ESA are mainly tackled on the academic level through student projects and thesis.

Q 214:

Alternatives, mitigation and compensation measures are mandatory under the draft decree, however again the issue is the practical implementation on the ground level. Many problems have arisen as a result of compensation measures during EIA, due to recurrent conflicts between Lebanese law and World Bank EIA laws.

Q 215:

A ministerial decision regarding the firms which are entitled to contact EIA studies was issued by the Ministry of Environment and published in the official gazette. All information and documentations related to EIA procedures and guidelines are available at the Ministry of Environment upon request.

Moreover, information on EIA review decision is sent to all stakeholders.

Furthermore, article 12 on information dissemination of the draft EIA decree states that : “ The Ministry of Environment keeps five copies of the final EIA or IEE studies and the related Ministry’s review decision, for public and stakeholders use”.

Article 15 Access to genetic resources

216. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low		X	
217. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	X
Further comments on relative priority and on availability of resources							
<p>Lebanon has not taken any measures concerning access to genetic resources and intellectual property rights and these issues are not addressed in any legislation. The Law for the Protection of the Environment calls for an elaboration of a system for controlling access to genetic resources in Chapter 8 concerning management of natural resources and conservation of biological diversity.</p> <p>The Ministry of Environment is currently collaborating with the American University of Beirut on the development of legislation for access to genetic resources and benefit sharing.</p> <p>The majority of stakeholders interviewed recommended several actions to be taken to improve the situation for the access to genetic resources. The first is the need to develop a regional rather than national program to regulate access to genetic resources. At the national level there is urgency to organize a convention among different stakeholders to organized germplasm exchange. At the legislative level the issue is at the early stages of establishment.</p>							

218. Has your country endeavoured to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties (15(2))?	
a) no	X
b) yes - limited extent	
c) yes - significant extent	
219. Is there any mutual understanding or agreement in place between different interest groups and the State on access to genetic resources (15(4))?	
a) no	X
b) yes - limited extent	
c) yes - significant extent	
220. Has your country an open participation planning process, or any other process in place, to ensure that access to resources is subject to prior informed consent (15(5))?	
a) no	X
b) early stages of development	
c) advanced stages of development	
d) processes in place	

221. Has your country taken measures to ensure that any scientific research based on genetic resources provided by other Contracting Parties is developed and carried out with the full participation of such Contracting Parties (15(6))?	
a) no measures	X
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	

222. Has your country taken measures to ensure the fair and equitable sharing of the results of research and development and the benefits arising from the commercial and other use of genetic resources with any Contracting Party providing such resources (15(7))?	
a) no measures	X
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
If so, are these measures	
a) Legislation	
b) Statutory policy or subsidiary legislation	
c) Policy and administrative measures	

Decision II/11 and Decision III/15. Access to genetic resources

223. Has your country provided the secretariat with information on relevant legislation, administrative and policy measures, participatory processes and research programmes?	
a) no	X
b) yes, within the previous national report	
c) yes, through case-studies	
d) yes, through other means (please give details below)	
224. Has your country implemented capacity-building programmes to promote successful development and implementation of legislative, administrative and policy measures and guidelines on access, including scientific, technical, business, legal and management skills and capacities?	
a) no	X
b) some programmes covering some needs	
c) many programmes covering some needs	
d) programmes cover all perceived needs	
e) no perceived need	

225. Has your country analysed experiences of legislative, administrative and policy measures and guidelines on access, including regional efforts and initiatives, for use in further development and implementation of measures and guidelines?	
a) no	X
b) analysis in progress	
c) analysis completed	
226. Is your country collaborating with all relevant stakeholders to explore, develop and implement guidelines and practices that ensure mutual benefits to providers and users of access measures?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	

227. Has your country identified national authorities responsible for granting access to genetic resources?	
a) no	X
b) yes	
228. Is your country taking an active role in negotiations associated with the adaptation of the International Undertaking on Plant Genetic Resources for Food and Agriculture?	
a) no	X
b) yes	

Decision V/26. Access to genetic resources

229. Has your country designated a national focal point and one or more competent national authorities to be responsible for access and benefit-sharing arrangements or to provide information on such arrangements?	
a) no	
b) yes	
c) yes, and Executive Secretary notified	X
230. Do your country's national biodiversity strategy, and legislative, administrative or policy measures on access and benefit-sharing, contribute to conservation and sustainable use objectives?	
a) no	X
b) to a limited extent	
c) to a significant extent	

Parties that are recipients of genetic resources	
231. Has your country adopted administrative or policy measures that are supportive of efforts made by provider countries to ensure that access to their genetic resources is subject to Articles 15, 16 and 19 of the Convention?	
a) no	X
b) other arrangements made	
c) yes	
232. Does your country co-operate with other Parties in order to find practical and equitable solutions supportive of efforts made by provider countries to ensure that access to their genetic resources is subject to Articles 15, 16 and 19 of the Convention, recognizing the complexity of the issue, with particular consideration of the multiplicity of prior informed consent considerations?	
a) no	X
b) yes (please provide details)	
233. In developing its legislation on access, has your country taken into account and allowed for the development of a multilateral system to facilitate access and benefit-sharing in the context of the International Undertaking on Plant Genetic Resources?	
a) no	
b) legislation under development	X
c) yes	
234. Is your country co-ordinating its positions in both the Convention on Biological Diversity and the International Undertaking on Plant Genetic Resources?	
a) no	X
b) taking steps to do so	
c) yes	
235. Has your country provided information to the Executive Secretary on user institutions, the market for genetic resources, non-monetary benefits, new and emerging mechanisms for benefit sharing, incentive measures, clarification of definitions, sui generis systems and "intermediaries"?	
a) no	X
b) some information provided	
c) substantial information provided	
236. Has your country submitted information on specific issues related to the role of intellectual property rights in the implementation of access and benefit-sharing arrangements to the Executive Secretary?	
a) no	X
b) yes	

237. Has your country provided capacity-building and technology development and transfer for the maintenance and utilization of ex situ collections?	
a) no	X
b) yes to a limited extent	
c) yes to a significant extent	

Further comments on implementation of this Article

Q 219:

There are no national programs in place for genetic resources access, however, the Lebanese Agricultural Research Institute is involved in several agreements: (i) a bilateral transfer agreement with ICARDA based on access and benefit sharing and (ii) an agreement with Kew Gardens wild species' collection, in which Kew covers the running costs of collections and training in field.

Lebanon was selected by the CBD secretariat to participate in panel of experts on access and benefit sharing in 2000 to set the guidelines about this issue as well as the first meeting of the adhoc open ended group on access and benefit sharing Bonn Germany 22-26 October 2001

A workshop will be held at the American University of Beirut in March 2003 to address property intellectual property rights, benefit sharing and access to genetic resources which will be conducted in collaboration with local lawyers, NGOs, Ministry of Environment as well as international consultants. Currently the collaborative partnerships mentioned above are working on a legislative draft to be presented in the workshop.

Article 16 Access to and transfer of technology

238. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium	x	c) Low			
239. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	X
Further comments on relative priority and on availability of resources							
<p>The Law for the Protection of the Environment stipulates the involvement of local communities in environmental management through the improvement of technologies and the proper orientation about the use of technologies. In essence Lebanon does not offer real technology transfer in the sense of patentable inventions. Even in the limited instances where technology is transferred to Lebanon, the lack of applied research has translated into useless technology not adapted to Lebanon. Lebanon has not conducted a through assessment of its technical capabilities, needs and priorities.</p> <p>The main constraints facing this issue is financial and lack of government support. Currently, the governmental does not offer supplies for projects, initiatives nor institutions. At the national level there is lack of incentives to share technical benefits. And on the international level the main source for technological transfer is through international projects, loans or the World Bank.</p> <p>The American University of Beirut has initiated a multidisciplinary multi institutional project for bioprospection in Lebanon. Given the level of funding (from the USDA) and the infrastructure available this collaboration would be expected to develop local solutions and potential products for the sustainable use of biodiversity.</p>							

240. Has your country taken measures to provide or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment (16(1))?	
a) no measures	X
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
241. Is your country aware of any initiatives under which relevant technology is transferred to your country on concessional or preferential terms (16(2))?	
a) no	X
b) yes (please give brief details below)	

242. Has your country taken measures so that Contracting Parties which provide genetic resources are provided access to and transfer of technology which make use of those resources, on mutually agreed terms (16(3))?	
a) not relevant	X
b) relevant, but no measures	
c) some measures in place	
d) potential measures under review	
e) comprehensive measures in place	
If so, are these measures	
a) Legislation	
b) Statutory policy or subsidiary legislation	
c) Policy and administrative arrangements	
243. Has your country taken measures so that the private sector facilitates access to joint development and transfer of relevant technology for the benefit of government institutions and the private sector of developing countries (16(4))?	
a) no measures	X
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
If so, are these measures	
a) Legislation?	
b) Statutory policy and subsidiary legislation?	
c) Policy and administrative arrangements?	
244. Does your country have a national system for intellectual property right protection (16(5))?	
a) no	
b) yes	X
245. If yes, does it cover biological resources (for example, plant species) in any way?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	

Decision III/17. Intellectual property rights

246. Has your country conducted and provided to the secretariat case-studies of the impacts of intellectual property rights on the achievement of the Conventions objectives?	
a) no	X
b) some	
c) many	

Further comments on implementation of this Article

Q 244.

