

The MEDCOASTLAND Thematic Network Project (2002-2007)

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Why MEDCOASTLAND?

Only 13 percent of the Mediterranean land is considered fit for agricultural use and around 5 per cent of it in the North African and the Middle Eastern countries is suitable for agriculture; the rest is made of pastures, forests, shrubs, urban zones, badlands, rocky areas, and deserts. Egypt alone cultivates something like 5.4 per cent of its land. If water would be available, then options for cultivating crops are largely increased. All of the countries of North Africa and most of those in the Middle East are water stressed and there is little or no additional resource to tap. Many scientists agree that widespread land degradation and desertification, inefficient and inequitable use of land and water lie at the root of the region's problems (including political ones), for which effective solutions are still pending. Hence, the challenge of sustained agricultural production relies by large upon proper use and management of existing land and water that undoubtedly complement each other in the agricultural system.

In 2005 the Mediterranean was home of 428 million people out of which 286 million currently live in the MENA (Middle East North Africa) countries. The Region's population has increased by 50 per cent over the last 30 years and in 2020 the MENA countries alone are expected to have 300 million people. Paradoxically population increase is higher where fewer natural resources are available. Models predict that arable land per capita would decrease from 0,48 ha per person in 1961 to 0,22 ha in the year 2020.

Coastal areas are experiencing the greatest anthropic pressures due to the fact that between 50 to 70 per cent of the population lives within 60 km from the coast. Population pressure is exacerbated also from the tourism industry. Every year around 218 million visitors spent their holidays in the Mediterranean and predictions are that by 2030 that number may double. A typical example is Malta, a country with less than half a million inhabitants receiving on average 1.2 million tourists per year.

The European Commission (EC) has been very active in its Mediterranean policies and has tackled a number of environmental issues such as sustainable growth, natural resources management and integrated rural development. The needs for these interventions derive from a set of factors ranging from food security, migration, economic development, as well as peace and political stability in the region. One of the projects funded by the EC under the 5th Framework Programme was also the MEDCOASTLAND Thematic Network (Contract No. ICA3-CT-2002-10002) whose main goal was *Mediterranean coordination and dissemination of land conservation management to combat land degradation for the sustainable use of natural resources in the region with special emphases on coastal areas*. As a Thematic Network the task of the project was not "to make research" but "to disseminate research results".

The network brought together 13 countries (from northern Mediterranean Europe, North Africa, Middle and Near East) making a total of 32 partners, of whom 17 were research and educational institutions, 7 represented decision makers and the remaining 8 were farmer's associations and/or non governmental organisations (NGOs). The International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) through the Mediterranean Agronomic Institute of Bari (MAI-B), in Italy coordinated the project that run from October 2002 until May 2007. Seven Work Packages (WP) supported the logical framework of the project. They were all linked to each other in a sequential manner that starts with the identification of the problem (i.e. land degradation) WP2, identification of methods to reverse the problem (i.e. income generating) WP3, finding the best equilibrium on decision making (i.e. participatory management) WP4, development and implementation of guidelines and regulations that support sustainable land management (i.e. legislative framework) WP5, and finding ways to assure continued collaboration among partners (but not only) even after the lifetime of the project (i.e. Memorandum of Understanding) WP6. All the abovementioned activities were strongly supported by the WP1, which covered managerial and communication actions, including the creation and updating of the Internet based Knowledge Database and the forum on land degradation. Finally in the context of WP7 almost 3,000 files of information retrieval were collected and downloaded in the Knowledge Database.

What we know at the end?

The project has identified water and wind erosion, soil sealing and urbanisation, loss of organic matter and biodiversity decline, nutrient mining, chemical pollution and contamination, floods and landslides, salinisation, littoralisation, overgrazing and degradation of vegetation cover as well as unsustainable irrigation practices as the main land degradation factors in the Mediterranean. It should be noted also that costs for ameliorating degraded lands are higher than preventing them of being degraded. For worst, climate change scenarios suggest that Mediterranean could become hotter and drier and consequently the above-mentioned problems could become more acute. Major handicaps in land degradation studies in the Mediterranean derive from the simple fact that there is not yet a comprehensive study to show the real extend (preferably in quantitative terms) of the problem at regional scale. However, it is evident that land degradation exists in both European rich Mediterranean countries as well as in the poorer ones on the South and East.

