



Republic of Iraq

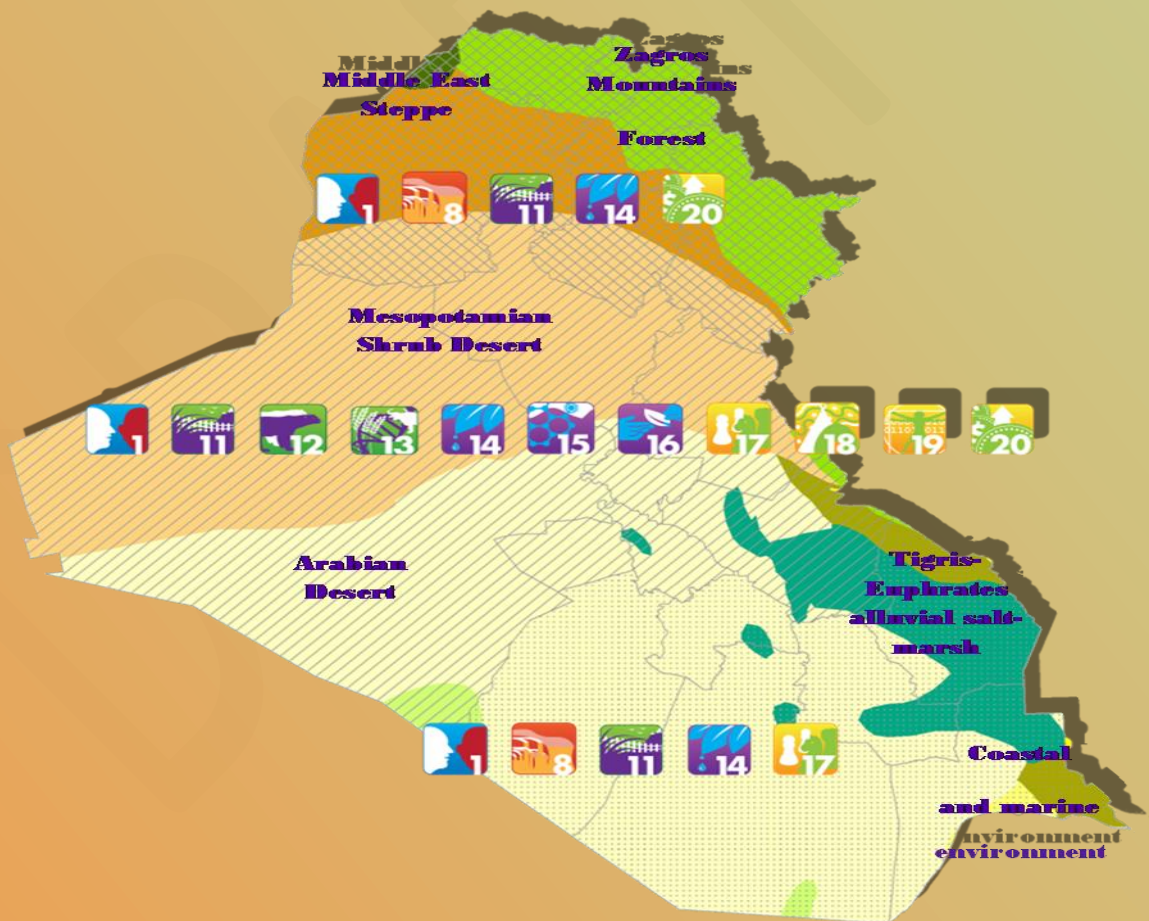


Ministry of Environment

First NBSAP for Iraq and Development of Fifth National Report to the Convention of Biological Diversity

A. NBSAP Stocktaking and Assessment Report

December 2013



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Task 1

1- Background information

Iraq is in its first steps of developing its National Biodiversity Strategy and Action Plans; it has received funding through the GEF financial mechanism for the Enabling Activity Project “*First NBSAP for Iraq and Development of Fifth National Report to the CBD*”.

According to the Project Work plan, approved by the GEF for Iraqi Enabling Activities in the area of Biodiversity, and to the specific guidelines given by the CBD Convention, the Stocktaking and Assessment phase shall address the following main subjects:

- 1) **Stakeholder identification** and strategies for their involvement
- 2) **Current status of biodiversity** (baseline) to be extracted from the 4th National Report
- 3) Current situation of **biodiversity national plans, policy and legislation**

In order to achieve these objectives a first workshop was held in Baghdad in December 2012. The structure of the workshop was operational and was aimed at the **stakeholder identification and analysis of current situation of biodiversity in Iraq**.

Institutional level bodies and agencies involved in biodiversity issues and responsible of the implementation of the CBD nationally, were involved in this stocktaking phase of the Project. In particular, this first technical workshop has addressed the following stakeholders:

1. Members of the National Committee for CBD Implementation in Iraq
2. National Experts
3. International Experts

Considering that, according to the CBD Training Package Module 2, “*The knowledge and information consolidated in the stocktaking exercise, will form the basis for the establishment of goals and objectives of the NBSAP*”; the expected outcomes of the Workshop were identified in:

- 1) Clear identification of all the stakeholders that should be involved in the process by listing all those subjects who have interest in biodiversity issues;
- 2) Outlining, for each stakeholder group, relevant strategies for their involvement in the NBSAP process;
- 3) Identification of gaps and missing information on biodiversity and related policies;
- 4) Roadmap for the NBSAP with tasks and responsibilities; and
- 5) Filled documents/forms of the Workshop exercises to be summarized in a Workshop final document.
- 6) Stocktaking and Assessment Report

2 Task 1 – Stocktaking

2.1 Main stakeholders to be involved in the NBSAP process

People’s right to be informed about plans and strategies that are directly affecting them and their livelihoods and their concrete involvement and participation in the decision making process, is a cornerstone of democratic governance (principle enshrined in the Rio Declaration of 1992). Much often the Stakeholders of various decision processes are identified only at higher levels, neglecting the opinion and needs of those for which the well being is directly depending on the conservation status of natural resources. For this reason, special attention should be devoted to rural communities and vernacular people, in that they are most likely to be affected by changes in the ecosystem services

provided by biodiversity. The conservation and sustainable use of biodiversity is a societal choice; the final choices concerning biodiversity are resulting from consultations, negotiations and trade-offs amongst societal groups with different interests. The most successful way to achieve acceptance of strategies and plans has proven to be the consideration of the uneven and diverse composition of societies. Recent NBSAPs assessments have shown that the limited effectiveness of many NBSAPs has been due to the limited involvement of the public, in particular of under-represented groups such as women and local communities and the private sector. Considering the above, both during the workshop and in the follow-up activities particular attention has been and shall be devoted to the involvement of the public, local communities and private sector.

2.1.1 Identifying the Stakeholders

The approaches for identifying the stakeholders involved in the NBSAP of Iraq and their importance/roles have been focusing on:

- the **ecosystem approach** for identifying the stakeholders that are using/benefitting/impacting the natural resources;
- The stakeholders' roles and their **level of stake/interest** in the NBSAP and ecosystem services.

2.1.2 Ecosystem approach

As already said, too often the identification of stakeholders for a process or plan is a top-down approach that takes into account the higher institutional levels that are known or foreseen to play a decisional or financial role in the process. As the NBSAP deals with plans and actions to conserve and sustainably use biodiversity, an alternative and straightforward way to identify stakeholders is to adopt the ecosystem approach. Having identified main ecosystems of Iraq, the services they provide can also be listed and their status and trends assessed. By identifying the societal groups that are contributing to determine the status and trend of the ecosystem service or that are most likely to be affected by changes in their status or declining trends, the main stakeholders for the NBSAP can be determined. Relevant questions that were requested to be asked during the workshop were the following:

- Who uses or impacts on ecosystem services?
- Who benefits of the ecosystem service and who does not?
- Who wishes to benefit of the ecosystem service but is unable to do so?
- Who will be affected by a change in the status/trend/management of the ecosystem service?

The following Table provides a list of stakeholders identified during the Workshop according to the ecosystem approach.

Table 1: Stakeholder identified with the ecosystems approach

Who uses or impacts ES?	Who benefits from ES and who does not?	Who wishes to benefit but is unable to do so?	Who will be affected by changes in ES status/trends/management
Private Companies and multinationals: oil, wood, agriculture, fishery, wildlife trade, pharmaceutical	Private Companies and multinationals: oil, wood, agriculture, fishery, wildlife trade, pharmaceutical	Citizens of urban centres	Private Companies and multinationals: oil, wood, agriculture, fishery, wildlife trade, pharmaceutical
Industries	Wildlife products transformation and manufacturing companies	Displaced Local communities and indigenous people	Industries

Who uses or impacts ES?	Who benefits from ES and who does not?	Who wishes to benefit but is unable to do so?	Who will be affected by changes in ES status/trends/management
Local governments: Governorates (structure plans)	Professional hunters	Poor and physically/mentally marginalized people	Professional hunters
Provincial Councils Municipalities: (urbanization) Governorate authorities	Local commercial activities and trading companies		Local commercial activities and trading companies
Parliament: (laws and regulations)	Tourist operators		Wildlife products transformation and manufacturing companies
Kurdistan Regional Government	Local communities and indigenous people		
Ministries: Environment, Water resources (and CRIM), Agriculture, Health, Planning, electricity , justice, Interior, defense, foreign affairs, trading, labor and social affair, culture, tourism and antiquities, education, Women affairs, Human Rights, Industry, communication, municipalities, science & technology and Oil. Ministry of Finance	Research institutions and universities		Environmental NGOs
Local communities and indigenous people	General public and citizens		
Professional hunters Research institutions and universities	Citizens of urban centres Displaced Local communities and indigenous people		
General public and citizens	Poor and physically/mentally marginalized people		
Wildlife products transformation and manufacturing companies			

Who uses or impacts ES?	Who benefits from ES and who does not?	Who wishes to benefit but is unable to do so?	Who will be affected by changes in ES status/trends/management
Local commercial activities and trading companies			
*ES=Ecosystem Services			

2.1.4 Level of Stake for the identified stakeholders

Another way in which stakeholders can be classified is according to the degree/strength of interest they have in the process. With reference to the NBSAP the following stakeholders have been classified according to their level of 'stake' in relation to the NBSAP and to biodiversity planning.

Table 2: Level of stake for the identified stakeholders

Level of Stake		
High	Medium	Low
Ministries: Environment, Water resources (and CRIM), Agriculture, Health Planning, Oil, electricity, justice, defense, foreign affairs, trading, interior, Municipalities, Industry, science & technology	Ministries: Women affairs Culture, labor and social affair, tourism and antiquities	Religious leaders, education and communication organizations
Parliament – Environment & health committee	Ministries: Human Rights	
Kurdistan Regional Government		
Governorate authorities		
Local governments: Governorates	Local commercial activities and trading companies	Teachers and education staff
Provincial Councils	Wildlife products transformation and manufacturing companies	Celebrities
Research institutions and universities	Media and communication agencies	General Public
Financial agencies and mechanisms: GEF, EU, Donors		Citizens of urban centers
International organizations and Intergovernmental organizations (IGOs)		

Level of Stake		
High	Medium	Low
Private Companies and multinationals: oil, wood, agriculture, fishery, wildlife trade, pharmaceutical		
Local communities and indigenous people		
Professional hunters		Poor people
Displaced Local communities and indigenous people		

2.1.4 Summary of stakeholders identified

The two different methods for identifying and classifying stakeholders, according to different approaches, are functional to define for each of them relevant characteristics concerning their direct/indirect participation to the plan, or their level of interest in the subject or again the way in which they benefit or not of ecosystem services. This comparative analysis is useful to understand the role each stakeholder can play in the NBSAP, the best way in which they can be contacted and involved and the phase of the process in which they can better give their contribution.