A new copy right law was enacted in 1999 and a new patent law that was passed in 2000. In addition, Lebanon joined the Patent Cooperation Treaty (PCT) in 2002. The Ministry of Economy is entrusted with the protection of intellectual property rights and has a special department for this purpose.

Q 245.

Article 2 of the patent law stipulates lists of all types of patentable inventions including those related to the discovery of new plant products and new plant varieties. The law also stipulates the patent protection for newly developed industrial products or new applications of a known industrial mean or method.

Article 17 Exchange of information

247. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low		X	
248. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	X	d) Severely limiting	
Further comments on relative priority and on availability of resources							

Article 14 of The Law for the Protection of the Environment states that the sharing of information should be based on a ministerial decree and that every concerned stakeholder in biodiversity has the right to access information about the environment.

There are several means available for the exchange of information from both public and private sources across Lebanon. However, at the national level, Lebanon does not have a coordination unit and an efficient mechanism for the exchange of information. Even though there are measures to exchange information, there is a lack of incentive to share information which has caused many projects achievements to go unnoticed by stakeholders. Information exchange is very difficult and time consuming in the absence of readily searchable documents, forcing people to resort to personal effort and contacts. The inflexibility and inefficiency in the exchange of information has lead to significant problems for biodiversity progress which is reflected in the double employment vacancies whereby many institutions work on the same issues and projects.

There is a need to strengthen and ameliorate the know-how transfer of information. There is a prevalent hesitation of releasing any information unless they have been officially published. Every institute either public or private has its own methods to disseminate its information, some means are very accessible such as web sites while other are inflexible and difficult to access as they are based on personal contacts.

At the national level there is improvement via internet-based information in some governmental bodies however CHM is still recommended. The Ministry of Environment's site (<http://www.moe.gov.lb>) includes information concerning projects, programs, reports and legislation. The Ministry of Environment has been active in disseminating reports all concerned institutions such as the first country national report, NBSAP and State of the Environment reports. The Ministry of Agriculture includes information on laws, agriculture plan for Lebanon, general agriculture related information and the full Biodiversity study of Lebanon on its website (<http://www.agriculture.gov.lb>) The National Council for Scientific Research serves an important role in exchanging information among various public and private institutions within the various research centers: Geophysics, marine sciences, remote sensing and atomic energy commission (<http://www.cnrs.edu.lb>).

The Biodiversity Planning Support Program (BPSP) which was initiated in the year 2000 at the Ministry of Environment and executed by the IUCN on the regional level formed as an important unit for exchanging information and experiences related to biodiversity planning among the various countries in the Middle East through newsletters, workshops and the bioplan list server. The Program aims to promote the exchange of regional information, expertise and materials related to biodiversity planning and to share collective experiences related to NBSAP processes

among the Middle East Region through regional workshops, newsletters, bioplan list server. The BPSP is currently addressed through the IUCN center in Lebanon and holds the responsibility of editing and publishing a newsletter, compiling the outcome of all projects database as well as compiling list of experts. The bioplan, an electric information server has been commended as an excellent method to disseminate information. The IUCN is also responsible for the Arabio-Journal.

The various NGO's involved in biodiversity issues have their independent web site where they disseminate general information about biodiversity, situation in Lebanon as well as their campaigns and projects.

249. Has your country taken measures to facilitate the exchange of information from publicly available sources (17(1))?

a) no measures	
b) restricted by lack of resources	
c) some measures in place	X
d) potential measures under review	
e) comprehensive measures in place	

If a developed country Party -

250. Do these measures take into account the special needs of developing countries (17(1))?

a) no	
b) yes - limited extent	
c) yes - significant extent	

251. If so, do these measures include all the categories of information listed in Article 17(2), including technical, scientific and socio-economic research, training and surveying programmes, specialized knowledge, repatriation of information and so on?

a) no	
b) yes - limited extent	
c) yes - significant extent	

Article 18 Technical and scientific cooperation

252. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium		c) Low	X
253. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	X
Further comments on relative priority and on availability of resources					
<p>Scientific cooperation on the national level is limited in comparison to international cooperation. The government is allocating funds for research activities within the National Council for Scientific Research, however there is a need for increased governmental support and to improve the capacity of governmental research institutions. The bulk of technical and scientific cooperation in Lebanon is limited to Ministry of Environment, Ministry of Agriculture, National Council for Scientific Research, national research stations and several main universities. The Ministry of Environment is continuously cooperating and coordinating with national experts and scientists for information exchange and consultations and is involving them in the Convention's activities and meetings.</p>					

254. Has your country taken measures to promote international technical and scientific cooperation in the field of conservation and sustainable use of biological diversity (18(1))?	
a) no measures	
b) some measures in place	X
c) potential measures under review	
d) comprehensive measures in place	
255. Do the measures taken to promote cooperation with other Contracting Parties in the implementation of the Convention pay special attention to the development and strengthening of national capabilities by means of human resources development and institution building (18(2))?	
a) no	X
b) yes - limited extent	
c) yes - significant extent	
256. Has your country encouraged and developed methods of cooperation for the development and use of technologies, including indigenous and traditional technologies, in pursuance of the objectives of this Convention (18(4))?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) methods in place	

257. Does such cooperation include the training of personnel and exchange of experts (18(4))?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
258. Has your country promoted the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of the Convention (18(5))?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	

Decision II/3, Decision III/4 and Decision IV/2. Clearing House Mechanism

259. Is your country cooperating in the development and operation of the Clearing House Mechanism?	
a) no	
b) yes	X
260. Is your country helping to develop national capabilities through exchanging and disseminating information on experiences and lessons learned in implementing the Convention?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
261. Has your country designated a national focal point for the Clearing-House Mechanism?	
a) no	
b) yes	X
262. Is your country providing resources for the development and implementation of the Clearing-House Mechanism?	
a) no	
b) yes, at the national level	X
c) yes, at national and international levels	
263. Is your country facilitating and participating in workshops and other expert meetings to further the development of the CHM at international levels?	
a) no	X
b) participation only	
c) supporting some meetings and participating	

264. Is your CHM operational	
a) no	
b) under development	X
c) yes (please give details below)	
265. Is your CHM linked to the Internet	
a) no	X
b) yes	
266. Has your country established a multi-sectoral and multi-disciplinary CHM steering committee or working group at the national level?	
a) no	X
b) yes	

Decision V/14. Scientific and technical co-operation and the clearinghouse mechanisms (Article 18)

267. Has your country reviewed the priorities identified in Annex I to the decision, and sought to implement them?	
a) not reviewed	X
b) reviewed but not implemented	
c) reviewed and implemented as appropriate	

Further comments on implementation of these Articles

Q 254:

There are several initiatives in Lebanon for international technical and scientific cooperation on biodiversity. However, these initiatives are restricted to projects and not to agreements between nations or institutions. The Lebanese and French government signed an agreement in 1993 aimed at technical and scientific cooperation. Other international collaborations includes collaborations between institutions in Lebanon and foreign institutions (Darwin Project in Coastal Vegetation Survey and Conservation for Lebanon, the CAMP Lebanon Program, the regional agrobiodiversity project and the MedWet Coast Project. The Protected Areas Project has involved a significant amount of scientific collaboration both at the national and international levels.

Q 259:

The Ministry of Environment website is currently in place where information related to biodiversity can be easily accessed. A clearing house website for Lebanon is planned for development through the Top Up Biodiversity Activity Project.

Q 262:

Even though, Lebanon has not yet developed its CHM, the Ministry's website provides a significant amount of information on biodiversity.

Q 266:

Lebanon is in the process of establishing a national biodiversity advisory group for all biodiversity related activities.

