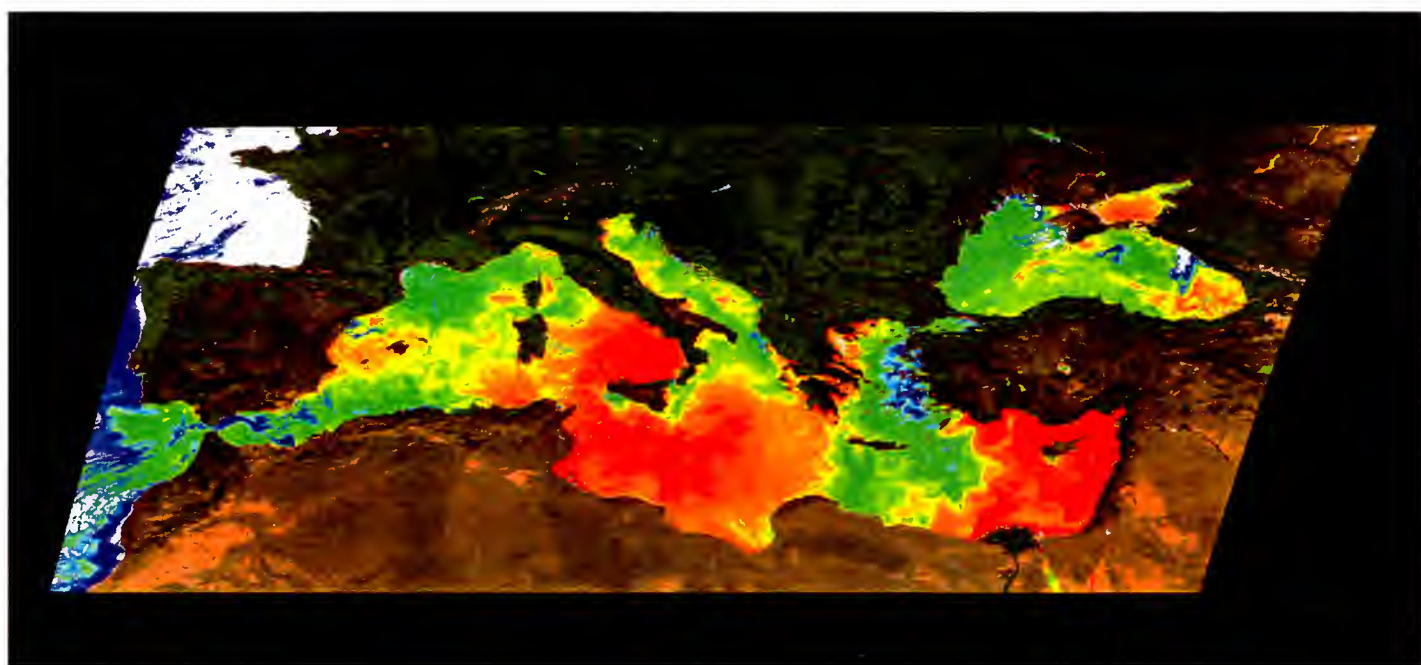


# A Review of Mediterranean Environmental Management Actions Using Space Techniques



*A contribution to the Eurisy Colloquium on "Space Techniques for Environmental Management of the Mediterranean", Athens 19-20 October 1998.*



**CTM**

CENTRO DI TELERILEVAMENTO MEDITERRANEO



UNITED NATIONS ENVIRONMENT PROGRAMME  
MEDITERRANEAN ACTION PLAN

ERS/RAC

ENVIRONMENT REMOTE SENSING REGIONAL ACTIVITY CENTER



UNEP



**esa**

**ESRIN**



NATIONAL OBSERVATORY OF ATHENS  
Institute of Meteorology and Physics  
of the Atmospheric Environment

*Italy - January*

**GEN58**



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## ACKNOWLEDGMENTS

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Special thanks are addressed to Prof. Costas Cartalis who introduced this Review on the occasion of the Eurisy Colloquium held in Athens on 19-20 October 1998.

This Review has been promoted and sponsored by ESA - International Affairs - as contribution to the EURISY Colloquium on "Space Techniques for Environmental Management of the Mediterranean", Athens 19-20 October 1998. The work has been managed by ESA-ESRIN.

Database implementation and population have been carried out by Ms Sabina Carnemolla and Ms Rossana Pantano, CTM-ERS/RAC.

Data and information on Projects have been collected by CTM-ERS/RAC in cooperation with NOA.

Online access to the detailed information provided in this document is available at: [www.ctmnet.it/stepinmed](http://www.ctmnet.it/stepinmed)

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## **1. INTRODUCTION**

An effective pursuing of a sound environmental policy towards sustainable development requires the availability of information on the present state, past changes and future trends of the environment, due to both human pressure and natural dynamics.

Nowadays, environmental information is being increasingly acquired by applying to space techniques - earth observation, positioning, telecommunications - and is widely spreading to new user communities.

With the objective of highlighting the importance of this process in the Mediterranean, and of providing references on the several application fields of such cost-effective means, this review draws out a comprehensive framework of carried out, ongoing or planned projects and programmes relying on the use of space technologies.

Its final aim is to increase the awareness on their potentialities, to underline achieved results and to encourage exchanges among different actors and users in view of further developments in the Mediterranean area.

This document represents the executive review of the work performed by CTM and NOA.