The following Table gives a comprehensive list of all the stakeholders that have been identified, classified according to the five major groups identified by the CBD COP:

- Government Ministries
- Scientific community
- NGOs
- Private sector
- Indigenous and local communities

Table 3: Summary of stakeholders identified

Summary of Stakeholders identified				
Government Ministries and Institutional bodies				
1.Parliament (Health and environment committee)	2.Ministry of Environment (MoE) - Advisor office - Technical office - Biodiversity department - Environmental directorate in the governorates - Legal department	3.Ministry of Water Resources (MoWR) and CRIM (Center for the Restoration of Iraqi Marshlands) - National centre for water resources management. - Department of environmental studies. - Department of strategic studies.	4. Ministry of Trading - Department of trading and financial control - Department of planning and follow up	5.Ministry of Agriculture - General company for livestock services. - General company for horticulture and forestry. - General authority for fish resources development. - General authority for examining and certification of seeds. - General authority for palms. - Department of Planning and follow-up
6. Ministry of Oil - Department of studies, planning and follow- up - Department of Environment :	7. Ministry of Planning - Department of regional and local development/ department of sustainable development. - Department of planning sectors.	8. Ministry of Health - Department of public health. - The unit of health, education awareness and protection.	9. Ministry of Interior - Directorate of environmental police	10. Ministry of justice - Council of state. Implementation department

Summary of Stakeholders identified				
- Division of water pollution control. - Division of air pollution control. - Division of soil pollution control. - Division of environmental planning and radiometric survey	- The central statistic directorate			
11. Ministry of electricity Planning and researches	12. Ministry of Foreign Affairs - Department of International cooperation, organization and conferences. - Department of Environment. - Department of Conventions. - Department of sustainable development. - Department of Political planning	13. Ministry of science and technology - Department of material research / oil and petrochemicals research. - Department of environment and water/ environmental researches	14. Ministry of Defense Directorate of military engineering	15. Ministry of higher education and scientific research - Department of studies, planning and follow-up. - Department of pilot projects management- Division of the development projects
16. Ministry of Labor and social affair - Department of planning and follow-up	17. Ministry of Industry and minerals - Department of industrial development and Regulation - department of environment	18. Ministry of tourism and antiquities - General Authority for Antiquities	19. Ministry of Culture - Department of cultural relations	20. The State Ministry for Women's Affairs
21. Ministry of education - Iraqi teachers association - Iraqi lecturer union	22. Ministry of Human Rights - National center for human rights Legal directorate	23. Ministry of Finance - Planning and follow up department	24. Ministry of communication - Directorate of planning and follow up	25. Provincial Councils - Health and environment committee / Baghdad provincial council and the rest of the provinces. - Municipal councils in Baghdad and other provinces
26. Kurdistan Regional Government - Authority of protection and improvement of the environment.	27. Governorate Authorities - Advisory board – the prime minister council	28. Municipalities - General directorate of municipalities - Department of the environment. - General directorate of planning and follow-up.	29. International organizations and Intergovernmental organizations (IGOs)	30. Financial agencies and mechanisms: GEF, EU, Donors
Scientific community				
31. Research institutions and universities				
Baghdad university - College of science / Biotechnology department. - Genetic engineering and biotechnology institute. - College of biology for girls – Biology department.	Al- Nahrain university: - Biotechnology department. - Center of researches and biotechnology.	The university of Technology -The environmental research center - The center of technological and renewable energy.	Babel university / The center of local environmental research.	Dhi Qar university / The center of Marshland researches.

Summary of Stakeholders identified				
- College of biotechnology / Department of Fish and Marine Resources. - College of agriculture. - College of engineering – The consultant office of Environment projects and researches.				
University of Karbala	University of Al – Muthanna	University of Al – Najaf	University of Al- Qadisiya	University of Diayla
University of Salah Ad Din	University of Al-Anbar	University of Wasit	University of Arbil	Al - Basrah university: College of agriculture/ Department of horticulture and palm / biology department. Marine science center.
Al- Sulaimaniyah university / College of agriculture.	Al- Mostansria university: College of science / microbiology department	Al- Mosel university -College of environment sciences and their technologies. -The center of environmental research and Pollution control. -College of forest and agriculture / forest Department		
32.Teachers , education staff & International Experts				
NGOs				
33.Professional hunters		34.Environmental NGOs		
		<p>Development of health and environmental awareness association.</p> <ul style="list-style-type: none"> - Iraqi association for technologies and alternative energy sources - Iraqi association for genetic resources and environmental maintenance - Iraqi medical plants science association. - Iraqi association of date palm. - Iraqi association for plant protection. - Iraqi association of hunting and Environment protection. - Aden association of Marshes development. - Iraqi Environment Protection association. - Association of population protection from environmental pollution. - Social and Environment organization. - Iraq council for fishing support. - Together association of human and environment protection. - Iraqi palm farmers association. - Association of enthusiast and professionals of Iraqi fishing. - Roaaya center for research and strategic studies. - Iraqi care and Humane Society. - Iraqi fishermen Association 		
Private sector				
35.Private Companies and multinationals: oil, wood, agriculture, fishery, wildlife trade, pharmaceutical	36.Wildlife products transformation and manufacturing companies	37.Local commercial activities and trading companies	38.Industries	39.General Public

Summary of Stakeholders identified				
- Iraqi company for manufacturing and marketing of dates. - Samarra Pharmaceutical Company - Oil company SOMO (civil-Government). - General Company for Grain Processing				
40.Citizens of urban centres	41.Media and communication agencies - Iraq media network	42.Celebrities	43.Religious leaders	44.Poor and - physically/mentally marginalized people
Indigenous and local communities				
45.Local communities and indigenous people	46.Poor people		47.Displaced Local communities and indigenous people	

The Stakeholders listed in the above Table represent a overall picture of the main stakeholders groups identified during the Stocktaking Workshop.

With a view to the above, the following Table identifies a list of stakeholders for Iraq that will be selected for the participation in the consultation process to identify the national priorities for setting national targets and indicators.

Table 4: Selected stakeholders for the consultation process

Stakeholder	Department/Agency	Role in the strategy
Ministries		
Ministry of Municipalities and Public Works	General directorate of planning and follow-up. General directorate of urban planning. General directorate of municipalities - Department of the environment.	Consulting
Ministry of Health	Technical matter directorate. Department of public health. Legal, financial and administrative department.	Informing and Consulting
Ministry of Industry	Department of industrial development and Regulation - Department of environment. Legal department.	Informing and Engagement
Ministry of Defense	Directorate of military engineering. Directorate of planning.	Informing and Engagement
Ministry of Labor and social affair	Department of planning and follow-up. Department of social welfare. Department of labor and vocational training. Legal department.	Informing
Ministry of higher education and scientific research	Department of studies, planning and follow-up. Department of research and development. Department of scientific affairs. Department of pilot projects management- Division of the development projects. Department of marketing and cooperation. Department of documentation and information management – Division of research and service. Research institutions and Universities Baghdad university / College of education of pure science. Baghdad university / College of agriculture.	Engagement and consulting

Stakeholder	Department/Agency	Role in the strategy
	Baghdad university / College of engineering – The consultant office of Environment projects and researches. Baghdad university / College of science / Biotechnology department. Baghdad university / Genetic engineering and biotechnology institute. Baghdad university / College of science / Biology department. Baghdad university / College of biology for girls – Biology department. Baghdad university / The Center of urban and regional planning. Baghdad university / Department of Fish and Marine Resources Al- Mosel university / College of environment sciences and their technologies Al- Mosel university / The center of environmental research and Pollution control. Al- Mosel university / College of forest and agriculture / forest Department. Al- Mostansria University / Al- Mostansria Center for Arabic and International studies. Technological university / The environmental research center / The center of technological and renewable energy. Babel university / The center of local environmental research. Dhi Qar university / The center of Marshland researches. Al- Nahrain university / biotechnology department. Al- Mostansria university / biotechnology department. Al - Basrah university/ Collage of agriculture : Department of horticulture and palm / biology department. Marine science center. Center of research and natural history museum. The unit of the medicinal plants research. Department of agricultural economy. Al- Sulaymaniyah university / College of agriculture.	
Ministry of Human Right	National center for human rights Legal directorate	Informing
The State Ministry for Women's Affairs	The state ministry for women's affairs	Informing
Ministry of Justice	Department Of justice planning. Council of state. Judicial relation department. Iraqi realities department. Implementation department.	Consulting
Ministry of Oil	Legal Department. Department of studies, planning and follow- up Department of Environment : - Division of water pollution control. - Division of air pollution control. - Division of soil pollution control. - Division of environmental planning. and radiometric survey. Department of Planning.	Collaboration and Engagement
Ministry of Foreign Affairs	Department of International cooperation, organizations and conferences. Department of Environment. Department of Human right. Department of Conventions. Department of economic. Department of sustainable development. Department of Neighboring countries. Legal department. Department of Political planning.	Consulting
	General company for livestock services.	

Stakeholder	Department/Agency	Role in the strategy
Ministry of Agriculture	General company for horticulture and forestry. General company for industrial crops. General authority for fish resources development. General authority for examining and certification of seeds. General authority for palms. General authority for plant protection. Legal department. Department of Planning and follow- up.	Engagement and consulting
Ministry of Water Resources	Marshes restoration centre. General authority for maintenance of irrigation and drainage projects. Legal departments and contracts. National centre for water resources management. Department of environmental studies. Department of strategic studies.	Engagement and consulting
Ministry of science and technology	Department of material research / oil and petrochemicals research. Department of environment and water/ environmental researches. Department of Agricultural research.	Engagement and consulting
Ministry of Planning	Department of regional and local development/ department of sustainable development. Department of planning sectors.	Engagement and consulting
Ministry of Culture	Department of cultural relations.	Informing
Other Institutions		
Iraqi Parliament	Health and environment committee	Consulting
Provincial Councils	Health and environment committee / Baghdad provincial council and the rest of the provinces. Municipal councils in Baghdad and other provinces.	Informing
Kurdistan Regional Government	Authority of protection and improvement of the environment.	Engagement and consulting
Intergovernmental Organizations	World health organization (WHO). Food and agriculture organization of the united nations (FAO). Global environmental facility (GEF). United nations educational, scientific and cultural organization(UNESCO). Foundation of united for relief and sustainable development (F.U.A.D).	Consulting
Media and Communications Agencies	Iraqi media network. Al-Iraqia satellite channel/ www.iraqimedianet.net Radio station /www.iraqhurr.org. Azzaman daily newspaper /www.azzaman.com. National Iraqi news agency /www.ninanews.com. International medial channel CNN /www.arabic.cnn.com. Al-Sabah newspaper /www.alsabah.iq.	Informing
The Scientific Community	Development of health and environmental awareness association. Iraqi association for technologies and alternative energy sources and emerging / irq_appi_phy@yahoo.com. Iraqi association for genetic resources and environmental maintenance / naturedesigns@yahoo.com. Iraqi medical plants science association / alniaimi45@yahoo.com. Iraqi association of date palm. Iraqi association for plant protection. Nature Iraq organization (NI). Natural history museum.	Consulting

Stakeholder	Department/Agency	Role in the strategy
Non-governmental organization (NGOs)	Iraqi association of hunting and Environment protection. Aden association of Marshes development. Iraqi Environment Protection association. Association of population protection from environmental pollution. Social and Environment organization. Iraq council for fishing support. Together association of human and environment protection. Iraqi palm farmers association. Association of enthusiast and professionals of Iraqi fishing. Roaya center for research and strategic studies. Iraqi care and Humane Society.	Engagement
Tourist companies	Iraq Al-Rafidain Company for travel and tourism (an example of the Iraq tourist companies).	Informing
Private companies and multinational	Iraqi company for manufacturing and marketing of dates. Samarra Pharmaceutical Co. Oil company SOMO (civil -Government). General Company for Grain Processing.	Informing and Engagement
Agencies and Financial mechanisms	Global Environment Facility (GEF), civil society organizations(NGOs).	Consulting and Engagement
The private sector	Internet services companies and telecommunications companies such as Zain, Asia, Earth Link	Informing and Engagement
Individuals		
The general public	-	Informing
Celebrities	-	Informing
Citizens of urban centers	-	Informing
International experts	World Bank experts. Intergovernmental experts (UNEP + UNDP).	Consulting
Indigenous and local communities	Local marshes population. People of Western desert Farmers stationed on the river banks.	Informing and Engagement
Religion leaders	Heads of Shiite, Sunni and Christian Endowments.	Informing
Professors, teachers and the teaching staff	Professors, lecturers in colleges of science and agriculture and environmental sciences. Teachers of biological departments in universities, institutes and Iraqi research centers.	Engagement
Professional hunters	Iraqi fishermen Association	Engagement

2.1.5 Involvement strategies and participation in the NBSAP development process

The involvement strategy for the various stakeholders has to be targeted specifically to meet the particular nature and driving force/underlying interests of each of them. Also the phase of the planning process to which each stakeholder will contribute, will vary accordingly. To clearly represent and summarize these considerations the following Table has been used.