Article 19 Handling of biotechnology and distribution of its benefits

268. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low		X	
269. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	X
Further comments on relative priority and on availability of resources							
<p>Biotechnology based research has not yet contributed to effective biodiversity use and conservation in Lebanon. Most research and academic institutions in Lebanon lack the infrastructure to handle biotechnology. Some academic institutions and the Lebanese Agricultural Research Institute are in the early stages of elaborating on the techniques of biotechnology, but these measures are restricted to projects. In contrast, the American university has been leading in this regard as it has received substantial financial support from USAID and ASHA to purchase state of the art equipment. The university is currently fully equipped with the latest technologies and has initiated international collaborations to study the potential utilization of alternative plants. This USDA funded project relies on collaborative research, using biotechnology, to generate new plant-derived commercial products from indigenous Lebanese plants to diversify the agro-industrial portfolio in Lebanon. The National Council for Scientific research is the main supportive institution for biotechnology research in Lebanon.</p>							

270. Has your country taken measures to provide for the effective participation in biotechnological research activities by those Contracting Parties which provide the genetic resources for such research (19(1))?	
a) no measures	X
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
If so, are these measures:	
a) Legislation	
b) Statutory policy and subsidiary legislation	
c) Policy and administrative measures	
271. Has your country taken all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties (19(2))?	
a) no measures	X
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	

**Decision IV/3. Issues related to biosafety and Decision V/1. Work Plan
of the Intergovernmental Committee for the Cartagena Protocol on
Biosafety**

272. Is your country a Contracting Party to the Cartagena Protocol on Biosafety?	
a) not a signatory	X
b) signed, ratification in progress	
c) instrument of ratification deposited	

Further comments on implementation of this Article

Q 270:

Except for the American University of Beirut, biotechnology is limited by a lack of experts and equipments. As a result universities and research organizations rely on foreign collaboration to conduct biotechnology based research related to biodiversity. Although this approach leads to capacity building of national scientists, the absence of any basic research infrastructure in the country will delay the chances of coming up with inventions at the national level.

Q 272:

Lebanon is currently in the process of ratifying the Biosafety Cartagena Protocol. Lebanon will soon initiate the National Biosafety Framework Project with the UNDP and funded by GEF which aims at the assisting up to 100 eligible countries to prepare their national biosafety frameworks and promoting regional and sub-regional collaboration and exchange of experiences on issues of relevance to the national biosafety frameworks. The Main objectives of Lebanon National Project is the preparation of a National Biosafety Framework in accordance with the relevant provisions of the Protocol and with four main elements: (i) a regulatory system, (ii) an administrative system, (iii) a decision making system that includes risk assessment and management and (iv) mechanisms for public participation and information.

Article 20 Financial resources

273. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low		X	
274. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	X
Further comments on relative priority and on availability of resources							
The majority of funds made for biodiversity initiatives in Lebanon are through collaborative projects with international funding. The Lebanese contribution is very minimal in terms of both direct financial assistance and infrastructure support and is limited to the contribution provided by the concerned ministries like the ministries of Environment & Agriculture.							
275. Has your country provided financial support and incentives in respect of those national activities which are intended to achieve the objectives of the Convention (20(1))?							
a) no							
b) yes - incentives only							
c) yes - financial support only						X	
d) yes - financial support and incentives							
If a developed country Party -							
276. Has your country provided new and additional financial resources to enable developing country Parties to meet the agreed incremental costs to them of implementing measures which fulfil the obligations of the Convention, as agreed between you and the interim financial mechanism (20(2))?							
a) no							
b) yes							
If a developing country Party or Party with economy in transition -							
277. Has your country received new and additional financial resources to enable you to meet the agreed full incremental costs of implementing measures which fulfil the obligations of the Convention (20(2))?							
a) no							
b) yes						X	
If a developed country Party -							
278. Has your country provided financial resources related to implementation of the Convention through bilateral, regional and other multilateral channels (20(3))?							
If a developing country Party or Party with economy in transition -							
279. Has your country used financial resources related to implementation of the Convention from bilateral, regional and other multilateral channels (20(3))?							
a) no							
b) yes						X	

Decision III/6. Additional financial resources

280. Is your country working to ensure that all funding institutions (including bilateral assistance agencies) are striving to make their activities more supportive of the Convention?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
281. Is your country cooperating in any efforts to develop standardized information on financial support for the objectives of the Convention?	
a) no	
b) yes (please attach information)	X

Decision V/11. Additional financial resources

282. Has your country established a process to monitor financial support to biodiversity?	
a) no	X
b) procedures being established	
c) yes (please provide details)	
283. Are details available of your country's financial support to national biodiversity activities?	
a) no	
b) not in a standardized format	X
c) yes (please provide details)	
284. Are details available of your country's financial support to biodiversity activities in other countries?	
a) not applicable	X
b) no	
c) not in a standardized format	
d) yes (please provide details)	
Developed country Parties -	
285. Does your country promote support for the implementation of the objectives of the Convention in the funding policy of its bilateral funding institutions and those of regional and multilateral funding institutions?	
a) no	
b) yes	
Developing country Parties -	
286. Does your country discuss ways and means to support implementation of the objectives of the Convention in its dialogue with funding institutions?	
a) no	
b) yes	X

287. Has your country compiled information on the additional financial support provided by the private sector?	
a) no	X
b) yes (please provide details)	
288. Has your country considered tax exemptions in national taxation systems for biodiversity-related donations?	
a) no	X
b) not appropriate to national conditions	
c) exemptions under development	
d) exemptions in place	

Further comments on implementation of this Article

Q 275:

Both the Ministry of Environment and Ministry of Agriculture have made financial contributions to various programs and projects dealing with biodiversity issues. The Ministry of Environment contributed \$677,000 USD to the management of seven nature reserves and funds local NGOs to execute projects related to the environment and nature conservation. The Government of Lebanon has allocated an annual budget of \$3.5 million USD in the budget of the Ministry of Environment to execute a five years reforestation programme in all the Lebanese region. The Lebanese government allocates some funds to The National Council for Scientific Research to implement its research activities related to biodiversity. The new Law for the protection of the Environment outlines the creation of new fund called National Environment Fund. The fund will serve to finance environmental projects and will be sustained by donations, fines and taxes.

Q 277 & Q 279:

International donors have contributed \$4.9 million USD for biodiversity issues and forest conservation received \$4.6 million USD in international grants. Below represent a sample of collaborative projects and their funding agency.

The GEF has funded the majority of biodiversity related initiatives in Lebanon through the UNDP:

- Biodiversity Enabling Activity Phase I and II
- Protected Areas Project
- Conservation of Agrobiodiversity

Upcoming projects to be funded by GEF include:

- Integrated management of Cedar Forests in Lebanon in cooperation with other Mediterranean countries.
- Conservation of Natural Resources in South Lebanon
- National Biosafety Framework

The French GEF is financing the Mediterranean Wetland project

The EU and UNDP financed the LEDO and SPASI projects

The EU is funding IPP (investment planning programme)

Netherlands Organization for International Cooperation (NOVIB) is the main funding agency for AFDC.

FAO has funded several project such the desertification project and *Cephalcia tannourensis*

The World Bank has funded several projects as well as providing the local NGO AFDC with financial support to carry out various activities and projects pertaining to forest management and conservation.

CEDRE has sponsored collaborative research between Lebanese and French scientists with some of these projects addressing biodiversity.

UNEP is providing funding for the Coastal Area Management Program (CAMP) through the Mediterranean Action plan (MAP).

Q280:

The concerned government institutions are continuously submitting project proposals to mobilize funds from international donors to implement activities supportive to the Convention.

Q 281:

Standardized information on financial support are available only for international projects related to the implementation of the Convention.

Q288:

Lebanon through its concerned government institutions and UNDP office in Beirut is continuously submitting project proposals to mobilize funds for the implementation of the Convention and is organising visits for the donors to potential project sites.

Article 21 Financial mechanism

289. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	X	c) Low	
290. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	X d) Severely limiting
Further comments on relative priority and on availability of resources					
<p>The Ministry of Environment, NGOs, as well as academic and research institutions have been successful in securing funds for several projects addressing different biodiversity issues. The fact that the majority of these funds are from foreign donors have resulted associated project activities to be oriented to donors' agenda rather than the national priorities of Lebanon. In many cases there is a good alignment between donor and national priorities. However, when this is not the case, the projects are introduced in a relatively top down approach which does not lead to a sense of ownership by stakeholders. In addition, in some cases stakeholders indicated the absence of a good control mechanism to verify the implementation of first phase of a project before issuing the remainder of the funds. Furthermore in most cases, the administrative procedures requested by international donors are very extensive and time consuming thereby taking time and effort away from project implementation.</p>					

291. Has your country worked to strengthen existing financial institutions to provide financial resources for the conservation and sustainable use of biological diversity?	
a) no	X
b) yes	

Decision III/7. Guidelines for the review of the effectiveness of the financial mechanism

292. Has your country provided information on experiences gained through activities funded by the financial mechanism?	
a) no activities	
b) no, although there are activities	
c) yes, within the previous national report	X
d) yes, through case-studies	
e) yes, through other means (please give details below)	X

Article 23 Conference of the Parties

293. How many people from your country participated in each of the meetings of the Conference of the Parties?	
a) CoP 1 (Nassau)	0
b) CoP 2 (Jakarta)	0
c) CoP 3 (Buenos Aires)	1
d) CoP 4 (Bratislava)	1
e) CoP 5 (Nairobi)	1

**Decision I/6, Decision II/10, Decision III/24 and Decision IV/17.
Finance and budget**

294. Has your country paid all of its contributions to the Trust Fund?	
a) no	
b) yes	X

Decision IV/16 (part) Preparation for meetings of the Conference of the Parties

295. Has your country participated in regional meetings focused on discussing implementation of the Convention before any meetings of the Conference of the Parties?	
a) no	
b) yes (please specify which)	X
If a developed country Party -	
296. Has your country funded regional and sub-regional meetings to prepare for the CoP, and facilitated the participation of developing countries in such meetings?	
a) no	
b) yes (please provide details below)	

Decision V/22. Budget for the programme of work for the biennium 2001-2002

297. Did your country pay its contribution to the core budget (BY Trust Fund) for 2001 by 1 st January 2001?	
a) yes in advance	
b) yes on time	X
c) no but subsequently paid	
d) not yet paid	

298. Has your country made additional voluntary contributions to the trust funds of the Convention?	
a) yes in the 1999-2000 biennium	
b) yes for the 2001-2002 biennium	
c) expect to do so for the 2001-2002 biennium	
d) no	X

Further comments on implementation of this Article

Q 295:

A regional preparatory meeting for CoP 4 was conducted in China and was attended by Lebanese representatives.