To overcome them, MEDCOASTLAND endorsed the ecosystem-based approach in natural resource management by giving equal importance to both biophysical and socio-economic features. Conclusions show that the fight against land degradation and desertification could be successful if land users meet their basic needs through income generating activities, if a good balance is found between bottom-up and top-down decision making and last but not least, policy, legislation, and the institutional framework makes its way towards implementation. Above all a stakeholder approach is needed where every one is aware of its duties and responsibilities.

The Mediterranean is the birthplace of agriculture and is extremely rich in indigenous technical knowledge on sustainable land and water management. MEDCOASTLAND findings show that when this precious knowledge is used appropriately it brings inevitably results as in the case of the management of coastal dunes of Adana in south-eastern Turkey or in similar examples in the management of sloping lands through terracing in Italy, Morocco, Malta, Syria and Lebanon. There is rarely a better place other than the Mediterranean where land and water could complement each other in terms of scarcity and impacts on every day life. Hence, they should receive equal attention. It is impossible to divide the techniques of water harvesting from soil erosion control and waterlogging from flooding and salinisation, just to mention a few examples.

Finally, addressing sustainability concerns in natural resources management requires the adaptation of an innovative approach that should be ecologically sound, economically viable, socially just, culturally appropriate, humane and based on a scientific holistic approach. Consequently, sustainable natural resources use and management in the region is not a choice but a prerequisite to secure prosperity and improve the livelihoods of its people by establishing societal responsibilities and priorities in this crucial process. MEDCOASTLAND has made available a number of positive examples that demonstrate this.

To support and strengthen future activities in natural resources management in the Mediterranean, the CIHEAM MAI-B has taken the lead to establish the Regional Office for Sustainable Land and Soil Management in the Mediterranean (ROSOM). There is agreement among the MEDCOASTLAND partnership that such entity could be instrumental in promoting sustainable use of Mediterranean land. Its planned activities are in accordance also with the EU Thematic Strategy for Soil Protection that is being discussed by the European Parliament.

