



**ECONOMIC AND SOCIAL
COUNCIL**

Distr.
LIMITED

E/ESCWA/SDPD/2007/WG.5/3
26 October 2007
ORIGINAL: ENGLISH

Economic and Social Commission for Western Asia (ESCWA)

Regional Conference on Land Degradation Issues
in the Arab Region
Cairo, 30 October - 1 November 2007



**Promoting Regional Cooperation in Reversing
Land Degradation in the ESCWA Region:
A Project Proposal**



Sustainable Development & Productivity Division
Sustainable Agriculture & Rural Development Team

UN-ESCWA



Note: This document has been reproduced in the form in which it was received, without formal editing. The opinions expressed are those of the authors and do not necessarily reflect the views of ESCWA.

07-0437

CONTENTS

I. INTRODUCTION	1
II. OBJECTIVES	3
III. SCOPE	4
IV. METHODOLOGY AND WORK PLAN.....	5
Methodologies For Work packages	7
V. EXPECTED OUTPUTS	17
VI. PROJECT REQUIREMENTS	19
VII. MANAGEMENT AND ORGANIZATION PLAN.....	20
A. Project management.....	20
B. Management tasks	20
C. Meetings and communication	20
D. Risk Management	22
E. Plan for disseminating knowledge	22
VIII. BUDGET AND FUNDING PLAN	23
Funding possibilities	23

I. INTRODUCTION

The Arab region has limited fertile land that is subject to different levels of degradation. With few exceptions, it is also considered a land scarce region. The abundance of bare and deteriorated lands with shallow soils points to processes of severe erosion and land degradation. The degradation of agricultural land in the region to a large extent is caused by human induced factors, but natural factors such as, low and erratic rainfall and droughts are also playing a part. Pressures on the resource base due to high population growth rates, rapid urbanization, and lack of land use plans further aggravate the situation for agriculture in the region. Furthermore, unsustainable cultivation practices, over-cultivation of marginal lands, overexploitation of water and land resources, and insufficient support given to the integrated management of land and water resources in agriculture are also negatively affecting the productivity of agriculture.

Analysis of the terrain in three dimensions shows that a considerable percentage of it has complex landforms with sloping and rugged lands, implying that steep slopes are a major physical factor enhancing soil erosion. The torrential rainfall causes flash floods and erosion, sometimes leading to mass movements due to poor drainage and weak lithology. Among the oldest direct human-induced erosion factors are deforestation and degradation of vegetative cover in the mountains. Forest fires and chaotic urban sprawl amplify the negative impacts of deforestation thus enhancing soil erosion by water and wind. Inappropriate irrigation practices and fertilizer application contribute to the development of soil salinity, not only in the arid and semi-arid areas, but also in the more humid Mediterranean coastal areas, especially with greenhouse agriculture. Seawater intrusion and mismanagement lead to further deterioration of groundwater quality and soil contamination hazards. The low levels of agricultural productivity and competitiveness, along with the degradation of natural resources in the region are further aggravated by the absence of proactive policies for encouraging the efficient and sustainable use of land resources.

The degradation of natural resources (land, water, biological diversity) is endangering the livelihoods of the poor, particularly in rural areas, where there is more reliance on such resources. The loss of livelihoods and natural resources leads poor farmers to adopt non-sustainable survival strategies that further deteriorate their resources base. Increasing poverty, also limits the range of available options with regard to the sustainable management of these finite resources. There is a strong correlation between population growth, land degradation, food insecurity and poverty. As such, promoting the sustainable use and management of the region's limited natural resources in agriculture is a great challenge that requires immediate consideration.

Despite some efforts exerted to assess and combat land degradation and desertification at local, national and regional levels, the achievements are limited thus far, and the approaches are not integrative; as a result, land degradation and desertification continue to intensify in the region. Furthermore, land degradation and desertification transcend political borders and one needs to take into consideration the regional impact of such occurrences. Responding to the complex and interconnected challenges of sustainable development also requires increased regional cooperation, and regional cooperation on tackling the impacts of land degradation is still weak. As such, setting up of regional cooperation mechanisms, and enhancing coordination of efforts on combating land degradation are crucial so that national efforts remain in harmony with regional initiatives. The promotion of inter-and intra-country cooperation and coordination in the region as well as that of regional and international organizations is essential to combat land degradation and desertification.

An integrated approach is needed in order to facilitate the monitoring of land degradation, the design of indicators and elaboration of responsive measures to prevent and reverse land degradation processes. This should be done cooperatively among member countries of the Region.

The preceding could provide a strong justification for cooperation among institutions within countries, and cooperation and coordination among countries of the region, and among regional and international organizations with interest in the subject to support the project proposal on promoting regional cooperation on combating land degradation. From the onset, it must be stated that financing of such project proposal is beyond the means of one organization or country, and as such, it will require concerted efforts to convince international funding agencies to fund the implementation of such project.

II. OBJECTIVES

- Establish a Regional Steering Committee (RSC) under the umbrella of ESCWA to enhance cooperation and collaborative work with National Focal Points (NFPs). The RSC will be made up of key decision-making staff from the countries of the Region, while the NFPs will include national experts on land degradation. The RSC and NFPs are to meet at an agreed upon time schedule.
- Collect, and analyze the existing data on land degradation through a uniform approach; for instance, such as Driving forces, Pressure, Status, Impact and Response (DPSIR) approach, and fill-up data gaps for using the ESCWA's Methodological Framework or Land Degradation Assessment in Drylands (LADA) project methodology as a unifying method for comparing the results of a successful cooperation program in the region
- Design effective indicators for identifying “bright” and “hot spots”. The project aims at identifying common regional environmental indicators that are easy to quantify. Indicators would characterize each component of land degradation. They are also applicable in the control of the implementation of remedial measures in hot spots, and for monitoring improvements of bright spots. This will allow the development of a regional cooperation management plan to protect natural resources according to a scheme for areas of priority intervention.
- Map three levels of thematic information as part of regularly updating regional databases to serve the decision-making process, technical staff and local players; and also create Local Rural Community Groups (LRCG) at Sub-Regional level to enhance participatory approaches on remediation measures. The project will strengthen interaction among government bodies and local stakeholders to elaborate on and to execute the remedial measures. A special focus will be given to the gender issues, and the active involvement of women in rural action programs.
- Build up capacity to strengthen regional institutional collaboration and common policies, and create a Regional Land Degradation Network (RLDN) to disseminate appropriate knowledge and information.