IUCN Thematic Center in Lebanon organized a preparatory meeting before the CoP6 to elaborate on the perspectives of all stakeholders. The preparatory meeting was originally planned to last for three days and cover three issues: (i) a review the articles of the CBD and (ii) an introduction to the priority issues of CoP6 and (iii) present a national paper on Lebanon's views about the priority issues. Due to the short notice given, IUCN was only able to conduct a one day workshop that included the first two issues outlined above, however, the timeframe did not allow for the coverage of the third issue. In addition, the meeting was held within a short period before the CoP rather than allowing sufficient time to review and prepare for the meeting beforehand.

Article 24 Secretariat

299. Has your country provided direct support to the Secretariat in terms of seconded staff, financial contribution for Secretariat activities, etc?	
a) no	X
b) yes	

Article 25 Subsidiary body on scientific, technical and technological advice

300. How many people from your country participated in each of the meetings of SBSTTA?	
a) SBSTTA I (Paris)	
b) SBSTTA II (Montreal)	
c) SBSTTA III (Montreal)	
d) SBSTTA IV (Montreal)	1
e) SBSTTA V (Montreal)	1

Further comments on implementation of this Article

Lebanon does not have a SBSTTA national focal point however Dr Ghassan Jaradi from the Lebanese University attended two SBSTTA meetings on behalf of Lebanon. Dr. Faysal Abu Ezzedine also participated in two SBSTTA meetings.

Article 26 Reports

301. What is the status of your first national report?	
a) Not submitted	
b) Summary report submitted	
c) Interim/draft report submitted	
d) Final report submitted	X
If b), c) or d), was your report submitted:	
by the original deadline of 1.1.98 (Decision III/9)?	
by the extended deadline of 31.12.98 (Decision IV/14)?	X
Later (please specify date)	

Decision IV/14 National reports

302. Did all relevant stakeholders participate in the preparation of this national report, or in the compilation of information used in the report?	
a) no	
b) yes	X
303. Has your country taken steps to ensure that its first and/or second national report(s) is/are available for use by relevant stakeholders?	
a) no	
b) yes	X
If yes, was this by:	
a) informal distribution?	X
b) publishing the report?	X
c) making the report available on request?	X
d) posting the report on the Internet?	X

Decision V/19. National reporting

304. Has your country prepared voluntary detailed thematic reports on one or more of the items for in-depth consideration at an ordinary meeting of the parties, following the guidelines provided?	
a) no	
b) yes - forest ecosystems	X
c) yes - alien species	X
d) yes - benefit sharing	

Decision V/6. Ecosystem approach

305. Is your country applying the ecosystem approach, taking into account the principles and guidance contained in the annex to decision V/6?	
a) no	
b) under consideration	X
c) some aspects are being applied	
d) substantially implemented	
306. Is your country developing practical expressions of the ecosystem approach for national policies and legislation and for implementation activities, with adaptation to local, national, and regional conditions, in particular in the context of activities developed within the thematic areas of the Convention?	
a) no	
b) under consideration	X
c) some aspects are being applied	
d) substantially implemented	
307. Is your country identifying case studies and implementing pilot projects that demonstrate the ecosystem approach, and using workshops and other mechanisms to enhance awareness and share experience?	
a) no	X
b) case-studies identified	
c) pilot projects underway	
d) workshops planned/held	
e) information available through CHM	
308. Is your country strengthening capacities for implementation of the ecosystem approach, and providing technical and financial support for capacity-building to implement the ecosystem approach?	
a) no	X
b) yes within the country	
c) yes including support to other Parties	
309. Has your country promoted regional co-operation in applying the ecosystem approach across national borders?	
a) no	X
b) informal co-operation	
c) formal co-operation (please give details)	

Further comments

Lebanon has not adopted an ecosystem approach to address biodiversity issues. Most funded proposals and projects refer to study areas and sites rather than ecosystems. The causes for the absence of such an approach are many. These range from a lack of appreciation of the importance an ecosystem approach to the limited resources and short term nature of funding and the absence of a critical mass of multidisciplinary national teams. All these have led to short term project based activities rather than long term national agenda driven activities. On the national level, the only project to take into consideration an ecosystem approach is Protected Areas Project. On the academic level, studies undertaken do not taken into consideration the ecosystem approach since studies are limited to specific issues. In contrast many NGOs, who have attempted to address biodiversity with an ecosystem approach, do not have the adequate multidisciplinary infrastructure that permits them to do so.

Inland water ecosystems

Decision IV/4. Status and trends of the biological diversity of inland water ecosystems and options for conservation and sustainable use

310. Has your country included information on biological diversity in wetlands when providing information and reports to the CSD, and considered including inland water biological diversity issues at meetings to further the recommendations of the CSD?	
a) no	X
b) yes	
311. Has your country included inland water biological diversity considerations in its work with organizations, institutions and conventions affecting or working with inland water?	
a) no	
b) yes	X
If a developing country Party or Party with economy in transition -	
312. When requesting support for projects relating to inland water ecosystems from the GEF, has your country given priority to identifying important areas for conservation, preparing and implementing integrated watershed, catchment and river basin management plans, and investigating processes contributing to biodiversity loss?	
a) no	
b) yes	X
313. Has your country reviewed the programme of work specified in annex 1 to the decision, and identified priorities for national action in implementing the programme?	
a) no	X
b) under review	
c) yes	

**Decision V/2. Progress report on the implementation of the programme of work on the biological diversity of inland water ecosystems
(implementation of decision IV/4)**

314. Is your country supporting and/or participating in the River Basin Initiative?	
a) no	
b) yes	X
315. Is your country gathering information on the status of inland water biological diversity?	
a) no	
b) assessments ongoing	
c) assessments completed	X

316. Is this information available to other Parties?	
a) no	
b) yes - national report	
c) yes - through the CHM	
d) yes - other means (please give details below)	X
317. Has your country developed national and/or sectoral plans for the conservation and sustainable use of inland water ecosystems?	
a) no	X
b) yes - national plans only	
c) yes - national plans and major sectors	
d) yes - national plans and all sectors	
318. Has your country implemented capacity-building measures for developing and implementing these plans?	
a) no	X
b) yes	

Decision III/21. Relationship of the Convention with the CSD and biodiversity-related conventions

319. Is the conservation and sustainable use of wetlands, and of migratory species and their habitats, fully incorporated into your national strategies, plans and programmes for conserving biological diversity?	
a) no	X
b) yes	

Further comments on implementation of these decisions and the associated programme of work

Q 311:

The wetlands of Ammiq and Tyre have received priority attention from both the government and international organizations. In addition one of the main objectives of the CAMP-Lebanon project is the development of an integrated master plan for the Damour River Basin from source to outfall including water and conservation issues. The project is currently working on the elaboration of an integrated master plan for the Damour River Basin, the declaration of the Damour River and Naqoura Bay as areas of special importance at national and Mediterranean levels.

Lebanon has satisfied its commitment as a signatory of the Ramsar Convention on Wetlands by designating Ammiq wetland as a wetland of international importance, include wetland conservation within their national land-use planning, and including a nature reserve on the Ammiq Wetlands in the MedWet Coast project. Three main objectives for the MedWet Coast Project: (i)Promotion and capacity building for the development of national policies and tools to address the policy-related root causes of loss of wetland and coastal biodiversity. (ii)Protection and removal of root causes in key demonstration sites selected in view of their global

significance and the variety, which they present in terms of threats and accompanying actions.
(iii) Contributing to the closing of the Mediterranean circle in terms of biodiversity protection and sustainable management of wetlands and coastal zones through cost effective regional networking for transfer of lessons, interchange and training.

Q 312:

The French GEF is funding the MedWet Coast Project.

Q 315:

Various studies were conducted related to inland water biodiversity, such as:

The Biodiversity Country Study prepared in 1996 by the Ministry of Agriculture with the collaboration of UNEP/GEF included information on the fresh water biodiversity.

The Lebanese University lead a 16 year study on the fauna, ecology and community structure of benthic invertebrates in Lebanese Rivers (1984-1999).