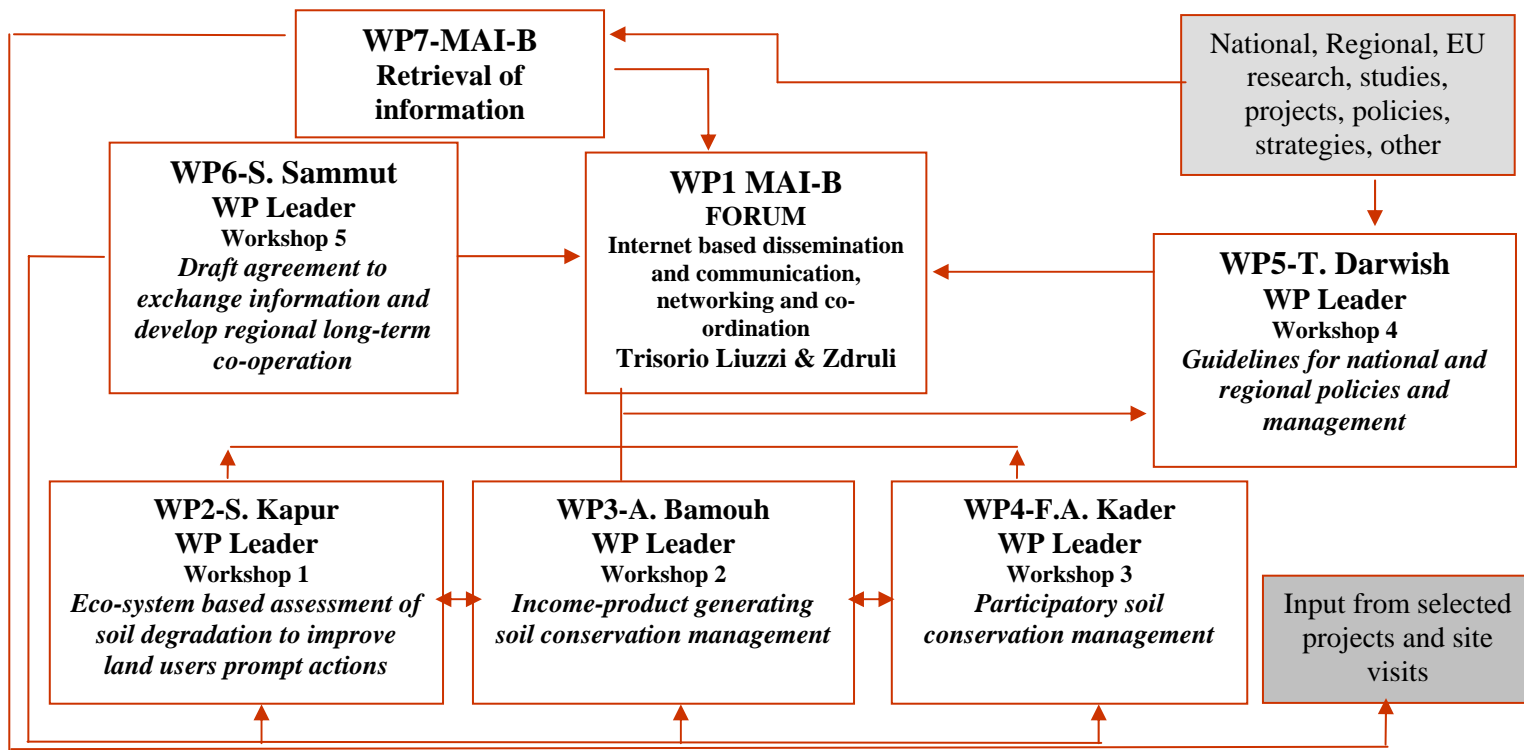
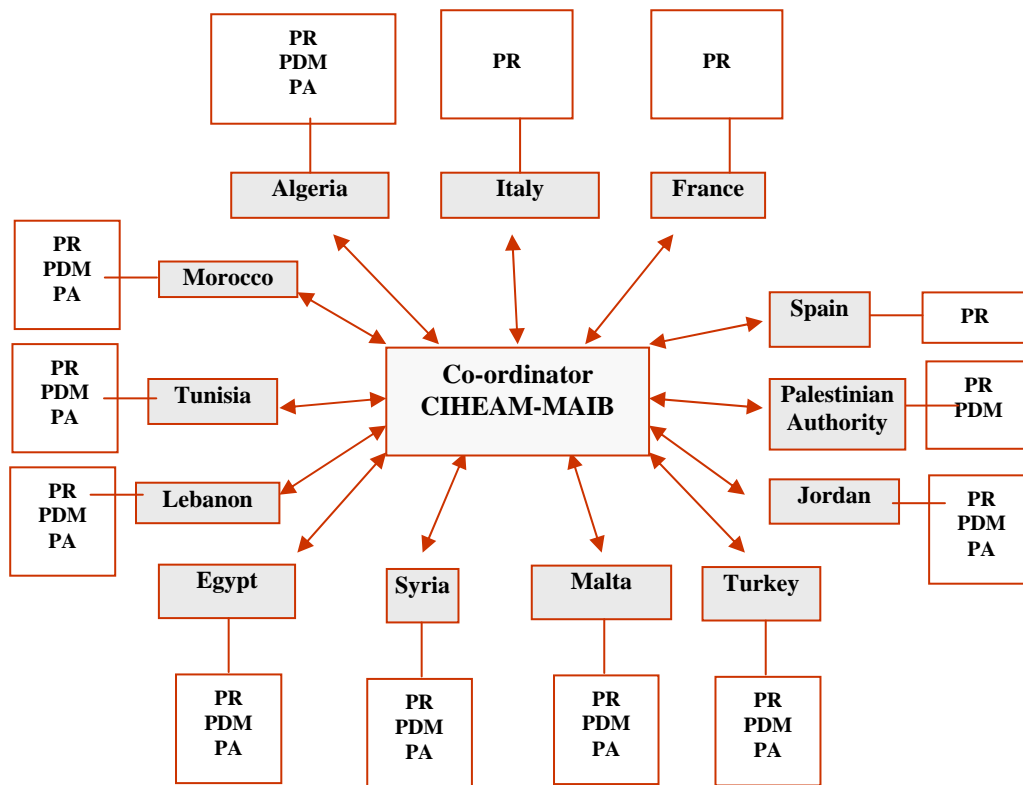


Figure 1. Organisation of Work Packages



Network structure. PR = Researcher, PDM = Policy/Decision Maker, PA = Farmer Association and NGOs