III. SCOPE

The impacts of land degradation or desertification are huge indeed. This theme has in fact taken international significance as witnessed by initiation of the following programs (for more details see the Funding Section): United Nations Environment Program – Mediterranean Action Plan (UNEP – MAP), Coastal Area Management Program (CAMP) projects, European Commission-Short & Medium-term Priority Environmental Action Program for the Mediterranean Projects (EC-SMAP), UNDP – GEF and ACSAD component on desertification, UNCCD, GTZ Regional aid on desertification, FAO LADA and GLCN projects, Canadian International Development Program (CIDA) and Swedish International Development Program (SIDA), etc.

The National Focal Point (NFP) agencies of each country in the Region will coordinate working with partners from relevant ministries notably of agriculture, environment and municipalities. The Regional Steering Committee (RSC) will have an overall coordinating role throughout the project. Work packages will have responsible leaders to ensure coordination, scheduling and proper implementation. Careful monitoring of project progress and reporting against milestones would contribute to project success, and several coordinating meetings of the RSC and NFP committees will also be needed for this purpose. The project has a full work package for proper dissemination of knowledge.

The project will be implemented by highly experienced interdisciplinary teams of soil scientists, earth scientists, information and remote sensing specialists, agronomists, economists and sociologists to cover its requirements on data collection, assessing land degradation, identifying remedial measures, monitoring hot spots and mapping of outputs for different stakeholders. An updated database will serve several purposes, particularly the envisaged management plan. The inherent nature of land degradation, intertwined so closely with the community, demands that participatory approaches and capacity building be followed. This is important for strengthening institutional and policy formulation capacity. In this context dissemination of knowledge is crucial, and it will be exchanged at different levels.

The work plan of the project follows five sequential phases with strong interlinkages. Phase I, starts with defining the terms of integrating inputs, project management, coordination and collecting the existing data. Phase II carries on to defining physical land degradation through review work and remote sensing. In Phase III the extent of other components of land degradation is explored and hot spots are defined. The control starts in Phase IV where monitoring of indicators and remedial measures is operative and where outcomes are mapped. In the final Phase V, refining the database, the maps, and establishing a management system will be completed. All phases will end with reporting, and several workshops and dissemination activities will be carried out for participatory and capacity building purposes.