In addition, studies have been done on the status of biodiversity in Ammiq wetland.

Q316:

The biodiversity Country Study is available on the Ministry of Agriculture's website (<http://www.agriculture.gov.lb>).

A-Rocha has published information on flora and fauna in Ammiq wetland on their website (<http://www.arocha.org/liban/en/index.htm>).

Q 319

BirdLife International is in the process of developing a comprehensive book on birds in Lebanon including a description of their habitat. The soaring bird project will be initiated to identify bottle-neck areas in Lebanon and develop management plans specific to these areas. In addition, a comparative study was conducted on the biodiversity of Syrian and Lebanese coasts with emphasis on distribution and migratory organisms (1997 –1999).

Marine and coastal biological diversity

Decision II/10 and Decision IV/5. Conservation and sustainable use of marine and coastal biological diversity

320. Does your national strategy and action plan promote the conservation and sustainable use of marine and coastal biological diversity?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
321. Has your country established and/or strengthened institutional, administrative and legislative arrangements for the development of integrated management of marine and coastal ecosystems?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) arrangements in place	
322. Has your country provided the Executive Secretary with advice and information on future options concerning the conservation and sustainable use of marine and coastal biological diversity?	
a) no	X
b) yes	
323. Has your country undertaken and/or exchanged information on demonstration projects as practical examples of integrated marine and coastal area management?	
a) no	
b) yes - previous national report	X
c) yes - case-studies	X
d) yes - other means (please give details below)	X
324. Has your country programmes in place to enhance and improve knowledge on the genetic structure of local populations of marine species subjected to stock enhancement and/or sea-ranching activities?	
a) no	X
b) programmes are being developed	
c) programmes are being implemented for some species	
d) programmes are being implemented for many species	
e) not a perceived problem	
325. Has your country reviewed the programme of work specified in an annex to the decision, and identified priorities for national action in implementing the programme?	
a) no	
b) under review	X
c) yes	

Decision V/3. Progress report on the implementation of the programme of work on marine and coastal biological diversity (implementation of decision IV/5)

326. Is your country contributing to the implementation of the work plan on coral bleaching?	
a) no	
b) yes	
c) not relevant	X
327. Is your country implementing other measures in response to coral bleaching?	
a) no	
b) yes (please provide details below)	
c) not relevant	X
328. Has your country submitted case-studies on the coral bleaching phenomenon to the Executive Secretary?	
a) no	
b) yes	
c) not relevant	X

Further comments on implementation of these decisions and the associated programme of work

Q 320:

The third goal of the National Biodiversity Strategy and Action Plan stipulates the protection of Lebanon's coastal and marine biodiversity and the development of marine resources in a sustainable manner. The main objectives of this goal are the protection of coastal and marine ecosystems as well as the sustainable utilization of resources in collaboration of other stakeholders in particular the local communities.

Q 321:

To meet the objective of the NBSAP several initiatives were undertaken in Lebanon in term of institutional and legislative capacity building. These initiatives fall into several categories ranging from policy, projects, studies, programs.

Legislation:

The code of the Environment includes guidelines for sustainable coastal zone management

The "Tourism Plan Development and Reconstruction" (1996) prepared by the UNDP and World Tourism Organization addressed coastal zone management and recommended the freezing of all coastal developments for at least two years until a coastal master plan establishes activities. Unfortunately such a plan has not been developed.

As part of the action plan for the conservation of Mediterranean Marine Turtles Lebanon has

agreed to enact legislation banning the consumption and sale of products derived from sea turtles, undertake a survey to assess nesting, potential sites, feeding and wintering areas on the coast, prepare a national action plan for their conservation

Projects:

The MedWet Coast project is working to conserve the marine biodiversity of Tyr coast nature reserve. The project aims at developing national policies and capacities for the conservation of wetlands, undertake actions for the conservation of threatened biodiversity, develop the framework for socioeconomic viability of proposed solutions and build the capacity of local stakeholders for the sustainable management of these sites.

The Coastal Area Management Programme (CAMP-Lebanon) aims at conserving coastal resources in the framework of sustainable development. The project aims to conserve the natural coastal resources along the Southern coastal line (between Damour and Naqoura) by developing and applying concepts of sustainable development and applying tools for the integrated coastal marine management to the economic and social development activities of the areas. Furthermore, the project will develop a strategy for prioritizing marine and coastal biodiversity as well as develop a legal framework for integrated coastal management. The project has several objectives both on the national and municipal level relating to marine biodiversity: (i) On the national level, propose laws on coastal zone management in Lebanon, develop environmental directives for the development of coastal urban master plans, establish a map of natural sites in the project area and a list of economic instruments of use for coastal zone management and perform tourism carrying capacity analysis (ii) on the municipal level the project will develop a database of fauna and flora in the three municipalities of the project area, declare the Naqoura Beach and Damour river basin as specially protected areas and develop an integrated ecotourism plan for the area.

The Darwin Project in “Coastal Vegetation Survey and Conservation for Lebanon” implemented at the American University of Beirut in collaboration with the Royal Botanic Gardens, Kew and University of Reading aimed to improve national capacity for the management of plant diversity, threatened species management and protected area planning and management along the Lebanese Coast.

The SAP-BIO regional project funded by GEF and executed by regional activity center for specially protected areas (RAC/SPA) within the context of MAP. The main objective of the project is the elaboration of a strategic action plan for the conservation of coastal and marine biodiversity in the Mediterranean. For this purpose, Lebanon has prepared through the Ministry of Environment a national report on coastal and marine biodiversity and identified five priority actions related to the conservation of coastal and marine biodiversity and has prepared five action plans related to these priority actions. The second phase of the project will include the implementation of the action plans where the necessary funds will be secured by the SAP-BIO project.

The Ministry of Agriculture is cooperating with JICA “Japanese International Cooperation Agency” international cooperation agency”, to alleviate pressures on fisheries and restore the

depleted resources. However, the project is hindered by a lack of recent species inventories, lack of incentives for the local communities to conserve biodiversity. The project has highlighted an urgent need to involve people in management plans, formulate adequate legislation and restore enforcement which has been absent due to political interventions.

The national land use planning project, initiated in 2002, covers the preparation of a National Land Use Plan, in coordination with the General Directorate of Urban Planning. This study was requested from CDR by a decision of the Council of Ministers. The study aims to prepare land use maps of the Lebanese territory based on satellite images and aerial photographs and will evaluate all demographic and social data, economic activities, employment and environmental and urban development issues. The study will form the basis for land development in Lebanon as a number of development scenarios will be submitted to the Council of Ministers based on results of this project.

The Integrated Coastal Zone Management, ICZM, project aims at protecting the coastal zone and involves many activities including: Assisting the Ministry of the Environment (MoE) in the preparation of an environmental strategy and a draft law for the coastal zone; creating units to conduct EIAs of projects for the benefit of the Ministry of the Environment, the General Directorate of Urban Planning, the Ministry of the Interior and Municipalities, etc; and develop detailed studies for the coastal zone in Sour and Batroun-Chekka-Anfeh in addition to subsequent execution of environmental protection works in these areas. ICZM will be implemented by the CDR, it is expected to be financed by the World Bank as part of SWEMP however it is currently on hold.

A workshop will be held in collaboration with the INOCLE on December 2002 to elaborate on alien species and threats facing the establishment of rocky formations harboring a high species diversity with a distribution limited to the eastern Mediterranean. The purpose of the workshop is to increase awareness regarding the importance of these terraces, lobby for legislation to protect them, plan for further studies and share expertise.

Universities:

The University of Balamand has introduced an academic program in Aquatic Resource Management, with students expected to join in the Fall semester, 2003.

The University of Balamand is in the process of establishing a Marine Station with the main objectives to conserve the Mediterranean ecosystem, to ensure the protection and sustainable use of marine resources, to propagate sustainable fish harvesting techniques and to enhance marine eco-tourism through applying scientific methods of evaluation and designing proper management and development plans.

Q 323:

Lebanon exchanges information on marine and coastal biodiversity through national reports, case studies and international conference and workshops. In addition, all environmental and

development related national reports submitted from Lebanon include information about the status of marine and coastal ecosystems. Case studies have served as important means of disseminating information such as those submitted to the Second International Conference on Oceanography of the Eastern Mediterranean and Black Sea.