The body of the document summarises and discusses the major findings. The annexes provide: copy of the Questionnaire used during the review (Annex I), the list of Programmes (Annex II) and the list of Projects (Annex III) identified during the review. Extensive information on each identified Programme and Project are included in a separate database, available at [www.ctmnet.it/stepinmed](http://www.ctmnet.it/stepinmed).

## **2. THE MEDITERRANEAN ENVIRONMENT AND ITS PROTECTION**

The Mediterranean environment is evolving under the impact of human activities and natural changes, and is seriously threatened.

The Mediterranean Sea is only 0,7 % of the total surface of the world seas and oceans, it is an enclosed sea and its waters are renewed through the Gibraltar strait every 80 - 90 years.

According to the findings of the Blue Plan/Regional Activity Centre of UNEP/MAP, some synthetic figures significantly show the dramatic pressure that the basin and its bordering Countries are undergoing in the most recent years and are expected to suffer in the near future:

- The population of 360 M recorded in 1985 is expected to grow to 570M in 2025, while the 220 M town dwellers in 1985 will become up to 440 M in 2025, and the urban population will multiply by 1.3 in the north and 2.5 to 4 in the south by 2025, also because of the abandoning of agricultural lands.
- Tourists will increase from 220 M up to about 380 to 760 M in the same period, and unmanaged environmental impacts of this priority resource of the Mediterranean people may undermine future earnings.
- The energy consumption of 600 M toe in 1985 will reach 900 to 1550 toe in 2025, so implying the heavy increase in pollution due to new power plants.
- The fertilizer consumption is foreseen to triple by 2025, with the aim of an overexploitation of agricultural land but with a consequential depletion of its fertility.

- The irrigated area of 16 M hectares in 1985 could double by 2025 and urban water consumption could increase by 50% in the north and 300% in the south, making the water shortage a main environmental concern.
- 60 M vehicles in 1985 will be in the order of 175 M in 2025, so worsening air pollution rates, which contribute to greenhouse effect and climatic change.
- 1 M tons of fish caught (against demand of 4 M tons) in 1985, are envisaged to increase up to 5 M in 2025.
- 220,000 ships over 100 tons cross the Mediterranean each year - 20% of the international oil traffic - and the discharge of ballast waters together with oil spills may have serious economic consequences through its negative impact on tourism and fisheries.

These alarming figures, dramatically increasing since the 50's, urged international community to concretely intervene through the setting-up of legal and operational frameworks in order to cooperatively tackle environmental threats at global and regional scale, relying also on the most advanced methodologies and techniques.

Hereinafter some of the Conventions and Treaties specifically addressed to or involving the Mediterranean area are briefly introduced and an estimation of the potential applicability of space techniques in their is then displayed.

## **2.1 The Barcelona Convention and the Mediterranean Action Plan**

Since 1975, the protection of the Mediterranean environment has been the objective of a concerted effort of the Countries of this region, that brought to the establishment of the Mediterranean Action Plan (MAP). Its legal support, the Barcelona Convention, was adopted the following year, and today, the 20 Mediterranean coastal Countries and the EU are Contracting Parties to it, while the UNEP (United Nations Environment Programme) has been designated to carry out the Secretariat functions and to act as coordinator of the MAP.

In this framework, in order to tackle main Mediterranean environmental concerns, priority fields of activities were adopted in 1995, ranging from integrated water management to soil management, fight against erosion and desertification, management of forests and plant cover, management of genetic and marine living resources, and dealing with integrated management of coastal areas, waste management, agriculture, industry and energy, transport, tourism, urban development, as well as with information, assessment, prevention and control of marine pollution and conservation of nature, landscapes and sites.

Furthermore, as a follow-up to the Agenda 21 resulting from the Rio Conference, the Mediterranean bordering States adopted in Tunis (1994) the Agenda MED 21, which takes into consideration the specific context of the region and reflects the commitment of the Mediterranean States in pursuing its sustainable development.

The Tunis Conference adopted also a resolution relevant to the creation of the Mediterranean Commission on Sustainable Development, which has been established in 1996 in the framework of the Mediterranean Action Plan, as an advisory body to make proposals to the Contracting Parties to the Barcelona Convention for specific actions to be adopted in priority environmental fields.



## **2.2 The Convention to Combat Desertification**

The Convention to Combat Desertification has been adopted in 1994.

As a matter of fact, desertification and land degradation involve over 100 Countries and threaten the survival of more than 1 Billion people, that is to say 1/5 of the world population, while more than 135 million farmers risk the loss of fertility of their lands.

As to the Mediterranean region, Annex I to the Convention concerns Africa and Annex IV the northern Mediterranean. They include recommendations and guidelines for the carrying-out of the Convention in those areas, in particular through the setting-up of national, sub-regional and regional programmes against desertification.

## **2.3 The Convention on Climatic Changes**

The Framework Convention on Climate Changes (FCCC) has been adopted on the occasion of the UNCED Conference in 1992. It contains short-term recommendations for limiting, or at least mitigating, possible global climatic changes induced by human activities, such as gas and pollutant emissions that may increase the greenhouse effect of our planet; medium-term recommendations for reducing the effects of global climatic changes, through the prevention of possible damages on natural environment, on anthropized environment and on the economic development; long-term recommendations devoted to adaptation of human beings to climatic changes and to a different global environment.

In the framework of the FCCC, the Kyoto protocol has been adopted in 1997 and includes decisions on operational carrying-out of priority commitments of the Conference (short-term actions).

## **2.4 The Convention on Biological Diversity**

The Convention entered into force on December 1993, following the adoption of its text in May 1992 and its opening for signature on 5 June 1992 at the Rio Earth Summit promoted by UNCD.