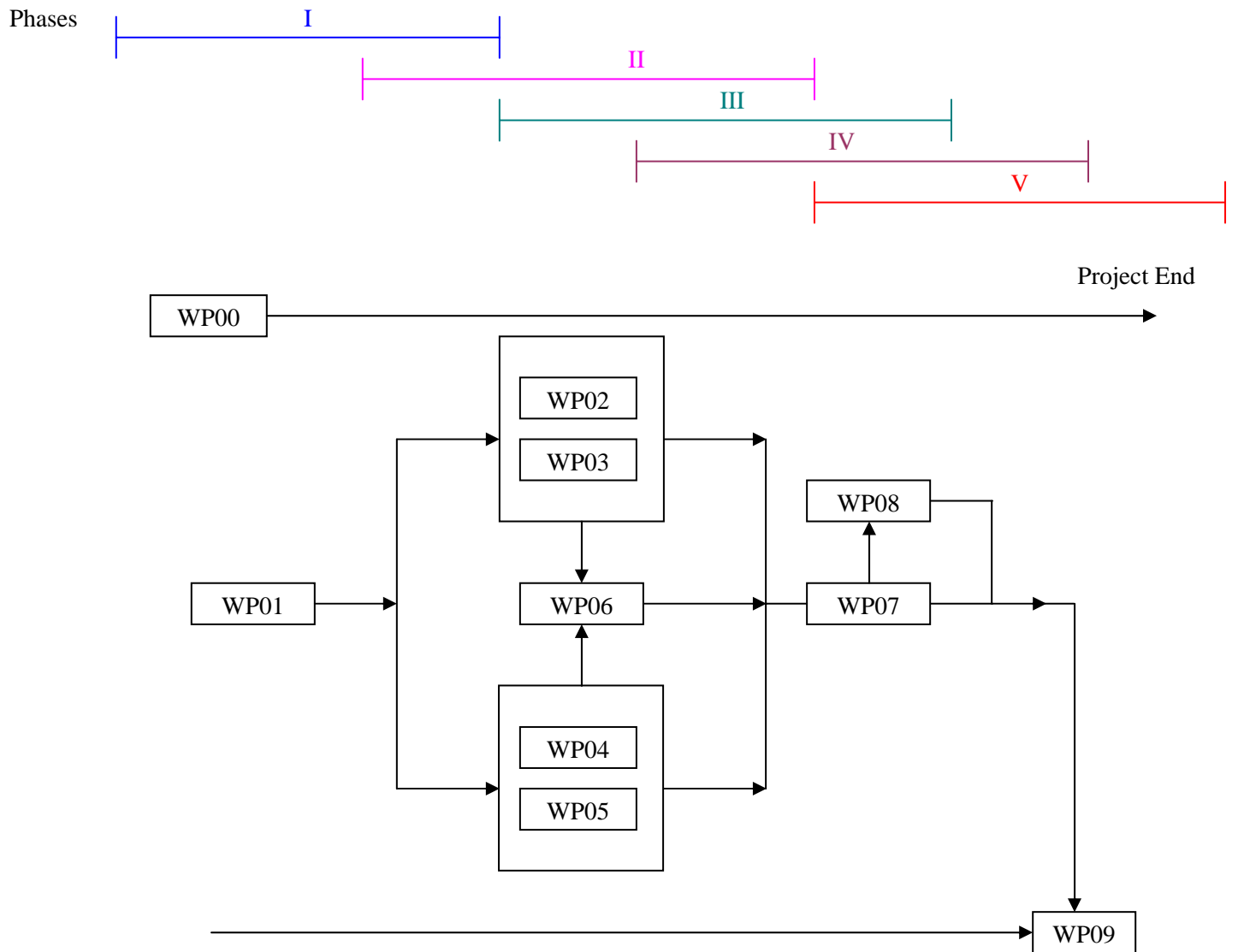
IV. METHODOLOGY AND WORK PLAN

The work plan of the project will follow five sequential phases, which will include distinct milestones and accompanying work packages where different methodologies would be applied for delivering the expected outputs of the project. The work packages as detailed below delineate the methodologies and their tasks.

Figure 1 depicts the interlinkages among the five phases of the project.

Phase I-	Initiation, coordination, and start of data collection Work packages – WP00 and WP01
Phase II-	Defining land degradation, field assessment and remote sensing; identifying and monitoring hot and bright spots Work packages-WP02, WP03
Phase III-	Mapping, database design, participatory approaches, and remedial measures Work packages-WP04 and WP05
Phase IV-	Database constructed, control and final mapping, management plan and participation Work packages-WP06, WP07
Phase V-	Quality control, capacity building, refining data outputs & policies, dissemination, and reporting Work packages-WP08, WP09.

Figure 1. Graphical presentation of work packages and phases



METHODOLOGIES FOR WORK PACKAGES

Different partners in the Region will work cooperatively together under the leadership of the manager in each country while ESCWA in liaison with the RSC will act as coordinator. The following assumes that there are 12 partners, for instance 12 countries from the ESCWA Region will participate initially.

Partner

00- ESCWA

01- Bahrain

02- UAE

03- Egypt

04-Iraq

05-Kuwait

06-Lebanon

07-Oman

08-Palestine

09-Qatar

10-Saudi Arabia

11-Jordan

12-Syria

13- Yemen

WP 00: Project coordination and management

Lead Partner:	ESCWA *	Start month: 1	End month: 48	Total effort: 60
---------------	---------	----------------	---------------	------------------

Person-months per partner:

P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	
20	3	3	3	3	3	3	3	3	3	3	3	3	

**ESCWA regional partners such as LAS, ACSAD, AOAD, ICARDA and UNEP/ROWA will be expected to join*

N.B. P is Partner; Start /End month is when Project starts or ends; Total effort is number of total person-months for this package

Objectives:

The objectives of project management include:

- Maintaining communication with the Funding Agencies, compilation and preparation of all reports
- Maintaining communication with the project partners
- Coordinating and synchronizing individual work packages
- Coordinating project meetings
- Monitoring of project according to its schedule, milestones and outputs
- Monitor the quality of the work in close collaboration with partners
- Document tracking and management

Tasks:

- Setting up the necessary management and communication structure, with e-mailing, website and on-line discussion
- Maintaining communication with officers of funding agencies, and project partners through applicable media, mostly electronic
- Monitoring project progress, compiling all reports and outputs for timely transmission to the relevant officers
- Organizing project meetings (RSC, NFP and LRCG Committees) at rotating locations, starting with a kick-off meeting, review meetings, all synchronized with the work plan, milestones and dates of deliverables or outputs

Deliverables

- Regular management and progress reports
- Annual reports
- Final report

WP 01: Collection, evaluation and screening of existing data

Lead Partner:	Country (a)	Start month: 1	End month: 30	Total effort: 34
---------------	-------------	----------------	---------------	------------------

Person-months per partner:

P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
2	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66

Objectives:

- Designing data collection strategy, and compiling inclusive list of work done in the countries and Region on land degradation assessment to identify data gaps
- Identifying and assessing status of Regional cooperation
- Defining the local stakeholders and ensuring their direct involvement
- Recording and documenting the data requirements for DPSIR
- Assessing the ESCWA's Methodological Framework requirements against local conditions
- Evaluating the limitations and alternative approaches if necessary for a cooperative program.

The main objectives of this work package are to ensure that relevant land degradation problems, as defined by local stakeholders, are tackled; all end users are defined; published information on the status of land degradation is collected and analyzed in a uniform manner; and ESCWA's Methodological Framework data requirements and proposed tools are matched and adjusted according to local constraints.

Tasks

- Identifying and contacting key institutions and local actors in the decision making process to ensure early involvement and support of relevant network and database for a Regional cooperation program
- Documenting the sources of information and collecting the relevant data according to a uniform approach compliant with ESCWA's Methodological Framework
- Compiling checklist of soil and land degradation problems, relevant indigenous and proposed solutions, defining a meta data structure for their documentation using DPSIR, and obtaining gender specific information on issues where available
- Analyzing the published information to characterize the status of land degradation in the area and linking the impacts on environmental and socio-economic aspects according to ESCWA's Methodological Framework
- Validating available data against project requirements and the different elements of the DPSIR approach as well as assessment tools to adapt the methodologies.

Deliverables

- D01.1 First Workshop
- D01.2 Report – analysis of available data
- D01.3 Structure of Data Information System

WP 02: Defining the extent of land degradation and assessing methodologies

Lead Partner:	Country (b)	Start month: 1	End month: 30	Total effort: 50
---------------	-------------	----------------	---------------	------------------

Person-months per partner:

P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
14	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92

Objectives

- Identifying driving forces (demographic changes, economic activities, land use change, institutional roles, policies and legislation) and their effects on the degradation of soil resources following DPSIR
- Assessing the types of land degradation, its status, extent pressures and response of different stakeholders in major agro-ecological and climatic zones
- Evaluating the ESCWA's Methodological Framework for land degradation assessment of different land units according to local conditions
- Defining the representative areas and scale within each component of land degradation and its pattern, and selecting the ESCWA's Methodological Framework procedures, indicators and tools for their assessment
- Analyzing field data and integrating RS and GIS findings within a structured database and information system
- Validating results and assessing their accuracy.