Stakeholder	Relative institution	Ecosystem Approach	Level of Stake	Strategy	Phase of the planning process	The role
1.Parliament	Heath and environment committee	Impacts ES through laws/regulations/policies	High	-	Consultation	Supporting the ratification and implementation process of the NBSAP
2.Ministry of Environment (MoE)	- Advisor office - Technical office-Biodiversity dept. - Environmental directorate in the governorates - legal department	Impacts ES through laws/regulations/policies	High	Nominate one member to represent the Ministry in the NBSAP Steering Committee	Consultation and Planning management	Management of the NBSAP
5.Ministry of Agriculture	<ul style="list-style-type: none"> • General company for livestock services. • General company for horticulture and forestry. • General authority for fish resources development. • General authority for examining and certification of seeds. • General authority for palms. Department of Planning and follow- up.	Impacts ES through laws/regulations/policies	High	Nominate one member to represent the Ministry in the NBSAP Steering Committee	Consultation and Planning	Engagement in the planning process to maintain the ecosystem
3.Ministry of Water Resources (MoWR) CRIM (Center for the Restoration of Iraqi Marshlands)	<ul style="list-style-type: none"> • Marshes revival centre. • National centre for water resources management. - Department of environmental studies. - Department of strategic studies. 	Impacts ES through laws/regulations/policies and implementation of measures	High	Nominate one member to represent the Ministry in the NBSAP Steering Committee	Consultation And Engagement	Providing the plans to supply the ecosystems with the required water resources to be maintained - Engagement in the process of water resources supply of the Marshlands
6.Ministry of Oil	<ul style="list-style-type: none"> • Department of studies, planning and follow- up: <ul style="list-style-type: none"> ▪ Department of Environment : 	Impacts ES through laws/regulations/policies	High	Nominate one member to represent the Ministry in the NBSAP Steering Committee	Consultation Planning and engagement	Providing the plans (or engagement in the planning process) to avoid the negative effects of the oil

	<ul style="list-style-type: none"> -Division of water pollution control. - Division of air pollution control. - Division of soil pollution control. - Division of environmental planning. and radiometric survey. 					pollutants on the ecosystems.
7.Ministry of Planning	<ul style="list-style-type: none"> • Department of regional and local development/ department of sustainable development. • Department of planning sectors. <p>The central static directorate.</p>	Impacts ES through laws/regulations/policies	High	Nominate one member to represent the Ministry in the NBSAP Steering Committee	Consultation, Planning, and engagement	Consultation about the development of the NBSAP, and participate in engaging plans related to ecosystem and biodiversity conservation into other related governmental institutions strategies and plans
8.Ministry of Health	<ul style="list-style-type: none"> • Department of public health. • The unit of health, education awareness and protection. 	Impacts ES through laws/regulations/policies	High	Nominate one member to represent the Ministry in the NBSAP Steering Committee	Consultation and Planning Informing and engagement	Promote the consideration of biodiversity issues in health programmes and plans / Integrate Biodiversity issues into their strategies, Raising of the awareness about the protection of the ecosystems.
9.Governorate Authorities	Advisory board – the prime minister council	Use and impact through policy and implementation of plans	High	Use the ecosystem approach to group Iraqi Governorates and nominate one member for each group (e.g. it should represent an ecological unit/region with similar features), the member shall be	Consultation, Planning and Implementation	Supporting the implementation of the NBSAP

				part of the NBSAP Steering Committee		
10. Municipalities, Ministry of Municipalities and Public Works	<ul style="list-style-type: none"> • General directorate of municipalities - Department of the environment. General directorate of planning and follow-up. 	Use and impact through policy and implementation of plans	High	Establish a permanent committee of municipalities that shall meet and inform at Governorate level and inform the governorate representative at the Steering Committee	Consultation, Planning and Implementation	Engagement in the planning process to avoid the side effects of the pollutants on the ecosystems. Take the biodiversity issues into their consideration by Integrating it into their policies and plans
11. International organizations and Intergovernmental organizations (IGOs)	<ul style="list-style-type: none"> • UNEP • Global environmental facility (GEF). • World health organization (WHO). • United nations educational, scientific and cultural organization(UNESCO). 	-	High	Identify important/ desirable IGOs to involve in the NBSAP and invite them in the Steering Committee	Consultation and Planning	Providing of the required consultation about the ecosystem maintaining processes Providing the financial support.
12. Ministry of finance	Follow and planning department	-	High		Consultation and Planning	Providing the financial support to implement the NBSAP
14. Ministry of higher education and scientific research	<ul style="list-style-type: none"> • Department of studies, planning and follow-up. • Department of pilot projects management- Division of the development projects. 	Impact, use and benefit through field and labs research	High	Select one department/institution for the Steering Committee	Consultation and Implementation	Technical support to prepare, plan and select the correct tools to maintain the ecosystems, in addition to providing the information and researches about the ecoregions .
15. Research institutions and universities	<ul style="list-style-type: none"> • Research institution and Universities : • Baghdad university : 	Impact, use and benefit through field and labs research	High	Select one research institutions relevant to the NBSAP for the Steering Committee	Consultation and Implementation	Technical support to prepare, plan and select the correct tools to maintain the

	<p>1- College of science / Biotechnology department.</p> <p>2- Genetic engineering and biotechnology institute.</p> <p>3- College of biology for girls – Biology department.</p> <p>4- College of biotechnology / Department of Fish and Marine Resources.</p> <p>5- College of agriculture.</p> <p>6- College of engineering – The consultant office of Environment projects and researches.</p> <p>• Al- Nahrain university:</p> <p>1-Biotechnology department.</p> <p>2-Center of researches and biotechnology.</p> <p>• Al- Mostansria university:</p> <p>College of science / microbiology department</p> <p>• The university of Technology</p> <p>1-The environmental research center</p> <p>2-The center of technological and renewable energy.</p> <p>Al- Mosel university :</p> <p>1-College of environment sciences and their technologies.</p> <p>2-The center of environmental research and Pollution control.</p> <p>3-College of forest and agriculture / forest Department.</p> <p>• Babel university / The center of local environmental research.</p>					<p>ecosystems in addition to providing the information and researches about the ecoregions according to each University locations</p>
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	<ul style="list-style-type: none"> • Dhi Qar university / The center of Marshland researches. • University of Karbala • University of Al – Muthanna • University of Al – Najaf • University of Al- Qadsiya • University of Diayla • University of Salah Ad Din • University of Al-Anbar • University of Wasit • University of Arbil • Al - Basrah university: <ul style="list-style-type: none"> ▪ College of agriculture/ Department of horticulture and palm / biology department. ▪ Marine science center. <p>Al- Sulaymaniyah University / College of agriculture.</p>					
16. Teachers and education staff, Ministry of education	Iraqi teachers association Iraqi lecturer union	- Impact, use and benefit through field and labs research	High	-	Consultation	Engagement in the public awareness process
17. Professional hunters	<ul style="list-style-type: none"> • Iraqi association of hunting and Environment protection. 	Impact, use and benefit through taking from the wild	Low	Propose this association for the Steering Committee	Consultation	Commitment and Implementation of the prescription of laws to protect the wild organisms
18. Environmental NGOs	<ul style="list-style-type: none"> • Development of health and environmental awareness association. • Iraqi association for technologies and alternative energy sources and emerging. • Iraqi association for genetic resources and environmental maintenance 	Affected by changes in ES status/trends/management	Low	All environmental NGOs of Iraq shall be invited to be part of the Steering Committee	Consultation Planning and Implementation	Engagement in public awareness process + the consultation about the NBSAP preparation process.

	<ul style="list-style-type: none"> • Iraqi medical plants science association. • Iraqi association of date palm. • Iraqi association for plant protection. • Aden association of Marshes development. • Iraqi Environment Protection association. • Association of population protection from environmental pollution. • Social and Environment organization. • Iraq council for fishing support. • Together association of human and environment protection. • Iraqi palm farmers association. • Association of enthusiasts and professionals of Iraqi fishing. • Roaaya center for research and strategic studies. • Iraqi care and Humane Society. • Iraqi fishermen Association 					
19.Private Companies and multinationals: oil, wood, agriculture, fishery, wildlife trade, pharmaceutical	<ul style="list-style-type: none"> • Iraqi company for manufacturing and marketing of dates. • Samarra Pharmaceutical Co. • Oil company SOMO (civil-Government). • General Company for Grain Processing. 	Use, benefit and will be affected by changes in ES status/trends/management	Low	Invite them in the Steering Committee	Consultation and Implementation	Engagement in the implementation of the NBSAP.

20.Wildlife products transformation and manufacturing companies		Use, benefit and will be affected by changes in ES status/trends/management	Medium	Identify these companies and, if present, the national association representing them	Consultation	engagement in the implementation of the NBSAP
21.Local commercial activities and trading companies , Ministry of Trading	<ul style="list-style-type: none"> Department of trading and financial control Department of planning and follow up. 	Use, benefit and will be affected by changes in ES status/trends/management	low	Survey the presence of small-scale economies and commercial companies through the Municipality/Governorate Permanent Committee	Consultation	Consultation about the maintaining process to protect the ecosystem (e.g engagement in the convention of Cites)
22.Industries Ministry of Industry and minerals	Department of industrial development and Regulation - department of environment.	Impact and will be affected by changes in ES status/trends/management	High	Identify main industrial productions and discover if there are national associations representing them	Consultation	Implementation of the NBSAP in general and the issues that's relative to ecosystems in specific
23.General Public		Use, impact, benefit and will be affected by changes in ES status/trends/management	low	Awareness raising through local authorities	Consultation	Engagement in the process of public awareness.
24.Citizens of urban centres		Wish to benefit but are unable	Low	Awareness raising through local authorities	Consultation	Engagement in the process of public awareness.
25.Media and communication agencies	<ul style="list-style-type: none"> Iraqi media network. 	-	Low	Identify main press and television media and involve them in the process	Consultation	Engagement in the process of public awareness.
26.Celebrities		-	Low	List and contact some of them for public awareness campaigns	Consultation	Engagement in the process of public awareness.
27.Religious leaders		-	Low	List and contact some of them for public awareness campaigns	Consultation	Engagement in the process of public awareness and to encouragement the protection process of the ecosystem

28.Poor and physically/mentally marginalized people		Wish to benefit but are unable	Low	-	Consultation	Engagement in the process of public awareness.
29.Local communities and indigenous people		Use, benefit and will be affected by changes in ES status/trends/management	Low	Establish, at governorate level, a Permanent Committee of indigenous people and local communities, that will represent all the communities found/identified inside the governorate, one member for each governorate shall be nominated to represent the communities in the Steering Committee	Consultation Planning and Implementation	Engagement in the process of public awareness.
30.Poor people		Do not benefit/Wish to benefit but are unable	Low	-	-	Engagement in the process of public awareness.
31.Displaced Local communities and indigenous people		Do not benefit/Wish to benefit but are unable	Low	-	Consultation	Engagement in the process of public awareness.
32.Ministry of Interior	Directorate of environmental police	Use and impact through policy and implementation of laws	high	Identify and stop the current Violations towards Ecosystems , Nominate one member to represent the Ministry in the NBSAP Steering Committee	Implementation	Engagement in the implementation of the NBSAP in general and in the implementation of the commitments towards the ecosystems
33. Ministry of justice	<ul style="list-style-type: none"> • Council of state. • Implementation department. 	Use and impact through policy and implementation of laws	high	Identify the current Violations towards Ecosystems , Nominate one member to represent the Ministry in the NBSAP Steering Committee	Consultation	Ensuring of the commitment of NBSAP

34. Ministry of electricity	Planning and researches	Impact and will be affected by changes in ES status/trends/management	High	Identify main power plants and invite the Ministry in the Steering Committee .	Engagement	Involvement in the protection of the ecosystems against the effects from the power stations
35. Ministry of Foreign Affairs	<ul style="list-style-type: none"> • Department of International cooperation, organizations and conferences. • Department of Environment. • Department of Conventions. • Department of sustainable development. Department of Political planning.	Use and impact through policy and commitment of national and international laws	High	List and contact them in the planning process of the NBSAP	Consultation	Engagement in the development of the NBSAP
36. Ministry of science and technology	<ul style="list-style-type: none"> • Department of material research / oil and petrochemicals research. • Department of environment and water/ environmental researches 	Impact, use and benefit through field and labs research	High	Invite them to be a part in the Steering Committee	Consultation and Engagement	Technical support to prepare, plan and select the correct tools to maintain the ecosystems in addition to providing the information and researches about the ecoregions .
37. Ministry of Defense	Directorate of military engineering.	Use and impact through implementation of laws	High	-	Informing and engagement	Implementation of the NBSAP in ecosystems under military jurisdiction
38. Ministry of Labour and social affair	<ul style="list-style-type: none"> • Department of planning and follow-up. • Department of labor and vocational training. 	Wish to benefit	Medium	-	Informing	Public awareness raising and achievement of the Poverty reduction target of the NBSAP
39. Ministry of tourism and antiquities	• General Authority for Antiquities	Use, benefit and will be affected by changes in ES status/trends/management	Medium	List and contact some of them for public awareness campaigns	Informing	Integrate biodiversity issues into their strategies.