It represents a dramatic step forward in the conservation of the biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources.

To date, an estimated 1.7 million species have been identified. The exact number however is estimated varying from 5 millions to a high of 100 millions.

Due to human activities, species and ecosystems are highly threatened and their extinction has also profound implications for economic and social development.

The Convention's provision on scientific and technical cooperation, access to financial and genetic resources, and the transfer of environmentally sound technologies, are the foundations of the partnership among Countries.

## **2.5 The Basel Convention**

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in Basel, Switzerland, and entered into force in 1989.

Today the Secretariat is located in Geneva, Switzerland.

The Basel Convention is one of the most important treaties dealing with pollution, because it is the first global attempt at addressing hazardous waste.

UNEP is the major player, as far as it took the first step towards dealing with this problem in 1987 for the purpose of creating a convention to formally regulate hazardous waste.

Within the Convention, developing countries and environmentalists have succeeded in achieving a decision to ban hazardous waste exports from the wealthiest to less wealthy countries.

## **2.6 The Bern Convention**

The Bern Convention on the Conservation of European Wildlife and Natural Habitats entered into force on June 1982.

Contracting Parties to this treaty are the European Commission, the Member States of the Council of Europe, and the non-member states which have participated in its elaboration.

The aims of the Convention are to conserve wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the co-operation of several states, as well as to promote such co-operation.

Particular emphasis is given to endangered and vulnerable species, including endangered and vulnerable migratory ones.

## **2.7 The Ramsar Convention**

The Convention's broad aims have been since 1971 to halt the worldwide loss of wetlands and to conserve, through a wise use and management, those that remain.

There are currently over 80 Countries, which are Contracting Parties to the Ramsar Convention, covering 75% of the world's lands.

Every three years a Conference of the Contracting Parties is held where the activities of the Convention are reviewed and new policies and initiatives are set.

The Ramsar Convention Bureau is based at Gland in Switzerland and provides the secretariat support for the implementation of the treaty.

## **2.8 The Euro-Mediterranean strategy**

In 1995 the Euro-Mediterranean strategy has been adopted by 15 European Countries and 12 Southern and Eastern Mediterranean Countries (Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Palestinian Authority, Syria, Tunisia, Turkey) and the MEDA Programme has been designed to support bilateral and multilateral north-south exchanges.

Considering that a high-quality environment is a prerequisite for both healthy living conditions and economic development, in 1997 the Short and Medium-Term Priority Environmental Action Programme (SMAP) has been adopted for the implementation of the abovementioned strategy in the field of integrated water management, integrated waste management, measures to combat desertification, integrated coastal zone management, and experience on regional environmental cooperation-hot spots.

## **2.9 The RAMOGE Agreement**

Its name derives from its initial geographic coverage including three towns: Saint-Raphaël, Monaco and Genoa.

The RAMOGE Agreement is a concerted framework aimed at conceiving actions and legal instruments for the protection of the marine environment, to be submitted to the concerned Governments.

Components of RAMOGE are the Commission, the Technical Committee and the Working Groups; all of them are devoted to a sound management of coastal areas, to the monitoring and the prevention of sea pollution and to awakening public opinion on environmental issues.

## 2.10 The Black Sea Economic Cooperation Pact

The Black Sea Economic Cooperation was launched in 1992 and is based on the principles laid down in the Helsinki Final Act, the follow-up Conference on security and Cooperation in Europe (CSCE) documents and in the Paris Charter for a New Europe.

The 11 members of the BSEC are Russia, Ukraine, Turkey, Georgia, Rumania, Bulgaria, Albania, Armenia, Azerbaijan, Moldavia, and Greece.

As a unique and promising model aimed at fostering interaction and harmony among the Participating States, the BSEC basic objective is to ensure that the Black Sea becomes a sea of peace, stability and prosperity, encouraging friendly and good-neighbourly relations.

In the following table an estimation of present use and potentiality for using space techniques in the framework of the above listed Conventions is reported.

Convention/Treaty	Potentiality for using space techniques			Present use of space techniques		
	L	M	E	L	M	E
The Barcelona Convention						
Convention to Combat Desertification						
Convention on Climatic Changes						
Convention on Biological Diversity						
The Basel Convention						
The Bern Convention						
The Ramsar Convention						
The Euro-Mediterranean Strategy						
The RAMOGE Agreement						
The Black Sea Economic Cooperation Pact						

**Table 1 - Estimation of present and potential use of space techniques in the framework of some Conventions covering the Mediterranean area (L: Limited; M: Medium; E: Extensive)**



### 3. THE REVIEW

In the abovementioned context, the use of advanced means such as space techniques for monitoring and studying environmental state and transformations in the Mediterranean basin, as well as for exchanging information on them for prevention, control and intervention purposes, is highly recommended and encouraged.

For many years, a broad experience on the use of such techniques has been gained, in the Mediterranean, by organizations, experts and scientists from both southern Mediterranean Countries and northern ones, as well as from many other areas.

Most of them are research activities or pilot projects and often they are carried out at local scale more than at national and basin scale, however many application fields have been broadly explored.

As a result, today techniques and methodologies are ready to be used at Mediterranean scale in a continuous way for a permanent monitoring of environmental dynamics and for acquiring information to be rapidly spread to users and concerned people.

The advantages of a possible integration of space-derived information with conventional one, such as in situ measurements, cartography and ancillary data, makes it realistic the creation and management of comprehensive archives of homogeneous and comparable data.

Moreover, synopticity and repetitivity characteristics of satellite remote sensing allow a cost-effective updating of stored information, while available geometric and radiometric resolutions offer a wide spectrum of an operational use of it.