Tasks

- Following the ESCWA's Methodological Framework, use of RS and GIS to classify the area of study into land units representing similarities in major landform and lithologies
- Subdividing land units based on repeated land use and physiographic, and mapable patterns
- Developing a questionnaire and field data collection forms to get an insight on the current agricultural and environmental management practices, and the socio-economic and biophysical aspects based on the "five capitals"- social, economical, environmental, institutional and ecological
- Defining the ESCWA's Methodological Framework baseline for land degradation assessment
- Assessing the dynamics of land degradation by the extent of its components (physical, chemical and biological) in different areas forests, agricultural areas, forest-agriculture, bare lands, urban areas and others.

Deliverables

D02.1 Report – Land degradation status

D02.2 Assessment of applying the ESCWA's Methodological Framework

D02.3 Report – Applying remote sensing and GIS for Regional cooperation on land degradation

WP 03: Identification and monitoring of hot spots/bright spots and indicators

Lead Partner:	Country (c)	Start month: 18	End month: 42	Total effort: 50
---------------	-------------	-----------------	---------------	------------------

Person-months per partner:

P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
5	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75

Objectives

- Identifying areas with different levels of degradation for comparative purposes
- Designing indicators for the descriptive monitoring and measurements of land degradation
 - Identifying the combined effects of several land degradation processes aggravating the state of degradation of a land unit, which make it severe among the assessed areas, thus allowing its classification in the "hot spot" class
 - Identifying and mapping bright spots, stable areas with no or very little human interference or recovered hot spot areas, by an assessment comparing its recent state with a previous one, where land degradation has been mitigated, stopped or reversed
 - Characterizing land management and society response including the applicability and feasibility of measures and the stakeholders' involvement

- The work package will identify “hot” and “bright” spots. This is done by integrating all the elements of the DPSIR approach and the indicators of the state (type and intensity of degradation) to characterize the type of land degradation (physical, chemical and/or biological), and causes (driving forces and pressure), thus allowing the identification of hot spots and depict them on a map, using the ESCWA’s Methodological Framework proposed legend. Comparing the state of a degraded area with a base line allows the assessment of the current state of the land. When any improvement is detected, this then will reflect on the response and remediation measures, permitting classification of the area as a bright spot.

Tasks

- Linking the state of land degradation with the driving forces and pressure to interpret the results of the field measurements and questionnaire (interviews with the farmers and other stakeholders) to compare the severity of land degradation in the assessed areas
- Designing and categorizing indicators by indirect (driving forces) and direct (pressure) causes of land degradation, and state, impact and the stakeholders response
- Establishing a network of causal chains using a manual procedure or automated integration decision support system
- Retrieving improvement trends from the monitoring of the state of land degradation, as compared with a previous situation, using comparable and measurable indicators to judge on the amelioration of the state, thus transferring the area from hot to bright spot.

Deliverables

- D03.1 Second workshop
- D03.2 Report – Hot spots and Bright spots status
- D03.3 Establish indicators and monitoring system
- D03.4 Prioritize Hot spots and Bright spots action plan

WP 04: Assignment of effective remedial measures

Lead Partner:	Country (d)	Start month: 24	End month: 36	Total effort: 38
---------------	-------------	-----------------	---------------	------------------

Person-months per partner:

P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
2	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8

Objectives

- Observing and describing applied remedial measures
- Involving end users in the process of assessing currently applied remedial measures and proposing alternatives or improvements
- Designing effective measures to reduce soil erosion, improve soil conditions, stop forest clearing, remediate and prevent chemical degradation (salinity, toxicity, contamination) and biological degradation (land cover, soil moisture, aridity), and to mitigate the drop of water table depth, drought, climatic change, decline in crop yield
- Upgrading farmers skills through activation of extension services to stop the buildup of nitrates in the soil and groundwater
- Designing remediation measures to protect groundwater quality.

The work package will analyze the currently applied protective, curative and remedial measures to assess their effect on the current state of land degradation. These will be categorized in terms of their importance for land conservation. It will also analyze the dynamics of decision-making regarding the adoption of effective measures and define the role of different stakeholders in proposing, supporting and

implementing these measures. It will review the applied policies and legislations regarding the causes and impacts of land degradation. Based on the pressures and responses of different stakeholders, the work package will propose cost effective and simple remedial measures and define the role of each governmental body, NGO and rural community in stopping and reversing land degradation.

Tasks

- Integrating the on-site and off-site effects of land degradation within a comprehensive plan in order to arrive at workable and applicable remedial measures
- Ensuring the direct stakeholders involvement in the process of evaluating and proposing effective remedial measures
- Proposing effective measures to prevent soil erosion and the contamination of surface water bodies with soil sediments rich in nitrogen and phosphorous that can affect the river water quality and aquatic life
- Combining the dual effect of hydrology, land stability and land use on landslides and mass movement to properly analyze the risks related to areas prone in terms of current and future land uses
- Integrating the physical and socio-economic factors in understanding of the causes and effect of land degradation to propose remedial measures that fit specific conditions.

Deliverables

D04.1 Report – Remedial measures status

D04.2 Guidelines to approaches that proves effective in specific cases of land degradation

D04.3 Analysis of different scenarios for remedial measures and methods

WP 05: Mapping, and establishment of a database and an information system

Lead Partner:	Country (e)	Start month: 1	End month: 30	Total effort: 48
---------------	-------------	----------------	---------------	------------------

Person-months per partner:

P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
1	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92

Objectives

- Designing a suitable database to document and structure all kinds of data that are relevant to the project (description of sites, analysis, land forms, Physiographic units, maps, pollutants, degradation processes, etc.)
- Assessing the types of information systems to select the one suitable for serving the tasks of the project across the region uniformly
- Establishing compatible database to be linked with Geographic Information System (GIS) and be interactive
- Assigning mapping schemes for degradation status, factors, and risks at three levels: decision makers, institutional research and the public.