						Informing about the ecosystems that have touristic importance
40. Ministry of Culture	<ul style="list-style-type: none"> Department of cultural relations. 	Use, benefit and will be affected by changes in ES status/trends/management	Medium	List and contact some of them for public awareness campaigns	Informing	Integrate biodiversity issues into their plans Informing about the ecosystems that have cultural importance
41. The State Ministry for Women's Affairs	<ul style="list-style-type: none"> The state ministry for women's affairs 	Impact and will be affected by changes in ES status/trends/management	Medium	List and contact some of them for public awareness campaigns	Informing	Informing about gender issues and integration in the NBSAP
42. Ministry of education	Iraqi teachers association Iraqi lecturer union	Impact and will be affected by changes in ES status/trends/management	Low	List and contact some of them for public awareness campaigns	Informing	Informing and delivering knowledge and awareness to the next generations about ecosystem protection and biodiversity issues
43. Ministry of Human Rights	<ul style="list-style-type: none"> National center for human rights Legal directorate 	Impact and will be affected by changes in ES status/trends/management	Low	List and contact some of them for public awareness campaigns	Informing	Informing about human right issues that might arise within the context of the NBSAP (e.g. local and indigenous communities displacement and abuses).
44. Ministry of communication	<ul style="list-style-type: none"> Directorate of planning and follow up. 	Wish to benefit	Low	List and contact some of them for public awareness campaigns	Informing	Informing (public awareness tool)
45. Provincial Councils	<ul style="list-style-type: none"> Health and environment committee / Baghdad provincial council and the rest of the provinces. Municipal councils in Baghdad and other provinces. 	Use and impact through implementation of laws	High	Nominate one member to be a part in the Steering Committee	Informing	Informing (public awareness tool)
46. Kurdistan Regional Government	<ul style="list-style-type: none"> Authority of protection and improvement of the environment. 	Use and impact through implementation of laws	High	Nominate one member to be a part in the Steering Committee	Engagement and consultation	Consultation about the NBSAP and integrate biodiversity and ecosystems issues into

						their strategies, plans and policies
47. Financial agencies and mechanisms: GEF, EU, Donors	-	-	High	Identify important financial agencies other than the existing and contact them for additional fundraising activities	Consultation and Planning	Providing the financial support to implement the NBSAP

Table 5: Strategy of participation in the NBSAP process

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2.1.6 Overall timeline of the project and involvement of the Stakeholders at relevant steps

In the following paragraph the global project “First NBSAP for Iraq and Development of Fifth National Report to the CBD”, within which the stocktaking and assessment phase forms just one of the 5 components, has been broken down into the main outcomes and milestones and for each of them the stakeholders to be involved have been identified in a separate column.

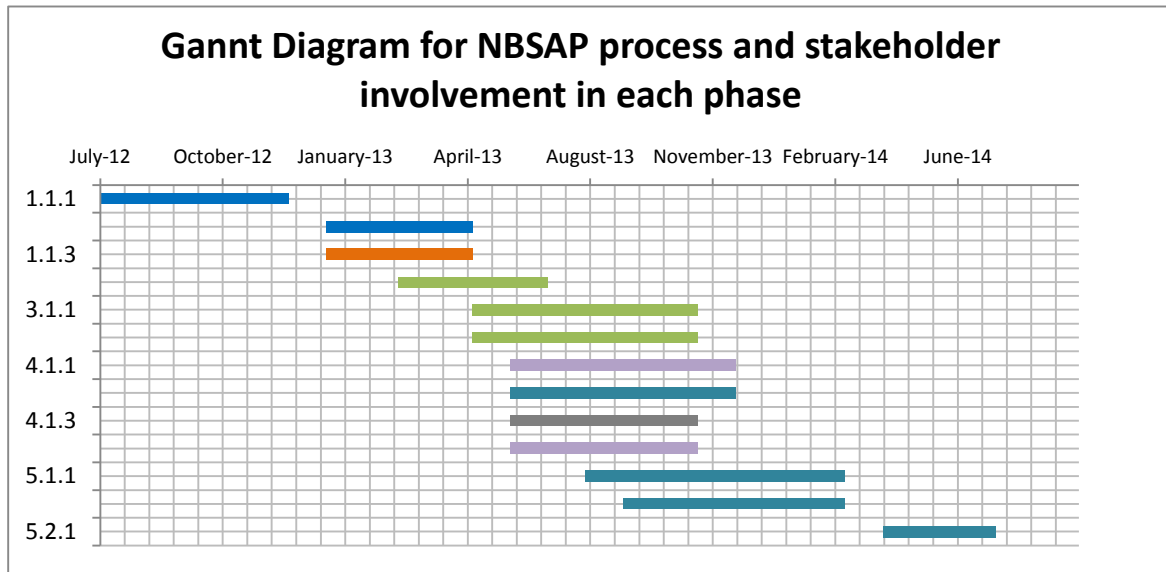
Table 6: Milestones of the project and project components

COMPONENT	INDICATOR/MILESTONE	STAKEHOLDER GROUPS INVOLVED
COMPONENT 1: STOCKTAKING AND ASSESSMENT		
Outcome 1.1 Improved and more realistic decision making on Biodiversity (BD) conservation by the relevant Ministries of Government of Iraq (GoI), resulting from improved baseline data and better understanding of the current baseline situation	1.1.1 Comprehensive stakeholder inventories and elaboration of best consultation modalities	Government Ministries and institutional bodies
	1.1.2 Completed reports from reviews of existing national plans & policies on Biodiversity conservation	Government Ministries and institutional bodies
	1.1.3 Reports emanating from review of causes and consequences of BD loss, and value of BD to human well being	Government Ministries and institutional bodies Scientific Community Indigenous People
COMPONENT 2 : SETTING NATIONAL TARGETS, PRINCIPLES, & MAIN PRIORITIES OF THE STRATEGY		
Outcome 2.1 National implementation of the Convention on Biological Diversity (CBD) is improved and enhanced as status of biodiversity, and measurable targets for conservation and sustainable use are operationalised in Iraq at national and sub-national levels, and mainstreamed into other relevant sectors and development plans	2.1.1 Iraq-specific BD conservation targets, principles, and priorities are developed in a consultative fashion, according to best international standards of practice and based upon CBD guidance	Government Ministries and institutional bodies Scientific Community Indigenous People NGOs Private Sector
COMPONENT 3: STRATEGY AND ACTION PLAN DEVELOPMENT		
Outcome 3.1 Iraq adopts and commences to use country-specific indicators and targets	3.1.1 The preliminary NBSAP report is shared with relevant stakeholders and integrated into sectoral development, poverty reduction, and climate change plans in Iraq	Government Ministries and institutional bodies Scientific Community Indigenous People NGOs Private Sector
	3.1.2 Other sectoral development, poverty reduction, and climate change plans reflecting NBSAP targets	Government Ministries and institutional bodies Scientific Community Indigenous People NGOs Private Sector
COMPONENT 4: DEVELOPMENT OF IMPLEMENTATION PLANS AND RELATED ACTIVITIES		
Outcome 4.1 GoI BD Budgets are adjusted as a result of an improved understanding of existing BD conservation capacity, available technology, and BD conservation gaps	4.1.1 Costed Capacity Development Plan for NBSAP Implementation is in place	Government Ministries and institutional bodies Private Sector NGOs
	4.1.2 Technology Needs Assessment Report is in place	Government Ministries and institutional bodies NGOs Scientific Community
	4.1.3 Costed Communication Strategy to support the NBSAP in place	Government Ministries and institutional bodies NGOs

COMPONENT	INDICATOR/MILESTONE	STAKEHOLDER GROUPS INVOLVED
		Media
	4.1.4 Costed Resource Mobilisation Plan for NBSAP implementation is in place	Government Ministries and institutional bodies NGOs Private Sector
COMPONENT 5: INSTITUTIONAL, MONITORING, REPORTING AND EXCHANGE		
Outcome 5.1 Major stakeholders and the general public are better informed and enabled to lobby for improved BD Conservation measures in Iraq Outcome 5.2 The CBD Conference of the Parties (COP) uses the results of the project to support decision making to improve BD conservation actions in Iraq	5.1.1 National BD Coordination Structures in place and Operational	Government Ministries and institutional bodies NGOs Scientific Community
	5.1.2 National CHM is in place and operational	Government Ministries and institutional bodies NGOs Scientific Community
	5.2.1 Fifth National Reports submitted to the SCBD by the recommended COP 10 deadline	Government Ministries and institutional bodies NGOs Scientific Community

The following Diagram proposes a global timeline for the two-year framework of the project, the different colors of the lines for each milestone are representing a different group of stakeholders to be involved in that specific phase of the project.

Figure 1: Gantt Diagram for the Stakeholder involvement



- Government ministries and institutional bodies
- Government Ministries and institutional bodies, Scientific Community, Indigenous People
- Government Ministries and institutional bodies, Scientific Community, Indigenous People, NGOs, Private Sector
- Government Ministries and institutional bodies, Private Sector, NGOs
- Government Ministries and institutional bodies, NGOs, Scientific Community
- Government Ministries and institutional bodies, NGOs, Media

3 Task 2 – Biodiversity Assessment

3.1 National Biodiversity Assessment and its links with human well being and ecosystem services

The location, topography, and climate of Iraq created considerable panorama of various habitats and landscapes, and this case was reflected obviously on the biological diversity of the country. In addition, the wide spectrum of eco-regions that the country has, provided additional dimension that enriched the species diversity in this area of the world. Iraq includes nine different eco-regions of which six are primary eco-regions.

An eco-region is defined as (according to the World Wildlife Fund (2010), a) as: A large area of land or water that contains a geographically distinct assemblage of natural communities that:

- (a) share a large majority of their species and ecological dynamics;
- (b) share similar environmental conditions, and;
- (c) interact ecologically in ways that are critical for their long-term persistence.

This wide range of primary and secondary eco-regions created different types of habitat being terrestrial or aquatic of which each of them has its own sub-classification of specific habitats with their own specifications. Subsequently under the terrestrial ecosystem, for instance, there is wide spectrum of mountains, hilly, semi-desert, and desert areas. Also, the wetlands ecosystems are represented by streams, rivers (Tigris, Euphrates, and Shat Al-Arab), lakes (like Tharthar, Dukan, and Razzaza etc ...), marshlands (like the Central Marshes, Dalmaj, and Hawizeh etc...), as well as the marine ecosystem represented by the Iraqi shoreline and the territorial marine waters at the upper part of the Arabian Gulf.

All of these different types of habitats and ecosystems are tightly linked to the life of the man in Iraq. Humans inhabit where the rich areas in biodiversity are, and the richer areas in biodiversity and natural resources are, the more human population can be found. This might illustrate the density of human populations close to the wetlands ecosystems in comparison with desert habitat. This gives direct indicator to the importance of the Biodiversity and to the importance of the services it provides to the human well being.

The table below summarizes the status of the main eco-regions in Iraq along with their specifications and the general services they provide to the human well being.

Table 7: Status of main eco-regions of Iraq

Habitats / Ecosystems	Specifications	Area	National Status	General services it provides for human*
Mesopotamian Marshlands	Critical/Endangered	35600 km ²	Severely Threatened	Food, shelter, fresh water, fuel, Reducing climate impact, refreshing the ecosystem by purifying the water
Arabian desert	Critical/Endangered	1851300 km ²	Threatened	Food, shelter, and fuel
Mesopotamian shrub desert	Vulnerable	211000 km ²	Partially Threatened	Food, shelter, and fuel
Steppe Habitats of the middle east	Vulnerable	132300 km ²	Partially Threatened	Food, shelter, and fuel
Zagros Mountain Forests	Critical/Endangered	397800 km ²	Threatened	Food, shelter, fresh water, and fuel
Coastal marine habitats	NA	approximately 105 km of coastline and 716 km ² of territorial seas	Threatened	Food, employment opportunities, recreation, eco-tourism

* This is discussed with more details below.

3.2 Current status and trends of Biodiversity

3.2.1 Current status and trends of habitats

Biodiversity of Iraq, including different components of habitats and species, faces various kinds of threats. The threats types and severity differs from one eco-region to another and from one species to another.

Due to the lack of current surveys and fieldworks on the national level, it seems that it is difficult to assess the current status and trends of ecosystems and if habitats are 'healthy'. However, an attempt to have general understanding was initiated by the stakeholders to evaluate the current status of these ecosystems along with their general trend.

The table below summarizes, however generally, the current status and the size of threat of different kinds of habitats (categorized under eco-regions) in Iraq.

Table 8: Main habitats of Iraq and threat assessment

Habitats / Ecosystems	Status	Threatened?
Marshlands	Known	Seriously
Arabian desert	Unknown	Partially
Mesopotamian shrub desert	Moderately known	Partially
Steppe Habitats of the middle east	Unknown	Partially
Zagros Mountain Forests	Medium	Partially
Coastal marine habitats	Known	Seriously

3.2.2 Current status and trends of species

Due to the very limited and scattered studies on the status of flora and fauna species in Iraq, no good understanding about the status of these species is present currently; subsequently, their trend in Iraq. It is very essential to have that level of knowledge about the status (with estimated population) in order to know the trend of these species, and then to reevaluate the conservation status in order to set the national conservation priorities. This is one of the essential cornerstones that the Biodiversity focuses on.