To depict a scenario on achievements of space techniques in the Mediterranean, the European Space Agency entrusted CTM - Centro di Telerilevamento Mediterraneo, ERS/RAC of UNEP/MAP, with the setting-up, in cooperation with NOA (National Observatory of Athens, Greece), of this Review of projects using Space techniques in the Mediterranean region, and related programmes.

The Review has been implemented in 5 months, starting from May 1998.

#### 3.1 Programmes

Information on Programmes having a regional or global coverage, has been mainly derived from web sites on the Internet, relying also on consultation of specific documentation issued by the International Organizations promoting such programmes.

A first analysis shows that some reviewed programmes have very specific objectives while others include broader fields of interventions.

They cover several themes (agriculture, land, industry, marine technologies, networking, cooperation, etc), many sectors (manufacturing, education, research, etc.), many geographic areas (multi-regional, global, Mediterranean, etc.), and resort to different technologies.

From the point of view of the overall Budget, the reported programmes show a high variability, ranging from 5M ECU to over 2 Billion ECU each.

Thirty-eight Programmes have been identified up to now, most of them (70%) supported by the European Union through its various Directorates General and running either within the IV Framework Programme (e.g. for Research and Technical Development or for International Cooperation), the Life Financial Instrument – with a sub-programme specifically addressed to Third Countries - or the Euro-Mediterranean Cooperation (MEDA) which supports bilateral and multi-lateral north-south actions and exchanges.

Special programmes and initiatives – Announcement of Opportunities - are also running under the European Space Agency, mainly with reference to specific thematic areas such as natural disasters (e.g. landslides, earthquakes) and oil pollution and mainly relying on the use of ERS satellite data.

The Multiannual Workprogramme, promoted by the European Environment Agency, aims at assuring a comprehensive view on present and foreseeable information on the state and trends of the environment in Europe.

Other Programmes are implemented under the aegis of the United Nations such as the GEF Global Environment Facilities (GEF), the Mediterranean Action Plan (MAP), the Global Resource Information Database (GRID) and the Environment and Natural Resources Information Networking (ENRIN) running under the UNEP, as well as the ones for Transboundary Animal and Plant Pests and Disease and for Technical Cooperation running under the FAO.

Some programmes are promoted by the more than one Organization, as in the case of the Mediterranean Environment Technical Assistance Programme METAP which is supported by the United Nations, the European Investment Bank, the World Bank and the European Commission.

Moreover, several Countries have established a series of Bilateral Cooperation Programmes also with the European Commission.

In the light of the reviewed Programmes, it is possible to notice that International Treaties and Conventions could be better supported by space techniques which, as it is well demonstrated, have all the characteristics to provide great benefits to them (Table 2).

The presently limited exploitation of such techniques could be improved by better demonstrating their achievements and potentialities and disseminating gathered results, by widening the use of appropriate communication channels and strengthening coordination among the various involved Organizations and bodies.

Programmes	Potentiality for using space techniques			Present use of space techniques		
	L	M	E	L	M	E
UNEP - Mediterranean Action Plan						
Short and Medium-term Action Programme (MEDA)						
EC - IV Framework Programme						
ESA - Announcement of Opportunities						
EC – Life Financial Instrument						
EEA – MultiAnnual Work-Programme						
Global Environment Facilities (GEF)						
METAP						

**Table 2 – Estimation of present and potential use of space techniques in currently running Programmes (L: Limited; M: Medium; E: Extensive)**



### 3.2 Projects

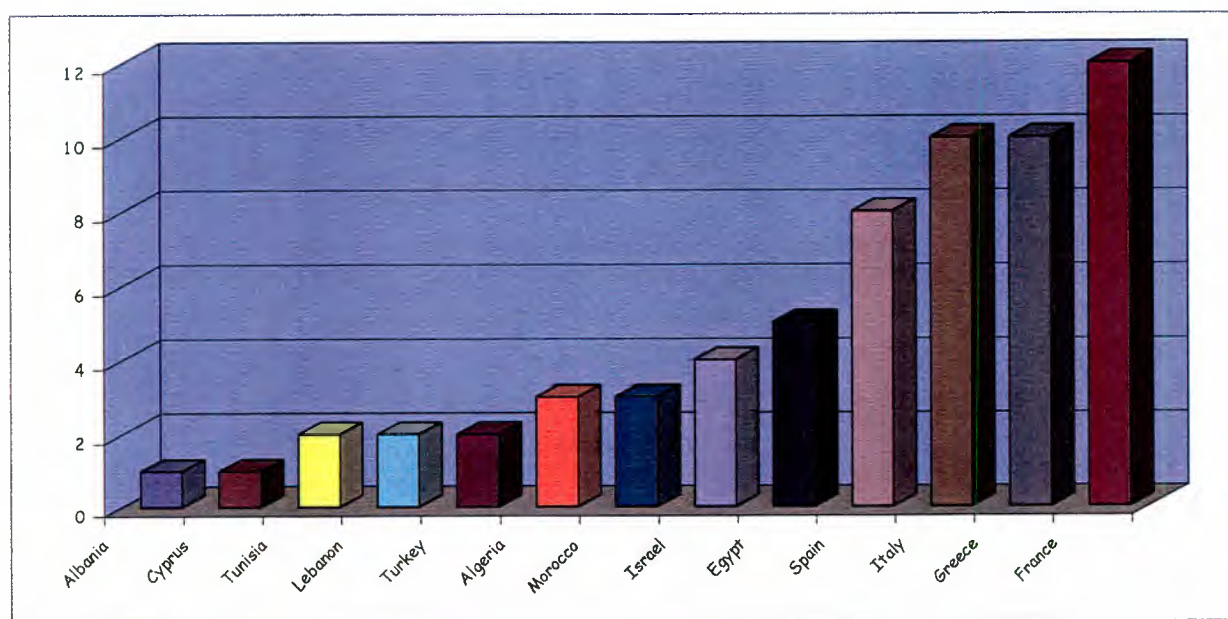
The main objective of the work has been the acquisition of information on projects concerning the Mediterranean environment and related to space techniques. As a whole 145 projects have been surveyed as already implemented or under implementation.