Tasks

- Classifying available data according to desertification factors in the study areas and determining data types representing degradation status according to Land Units.
- Dividing database into sub-databases according to degradation factors, and creating a uniform regional code (related with different ranks of units based on land facets, land use classes and physiographic units) and linking sub-databases to Geographic Information System (GIS).

- Applying field and remote sensing mapping methodologies for cartography to create useful maps and schemes representing the study area status of degradation for highlighting the hot and bright spots.
- Creating thematic maps in two scales to meet different users needs as well as factors of degradation that are defined at three levels, as shown below:

Maps & users	Scale 1:25.000	Scale 1:50.000
Planning Maps (Decision makers)		Yes (districts)
Thematic maps (Researchers & concerned institutions)	Yes (based on topo sheets)	Yes (topo sheets)
Community awareness maps (local people)	Yes (districts)	

- Creating maps-schemes for each degradation factor at a scale of 1:25000 and ranking the factors into four categories (High, Medium, Low and None) to execute spatial analysis of factors in the process of creating final maps as follows:

Hot Spots		Bright Spots
Description	Level	<ul style="list-style-type: none">• Protected area• Rehabilitated area• Managed land
Soil, water & plant are deteriorated	High	
Less deteriorated	Medium	
Minor deteriorated	Low	
None: lands with very low or no effect of man (natural forest)		

Ranking soil and plant factors will be executed as follows:

- Soil factor will be classified into High (h), Medium (m), Low (l) and none (n).
- Plant factor will also be classified into high (H), Medium (M), Low (l) & none (n).

The ranking of the two factors is explained as follows:

		Soil Factor			
		h	m	l	n
Plant Factor	h	H	H	M	-
	m	H	M	L	-
	l	M	L	L	-
	n	-	-	-	N

Soil and plant are limiting factors

Ranking of soil-plant and water factors will be executed as follows:

- Soil-plant factor will be classified into high (H), Medium (M), Low (L) & None (N).
- Water factor will also be classified into high (h), Medium (m), Low (l) & none (n).

The ranking of Soil-Plant and Water factors is explained as follows:

		Soil-Plant Factor			
		H	M	L	N
Water Factor	h	h	h	m	-
	m	h	m	m	-
	l	h	m	l	-
	n	-	-	-	n

Soil and plant are limiting factors

- Finalizing Data Information System based on Geographic Information System (GIS) for easy handling and distribution of project outputs for the three levels as mentioned above.

Deliverables

- D05.1 Report – Land degradation mapping status
- D05.2 Applying field methodologies mapping
- D05.3 Applying remote sensing mapping
- D05.4 Refining and establishing database
- D05.5 Finalizing data information system

WP 06: Development of management plan

Lead Partner:	Country (f)	Start month: 1	End month: 30	Total effort: 24
---------------	-------------	----------------	---------------	------------------

Person-months per partner:

P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
3	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74

Objectives

- Devising a management plan that handles the problems, their remedial measures, and basic institutional arrangements as well as indicators for implementation
- Protecting natural resources by assessing the stable managed areas and applying preventive measures
- Assigning and applying appropriate curative measures over hot spot areas by integrating the results of the assessment and related descriptive mapping with the aggravating socio-economic conditions
- Assessing remedial measures and evaluating and monitoring their performance and involving local authorities and stakeholders in managing hot spot areas
- Proposing policies and legislation for sustainability of natural resources
- Setting an regional cooperation project performance program to ensure the implementation of all phases

Tasks

- Setting up priority problem areas based on a prioritization procedure integrating the assessment and thematic mapping considering actual and potential land use values, notably the perception of the stakeholders, through national policies and assessment of potential for forestry, agricultural use and other land use forms
- Linking remedial measures to relevant stakeholders and identifying responsible institutions and defining the role of each player
- Applying stakeholder approval mechanisms for public participation program involvement and assigning a special awareness program for this purpose
- Defining indicators of project implementation, considering local conditions of each country. These indicators will be further evaluated in details. The following are some examples of indicators in general that stabilized areas, regenerated forest, recovered degradation, improved rural living, etc.
- Defining a Regional Coordination Program that will ensure setting of on-going management procedures at National levels for implementing the national component of the project with 4 phases: 1. Assessment appraisal, 2. Methodologies/analysis, 3. Monitoring/validation, and 4. Dissemination.

Deliverables

- D06.1 Draft management plan
- D06.2 Define (fine tune) indicators for management plan
- D06.3 Management planning activities and implementation

WP 07: Design and enhancement of participatory approach

Lead Partner:	Country (g)	Start month: 1	End month: 30	Total effort: 32
---------------	-------------	----------------	---------------	------------------

Person-months per partner:

P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
4	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33

Objectives

- Enhancing participatory approach contribution to remedial measures based on the assessment procedures and elaboration of indicators
- Enhancing interaction for elaborating and executing remedial measures with government authorities and local stakeholders
- Focusing on involving rural institutions and stakeholders to activate action programs which serve local population and protect natural resources in these areas.

Tasks

- Assessing integrated public participation methodologies
- Designing special programs for local population awareness raising and enhancing institutional capabilities
- Defining public monitoring plan and training requirements.