Figure 2. Consortium composition

MEDCOASTLAND PROJECT
Work plan and deliverables

Structure	Responsible partner	Deliverables	Status
WP1 Internet based communication, dissemination and sharing information	IAMB	D1: http://medcoastland.iamb.it/ D2: Virtual campus accessible D3: Accessible database D4: Electronic newsletters D5: Proceeding International Conference D6: Multi-thematic Video/CD Rom D7: Minutes of the Steering Committees Meetings D27÷30: Four Annual project reports D31: Final project report	YES YES YES YES YES (in print) YES (4 video) YES (6) YES (4) YES
WP 2 Eco-system based assistance to land user and land owners	University of Cukurova Adana, Turkey	D8: DPSIR Indicators D9: Abstract – review of research results WP2 D10: Conceptual scheme of eco-system/integrated assessment D11: Proceeding of Workshop n. 1 D12: CD Rom and Video WP2	YES YES YES YES YES (1)
WP3 Income-Product generating soil conservation management	IAV Hassan II Rabat, Morocco	D13: IPSM Indicators D14: Abstract – review of research results WP2 D15: Proceeding of Workshop n. 2 D16: CD Rom and Video WP3	YES YES YES YES (1)
WP 4 Participatory management in land and Soil	University of Alexandria, Egypt	D17: Abstract – review of research results D18: Proceeding of Workshop n. 3 D19: CD Rom and Video on PSM	YES YES YES (2)
WP 5 Guidelines for national and regional policies and management in soil conservation	National Council for Scientific Research, Beirut, Lebanon	D20: Review of existing Euro-Mediterranean regulatory framework/policies D21: Proceeding of Workshop n. 4 D22: Draft guidelines	YES YES YES
WP 6 Draft Agreement on data share and Development of Regional co-operation	Ministry for Rural Affairs and the Environment Malta	D23: Proceeding workshop n. 5 D24: Draft Agreement	(No proceedings were deemed necessary. Instead it was prepared the Memorandum of Understanding) YES
WP 7 Retrieval of Information	IAMB	D25: On-line supply of data D26: Report on retrieved data	YES (3,000 files) YES

Nota bene

Please note that the EC granted an extension period of 8 months (without additional funding) prolonging thus the project duration until 31 May 2007. The most important event occurred during this extension period was the Mediterranean Conference held in Tunisia in 26-31 May 2007 whose theme was "Status of Mediterranean Soil Resources: actions needed to support their sustainable use". The proceedings of the Conference were also published and are available.

Responsible persons for the programme

- Cosimo Lacirignola *IAMB Director*
- Gerasimos Apostolatos *EC Scientific Officer*
- Giuliana Trisorio Liuzzi *Coordinator*
- Pandi Zdruli *Project Manager*

Most important publications

- Zdruli, P., P. Steduto, C. Bogliotti. (2006a). *Fostering networking and exchange of information in the Mediterranean region: The MEDCOASTLAND Thematic Network*. In: Desertification in the Mediterranean Region. A Security Issue. 2005. W.G. Kepner, J.L. Rubio, D.A. Mouat, and F. Pedrazzini (Eds.). NATO Programme for Security through Science Series, Volume 3, 605p, Springer Publishers, Germany. ISBN 1-4020-3759-7/ISSN 1871-4668. pp 385-400.
- Zdruli, P., G. Trisorio Liuzzi and C. Lacirignola. (2006b). 18th World Congress of Soil Science. *Lessons learned from a Thematic Network dealing with land degradation assessment and soil conservation management in the Mediterranean region*. Extended Abstracts. Philadelphia, USA, 9-15 July 2006.
- Zdruli, P., Lacirignola, C., Lamaddalena, N., and Trisorio Liuzzi, G. (2007). *The EU-funded MEDCOASTLAND Thematic Network and its Findings in Combating Land Degradation in the Mediterranean region*. In: M.V.K. Sivakumar and N. Ndiang'ui (eds). *Climate and Land Degradation*. Environmental Science and Engineering. Proceedings of the International Workshop on Climate and Land Degradation, held in Arusha, Tanzania 11-15 December 2006 sponsored by the World Meteorological Organisation and United Nations Convention to Combat Desertification. Springer-Verlag Berlin Heidelberg 2007. pp 422-434.