Relevant information has been gathered through questionnaires, derived from web sites in the Internet, or identified through crossed consultation of documentation, such as proceedings and technical publications.

The funding associated with these projects is estimated to be 78.4 MECU, an amount which should be taken into consideration with caution given that no cost estimates were identified for projects run at the bilateral or national levels, and that some projects are “self funded”.

The majority of funds are provided either by the European Union, the European Space Agency and the United Nations.

The distribution of projects per Country highlights that only 15-20% of them is located in Mediterranean Countries (Diagram 1).



**Diagram 1 – Country distribution of reviewed projects**

With regard to the type of projects, the majority are either demonstration, operational or research ones while as for the used space techniques, the majority of projects (90%) refer to remote sensing, while only 10% refer to geopositioning and communication.

As to the dealt-with applications, the most popular ones are related to sea, agriculture and land, as well as to environmental resources management and natural hazards and damages, while applications in the climate, atmosphere and communication and positioning fields could be increased (Diagram 2).

As far as the geographical distribution is concerned, it may be noticed that (Diagram 3) the majority of the projects are developed at national level, many are multi-national or sub-regional ones, while some of them, referred to as Mediterranean or regional, have a



Mediterranean coverage, even if in certain cases are implemented only in pilot areas distributed all over the region.

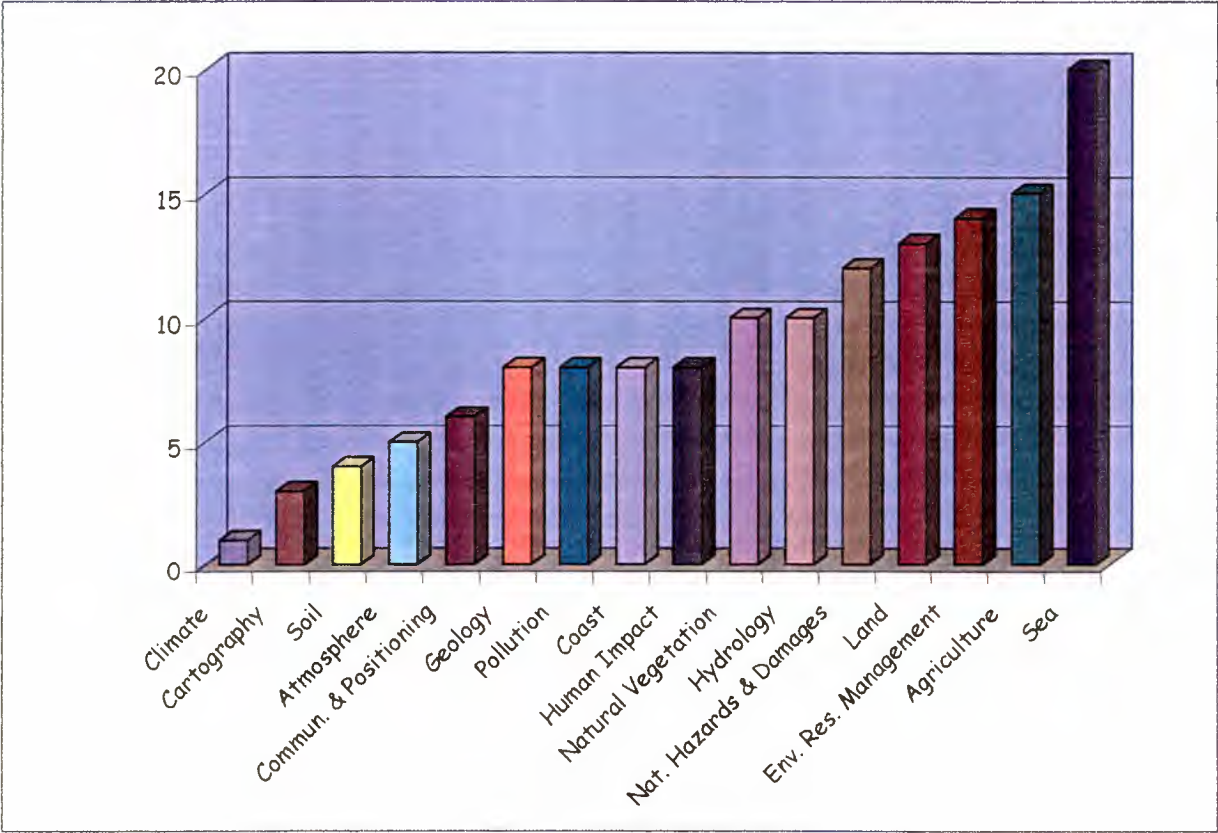


Diagram 2 – Surveyed projects ranked by main applications

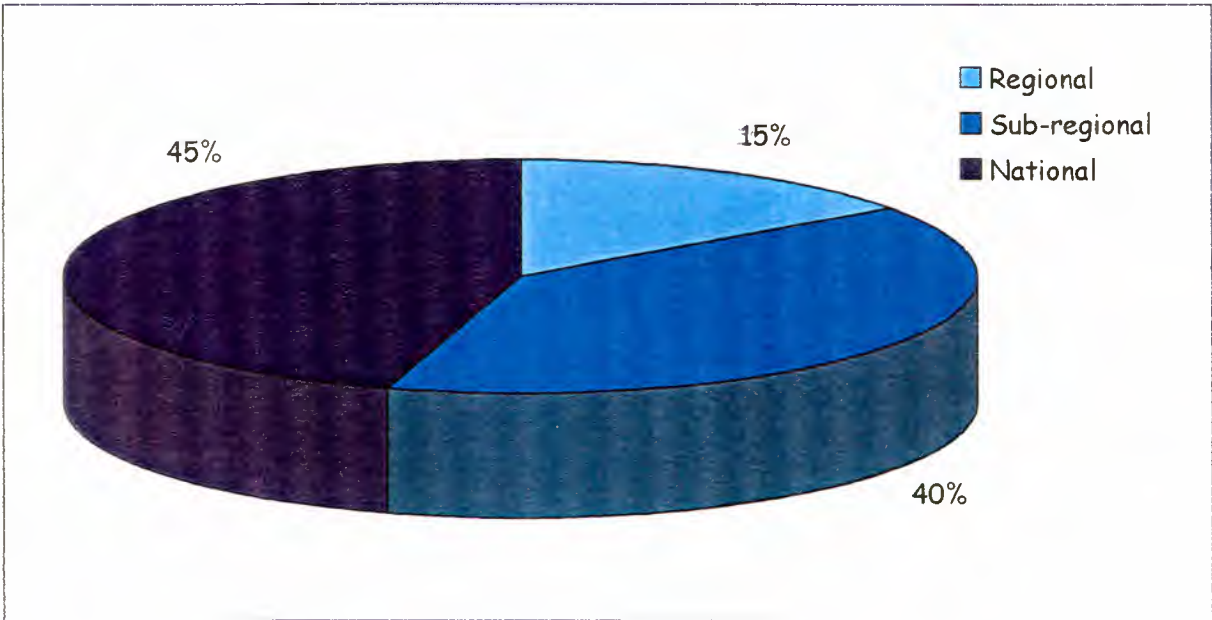


Diagram 3 – Geographic coverage of reviewed projects

Synergy among research projects and operational ones seems to be not sufficiently promoted (e.g. although there are projects dealing with desertification phenomena or marine pollution in the Mediterranean, results are not passed on to the concerned Convention Secretariats).

### **3.2 Organizations**

About two- hundred-and-fifty Organizations involved in the reviewed projects and programmes have been surveyed, both through direct contacts and through information derived from the projects themselves.

The majority of them may be classified into the “Private Commercial” and “Governmental National” groups. Some other ones, classed as “International”, are those supporting or funding International Programmes such as the European Commission, the European Space Agency, the European Environment Agency, the United Nations and so forth.

As for their geographical position, the Organizations are mainly based in the European Countries, while about 10% are located in southern and eastern Mediterranean Countries. This figure suggests that the involvement and the strengthening of Southern and Eastern Mediterranean Organizations participation in international programmes could significantly increase, if international cooperation and north-south exchanges in the region would be properly fostered.