Deliverables

- D07.1 Report – participatory modalities status
- D07.2 Assessing integrated public participation methodologies and training
- D07.3 Public monitoring plan and training requirements

WP 08: Design and enhancement of capacity building, policies and institutions

Lead Partner:	ESCWA	Start month: 1	End month: 30	Total effort: 41
---------------	-------	----------------	---------------	------------------

Person-months per partner:

P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
5	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80

Objectives

- Building capacity at Regional and National levels to strengthen institutional setting and policies, technical and infrastructure background
- Filling gaps in the current legislation addressing the conservation of natural resources

Tasks

- Increasing institutional capabilities for working in the field of policies and legislation to ensure the sustainability of natural resources
- Assessing the needs for capacity building for managing hot spot areas and conserving bright spot areas, and establishing local institutional teams to increase public awareness about the environmental issues

Deliverables

- D08.1 Report –institutional capacities modalities status
- D08.2 Assess needs for capacity building and training
- D08.3 Strategies and policies for capacity building

WP 09: Dissemination of appropriate knowledge & proper exploitation plans

Lead Partner:	ESCWA	Start month: 1	End month: 30	Total effort: 34
---------------	-------	----------------	---------------	------------------

Person-months per partner:

P01	P00	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
8	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16

Objectives

- Disseminating appropriate knowledge and proper exploitation plans at Regional and National levels to ensure public awareness to applicability of data elsewhere and scientific merit of methodologies
- Disseminating relevant information to ensure the proper management and implementation of results

Tasks

- Creating project website and printing brochures introducing the project activities, deliverables, management plans
- Carrying out meetings with decision makers, local authorities and higher authorities
- Carrying out meetings with stakeholders to discuss and disseminate the project results
- Carrying out workshops at the district levels for decision makers, NGOs and farmers
- Carrying out workshops at the governorate levels for public
- Involving the national and local media to disseminate the objectives and the results of the project
- Carrying out a final workshop

Deliverables

- D09.1 Project website
- D09.2 Guidelines for assessment of hot spots
- D09.3 Institutional strategies to implement monitoring program

D09.4 3rd Workshop
D09.5 Final country reports
D09.6 Final Report

V. EXPECTED OUTPUTS

The project has eight well-defined milestones, or stages which are divided into structured working units, foreseen at more or less regular six-monthly intervals (Table 1), in order to coincide with progress in work packages and other progress reports. The Regional Steering Committee (RSC) would meet around each milestone and would also decide on meetings of the NFPs and LRCGs during the Kick-off meeting at the beginning of project.

Table 1. Project milestones time definition and description

<i>Milestone Number</i>	<i>Project Month</i>	<i>Milestone Description</i>
M ₁	PM06	End of initiation phase, 1 st workshop
M ₂	PM12	End of existing data collection plus testing and refinement of assessment methodologies and starting project specific operations
M ₃	PM18	Refining/fine-tuning remote sensing & field data assessment requirements – communication plan
M ₄	PM24	Implementing work packages, 2 nd workshop
M ₅	PM30	Implementing work packages, mapping & indicators
M ₆	PM36	Developing management plan
M ₇	PM42	Public participation and capacity building completion
M ₈	PM48	Project & reporting completion, as well as dissemination

Each milestone will mark the completion of particular work package(s), which are detailed in the section on Methodology. More than one work package is linked to each milestone, as shown in Table 2.

Table 2. Expected Outputs

<i>N° Work Package</i>	<i>N° Outputs</i>	<i>Title</i>	<i>Due</i>
WP01	D01.1	First Workshop	PM6
	D01.2	Report – analysis of available data	PM12
	D01.3	Structure of Data Information System	PM30
WP02	D02.1	Report – Land degradation status	PM18
	D02.2	Assessment of applying ESCWA’s Methodological Framework	PM30
	D02.3	Report – Applying remote sensing & GIS for regional cooperation in land degradation	PM20
WP03	D03.1	2 nd Workshop	PM24
	D03.2	Report – Hot spots and Bright spots status	PM27
	D03.3	Establish indicators & monitoring system	PM40
	D03.4	Prioritize Hot spots and Bright spots action plan	PM42
WP04	D04.1	Report – Remedial measures status	PM30
	D04.2	Guidelines on effective approaches in the field	PM33
	D04.3	Analysis of different scenarios of remediation	PM36
WP05	D05.1	Report – Land degradation mapping status	PM18
	D05.2	Applying field methodologies for mapping	PM30
	D05.3	Applying remote sensing mapping	PM36
	D05.4	Refining & establishing database	PM39
	D05.5	Finalizing Data Information System	PM45
WP06	D06.1	Draft management plan	PM35
	D06.2	Define/fine-tune indicators for management plan	PM40
	D06.3	Management planning activities & implementation	PM45
WP07	D07.1	Report – Participatory modalities status	PM27
	D07.2	Assessing integrated public participation methodologies & training	PM30
	D07.3	Public monitoring plan & training requirements	PM33
WP08	D08.1	Report – Institutional capacities modalities status	PM33
	D08.2	Assessing needs for capacity building & training	PM38
	D08.3	Strategies & policies for capacity building	PM42
WP09	D09.1	Project website	PM12
	D09.2	Guidelines for assessment of hot spots	PM30
	D09.3	Institutional strategies to implement monitoring program	PM38
	D09.4	3 rd Workshop	PM46
	D09.5	Final Reports (countries)	PM48
	D09.6	Final Report	PM48

VI. PROJECT REQUIREMENTS

The budget is evenly allocated among the related components, for instance about one third will constitute the cost of personnel who would be in charge of doing the actual work, assessments, field visits, and travel costs for project meetings, and overheads. In some cases, third party assistance is foreseen for certain tasks, as well as cost for computing and third party data acquisition. A certain part of the budget is allocated for the operation of the project web server, and another part for dissemination purposes.

As shown in the Work Package list (Table 3), it is proposed that ESCWA (with the help of interested Regional Cooperating Partners) will coordinate the implementation of the project, while cooperating partners constitute Regional Organizations as well as the Countries within the ESCWA Region that will take part in the project. They would contribute to all packages as shown in Table 4, and each would be a leader in the implementation of one work package as discussed earlier.