Marine experts also work closely with RAC/SPA vis-à-vis drawing plans for the conservation and protection of the coastal zone in general and the marine environment in particular. Experts from Lebanon also attend meetings within the context of the CBD and RAC/SPA. Experts in marine and coastal ecosystem continuously attend international workshops and conferences such as (i) ICESM workshop held in Monaco to share data and experiences from Lebanon, (ii) First and second International Conference on Oceanography of Eastern Mediterranean and Black Sea (iii) The Ad Hoc Technical Expert Group on Mariculture, established by the Conference of the Parties in its decision V/5 to assist the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) in its work on marine and coastal biological diversity, works specifically to implement program element 4 (Mariculture). The terms of reference of the expert group were to evaluate the state of scientific and technical knowledge on the effects of mariculture on marine and coastal biodiversity; and provide guidance on criteria, methods and techniques that avoid the adverse effects of mariculture and stock enhancement on marine and coastal biological diversity, and enhance the positive effects of mariculture on marine and coastal productivity and (iv) Meeting of Experts for the elaboration of an Action Plan for the Conservation of Mediterranean species of cartilaginous fishes. The meeting was organized by RAC/SPA in collaboration with "Istituto Centrale per la Ricerca Scientifica e Tecnologica Applicata Al Mare" (ICRAM, Rome, Italy) with the aim of elaborating a draft Action Plan for the conservation of Mediterranean Species of cartilaginous fish, which will be reviewed by the sixth meeting of the national focal points for SPA and then submitted to the Contracting Parties to the Barcelona Convention.

Constraints:

The stakeholders consulted for the preparation of this report stated several issues in Lebanon that are hindering the conservation of marine and coastal biodiversity:

- Lack of follow up (Studies and research projects remain on the report level rather than being implemented)
- Lack in funding to launch a diversity of activities related to marine coastal biodiversity
- Need for policy enforcement
- Tourism developments are out competing efforts for conservation

In the Action Plan for the conservation of biological Diversity in the Mediterranean Region (SAP BIO)-Lebanon. Priority Action 1 which seeks to establish Conservation Strategies for Coastal Habitats included in several issues the Lebanese marine environment that have been neglected for decades and therefore pose major problems

Difficulty in securing specialists in marine sciences, more specifically taxonomists

- Difficulty in obtaining the necessary database for marine and coastal fauna and flora (not available)
- Difficulty in obtaining recent background data on invasive species and their impact (not available)
- Lack of detailed topographic and bathymetrical maps for the Lebanese coast
- Complete absence of a national land use plan
- Non-availability of a research vessel for long term studies
- Non-availability of up to date field and laboratory research equipment
- Difficulty in obtaining funding for marine research
- Absence of financial support for academic research institutions in terms of marine research
- Lack of awareness on the level of concerned public institutions (ministries)
- Lack of support by the political body to protect the coastal zone
- Difficulty of law enforcement agencies to prevent pollution along the coast
- Refusal of law enforcement agencies in prioritizing conservation measures (basically law enforcement) to polluting and construction activities

Agricultural biological diversity

Decision III/11 and Decision IV/6. Conservation and sustainable use of agricultural biological diversity

329. Has your country identified and assessed relevant ongoing activities and existing instruments at the national level?	
a) no	
b) early stages of review and assessment	X
c) advanced stages of review and assessment	
d) assessment completed	
330. Has your country identified issues and priorities that need to be addressed at the national level?	
a) no	
b) in progress	
c) yes	X
331. Is your country using any methods and indicators to monitor the impacts of agricultural development projects, including the intensification and extensification of production systems, on biological diversity?	
a) no	X
b) early stages of development	
c) advanced stages of development	
d) mechanisms in place	
332. Is your country taking steps to share experiences addressing the conservation and sustainable use of agricultural biological diversity?	
a) no	
b) yes - case-studies	X
c) yes - other mechanisms (please specify)	
333. Has your country conducted case-studies on the issues identified by SBSTTA: i) pollinators, ii) soil biota, and iii) integrated landscape management and farming systems?	
a) no	X
b) yes - pollinators	
c) yes - soil biota	
d) yes - integrated landscape management and farming systems	
334. Is your country establishing or enhancing mechanisms for increasing public awareness and understanding of the importance of the sustainable use of agrobiodiversity components?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) mechanisms in place	

335. Does your country have national strategies, programmes and plans which ensure the development and successful implementation of policies and actions that lead to sustainable use of agrobiodiversity components?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) mechanisms in place	
336. Is your country promoting the transformation of unsustainable agricultural practices into sustainable production practices adapted to local biotic and abiotic conditions?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
337. Is your country promoting the use of farming practices that not only increase productivity, but also arrest degradation as well as reclaim, rehabilitate, restore and enhance biological diversity?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
338. Is your country promoting mobilization of farming communities for the development, maintenance and use of their knowledge and practices in the conservation and sustainable use of biological diversity?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
339. Is your country helping to implement the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources?	
a) no	X
b) yes	
340. Is your country collaborating with other Contracting Parties to identify and promote sustainable agricultural practices and integrated landscape management?	
a) no	
b) yes	X

Decision V/5. Agricultural biological diversity: review of phase I of the programme of work and adoption of a multi-year work programme

341. Has your country reviewed the programme of work annexed to the decision and identified how you can collaborate in its implementation?	
a) no	X
b) yes	

342. Is your country promoting regional and thematic co-operation within this framework of the programme of work on agricultural biological diversity?	
a) no	
b) some co-operation	
c) widespread co-operation	
d) full co-operation in all areas	X
343. Has your country provided financial support for implementation of the programme of work on agricultural biological diversity?	
a) no	
b) limited additional funds	X
c) significant additional funds	
If a developed country Party -	
344. Has your country provided financial support for implementation of the programme of work on agricultural biological diversity, in particular for capacity building and case-studies, in developing countries and countries with economies in transition?	
a) no	
b) yes within existing cooperation programme(s)	
b) yes, including limited additional funds	
c) yes, with significant additional funds	
345. Has your country supported actions to raise public awareness in support of sustainable farming and food production systems that maintain agricultural biological diversity?	
a) no	
b) yes, to a limited extent	X
c) yes, to a significant extent	
346. Is your country co-ordinating its position in both the Convention on Biological Diversity and the International Undertaking on Plant Genetic Resources?	
a) no	X
b) taking steps to do so	
c) yes	

347. Is your country a Contracting Party to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade?	
a) not a signatory	X
b) signed - ratification in process	
c) instrument of ratification deposited	
348. Is your country supporting the application of the Executive Secretary for observer status in the Committee on Agriculture of the World Trade Organisation?	
a) no	X
b) yes	
349. Is your country collaborating with other Parties on the conservation and sustainable use of pollinators?	
a) no	X
b) yes	
350. Is your country compiling case-studies and implementing pilot projects relevant to the conservation and sustainable use of pollinators?	
a) no	X
b) yes (please provide details)	
351. Has information on scientific assessments relevant to genetic use restriction technologies been supplied to other Contracting Parties through media such as the Clearing-House Mechanism?	
a) not applicable	
b) no	X
c) yes - national report	
d) yes - through the CHM	
e) yes - other means (please give details below)	
352. Has your country considered how to address generic concerns regarding such technologies as genetic use restriction technologies under international and national approaches to the safe and sustainable use of germplasm?	
a) no	
b) yes - under consideration	X
c) yes - measures under development	
353. Has your country carried out scientific assessments on inter alia ecological, social and economic effects of genetic use restriction technologies?	
a) no	X
b) some assessments	
c) major programme of assessments	

354. Has your country disseminated the results of scientific assessments on <u>inter alia</u> ecological, social and economic effects of genetic use restriction technologies?	
a) no	X
b) yes - through the CHM	
c) yes - other means (please give details below)	
355. Has your country identified the ways and means to address the potential impacts of genetic use restriction technologies on the <u>in situ</u> and <u>ex situ</u> conservation and sustainable use, including food security, of agricultural biological diversity?	
a) no	X
b) some measures identified	
c) potential measures under review	
d) comprehensive review completed	
356. Has your country assessed whether there is a need for effective regulations at the national level with respect to genetic use restriction technologies to ensure the safety of human health, the environment, food security and the conservation and sustainable use of biological diversity?	
a) no	X
b) yes - regulation needed	
c) yes - regulation not needed (please give more details)	
357. Has your country developed and applied such regulations taking into account, <u>inter alia</u> , the specific nature of variety-specific and trait-specific genetic use restriction technologies?	
a) no	X
b) yes - developed but not yet applied	
c) yes - developed and applied	
358. Has information about these regulations been made available to other Contracting Parties?	
a) no	X
b) yes - through the CHM	
c) yes - other means (please give details below)	

**Further comments on implementation of these decisions and the
associated programme of work**

Q 334:

First national agrobiodiversity workshop held in Lebanon on April 2002, served as a forum for sharing experiences, create a national interest group that would serve as the foundation of a national agro biodiversity committee to support in situ conservation and sustainable use of agro biodiversity in Lebanon. In addition, the project held many workshops throughout the project's duration on three levels: (i) regional, (ii) staff, (iii) local communities .

The main objective of the project "Conservation and Sustainable Use of Dryland Agrobiodiversity of the Near East" is the in situ conservation and sustainable use of globally significant dryland agrobiodiversity in West Asia. The project has established seven outputs to conserve the agrobiodiversity (i) Understand the causes of degradation of agrobiodiversity of target crops, (ii) improve current land use practices, (iii) strengthen national human resources capacity in agrobiodiversity (iv) propose relevant policy/legislation for government, (v) monitor and assess the impact of project interventions, (vi) raise public awareness and (vii) identify and promote additional sources of income.