The table below might contribute in illustrating basic knowledge about the status and the trend of the listed threatened species

Table 9: Status and trend of threatened species

Species	Conservation Status	Knowledge about this species	Trend
Basrah Reed Warbler (<i>Acrocephalus griseldis</i>)	EN and endemic	Partially	unknown
Marbled Teal (<i>Marmaronetta angustirostris</i>)	VU	Partially	unknown
Houbara Bustard (<i>Chlamydotis macqueenii</i>)	VU	Partially	declining
Egyptian Vulture (<i>Neophron percnopterus</i>)	EN	Partially	unknown
Red-breasted goose (<i>Branta ruficollis</i>)	EN	Partially	declining
Dalmatian Pelican (<i>Pelicanus crispus</i>)	VU	Partially	unknown
Iraq Babbler (<i>Turdoides altirostris</i>)	region endemic	Partially	unknown
Maxwell's otter (<i>Lutra perspicillata maxwelli</i>)	VU and endemic	Partially	declining
Euphrates softshell turtle (<i>Rafetus euphraticus</i>)	EN	Partially	unknown

Species	Conservation Status	Knowledge about this species	Trend
Goitered Gazelle (<i>Gazella subgutturosa</i>)	VU	Partially	declining
Wild Goat (<i>Capra aegagrus</i>)	VU	Partially	unknown
Gattan (<i>Luciobarbus xanthopterus</i>)-	endemic Tigris/ Euphrates	Partially	unknown
Biss (<i>Luciobarbus esocinus</i>)	endemic Euphrates	Yes	unknown

In addition to above, there is knowledge about (Aquatic plants, Terrestrial plants, Algae & Fungi) in Iraq, but further research is needed to know their status and trends.

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3.2.3 Evaluate Biodiversity loss

Due to the rapid and continuous activities of the human kind over the entire globe, it became obvious that this development goes in parallel with the habitat degradation and the extinction of different kinds of fauna and flora species. It became obvious that there is a clear relationship between the human development and the degradation of biodiversity over the globe.

Below, are the most serious threats that the main eco-regions are facing, and subsequently, causing biodiversity loss in Iraq:

- Lack of water and precipitation: this kind of threat affects directly the plant cover of each habitat along with the fauna content of each habitat;
- Overhunting and overfishing: this kind of threats are represented by the illegal hunting and fishing either by locals or by other people who visit these areas to get the benefit of its natural resources;
- Lack of environmental education: this kind of threat affects directly and indirectly the biodiversity, and the more environmental awareness exists in an area, the less loss in habitat and natural resources occurs;
- Unplanned agricultural expansion: this kind of threat causes direct destruction of the biodiversity by turning the natural habitats into urban areas, and it also affects it indirectly by increasing the disturbance to the wildlife around these newly-established developed areas;
- Pollution: this kind of threat might be of different types like:
 - Oil pollution (either in water or soil)
 - Air pollution
 - Plastic and other persistent wastes
 - Noise pollution
- Invasive species: this kind of threat can be found either in flora or fauna in different places and habitats in Iraq;
 - Logging: this kind of threat can be found mainly at the mountainous areas and consists of the intensive cutting of the woods. However, it can be also found in different places in Iraq and it is represented by the unsustainable cutting of trees and shrubs;
 - Grazing: this kind of threat can be found all over the country, from the mountainous areas southwards till the grazing of buffalo in the marshes and the cattle in the desert areas;
 - Woods fire: this kind of threat can be found in the dense woods in northern Iraq;
 - Transportation corridors: this threat to the habitats and species that are using the habitat close to human activities like the roads, canals, rivers etc ...;
 - Roads construction: this kind of threat has its own effect on the habitat and species by destructing considerable stripes and network of habitats, disturbing the wildlife in these habitats;
 - Upstream dams works: this kind of threat affects the natural quantity of water available for the marshland environments and for nature-related human uses
 - Unplanned urbanization: reduces the amount of natural habitats and damages the territory by unplanned generation and disposal of waste.
 - War and war remaining: introduce dangerous substances into the environment that enters the food chain and generates direct risk for humans and wildlife (mine explosions, hazardous chemicals and soil destruction)
 - Political situation of neighboring countries: unstable political regimes of neighboring countries might generate unregulated immigration of people with random settlements and exploitation of natural resources
 - Marine and coastal ports for commercial and oil transport.

3.2.4 The Drivers of Biodiversity loss

The presence of a long and considerable list of different kinds of threats acts as a main factor to generate the loss of some of the qualitative and quantitative components of Biodiversity in Iraq. This set of threats affects the ecosystems directly and indirectly at different levels causing serious changes of the natural characteristics of some of these ecosystems. The draining of the marshlands, for instance, turned this aquatic ecosystem into a terrestrial one and has changed radically all the characteristics of the marshland ecosystem in this area that used to be an aquatic habitat for thousands of years. This change happened over very few decades. One of the effects of this change was on the global level which is represented by shifting the global migration Afro-Eurasian

routes of many water birds. This gives an indication of the vulnerability of the marshlands (as an ecosystem) and to which extent it can be lost so easily.

Table 10: The drivers of biodiversity loss

Habitats / Ecosystems	Drivers of change (the main factors)	
Marshlands	Lack of water, increasing of soil salinity, draining, oil exploration, climate change	Lack of Environmental awareness, bordering countries water policies
Arabian desert	Oil exploration, oil waste disposal, illegal hunting	Climate change
Mesopotamian shrub desert	Military operations and waste, illegal hunting, oil exploration	Rain-fall fluctuation
Steppe Habitats of the Middle East	Grazing, wood cutting, overhunting, agro-chemicals pollution	Dams allowing to expand agricultural areas and drainage of natural wetlands
Zagros Mountain Forests	Logging, grazing and fires	Agricultural expansion
Coastal marine habitats	Pollution, port constructions, coastal traffic	Upstream water regulation and irrigation schemes, waste disposal

3.2.5 Ecosystem services

Although services provided by Iraq's ecosystems are fully appreciated by many stakeholders, in fact presence and functioning of these ecosystems may be more vital than they are actually known. The services provided by Iraq's ecosystems may be generally divided into five major components: Provisioning, such as food sources, sources for fresh water, sources for fuel raw material and wood and fiber; Regulating services such as climate and flood control, disease transmission and control, water purification; Cultural services: such as aesthetic values, spiritual, educational, and recreational services; Supporting services such as nutrient cycling, soil forming, and primary production. The following table presents summarized information on these services.



Table 11: Ecosystem services

Ecosystem Services	Marshland	Arabian Desert	Mesopotamian Shrub Desert	Steppe Habitat of the Middle East	Zagros Mountain Forests	Coastal Marine Habitats
1.PROVISIONING (FOOD, FRESH WATER, FUEL, WOOD AND FIBER)						
1.Food production	Fish, vegetables, Rice, and dairy cattle herds	Pasture for livestock, orchard plantation	Cereal cultures, various crops, forage for livestock	Cereal culture, various crops, forage for livestock	Vines, nuts, and crops	Fish and sea food
2.Water for domestic needs	Plentiful source of raw surface freshwater	Underground sources	River catchment area, storage reservoirs	River, catchment area, lakes	Catchment area	Nearby marshes and Shatt-al-Arab
3.Fisheries	Large freshwater fish stocks	-	Fish stock and Aquaculture	Fish stock and Aquaculture	-	Diverse marine fish fauna
4.Water for irrigation	Plentiful source	Underground sources	Rain and storage reservoirs	Plentiful source	Rain and storage reservoirs	Nearby marshes and Shatt-al-Arab
5.Hydroelectric power	Other sources of clean energy	Other sources of clean energy	River dam schemes	River dam schemes	Other sources of clean energy	Other sources of clean energy
6.Transport	Waterway for local needs	Land and waterways	Land and waterways	Land and waterways	Land routes	Coastal and marine transport systems
7.Source for raw industrial material	Various plants and animal products	Desert plants	Industrial crops and animal products	Industrial crops and animal products	Plants and animal products	Material for industrial production
8.Genetic resources	Plant and animal native species	Plant and animal native species	Plant and animal native species	Plant and animal native species	Plant and animal native species	Plant and animal native species
9.Biochemicals	Sources from natural plants	Sources from natural plants	Plant species for use in industrial productions and medicinal plants	Plant species for use in industrial productions and medicinal plants	Plant species for use in industrial productions and medicinal plants	Sea-weed and fish products
2.REGULATING (CLIMATE, FLOOD, DISEASE AND CONTROL WATER PURIFICATION)						

Ecosystem Services	Marshland	Arabian Desert	Mesopotamian Shrub Desert	Steppe Habitat of the Middle East	Zagros Mountain Forests	Coastal Marine Habitats
1.Regulating the water cycle and maintenance of long-term water cycling	Large reserves of fresh and underground water	Large reserves of underground water	Large reserves of fresh and underground water	Large reserves of fresh and underground water	Large reserves of fresh and underground water	Large water volume reserve
2.Regulating floods	Large storage capacity by reservoirs	By man-made small dams	Storage capacity by reservoirs	Storage capacity by reservoirs	Storage capacity by reservoirs	Surface runoff
3.Protecting communities from storms and hurricanes	-	-	Wind shield	Wind shield	-	-
4.Reduce climate change impacts	Reducing climate impact	-	Reducing climate impact	Reducing climate impact	Reducing climate impact	-
5.Natural Hazard Protection	Protective zone	Protective zone	Protective zone	Protective zone	Protective zone	Protective zone
6.Improving maternal health	By Health care good infrastructure	By Health care good infrastructure	Less possible for vast area and access	By Health care good infrastructure	Less possible for vast area and access	Less possible for vast area and access
7.Regulating the erosion of soil into water	Effective role	Potentially by vegetative cover	Effective role	Effective role	Effective role	Effective role
8.Filtering impurities from water	Reducing and precipitating	Quality underground water	Reducing and precipitating	Reducing and precipitating	Reducing and precipitating	Reducing and precipitating
9.Capturing carbon dioxide from the atmosphere	Effective role	-	Effective role	Effective role	Effective role	Effective role
10.Maintenance of Fisheries	Large natural stocks	-	Large stocks	Large stocks	Large stocks	Large stocks
11.Invasion Resistance	Diverse habitat but highly vulnerable	Harsh environment, less vulnerable to alien species	Vulnerable to alien species	Vulnerable to alien species	Vulnerable to alien species	Vulnerable to alien species

Ecosystem Services	Marshland	Arabian Desert	Mesopotamian Shrub Desert	Steppe Habitat of the Middle East	Zagros Mountain Forests	Coastal Marine Habitats
12.Herbivory	Highly important for herbivorous fish and dairy animals	Plants precious source for food	Plants precious source for food	Plants precious source for food	Diverse plants sources for food	Scarce sources
13.Pollination	-	-	Effective role	Effective role	Effective role	-
3. CULTURAL (AESTHETIC, SPIRITUAL, EDUCATIONAL, RECREATIONAL)						
1.Natural surroundings	Unique	High quality	High quality	High quality	High quality	High quality
2.Scenic values	Very high value	High value	High value	High value	Very High value	High value
3.Tranquility	Highly tranquil	Highly tranquil	Highly tranquil	Highly tranquil	Highly tranquil	Tranquil
4.Religious values	Various shrine sites	Various shrine sites	Various shrine sites	Various shrine sites	Various shrine sites	-
5.Educational examples	Excellent	excellent	excellent	excellent	excellent	Excellent
6.Recreation sites	Potentially high quality	Ecotourism and game birds and mammals	Ecotourism and game birds	Ecotourism and game birds	Ecotourism and game birds and mammals	Ecotourism and game animals
4. SUPPORTING (NUTRIENT CYCLING, SOIL FORMATION, PRIMARY PRODUCTION)						
1.Nutrient cycling	Highly efficient	normal	efficient	efficient	normal	Efficient
2.Production of atmospheric oxygen	Highly effective	normal	effective	effective	effective	Normal
3.Soil forming	Normal process	Normal process	Highly effective	Highly effective	Highly effective	-
4.Provide renewable energy sources such as biofuels	Rich resources	Rich resources	Rich resources	Rich resources	Rich resources	Rich resources
5.Maintenance of biodiversity	Highly diverse	diverse	Highly diverse	Highly diverse	diverse	Diverse

3.2.6 Human well being

Human well being issues in Iraq are closely related to ecosystems and biodiversity. The main human well being issues in general consist of five major categories. Availability of basic material for good life such as adequate livelihoods, availability of sufficient nutritious food, availability of shelter and access to goods; health as strength feeling by people, feeling healthy and well, and access to clean air and water; existence of good social relations such as social respect and cohesion, and people willingness to help one another; freedom of choice and actions such as opportunity to be able to achieve what an individual values doing and being; and Security, as personally felt security and secure access to resources and security from disasters.