The components of the budget are broken down into seven items (personnel, travel, consumables, equipment, other costs, subcontracting, and dissemination) plus overhead cost, Table 5 (more details are provided in the Budget section).

The lead partners for different packages should be well equipped and shall have the basic capacity to undertake the required work, but may need to upgrade and support those needs with “equipment” that is allocated for the project, in order to minimize conflict with other on-going projects.

Table 3. Work package list

<i>N° Work package</i>	<i>Description</i>	<i>Start month</i>	<i>End month</i>	<i>Total project Man-Month</i>
00	Project coordination & management, capacity building and dissemination	1	48	60
01	Collect, evaluate, screen existing data	1	30	36
02	Investigate land degradation & apply methodologies	3	38	54
03	Identify/monitor hot/bright spots & indicators	18	42	54
04	Identify effective remedial measures	24	36	40
05	Map, establish database & information system	12	45	51
06	Develop management plan	30	45	22
07	Design & enhance participatory approaches	24	40	31
08	Design & enhance capacity building, policies & institutions	32	42	41
09	Disseminate appropriate knowledge & proper exploitation plans	6	48	34

VII. MANAGEMENT AND ORGANIZATION PLAN

A. PROJECT MANAGEMENT

ESCWA would act as the coordinator and lead partner of the Project (in cooperation with other interested Regional Organizations). ESCWA member countries would constitute the core participating partners, and each country would be assigned the day-to-day operational management of the project in its territories. The Partners should have considerable experience in undertaking such cooperation projects, and ESCWA would assist in management needs. But the success of the project requires a strong network of committed partners (Figure 2). A Regional Steering Committee (RSC) from representatives of all the partners will guide the project management.

B. MANAGEMENT TASKS

The management tasks include:

- Coordinating and synchronizing the different work packages
- Coordinating project meetings
- Documenting project management tracking and quality control
- Monitoring of project progress in view of its schedule, milestones and deliverables and risk management
- Reporting (Partners & Coordinator)

C. MEETINGS AND COMMUNICATION

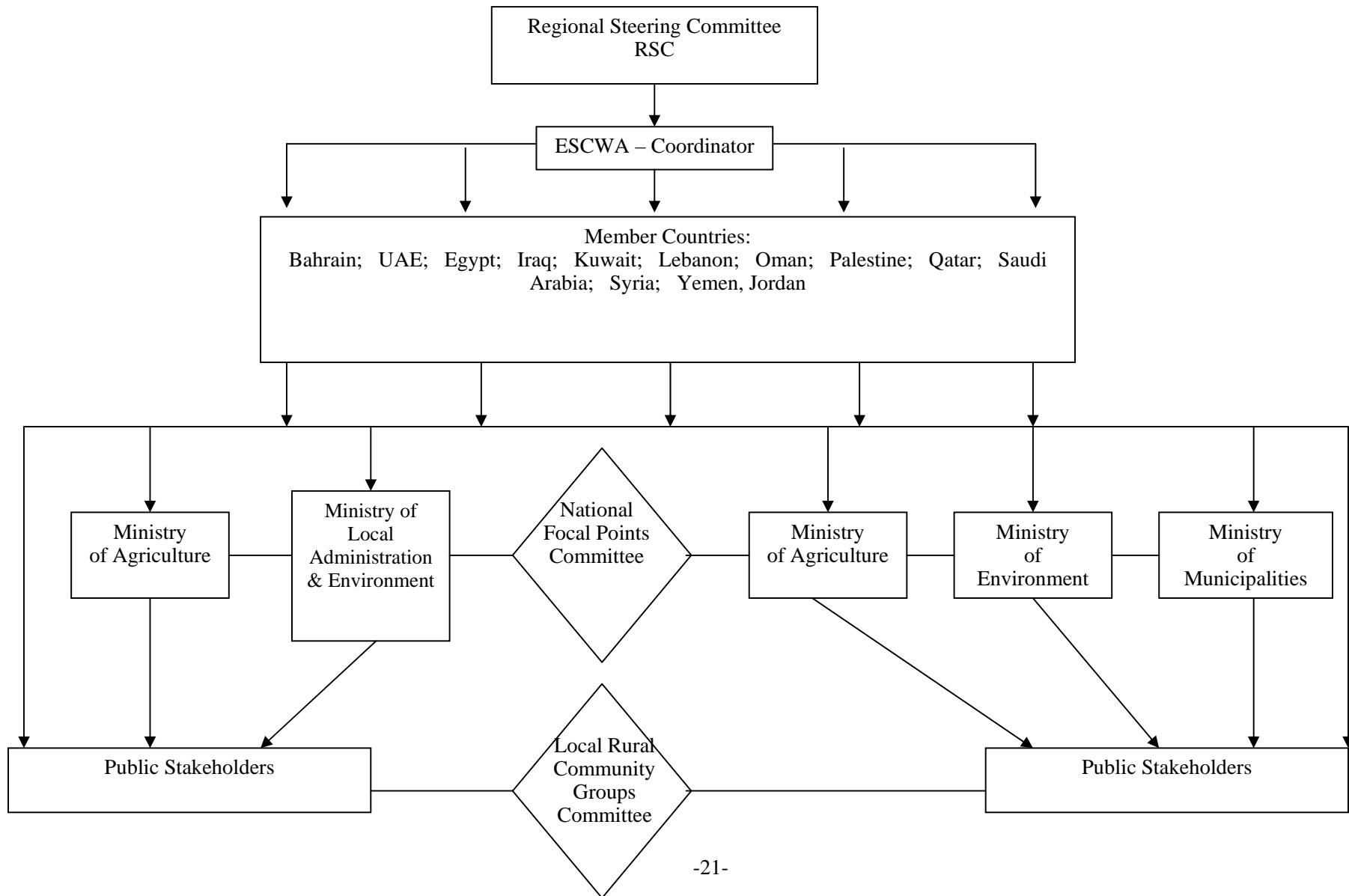
Overall project management will envisage regular meetings and communication with the Regional Steering Committee (RSC). Each partner will have a representative in the RSC. It should assure continuous contact with stakeholders. It is assumed that unanimous agreement is always sought, otherwise, a two-thirds majority would decide on contested issues. The RSC will convene up to twice a year, and at the beginning of the project for the first coordination meeting (the kick-off). These will be part of the regular project technical meetings as the project progress would require.