An important feature of this project in comparison to others is that it follows a "bottom up approach", and has developed effective follow up procedures to ensure the long-term sustainability of the results achieved even when the project terminates.

Q 340:

With in the context of the Agrobiodiversity Project there is significant degree of collaboration with Syria, Jordan and Palestine. In addition, Lebanon collaborate with ICARDA, IPGRI and ACSAD in agrobiodiversity initiatives.

Q 345:

The Yammouneh Technology Transfer and Extension Project (YTTE) at the American University of Beirut. Phase one the project aimed at building an extension delivery network that successfully transferred technology with an overall goal of improving agricultural sustainability in the Yammouneh region. One of the main objectives of the project is the continuation of convenient technology transfer which is adapted to the farmers real situation and needs, while helping them manage their limited resources in an ecological manner. A specific unit called TTE has been established for this purpose and an organic farming initiative launched through the Yammouneh Technology Transfer and Extension Project.

Forest biological diversity

Decision II/9 and Decision IV/7. Forest biological diversity

359. Has your country included expertise on forest biodiversity in its delegations to the Intergovernmental Panel on Forests?	
a) no	X
b) yes	
c) not relevant	
360. Has your country reviewed the programme of work annexed to the decision and identified how you can collaborate in its implementation?	
a) no	X
b) under review	
c) yes	
361. Has your country integrated forest biological diversity considerations in its participation and collaboration with organizations, institutions and conventions affecting or working with forest biological diversity?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
362. Does your country give high priority to allocation of resources to activities that advance the objectives of the Convention in respect of forest biological diversity?	
a) no	
b) yes	X
For developing country Parties and Parties with economies in transition -	
363. When requesting assistance through the GEF, Is your country proposing projects which promote the implementation of the programme of work?	
a) no	
b) yes	X

Decision V/4. Progress report on the implementation of the programme of work for forest biological diversity

364. Do the actions that your country is taking to address the conservation and sustainable use of forest biological diversity conform with the ecosystem approach?	
a) no	X
b) yes	

365. Do the actions that your country is taking to address the conservation and sustainable use of forest biological diversity take into consideration the outcome of the fourth session of the Intergovernmental Forum on Forests?	
a) no	X
b) yes	
366. Will your country contribute to the future work of the UN Forum on Forests?	
a) no	
b) yes	X
367. Has your country provided relevant information on the implementation of this work programme?	
a) no	
b) yes - submission of case-studies	
c) yes - thematic national report submitted	X
d) yes - other means (please give details below)	
368. Has your country integrated national forest programmes into its national biodiversity strategies and action plans applying the ecosystem approach and sustainable forest management?	
a) no	
b) yes - limited extent	X
c) yes - significant extent	
369. Has your country undertaken measures to ensure participation by the forest sector, private sector, indigenous and local communities and non-governmental organisations in the implementation of the programme of work?	
a) no	
b) yes - some stakeholders	X
c) yes - all stakeholders	
370. Has your country taken measures to strengthen national capacities including local capacities, to enhance the effectiveness and functions of forest protected area networks, as well as national and local capacities for implementation of sustainable forest management, including restoration?	
a) no	
b) some programmes covering some needs	X
c) many programmes covering some needs	
d) programmes cover all perceived needs	
e) no perceived need	

371. Has your country taken measures to implement the proposals for action of the Intergovernmental Forum on Forests and the Intergovernmental Panel on Forests on valuation of forest goods and services?	
a) no	
b) under consideration	
c) measures taken	X

Further comments on implementation of these Decisions and the associated programme of work

The existing forest data in terms of forest cover per forest types is mostly derived from field investigations performed in 1966. In the absence of updated field information, most recent report still rely on this same information. Despite the lack of documentation related to forest cover, 4 main forests have acquired protected area status. The Forest code (law 85 of 12/9/1991) lists all conifer species under a protection, this law was amended in 1996 (law 558 of 24/7/96). The amended forest code stipulates that all cedar, fir, cypress, juniper forest's and "other forests" in Lebanon are protected de facto. Moreover, at least 15 forests were declared protected explicitly by ministerial decisions (MOA) under the amended forest code.

There are several projects relating to forest biodiversity in Lebanon:

A two year project is currently in progress between the Lebanese University, National Council for Scientific Research and the Council of Higher Education in Syria for the complete assessment of land suitability for reforestation with *Ceratonia siliqua* and *Pinus* along the Lebanese _Syrian Coast.

The Ministry of Agriculture has launched a project on fire control in collaboration with France.

The Ministry of Agriculture was encouraging Non-wood forest products through the reforestation projects and protection of Pine and Carob trees.

Another project involves the assessment of the scale of insect infestation in Cedars forests in the Mediterranean region and addresses the infestation of the Tannourine Hadath El Jebbeh Cedars Forest. The project will also develop a sustainable management plan for the forest.

AFDC is collaborating with WWF and have selected 13 hotspots, defined as conservation areas and fall within Important Forest Areas IFAs which are mainly private lands. The AFDC units launch awareness campaigns among local communities. They have launched many awareness and educational programs, trained local communities on forest fire fighting as well as focused on ecotourism and supported protected areas with a main focus on schools.

The NGO Friends of Horsh Ehden have initiated several reforestation efforts over the years such as the reforestation of the Cedars of Bsharre.

A five year reforestation plan for Lebanon has been recently initiated through the Ministry of Environment. The project will be financed by the Lebanese government with (\$3,333,000 USD per year) to increase the vegetation cover from 3.5% to 21%. Around 140,000 hectares will be reforested . Experts led field surveys will be conducted on the basis of geology, altitude and latitude. Reforestation will be carried out using evergreen species that where present in the sites.

The project is currently in the bidding phase and the Ministry of Environment will be the implementing body.

An EU funded collaboration between France and Lebanon resulted in the generation of three management plans for the forests of Haddath, Nahr Ibrahim and Kefraya . In addition the project produced two documents on describing native trees and the other elaborating on forest management. The project was completed in 1999 and the Ministry of Agriculture was given the responsibility to implement the resulting action plans.

A three year collaborative project will be implemented soon by between the Ministry of Environment and UNEP entitled “Assessment of insect infestation in cedar forests in the Mediterranean region and development of an action plan for integrated management of forests with particular emphasis on the Tannourine-Hadath El Jebbeh forest. The project is funded by GEF and aims to develop an action plan for integrated management of forests including assessment of insect infestation in cedar forests in the Mediterranean region with particular emphasis on the Tannourine-Hadath El-Jebbeh cedars forest. The project will develop a sustainable management plan that addresses possible threats to the ecosystem of cedar forests and means of removal of these threats.

A FAO project entitled “Protection of forest with particular emphasis on the new pest *Cephalcia tannourinensis*, infesting Lebanon cedars”. This project aims to protect and preserve the health and vitality of scarce and precious forest resources through improved pest management practices and long-term management of the forest which will translate into the preservation of the ecosystem of this semi-arid zone as well as preserving a sacred tree species. Foresters will benefit from training in forest protection approaches while the local communities will benefit through national awareness campaigns.

Q 361:

Forest biological diversity is not yet fully integrated in organizations, institutions and conventions affecting forest biological diversity. Some integration has been accomplished with regard to the IPCC land use, land change and climate change. The main reason that forest initiatives have not been well integrated with other initiatives is the fact the majority of efforts in this area focus solely on reforestation.

Q 363:

The main projects in this areas are conducted with the assistance of the FAO.

Q 366:

Lebanon contributes to the UN forum on Forests through discussions

Q 370:

Many measures have been taken to strengthen national capacity mainly through workshops,

training and awareness campaigns administered by NGOs such as Greenline, AFDC and both the Ministries of Environment and Agriculture.

Q 371:

Lebanon has partly implemented the intergovernmental forum on forests by initiating projects to combat forest fires, reforestation and desertification control

Biological diversity of dry and sub-humid lands

Decision V/23. Consideration of options for conservation and sustainable use of biological diversity in dryland, Mediterranean, arid, semi-arid, grassland and savannah ecosystems

372. Has your country reviewed the programme of work annexed to the decision and identified how you will implement it?	
a) no	x
b) under review	
c) yes	
373. Is your country supporting scientifically, technically and financially, at the national and regional levels, the activities identified in the programme of work?	
a) no	x
b) to a limited extent	
c) to a significant extent	
374. Is your country fostering cooperation for the regional or subregional implementation of the programme among countries sharing similar biomes?	
a) no	
b) to a limited extent	x
c) to a significant extent	

Further comments on implementation of these Decisions and the associated programme of work

Q 374:

There are three main projects that deal with the biodiversity of dry and sub-humid lands:

The Lebanese government and UNDP/UNSO collaborated with the German Government for a national action program to assess the current situation of desertification and to be followed by the development of management strategy for drylands.