Table 12: Human well-being

Human well being and poverty reduction	Marshlands	Arabian Desert	Mesopotamian Shrub Desert	Steppe Habitat of the Middle East	Zagros Mountain Forests	Coastal Marine Habitats
1. BASIC MATERIAL FOR A GOOD LIFE (ADEQUATE LIVELIHOODS, SUFFICIENT NUTRITIOUS FOOD, SHELTER, ACCESS TO GOODS)						
1.Poverty level	High level	Moderate	moderate	Moderate	High level	high
2.Quality of life	Below average	Average	average	Average	Below average	Below average
3.Crime level	normal	Normal	normal	Normal	normal	Normal
4.Quality of food	average	Average	Above average	Above average	Above average	Average
5.Secure shelter	Mostly primitive	Mostly primitive	average	Average	average	Average
6.Access to goods	difficult	Difficult	reasonable	Reasonable	reasonable	Reasonable
2. HEALTH (STRENGTH, FEELING WELL, ACCESS TO CLEAN AIR AND WATER)						
1.Health care scheme	Below regular	Below regular	regular	Regular	regular	Regular
2.People health status	poor	Poor	average	Average	average	Average
3.Quality of living	Below standard	Below standard	standard	Standard	standard	Standard
3. GOOD SOCIAL RELATIONS (SOCIAL COHESION, MUTUAL RESPECT, ABILITY TO HELP OTHERS)						
1.Social life	rural	Rural	urban	urban	Rural/urban	urban

3.2.7 Gaps identified

Iraq's ecosystems are mostly diverse and host large numbers of plant and animal species. However, weaknesses and threats to their existence and sustainability are considered serious but may be common to all and shared, especially, by those which are more geographically closed to one another.

To summarize, the following table gives brief description of the more general weaknesses and threats revealed by the stakeholders:

Table 13: Ecosystems' threats and weaknesses

Ecosystems	Weaknesses	Threats
Marshlands	<ol style="list-style-type: none"> 1. Loss of wetland habitats and biodiversity 2. uncontrolled water supply 	<ol style="list-style-type: none"> 1. overfishing, overhunting of birds 2. water scarcity and drought 3. impact of neighboring countries on water availability 4. increase of tourism activity 5. Oil exploration and production
Arabian Desert	<ol style="list-style-type: none"> 1. lack of studies 2. water scarcity and fluctuation of rain-fall 	<ol style="list-style-type: none"> 1. Unauthorized hunting 2. waste material of wars 3. Oil exploration and production
Mesopotamian shrub desert	<ol style="list-style-type: none"> 1. lack of studies 2. water scarcity and fluctuation of rain-fall 	<ol style="list-style-type: none"> 1. Urban expansion 2. Overhunting, overgrazing
Steppe Habitat of the Middle East	<ol style="list-style-type: none"> 1. lack of studies 2. water scarcity and fluctuation of rain-fall 	<ol style="list-style-type: none"> 1. lack of advanced agriculture practices 2. overgrazing, overhunting 3. urban expansion 4. construction of dams
Zagros Mountain Forest	<ol style="list-style-type: none"> 1. Loss of forest habitats and biodiversity 	<ol style="list-style-type: none"> 1. cutting of trees 2. wastes of wars 3. pollution 4. uncontrolled wood fires
Coastal Marine Habitat	<ol style="list-style-type: none"> 1. Loss of marine and coastal biodiversity 	<ol style="list-style-type: none"> 1. construction of ports 2. ballast waters 3. pollution 4. industrial activity

3.2.8 Capacity assessment and needs

3.2.9 Institutional assessment

Conservation of Biodiversity requires considerable amount of planning and coordinating among a wide spectrum of governmental, nongovernmental, and communal sectors inside and outside Iraq. The following list includes the related institutions to the Biodiversity of Iraq; however, the list includes some foreign institutions (out of Iraq) which are related to the national Biodiversity issue. Definitely, these institutions are of different capacities and this necessitates the close coordination and cooperation among them in order to protect the national Biodiversity of Iraq:

1. Ministry of Environment;
2. Ministry of Agriculture;
3. Ministry of Water resources;
4. Ministry of oil;
5. Iraqi Universities
6. National environmental research centers;
7. Ministry of Higher Education;
8. Ministry of Science and Technology;
9. Center for Restoration of the Iraqi Marshlands and Wetlands;
10. Marine Science Centre
11. Regional Organization for the Protection of the Marine Environment (ROPME)
12. The research center of Arabian desert;
13. Arab Gulf Studies Center;
14. Ministry of Communication;
15. Ministry of Transportation;
16. Ministry of industry and minerals;
17. Iraqi ports;
18. Regional institutions in Kurdistan Region (EPIB, Ministry of Natural resources, etc.);
19. The Natural history museum;
20. Global Governmental Organization (UNEP, UNDP, FAO, etc);
21. NGOs (Nature Iraq and others);
22. Global and regional environmental research centers.

3.2.10 Needs to be fulfilled

In order to activate the work among the upper-listed network of institutions and organizations from inside and outside Iraq, there should be powerful but active relationship and cooperation efforts among these different institutions to achieve the protection of the Biodiversity in Iraq. The following proposed list of activities and requirement address the required efforts and the level of cooperation among these institutions to get the final goal.

General actions

- Making modern surveys of environmental monitoring (Environmental monitoring)
- Integrating the efforts between research institutions and relevant ministries
- Integrating (inserting) BD concept (subject) in the educational curricula
- Introducing new, and update existing, laws and regulations on BD

Ecosystems-related actions

- Marshlands
 - Water sustainability (quality and quantity)
 - Reduction of urbanization and population expansion
 - Overgrazing prevention
 - Regulating (organizing) the agricultural practices (activities) and expansion

- Defining environmental quality standards
- Environmental awareness and the importance of BD among local people
- Governmental and funding support to the marshlands community
- Making a future plan to develop the marshlands by sustainable development.
- Completing the on-going researches and reviews on the natural features in the past and present.
- Forests
 - Prevention and remediation of soil erosion and reducing logging in a way suited to the restoration of forests
- Coastlines
 - Regulation of fishing and prevention of dumping
- Arabian Desert
 - Establishment of protected areas in desert habitats
 - Measures for protection of desert oases
 - Prevention of illegal hunting and overexploitation of raw materials
 - Implementing the law of environmental protection.

This long list of actions to protect the Biodiversity in Iraq requires, basically, acquiring better understanding of the importance of the Biodiversity and protecting the natural resources by all of stakeholders (governmental, non-governmental, and individuals). This should be made through well-studied strategies that start by involving the stakeholders at the early stages of the planning process. What is needed is a start-up process that gathers the main stakeholders of Biodiversity inside Iraq, alert them to the importance of Biodiversity, and involve them in the planning from the beginning of the decision making process.

3.2.11 Recommendations

The table below summarizes the strength points and opportunities, and specific recommendations (regarding each ecosystem), and general recommendations applied for one or more ecosystem.

Table 14: Strengths, opportunities and recommendations about ecosystems of Iraq

Ecosystems	STRENGTHS	OPPORTUNITIES	Recommendations	General Recommendations
Marshlands	Rich in biodiversity Rich in biodiversity- spawning places for fish species Migration and reproduction places (birds and fishes).	Investment in Biodiversity Considering it as standard for protecting wetlands.	Establishment of natural protected areas Ensuring sustainable share of water Conducting specific studies that target the key species in the marshlands	<ul style="list-style-type: none"> • Conducting modern surveys together with active environmental monitoring. • Coordinated efforts between institutions and the ministries. • Implementing new, updated, and complementary laws and legislations. • Integrating BD concepts in the educational programs and syllabus. • Conducting general awareness campaign with target the general public and the locals about the importance of Biodiversity and the protection of the natural resources.
Arabian Desert	Virgin places (undiscovered places) which are mostly uninhabited	Underground water to develop and enrich the area.	Establishment of oasis and natural protected areas and control of grazing Conducting specific studies that target the key species in the desert habitat	
Mesopotamian shrub desert	The presence of large numbers of waters bodies	Underground water to develop and enrich the area.	Establishment of oasis and natural protected areas	
Steppe Habitat of the Middle East		Underground water to develop and enrich the area.	Programming of irrigation and grazing operations	
Zagros Mountain Forest	Heavy rains Density of woods	Investment in Biodiversity	Establishment of protected areas and tourism areas. Planting of native trees (trees compensation)	

Ecosystems	STRENGTHS	OPPORTUNITIES	Recommendations	General Recommendations
Coastal Marine Habitat	Rich in BD	Investment in Biodiversity	<p>Conserving the natural status of the marine shoreline; protect the most 'natural' patch of this coast being the only marine habitat for Iraq.</p> <p>Conduct research and studies on this unique habitat of Iraq</p>	

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4 Task 3 – Policies, Plans and Legislation

4.1 Relevant plans and policies

The limited understanding and consideration of the environment in the planning and national development strategies cause damage to the environment.

So that, considering environmental resources, as free of charge goods and available endlessly, has resulted in an excessive depletion of both terrestrial and aquatic biota, while considering environmental protection a luxury. Improving the quality of the environment is considered to hamper the economic growth.

Iraq needs a long term clear vision on its plans and policies on restoring and improving the damaged environment including the biodiversity as main component of the ecosystems.

Iraqi people supported by the government should identify long term principle and core values in regards to the environment.

Iraq should aim at the integration of environmental issues including biodiversity into its broader national policies and strategic goals of sustainable development.

Education and poverty eradication can play a positive role in the protection of the environment in general and biodiversity particularly.

To date the general framework about environmental policies, laws and plans in Iraq consists of a series of environmental laws addressing the protection and improvement of the environment, fishing, wildlife protection, marine environment protection, forestry, natural resources and pastures preservation. Various plans and projects also exist, carried out in cooperation with relevant universities and research institutions, such as studies for the restoration of the marshlands, research on desertification, irrigation schemes and water use, environmental tourism. A detailed list of policies and plans concerning biodiversity is provided in the following paragraph.

4.1.1 Existing policies, legislation and plans of Iraq

For the identification of existing Iraqi Environment-related Legislation, besides the information collected during the workshop (bold text in the following Tables), the main source of information has been the National Report on Biodiversity in Iraq issued in July 2010.

4.1.2 Old Environmental Legislation of Iraq

Table 15: Old environmental legislation of Iraq

Title of Act	Serial of Act	Type of Act	Status of the Act	Issuing Office
The first amendment of the Iraqi Environmental protection and improvement law No. 3/1997	(73) for the year 2001	Law	valid	Iraq - federal
Directives of the General Directorate of Forests and Afforestation	(1) for the year 1957	Directives	valid	Iraq - federal

Title of Act	Serial of Act	Type of Act	Status of the Act	Issuing Office
Directives for trees cutting and transfer	without sereal in year 1959	Directives	valid	Iraq - federal
Directives on forest conservation	Without sereal in year 1946	Directives	valid	Iraq - federal
Statement on the conservation of forests	(4) for the year 1958	Statement	valid	Iraq - federal
Statement No. (1) for the year 1955 to preventing cutting of forests	(22) for the year 1955	Statement	valid	Iraq - federal
Pastures Protection Act	.(106) for the year 1965	Law	valid	Iraq - federal
Natural Pastures Act	(2) for the year 1983	1983	Valid	Iraq-federal
Nominating the Supreme Council for the protection and improvement of the environment	(312) for the year 1988	Resolution of the Revolutionary Command Council	valid	Iraq - federal
Adition of a representative as a member to the board of protection and improvement of the environment	No. (1049) for the year 1978	Resolution of the Revolutionary Command Council	valid	Iraq - federal
Decree to serve and protect the animal and agricultural resources	(10) for the year 1992	Decision	valid	Iraq - federal
A Decree of the Council for the protection and improvent of the environment on Logging	(1) for the year 1991	Decision	valid	Iraq - federal

Title of Act	Serial of Act	Type of Act	Status of the Act	Issuing Office
Incentives and wages for the employees of the council for the protection and improvement of the environment in the provinces	(2) for the year 1998	System	valid	Iraq - federal
Structural formations of the council for the protection and improvement of the environment	(1) for the year 1998	System	valid	Iraq - federal
Forest System	(7) for the year 1956	System	valid	Iraq - federal
The Second Amendment to the Directive for the formation of the provincial councils to protect and improve the environment	(2) for the year 2002	Directives	valid	Iraq - federal
The formation of the provincial councils to protect and improve the environment	(4) for the year 2000	Directives	valid	Iraq - federal
Duties of the Departments of protection and improvement of the environment in the provinces and annexes	(1) for the year 1998	Directives	valid	Iraq - federal
Regulation of the trading in medicinal herbs	(1) for the year 1997	Directives	valid	Iraq - federal
Directives issued by the Ministry of Irrigation on the cultivation of trees within the boundaries of the Mayoralty of Baghdad	(10) for the year 1992	Directives	valid	Iraq - federal