The Coordinator will be responsible for all administrative and organizational matters, plus critical assessment of project progress as foreseen with milestones and deliverables. For Quality Assurance, all project deliverables will have to be reviewed and approved by at least three RSC members, excluding the partner responsible for the work package in question. Electronic communication on continuous basis, to ensure full interaction, and to address all technical matters will be an on-going tool. Staff exchange and additional meetings, field visits to countries are envisaged at different times for added benefits and knowledge dissemination.

Responsible leaders assigned for the implementation of each Work Package would take care of coordination, scheduling, and proper implementation in cooperation with other agencies, and communicating its deliverables, making sure that all parties involved are aware and have knowledge about its progress.

The project will maintain an e-mailing list and a website for general accessible repository of project-related information, i.e. reports, documents, data, announcements, media materials, and stake holder's information.

Figure 2. Interactive management and collaboration structure in Project



D. RISK MANAGEMENT

The management system and task monitoring, including careful monitoring of project progress against its milestones, and regular project internal progress reports, will assure minimal risks to project progress and success. Ad hoc meetings of the RSC, if and when need arises, can be called through electronic media. For any possible risk (delays, lacking data, institutional or unforeseen conditions ...) certain contingency plans will be in place. Any conflict that might arise between partners, or with stakeholders, will be resolved amicably, where the local manager, and if need be, the RSC, will make sure unanimity is reached for that purpose.

E. PLAN FOR DISSEMINATING KNOWLEDGE

The project dedicates a full work package (WP 09) for the dissemination of results and activities. The extent of Partners' involvement in the operation of the project, and the benefits that each partner will get from it will be crucial for success. Seminars, workshops and the web services will be used for the purpose of ensuring their involvements. Scientific communications will be delivered in accordance with project needs, especially dissemination.

The project foresees training activities for the methodological components to be applied in each country, including socio-economic impact assessment within the context of human induced land degradation.

The project gives due significance to public participation through the local stakeholders' involvements, including local government (municipalities) and non-governmental institutions and private sector.

VIII. BUDGET AND FUNDING PLAN

All budget items are defined in Table 4, but the following elaboration is in order:

Most of the budget for personnel related to partners will be covered by partners themselves, as their contribution to the project cost (close to 30% each). This includes their part-time salaries. The Partners will have different personnel categories. The capital expenses, and equipment, make about 20%; the remaining 50% is earmarked as operating expenses for each Partner. The “Travel” would cover external travel outside the country to participate in conferences, workshops, training, and exchange visits that are relevant to the project and its themes. The item “Consumables” covers such items as stationery, spare parts; operational daily needs for running office by personnel working for the project. “Other costs” cover items such as testing, analysis, field-work needs and repairs. “Subcontracting” implies expertise external to the partners that would be contracted on a part-time, job-specific basis. The item “Dissemination” relates to expenses for the website, seminars, meetings, and workshops that serve the entire project, especially participatory activities, capacity building, drafting publications and reporting.

FUNDING POSSIBILITIES

The theme of the project proposal is promoting regional cooperation on land degradation, thus it could be of interest to other similar international programs and organizations. It certainly serves ESCWA’s priorities as well as the UNEP-MAP aspirations of the Barcelona Convention for safeguarding the Mediterranean and its natural resources. The aims of their CAMP projects are quite close to the purpose of this project proposal. The EC program SMAP, also focuses on assessing environmental degradation of the Mediterranean, may have an interest in the proposal as it covers a major portion of the Eastern Mediterranean focusing on its natural resources and public participation plus capacity building. The UNDP-GEF funding mechanism and the UNCCD Global Mechanism on combating desertification which is supporting action-oriented activities, policies and regulations could be requested to finance this project proposal. As this project proposal is Regional, and its geographic area spans a multitude of climatic zones, from the humid to the semi-arid and arid, regional and international organizations such as LAS, ACSAD, AOAD, ICARDA, UNEP/ROWA and CIHEAM could be encouraged to join as project partners. Land degradation is also the prime concern of the LADA project at FAO where, in April 2006, a meeting of experts was convened at Rome to compare the different methodologies for assessing land degradation and mapping of affected areas. Another relevant FAO program which focuses on mapping the Global Land Cover Network (GLCN), as such FAO could support and provide finance for this project proposal which is focusing on the use of remote sensing techniques and geographic information system and modeling. Both the Canadian CIDA and Swedish SIDA are support funding of projects in this domain. GTZ is supporting and funding regional components on similar themes.

Table 4. Budget estimate in US Dollars*

<i>Budget item</i> <i>Partner</i>	<i>Salaries Part time</i>	<i>Capital Expenses</i>	<i>Operating expenses</i>						<i>Total</i>
	<i>Personnel</i>	<i>Equipment</i>	<i>Travel & subsistence</i>	<i>Consumables</i>	<i>Other costs</i>	<i>Subcontracting</i>	<i>Dissemination</i>	<i>Overhead 13%</i>	
Coordinator	600000**	-	140000		-	-	150000	115700	1,005700
Partner 1	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 2	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 3	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 4	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 5	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 6	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 7	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 8	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 9	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 10	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 11	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Partner 12	157833.33	105833.33	68333.33	15833.33	24583.33	16250.00	42500.00	56051.66	487218.31
Total	2,494000	1,270000	960000	190000	295000	195000	660000	867000	6,931000

*Assuming one Coordinator and 12 partner countries

** Consultants