The project “Conservation and Sustainable Use of Dryland Agrobiodiversity of the Near East” (Please refer to the section of Agricultural Biological Diversity)

The Yammounh Technology Transfer and Extension Project aims at income generation for local communities through sustainable use of natural resources in Yammounh in Northern Bekaa area. Other objectives of the project are conservation of biodiversity, increased public awareness and capacity building for to strengthen community support for the project.

The general sentiment from the stakeholders interviewed is that overgrazing problem has not been effectively addressed in Lebanon. In some cases, grazing is allowed without any measures while in other circumstances, grazing is banned without any attention to the impacts on other areas which will suffer from a significant increase in the intensity of grazing and still in other cases efforts have been launched to stop grazing without any consideration for the interrelated social issues, thereby, the results are short-lived. In addition, the Mad Cow disease increased pressures on rangelands.

Decision V/20. Operations of the Convention

375. Does your country take into consideration gender balance, involvement of indigenous people and members of local communities, and the range of relevant disciplines and expertise, when nominating experts for inclusion in the roster?	
a) no	
b) yes	X
376. Has your country actively participated in subregional and regional activities in order to prepare for Convention meetings and enhance implementation of the Convention?	
a) no	
b) to a limited extent	X
c) to a significant extent	
377. Has your country undertaken a review of national programmes and needs related to the implementation of the Convention and, if appropriate, informed the Executive Secretary?	
a) no	
b) under way	X
c) yes	

Please use this box to identify what specific activities your country has carried out as a DIRECT RESULT of becoming a Contracting Party to the Convention, referring back to previous questions as appropriate:

Biodiversity Country Study (1995-1996)

Nine biodiversity assessment reports including a comprehensive inventory of the flora and fauna in the various ecosystems and habitats across the country.

Biodiversity Enabling Activity

In phase I had two major outcomes:

1. National biodiversity strategy and action plan (NBSAP)
2. First national report to the CoP.

In phase II

1. Assessing national capacity building needs
2. Identification of specific country priorities for biodiversity conservation
3. Preparation of the second national report to the CoP
4. Review and update the NBSAP as per the strategic plan of the CBD

Implementation of Operational Projects

1. Protected areas Project
2. Agro biodiversity Project
3. MedWet Coast Project
4. SAP BIO Project

Biodiversity Planning Support Programme

1. Strengthen national capacity for biodiversity initiatives
2. Promote regional exchange of information, expertise and materials
3. Share collective experiences related to NBSAP
4. Regional newsletter
5. Electronic mailing list (bioplan)
6. Regional website

Other activities

Species inventories

Taxonomic identification

Increased public awareness about the importance of biodiversity and the need for its conservation

Increased national funding to support projects and activities related to biodiversity conservation allocated to NGOs and to protected areas management bodies.

Increased cooperation with NGOs

Increased legislation for the protection of threatened plants and hunting laws

**Please use this box to identify joint initiatives with other Parties,
referring back to previous questions as appropriate:**

Joint initiatives are considered as those activities involving active collaboration between Lebanese and foreign institutions. With this understanding the following projects are considered as joint initiatives:

Collaboration between French and Lebanese institutions within the context of CEDRE

Collaboration between British and Lebanese institutions through Darwin Initiative Funds

Collaboration between US and Lebanese institutions through USDA supported funds.

Collaboration between Lebanon and Syria through IPGRI sponsored funds, and National funds

Collaboration between Lebanon, Syria, Jordan and Palestine through UNDP sponsored project

Please use this box to provide any further comments on matters related to national implementation of the Convention:

Refer to table 3 for an assessment of NBSAP proposed action plans, their relation to CBD articles and the extent of their completion.

The following represents a summary of the main recommendations outlined by the majority of stakeholders interviewed:

Policies:

- Biodiversity should be considered as a priority in the national agenda
- There is a need to enforce implementation of operational projects and not only rely on preparing proposals and studies

Coordination:

- Creation of multidisciplinary unit for biodiversity
- Creation of community of practices to share experiences

Awareness

- Enforce sustainable management through awareness raising, capacity building and improvement of laws
- There is a need to launch awareness among decision makers

Research fields

- Science should be the basis of policy making
- There is a necessity to evaluate the status of natural resources and their distribution
- Update basic databases
- Elaborate on a consensus about the definitions of issues
- Set a list of indicators of biodiversity
- Allocate more funds for applied research
- Promote private sector investments in biodiversity
- Promote the translation of research outputs into usable information by the private and public sector

Implementation

- Devise overall national and regional plan for biodiversity conservation
- Elaborate a strategic framework to guide ongoing plans and activities

- Establish of a multidisciplinary unit or panel of experts to ensure synergy among different ministries and stakeholders Increase the capacity building and the number of experts in many fields related to biodiversity by providing scholarships
- Establish a national system of follow up to all projects related to biodiversity to ensure effective implementation and avoid duplication
- Assess economic aspect of biodiversity and promote its marketing potentials Establish an economic strategy for biodiversity issues which will attract the private sector

The following represents a summary of the main criticism outlined by the majority of stakeholders interviewed:

Policies

- There is no common vision in Lebanon about what should be done with biodiversity There is a need to identify if biodiversity or the livelihood is a priority in this country
- Biodiversity conservation and sustainable use are neither integrated in national policies nor implemented
- Laws are not fully enforced

Coordination

- The lack of sharing among institutions is the main constraint facing the elaboration and the implementation of a clear management plan for biodiversity conservation and sustainable use

Awareness

- There is a lack of awareness about definitions of CBD articles and related terminology
- Obstacles facing young scientists to be integrated in the system
- Biodiversity is seen as limited to protected areas

Research

- Most of the projects undertaken in Lebanon relating to biodiversity remain on the study level rather than being implemented on the field.
- Large gaps to be filled in the fields of identification - taxonomy -systematics- ecology-ecosystem management- pomology-propagation of wild fruit trees- botany- forestry - transplantation.

Implementation

- Divergence among projects, there is an evident lack of integration among project activities Difficulty in implementing an agenda not directly related to the country; in fact the North has been asking for studies and reports and the South is asking for development and money

- Employment within international projects is for limited employees and for a limited period of time
- There is a lack of know how related to the involvement of local communities in biodiversity

The wording of these questions is based on the Articles of the Convention and the decisions of the Conference of the Parties. Please provide information on any difficulties that you have encountered in interpreting the wording of these questions

Advantages of the template:

- A template is easier for the elaboration of a report
- This type of questionnaire helps in identifying planning tools of achievements
- The questions can be considered as typical ones covering many aspects of biodiversity.
- Questions are covering specific subjects of concern.
- The questions are highly covering all aspects related to biodiversity.
- Provides guidelines to give information about the implementation of the Convention on the national level
- The questions covered all issues related to the articles of the CBD and CoP decisions therefore contracting parties will assess the work in implementing the Convention rather than only description of the biodiversity status in the country

Disadvantages of the template:

- The questionnaire is too long it could have been more simple
- There is some redundancy
- Answers are within the questions and are based on perceptions
- In addition sections about private sector, NGOs and academic institutions are not highlighted clearly.
- The economic aspect is lacking.
- Trade of species was not clearly highlighted although Lebanon has provided a law for the use and marketing of aromatic species
- Performance measure of implementation is not clear.
- Template is not user-friendly for national audience that is not familiar with the convention
- Requires a national perspective to answer the questions
- To provide all the examples asked for in the questionnaire will create an overly text laden document.

If your country has completed its national biodiversity strategy and action plan (NBSAP), please give the following information:

Date of completion:	November 1998		
If the NBSAP has been adopted by the Government			
By which authority?	Ministry of Environment		
On what date?	1998		
If the NBSAP has been published please give			
Title:	The NBSAP was published with the budget of the Biodiversity Enabling Activity Project (UNDP/GEF-Ministry of Environment)		
Name and address of publisher:	Ministry of Environment P.O.Box: 70-1091, Antelias-Lebanon		
ISBN:			
Price (if applicable):			
Other information on ordering:			
If the NBSAP has not been published			
Please give full details of how copies can be obtained:			
If the NBSAP has been posted on a national website			
Please give full URL:	http://www.moe.gov.lb		
If the NBSAP has been lodged with an Implementing Agency of the GEF			
Please indicate which agency:	UNDP		
Has a copy of the NBSAP been lodged with the Convention Secretariat?			
Yes	X	No	

Please provide similar details if you have completed a Biodiversity Country Study or another report or action plan relevant to the objectives of this Convention

State of the environment report 2002 (Publisher : Ministry of Environment)

Rihan Biodiversity assessment: South for conservation 2000.

Biodiversity Country Study (Publisher : Ministry of Agriculture, website:<http://www/agriculture.gov.lb>)

Rio +5 review report

Rio+10 review report

Please provide details of any national body (e.g. national audit office) that has or will review the implementation of the Convention in your country

The Ministry of Environment is the national body in Lebanon that reviews the implementation of the CBD. In the future there will be a Higher Council for the Environment and a panel of experts will be established.

APPENDIX 1

References

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