#### 4. CONCLUSIONS

This review is a dynamic basis of information open to further implementation, since other activities based on the use of space techniques in the Mediterranean may certainly have been carried out, be ongoing or planned.

Nevertheless, from the already collected information and the designed data base, a comprehensive framework of the space techniques-based projects and programmes in the environmental field may be effectively depicted, and a reliable analysis made, resulting on the following main considerations:

- A broad use of space techniques has been experienced in the Mediterranean region and the expectancy is that it will significantly increase in the near future.
- Space techniques are mostly being supporting important research projects and pilot case studies, which have demonstrated the advantages and benefits of resorting to them and to their integration with more conventional methods (in situ measurements, cartography, field campaigns etc.) in wide sectors of different environmental issues.
- Governments, Planners and decision-makers are growingly paying attention to the achievements of the use of space techniques and are getting more confident with them.
- There is still not a regular use of space techniques for environmental purposes, other than in some fields (i.e. telecommunications in case of emergencies, weather forecasting, etc), if compared to the huge number of applicational fields that have already been deeply investigated and demonstrated.
- The supporting funding resources should be sharply increased to bridge the gap between research and regular and permanent use of space techniques, at least until they become routinely applied to by Mediterranean Countries and International Organizations devoted to facing environmental concerns and threats.
- The potentialities of remote sensing might be widely exploited providing a sound coordination among different projects and programmes, in order to profit from achieved results and to avoid duplications and waste of resources.

As a last conclusion, it has to be underlined how challenging was to identify as many space techniques activities in the Mediterranean as possible within the time limits of the accomplishment of the review, and therefore additional investigations could help to increase and continuously update the number of surveyed projects and programmes, and to provide complete information on them.

In this light, Organizations or individual experts willing to contribute to this work and to its further development, as well as to include their activities in the review, can fill in the annexed questionnaire and forward it to CTM, or download it from the Review web site ([www.ctmnet.it/stepinmed](http://www.ctmnet.it/stepinmed)) and send it back to us by Email ([ctm.ersrac@ctmnet.it](mailto:ctm.ersrac@ctmnet.it)).

Furthermore, through the web site they can register for direct access to, and for friendly consultation of, the database and its links with other related sites.