Title of Act	Serial of Act	Type of Act	Status of the Act	Issuing Office
Environmental standards for services, industrial and agricultural projects	1990	Directives	Valid	Iraq - federal
Manufacturing and trading of pesticides	(2) for the year 1990	Directives	valid	Iraq - federal
Prohibition of Fishing	No. (70) for year 2013	Declaration	valid	Iraq - a federal
Irrigation Act	No. (6) for the year 1962	Act	valid	Iraq - a federal
Penal Code	No. (111) for the year 1969	Act	valid	Iraq - a federal
Implementation law	No. (45) for the year 1980	Act	valid	Iraq - a federal
Environmental rules for industrial and agricultural projects	No. (3) for the year 1980	Directive	valid	Iraq - a federal

4.1.3 Veterinary and livestock/fishery legislation

Table 16: Veterinary and livestock/fishing legislation

Title of Act	Sereal of Act	Type of Act	Status of the Act	Issuing Office
Law of Wild Animals Protection	17	15/02/2010	legislation	Iraq - a federal
Amendment Act of Rotting Animal Diseases number (68) for the year 1936	61	1985	legislation	Iraq - a federal
Sixth Amendment to the Institute of Animal Health Number 7 for the year 1968 (canceled)	17	26/06/1980	legislation	Iraq - a federal
Law of Birds and Wild Animals Protection number (21) for the year 1979	21	28/02/1979	legislation	Iraq - a federal
The first amendment law to the rotting animal diseases law Number 68 for the year 1936	78	18/06/1972	legislation	Iraq - a federal
Amending Law for the Institute of Animal Health	221	17/12/1969	legislation	Iraq - a federal

Title of Act	Sereal of Act	Type of Act	Status of the Act	Issuing Office
Law No. 22 of 1968 (canceled)				
Institute of Animal Health Law No. (22) for the year 1968 (canceled)	22	21/02/1968	legislation	Iraq - a federal
Pregnant ewes Conservation Law No. (5) for the year 1946 (canceled)	5	30/01/1946	legislation	Iraq - a federal
Sex animals Reform Law No. 58 of 1940 (canceled)	58	01/05/1940	legislation	Iraq - a federal
Pregnant ewes Conservation Law No. (22) for the year 1937 (canceled)	22	03/06/1937	legislation	Iraq - a federal
Amendment Law of the animal diseases law for the year 1927 (canceled)	8	19/01/1927	legislation	Iraq - a federal
Fish Conservation Law of 1924	No serial	21/05/1924	legislation	Iraq - a federal
Amendment of the Revolutionary Command Council resolution 1987/500 horses Organization	255	22/12/1999	Abolished Revolution Command Council	Iraq - a federal
Abolition of the General Authority for Fish Resources Development	814	1990	Abolished Revolution Command Council	Iraq - a federal
Allowing the establishment of poultry farms on the banks of rivers or near	844	1988	Abolished Revolution Command Council	Iraq - a federal
The First Amendment Law to the regulating fishing and the exploitation and protection of aquatic law No. (48) for the year 1971	10	31/01/1981	legislation	Iraq - a federal
Regulating Law of the fishing and the exploitation and protection of aquatic organisms (Revised)	48	10/04/1976	legislation	Iraq - a federal
First Amendment law for hunting law No. (57) for the year 1938	4	15/07/1948	legislation	Iraq - a federal

Title of Act	Sereal of Act	Type of Act	Status of the Act	Issuing Office
The First Amendment law to the fishing law No.57 for the year 1938	19	02/07/1939	legislation	Iraq - a federal
Hunting Law No. (57) for the year 1938 (Revised)	57	03/05/1938	legislation	Iraq - a federal
Extension of the period during which fishing prohibited in a statement published in the official gazette and the media	30	20/2/2000	RCC ² decision	a federal-Iraq
A decree to ban deer hunting in all parts of Iraq	463	22/7/1989	RCC decision	a federal-Iraq
The application of the provisions of Law Number 20 of 1970 on the fishermen who use toxins	1578	11/10/1980	RCC decision	a federal-Iraq
Strictly prohibiting the hunting of wild animals Number 1277	1277	26/9/1978	RCC decision	a federal-Iraq
Regulation of hunting wild animals and its protection	47	9/11/1965	System	a federal-Iraq
First Amendment of the regulation of fishing Number 40 of 1938	77	14/10/1939	System	a federal-Iraq
Second Amendment to the regulation of fishing number 40 of 1938	3	1958	System	a federal-Iraq
Regulation to prohibiting hunting of certain birds at certain times	40	24/9/1938	System	a federal-Iraq
Issued by the Public Establishment for Fish	7	1987	Directive	a federal-Iraq
Limiting the hunting of wild animals and birds to the members of the Iraqi Fishermen's Association	No	2002	Statement	a federal-Iraq
Prohibition of fishing in some areas	35	1988	Statement	a federal-Iraq
Prohibiting fishing in the internal waters	33	1988	Statement	a federal-Iraq

² RCC: Revolution Command Council

Title of Act	Sereal of Act	Type of Act	Status of the Act	Issuing Office
Prohibiting fishing in some areas of Lake Tharthar	36	1988	Statement	a federal-Iraq
Prohibiting fishing in a number of areas	37	1988	Statement	a federal-Iraq
On the strict prohibition of fishing in a number of areas during all seasons of the year	32	1987	Statement	a federal-Iraq
Statement issued by the Fishermen Association of Iraq	No	1987	Statement	a federal-Iraq
A Statement prohibiting fishing in areas and times at specified periods	29	1986	Statement	a federal-Iraq
A statement Issued by the general Establishment for fishing on fishing in reservoirs	28	1985	Statement	a federal-Iraq
A statement strictly prohibiting fishing for specific areas and periods	22	1983	Statement	a federal-Iraq
Prohibiting fishing for specific areas and periods	23	1983	Statement	a federal-Iraq
Prohibiting fishing for specific areas and periods	20	1982	Statement	a federal-Iraq
Prohibiting fishing for specific areas and periods	21	1982	Statement	a federal-Iraq
Prohibiting fishing for specified places in the statement	19	1981	Statement	a federal-Iraq
Prohibiting fishing in the Hemrin Dam Reservoir	17	1980	Statement	a federal-Iraq
Statement number (10) prohibiting the use of special nets to catch fish	10	1978	Statement	a federal-Iraq
Statement number (1) (prohibiting fishing	11	1978	Statement	a federal-Iraq
Statement number (9) for the year 1978 Cancelling statement Number 8 for the year 1977 about Prohibiting Fishing	9	1978	Statement	a federal-Iraq
Statement number 1 for the year 1977 about	1	1977	Statement	a federal-Iraq

Title of Act	Sereal of Act	Type of Act	Status of the Act	Issuing Office
specification of nets for fishing in Rivers				
Statement Number 8 for the year 1977 strictly prohibiting fishing in Hor Al-Jazeera areas	8	1977	Statement	a federal-Iraq
Strictly prohibiting Fishing in the area near to Diyala River estuary	7	1977	Statement	a federal-Iraq
Statement number (14519) for the year 1976 about specifying prohibited areas for fishing	14519	1977	Statement	a federal-Iraq
Statement number 1 for the year 1975 Declaring an area as strictly and totally prohibited for fishing	1	1975	Statement	a federal-Iraq
A statement about protection of fish and prohibiting fishing according to the provisions of Law Number 32 for the year 1965	1	1967	Statement	a federal-Iraq
Prohibiting the hunting of wild animals is strictly forbidden Number 1277	2	1967	Statement	a federal-Iraq
Statement No. 4 of 1967 on fishing	4	1967	Statement	a federal-Iraq
According to a statement issued fishing law and protect aquatic No. 32 of 1965 should be getting a vacation for trafficking in aquatic	9	1965	Statement	a federal-Iraq
According to a statement issued fishing law and protect aquatic No. 32 of 1965 on how to use the stream water for fishing and measuring network	5	1965	Statement	a federal-Iraq
According to a statement issued fishing law and protect aquatic No. 32 of 1965 to prevent the use of chemicals	4	1965	Statement	a federal-Iraq

Title of Act	Sereal of Act	Type of Act	Status of the Act	Issuing Office
Statement on the renewal of licenses according to the law of fishermen fish catch and protect aquatic No. 32 of 1965	11	1965	Statement	a federal-Iraq
A statement issued According to the Law of fishing and protection of aquatic organisms number 32 of the year 1965 to prevent the use of nets	7	1965	Statement	a federal-Iraq
A statement issued According to the Law of fishing and protection of aquatic organisms number 32 of the year 1965 to prevent fishing in prohibited areas	6	1965	Statement	a federal-Iraq
A statement issued According to the Law of fishing and protection of aquatic organisms number 32 of the year 1965 to prevent fishing of fish species	7	1965	Statement	a federal-Iraq
A statement issued According to the Law of fishing and protection of aquatic organisms number 32 of the year 1965 to organize the fishing nets industry	10	1965	Statement	a federal-Iraq
A Statement preventing Deer Hunting	2	1964	Statement	a federal-Iraq
A statement from the director of research and agricultural projects on the renewal of Fishing licenses and trading	Not present	1964	Statement	a federal-Iraq
Statement to prevent Gazelle hunting	1	1963	Statement	a federal-Iraq
Statement by the Minister of Agriculture for fishing	1	1962	Statement	a federal-Iraq

Title of Act	Sereal of Act	Type of Act	Status of the Act	Issuing Office
Statement by the Minister of Agriculture for fishing	2	1962	Statement	a federal-Iraq
A statement concerning fishing licenses	5	1962	Statement	a federal-Iraq
A statement concerning fishing licenses	6	1962	Statement	a federal-Iraq
A statement to the Fishermen	7	1962	statement	Iraq - Federal
A statement of the Ministry of Agriculture under the law of hunting aquatic animals	7	1961	statement	Iraq - Federal
Statement No.1 for the year 1957 Fishing prohibition	1	1957	statement	Iraq - Federal
Hunting Prohibition	2	1957	statement	Iraq - Federal
Fishing Prohibition	without serial	1/3/1956	statement	Iraq - Federal
A statement to prohibit all means of fishing	without serial	1956	statement	Iraq - Federal
Statement on Fishing prohibition	10	1955	statement	Iraq - Federal
Regulation for the rent of the beaches and islands and public lands, which grow Pure pasture and liquorice	No. 33-1961	regulation	Valid	Iraq - Federal

4.1.4 New environmental legislation (from 2003 up to now)

Table 17: New environmental legislation

Title	No. and The year of Legislation The current situation	Type legislation (law regulation instructions)	The current situation
Ministry of the Environment Act – the establishment of the ministry of the Environment (instead of the Council to protect and improve the environment previously)	No. (37) for the year 2008 previously order No. (44) of the Coalition provisional Authority (CPA) of the year 2003	Law	Valid
Regulation on natural protected areas	No. (139) for the year 2014	Regulation	Valid
Biosafety Act of organisms genetically modified and its products	No. (47) for the year 2013	Law	Valid
the Accession act of Iraq to the convention of	No (29) for the year 2012	Law	valid

Title	No. and The year of Legislation The current situation	Type legislation (law regulation instructions)	The current situation
international trading of the endangered spp. of wild animals and plants (Iraq is the party No. 180)			
The decree of Iraq accession to the convention of migratory spp.(CMS)	No. (114) for the year 2014	Decree	Valid
The accession decree of on the convention of conservation of African Eurasian Migratory Waterfowl	No. (144) for the year 2014	Decree	Valid
Law to protect and improve the environment	No.(27) for the year 2009 (previously law No. (3) for the year 1979)	Law	Valid
Wild Animals Protection Act instead of the law on the Protection of wild Animals and Birds	No. (17) for the year 2010 (previously law No (21) for the year 1979	Law	Valid
Law of Forests and trees	No. (30) for the year 2009 (previously law No. (75) for the year 1955	Law	Valid
prohibition of the importation of plants to Iraq – attributes to the Ministry of Environment and Agriculture the sole authority to import plants and prohibits the import of all plants in support to Instruction No. 11	No (74) for the year 2010	Law	Valid
Consumer protection law	No. 1 for the year 2010	law	Was approved
Iraqi products protection law	No. 11 for the year 2010	law	adopted
Law of the republic of Iraq's accession to the United Nations Frame work Convention to combat Desertification	No. 7 for the year 2009	law	adopted
Law of the republic of Iraq's accession the United Nations Framework for Climate change and its Kyoto protocol	No. (7) for the year 2008	law	Was approved
Law of the republic of Iraq's accession to the convention on Biological Diversity	No. (31) for the year 2008	law	Was approved

Title	No. and The year of Legislation The current situation	Type legislation (law regulation instructions)	The current situation
Law of the republic of Iraq's accession to the Ramsar convention on Wetlands	No. (7) for the year 2007	law	Was approved
Rules of procedure and the establishment of Ministry of Environment and its functions	No. (1) for the year 2011	regulation	valid
Establishment and functions of the council to protect and improve the environment in the provinces	No. (1) for the year 2012	Directive	valid
Terms of adoption of consulting offices and laboratories in the fields of environmental protection	No. (1) for the year 2011	Directive	valid
Direct implementation	No. (1) for the year 2011	Directive	valid

4.1.5 Existing strategies and project and main international agreements concerning biodiversity

Table 18: Existing strategies and projects concerning biodiversity

Strategies and projects	
Strategy/project	Ministry/Agency
National strategy for the protection of the environment and the executive action plan for the years (2013 – 2017)	Ministry of Environment Ministry of environment. Decision No. (89) for the year of 2013
UNEP Iraqi Marshlands observation system (IMOS)	-
Management plan of Dalmaj of hydroponics operations	-
Oil resource management plan	Ministry of Oil
Hawizeh Management plan (Ramsar site)	Ministry of Water Resources (CRIM)
Management plan for Mesopotamia marshland national park	-
National strategy for the development of Statistics in Iraq (2011 – 2015)	Ministry of Planning / Central Bureau of Statistics
National strategy for poverty alleviation	Ministry of Planning and Development Cooperation / High Commission for poverty alleviation policies
National strategy of learning and higher education of Iraq. The higher advisory commission for the preparation of learning and higher education strategy	Ministry of higher education/ Ministry of Planning
National strategy of complementary energy of Iraq.	advisory board of the Council of the Prime Minister. Decision No. (157) for the year 2013.