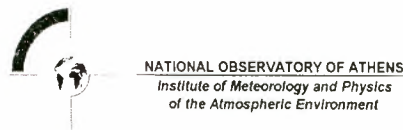


*Annex I*

***Questionnaire***







*A REVIEW OF*  
**"MEDITERRANEAN ENVIRONMENTAL MANAGEMENT ACTIONS  
USING SPACE TECHNIQUES"**

SUPPORTED BY ESA - EUROPEAN SPACE AGENCY

**QUESTIONNAIRE**

**1. PROJECT NAME**

1.1 Acronym
1.2 Name
1.3 Subtitle (if any)

**2. KEYWORDS**


**3. OBJECTIVES OF THE PROJECT** *(please not more than 10/15 lines)*


**4. TYPE OF PROJECT**

Demonstration	Operational
Research	Other

5. GEOGRAPHICAL LOCATION

Whole Mediterranean Region
Sub-regional :
National :
Local :

6. MAIN APPLICATIONS

Land	Cartography
Soil	Forests and Natural Vegetation
Atmosphere	Hydrology and Freshwater Resources
Sea	Natural Hazards and Damages
Coast	Pollution
Climate	Urbanization and Human Impact
Geology	Environmental Resources Management
Agriculture	Communication and Positioning

7. USED SYSTEM

SPACE TECHNIQUES	NON-SPACE TECHNIQUES
Telecommunications	GIS
Remote sensing	Monitoring
Navigation and positioning	Modelling
Other	Other

8. POSSIBLE UTILIZATION OF SPACE TECHNIQUES IN ADDITION TO THE USED ONES


9. INVOLVED ORGANIZATIONS (use as many forms as needed)

9.1 Name :
9.2 Address (street/road) :
9.3 Post office Box :
9.4 Town/City (include Postal Code) :
9.5 State/Province (include Postal Code) :
9.6 Country :
9.7 Telephone number(s) :
9.8 Fax Number(s) :
9.9 Electronic Mail :
9.10 Contact person :

9.11 TYPE OF INSTITUTION (please tick one box)

Governmental, national	Private non-profit
Governmental, local	Private commercial
International (intergovernmental)	Other (please specify)
International (non-governmental)	

9.12 Industrial Partner

Not

Yes

	Value added
	Manufacturing
	Service
	Other

9.13 Project Leader

Project Partner

Project User/Customer

9.14 Funding Organization

Not

Yes

9.15 Sponsoring or support Organization

Not

Yes

10. PARTNERS EFFORT (man/months)


11. UMBRELLA PROGRAMME

12. COST OF THE PROJECT (ECU)

12. STATUS OF ACTION

13.1 Date of start
13.2 Date of completion (performed or expected)
13.3 Completion timeschedule

13. SUPPORT DOCUMENTATION AND/OR ONLINE INFORMATION




## *Annex II*

# *List of Programmes*

Additional information on the listed Programmes may be requested to CTM or directly accessed to on: [www.ctmnet.it/stepinmed](http://www.ctmnet.it/stepinmed)





# List of Programmes

**Name** Environment and Climate - Center for Earth Observation

**Acronym** E&C - CEO

**Organization** EU-DG XII Science, Research and Development

**Name** Environment and Climate

**Acronym** ENV 2C

**Organization** EU-DG XII Science, Research and Development

**Name** Coastal Area Management Programme

**Acronym** CAMP

**Organization** MAP/UNEP Coordinating Unit of Athens

**Name** Short and Medium term Action Programme

**Acronym** SMAP

**Organization** EU-DG XI Environment, Nuclear Safety and Civil Protection  
EU-DG IB

**Name** Information Technologies Programme

**Acronym** ESPRIT

**Organization** EU-DG III Industry

**Name** Telematics Applications Programme

**Acronym** TAP/TELEMATICS 2C

**Organization** EU-DG XIII Telecommunication, Information Market & Exploitation

**Name** Avicenne Initiative (Science and Technology cooperation with the Maghreb and the countries of the Mediterranean Basin)