Table 19: MEAs to which Iraq is a Party

International Agreements	
International convention	Related sectors
CBD	Environment, agriculture, fishery, forestry, trade, tourism,
CITES	Environment, Trade, Agriculture, Rural Development Forests, Fisheries Interior, Financial
CMS	Environment ,Agriculture , Rural Development Forests ,Fisheries ,Trade , Tourism
Ramsar	Environment , Water management , Agriculture , Rural Development , Fisheries , Tourism
World Heritage Convention	Environment , Rural Development, Education , Tourism
UNFCCC	Environment , Agriculture , Health, Rural Development, Forests, Fisheries
UNCCD	Environment , Agriculture , Health, Rural Development, Forests

4.1.7 Gaps identified

During the workshop weaknesses and threats for the legislation and policy biodiversity framework were identified; these will give the opportunity to define main gaps and needs that should be addressed in the biodiversity policy construction process of Iraq.

WEAKNESSES identified during the workshop are:

- The lack of coordination and coherence in plans and policies
- Overlapping and unclear attribution of duties and responsibilities among different governmental departments, resulting in poor or lack of implementation
- Weaknesses in implementation, monitoring and control of relevant programs
- Unclear functions of the ministries and overlapping of their work
- Lack of communication between the scientific community and policy-makers
- Inexperience in multi-stakeholder policy negotiations
- Iraqi officials responsible for developing legislations have insufficient input from economists, so the relationship between fiscal policy and biodiversity is hardly covered.
- A lack of institutional coordination
- Conflict of interest among the relevant governmental and nongovernmental organizations and departments for biodiversity
- The absence of an inventory of scientific institutions dealing with relevant biodiversity areas. Moreover within these institutions there is lack of communication and coordination.
- Lack of integration into policy of the studies and research related to biodiversity, lack of a research information database and personnel trained in biodiversity assessment.
- The policy framework and the political commitment to the process is still weak.
- Iraq also has no policy on land use, and it lacks clear laws on the use of natural resources.

THREATS identified during the workshop are:

- The principle of sustainable development should be, but it is not at present, the presiding principle in all relevant laws and regulations in regards to biodiversity in particular and the environment in general.

- Difficulty of integrating environmental and biodiversity concerns into all sectoral policy and budgetary work.

4.1.8 Capacity assessment and needs

Iraq has well-developed scientific and environmental science colleges in almost all its universities and relevant research centers including the unique Marine Science Centre of Basrah University, specialized in the study of the marine environment, the southern marshes and wetlands ; however they lack resources including technologies for documentation, classifications and preservation of species.

Iraq used to have natural science museums in Baghdad and Basrah which were destroyed during the war times, with them Iraq lost important collections of reserved biota documenting Iraq's diverse environments.

Also Iraq is home to many unique species, whose genetic material is preserved outside Iraq, in international botanical gardens and museums.

Iraq need to develop technical capacity on new science technology, teaching and research methods that marry between a wide range of subject areas including environment, management, law, economics.

Iraq needs to develop observation and monitoring systems using new technologies by working collaboratively within the region and the international scientific community.

Iraq is also in need of wider education programs that incorporate and enforce environmental issues in all its components and at all levels.

4.1.9 Recommendations

During the workshop strengths and opportunities concerning the policy sector were identified; these will form the basis to give useful recommendations for improving the policy biodiversity framework of Iraq.

- Laws that are currently in force on environmental protection and biodiversity conservation provide an opportunity for further development and implementation of environmental provisions
- Iraq is an active member in bilateral and multilateral environmental conventions and agreements
- Customs and border police and airports can be involved in biodiversity conservation issues through control of trade and violations concerning natural resources
- Environmental police can be specifically trained to nature conservation purposes
- Iraq is trying to move (though slowly) towards changes in the policy and legal framework for natural resources, including protected areas, access to genetic resources, land tenure, property rights, benefit and cost sharing, trade and environmental impact assessment
- Iraq is strengthening research, assessment, and monitoring of biodiversity and maintenance of endangered species. Actions should include cataloguing, coordination and ongoing assessment and monitoring of conservation efforts
- Integrate sustainable use of biological diversity into relevant sectoral or cross sectoral plans, programs and policies
- Adopt the precautionary principle in determining the use of resources which status is uncertain or unknown
- Modify the penal code and the sanction mechanism, to include violations and damages to the natural resources
- Strengthen the implementation and enforcement of laws
- Strongly focus on education including environmental education at all levels.
- Long term media campaigns to inform the wider community about Iraqi environmental laws and regulations relevant to biodiversity, protection of ecosystems and natural resources.

- Strategies to include environmental systems south of the marshes in all central government plans due to the importance of these unique and diverse ecosystems including their economical and commercial values.

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5 Way forward

5.1 Task 1

For this task the next steps to be carried out will focus on stakeholder contact and involvement at the relevant phase. The Diagram presented in Task 1 section gives the roadmap of the stakeholder types to be involved in each step of the project. The main activities to be performed in the next months can be summarized as follows.

1. Draft a tentative list of all mentioned stakeholders to be involved in all relevant steps of the Project
2. Identify for each stakeholder specific contacts, address and responsible persons
3. Outline a priority list of stakeholders, according to the order of their involvement in the project
4. According to the strategy outlined for the involvement of each stakeholder, organize the necessary activities and steps for involving them

5.2 Task 2

In this Task the way forward is represented by an immediate beginning of comprehensive biodiversity assessments in order to evaluate in the short, medium and long term the trends in biodiversity and species status. Moreover a coordinate effort on mainstreaming biodiversity issues through all relevant institutions/bodies shall be achieved in the short term and finally main threats and pressures on biodiversity shall be removed in the short-medium term. Main activities to be performed are therefore identified in the following:

1. Comprehensive monitoring and surveys of species and environmental features
2. Coordination among institutions to mainstream biodiversity issues into cross-sectoral policies
3. Establishment and implementation of relevant legislation
4. Raising of the environmental awareness
5. Involving locals in the early preparations of any local protection action
6. Removal of direct and underlying causes of biodiversity loss.

5.3 Task 3

According to the recommendations given in Task 3 section, the following priority actions can be figured out for the policy and legislative framework.

1. Collection of all existing environmental legislation (to be carried out by the responsible stakeholder which has been identified in the stakeholder analysis)
2. Analysis of legislation content and identification of gaps that could be filled by each sector (e.g. agriculture, water resources, environment)
3. Collection of all existing national and regional PLANS concerning the environment
4. Analysis of the PLANS and identification of gaps that could be filled by putting in place sectoral plans
5. Formulate proposals for legislation and plans concerning biodiversity and its integration in each of the involved sectors
6. Approve the legislation and sectoral plans within the duties of each of the sectoral stakeholders involved
7. Ensure the IMPLEMENTATION and ENFORCEMENT of the legislation and plans
8. Capacity building, (scientific, legal and enforcement).

6 Stocktaking and Assessment Way forward

6.1 Recommendations

The workshop has identified main stakeholders involved with biodiversity issues, according to the findings of the participants. The list of participants is reported in Annex, to each participant has been associated a letter symbolizing their status of: governmental body (G), scientific community (S), NGO, Private sector (P), indigenous communities (I).

Stakeholder groups that were absent in the first workshop are belonging to the categories: “Private sector” and “Indigenous people”, in accordance with the timeline that has been proposed in the Gantt diagram of the Report, where it appears clearly that they will be involved in the NBSAP and 5th NR at a later stage.

6.1.1 Recommendation 1

Draft a list of all stakeholders to be involved in all relevant steps of the Project, with contact details

6.1.2 Recommendation 2

Establishing an NBSAP Steering Committee

An important first step in preparing an NBSAP is the establishment of a steering committee that includes representatives of different agencies of government, sectors of civil society (including women, indigenous and local communities, the private sector and sectoral interests, non-governmental organizations), areas of scientific expertise and national biomes or geographical regions. It is envisaged that **the NBSAP steering committee will coordinate and oversee the NBSAP process** and thus its membership should be willing to be engaged throughout the development of the NBSAP, and preferably into the implementation, monitoring, and reporting phases (CBD training package on the updating and revision of national biodiversity strategies and action plans (NBSAPs), Module 5 “Ensuring Inclusive Societal Engagement in the Development, Implementation and Updating of NBSAPs”).

6.1.3 Recommendation 3

Review all policies across relevant sectors (Industry, Oil, Agriculture and fishery, Education, Trade and finance etc.) and identify gaps to fill.

6.1.4 Recommendation 4

Clearly identify the national priority/actions that have emerged from the stocktaking exercise (from the three main tasks addressed in the report), summarized in the following.

6.1.5 National priority 1

Conducting modern surveys and environmental monitoring to address all environmental components.

6.1.6 National priority 2

Establish pilot protected areas in line with PoWPA priorities, as a basis for the development of national PA management capacity through on-the-ground conservation action and associate training for building capacity for national staff.

6.1.7 National priority 3

Coordinated efforts between institutions and the ministries in order to mainstream biodiversity issues across all relevant sectors.

6.1.8 National priority 4

Integrating Biodiversity concepts in the educational programs and initiatives at all levels.

6.1.9 National priority 5

Conducting general awareness campaign with target the general public and the locals about the importance of Biodiversity and the protection of natural resources.

6.1.10 National priority 6

Continuous capacity building on biodiversity issues and integration at all relevant institutional, technical and scientific level.

6.1.11 National priority 7

Review and strengthening of laws on environmental protection and biodiversity conservation.

6.1.12 National priority 8

Environmental police training to nature conservation purposes.

6.1.13 National priority 9

Integrate sustainable use of biological diversity into relevant sectoral or cross sectoral plans, programs and policies.

6.1.14 National priority 10

Adopt the precautionary principle in determining the use of resources which status is uncertain or unknown.

6.1.15 National priority 11

Modify the penal code and the sanction mechanism, to include violations and damages to the natural resources.

6.1.16 National priority 12

Strengthen the implementation and enforcement of laws.

6.1.17 National priority 13

Promote and implement strategies to include the environmental systems of the southern marshes in all central and local government plans due to the importance of these unique and diverse ecosystems including their economical and commercial values.





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Annex – List of Participants and stakeholder group

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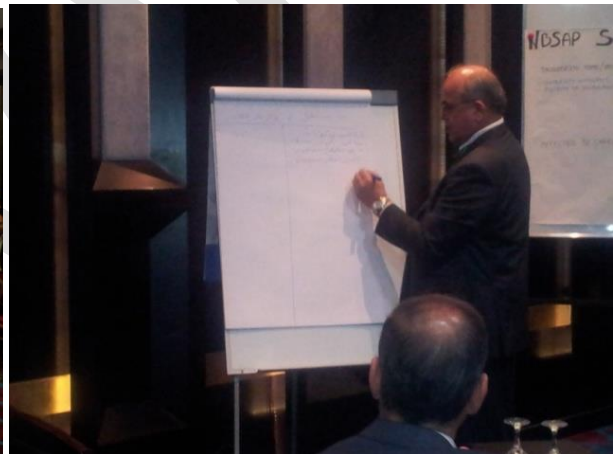
Selected photos from the workshop and symposiums regarding the targets settings:











Iraqi Ministry of Environment welcomes receiving any comments about the report to get benefit from it in the future, via following e-mail:

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