**Acronym** AVICENNE

**Organization** EU-DG XII Science, Research and Development

**Name** Advanced Communications Technologies and Services

**Acronym** ACTS

**Organization** EU-DG XIII Telecommunication, Information Market & Exploitation

**Name** Industrial and Materials Technologies (BRITE-EURAM III)

**Acronym** IMT

**Organization** EU-DG XII Science, Research and Development

**Name** Marine Science and Technology Programme

**Acronym** MAST 3

**Organization** EU-DG XII Science, Research and Development

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<b>Name</b>	LIFE - Environment
<b>Acronym</b>	LIFE - Environment
<b>Organization</b>	EU-DG XI Environment, Nuclear Safety and Civil Protection
<b>Name</b>	European Cooperation in the field of Scientific and Technical Research
<b>Acronym</b>	COST
<b>Organization</b>	EU-DG XII Science, Research and Development
<b>Name</b>	LIFE - Nature
<b>Acronym</b>	LIFE - Nature
<b>Organization</b>	EU-DG XI Environment, Nuclear Safety and Civil Protection
<b>Name</b>	LIFE - Third Countries
<b>Acronym</b>	LIFE - Third Countries
<b>Organization</b>	EU-DG XI Environment, Nuclear Safety and Civil Protection
<b>Name</b>	Integrated Coastal Zone Management Demonstration Programme
<b>Acronym</b>	ICZM
<b>Organization</b>	EU -DG XI; DG XIV (Fisheries); DG XVI (Regional Policy and Cohesion)
<b>Name</b>	Mediterranean Environment Technical Assistance Programme
<b>Acronym</b>	METAP
<b>Organization</b>	European Investment Bank; The World Bank
<b>Name</b>	Scientific and Technological Cooperation with Developing Countries
<b>Acronym</b>	INCO-DC
<b>Organization</b>	EU-DG XII Science, Research and Development
<b>Name</b>	Scientific and Technological Cooperation in Europe
<b>Acronym</b>	INCO-Copernicus
<b>Organization</b>	EU-DG XII Science, Research and Development
<b>Name</b>	Fisheries, Agriculture and agro-Industrial Research
<b>Acronym</b>	FAIR
<b>Organization</b>	EU-DG XII Science, Research and Development
<b>Name</b>	Monitoring Agricultural Statistics with Remote Sensing
<b>Acronym</b>	MARS
<b>Organization</b>	EU-DG VI Agriculture
<b>Name</b>	Cultural heritage programme
<b>Acronym</b>	RAPHAEL
<b>Organization</b>	EU-DG X Information, Communication, Culture & Audiovisual

**Name** Cooperation between European firms and research institutes in the field of advanced technologies

**Acronym** EUREKA

**Organization** EU-DG XII Science, Research and Development

**Name** European Programme On Climatological and natural Hazards

**Acronym** EPOCH

**Organization** EU-DG XII Science, Research and Development

**Name** Global Resource Information Database

**Acronym** GRID

**Organization** UN-DEIA Division of Environmental Information and Assessment  
UN-GRID G Geneva Executive Center

**Name** Environment and Natural Resources Information Networking

**Acronym** ENRIN

**Organization** UN-DEIA Division of Environmental Information and Assessment

**Name** Land Cover Classification Programme

**Acronym** LCCP

**Organization** FAO Food and Agriculture Organization

**Name** Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases

**Acronym** EMPRES

**Organization** FAO Food and Agriculture Organization

**Name** Technical Cooperation Programme

**Acronym** TCP

**Organization** FAO Food and Agriculture Organization

**Name** Basic Research in Industrial Technologies for Europe/European Research on Advanced Materials

**Acronym** BRITE/EURAM 3

**Organization** EU-DG XII Science, Research and Development

**Name** Global Environment Facility

**Acronym** GEF

**Organization** UNDP; the World Bank; GEF Unit; GEF Coordinating Office

**Name** Bilateral Programme France-Egypt

**Acronym** FR-EG BP

**Organization** France Ministry of Agriculture and Egyptian Ministry of Agriculture

**Name** Bilateral Programme Italy-Algeria

**Acronym** IT-AL BP

**Organization** Italian Ministry for Foreign Affairs

**Name** IV Protocol of the European Union with the Kingdom of Morocco

**Acronym** EU Protocol

**Organization** European Union

**Name** Bilateral Programme Italy-Turkey

**Acronym** IT-TU BP

**Organization** Italian Ministry for Foreign Affairs

**Name** Bilateral Programme European Space Agency - European Union

**Acronym** ESA-EC BP

**Organization** European Space Agency and European Union

**Name** European Space Agency - Announcements of Opportunities

**Acronym** ESA-AO

**Organization** European Space Agency

**Name** National Programmes

**Acronym** NP

**Organization** National Ministries

## *Annex III*

# *List of Projects*

Detailed information on the listed Projects, according to the used questionnaire (Annex I), may be requested to CTM or directly accessed to on: [www.ctmnet.it/stepinmed](http://www.ctmnet.it/stepinmed)





# List of Projects

<b>Name</b>	<i>Africa Real Time Environmental Monitoring using Imaging Satellite</i>		
<b>Acronym</b>	ARTEMIS	<b>Location</b>	Africa
<b>Involved Organization (s)</b>			<b>Acronym</b>
Nationaal Lucht-en Ruimtevaartlaboratorium			NLR
Food and Agriculture Organization of the United Nations			FAO UN
<b>Name</b>	<i>AFRICOVER</i>		
<b>Acronym</b>	AFRICOVER	<b>Location</b>	Africa
<b>Involved Organization (s)</b>			<b>Acronym</b>
Food and Agriculture Organization of the United Nations			FAO UN
<b>Name</b>	<i>Agricultural resource monitoring aid for Egypt</i>		
<b>Acronym</b>	ALIS	<b>Location</b>	Egypt
<b>Involved Organization (s)</b>			<b>Acronym</b>
SPOT IMAGE			SPOT IMAGE
Soil, Water and Environment Research Institute - Ministry of Agriculture			SWERI
<b>Name</b>	<i>Amélioration et renforcement du système national d'adaptation varietale du blé dur</i>		
<b>Acronym</b>		<b>Location</b>	Algeria
<b>Involved Organization (s)</b>			<b>Acronym</b>
Istituto Agronomico per l'Oltremare - Italian Ministry for Foreign Affairs			IAO
Institut Technique des Grandes Cultures			
<b>Name</b>	<i>An Earth Observation Based Flood Risk Information Management Service</i>		
<b>Acronym</b>	SIREN	<b>Location</b>	Sub-regional
<b>Involved Organization (s)</b>			<b>Acronym</b>
SCOT Conseil			SCOT Conseil
Company for Applied Remote Sensing			GAF
Infocarto Sociedad Anonima			INFOCARTO S.A.
DATAMAT			DATAMAT
European Space Agency/ESRIN			ESA/ESRIN
Vitrociset S.p.A.			Vitrociset
Alcatel Space			
Confederation Hydrografica del Guadalquivir			
Autorità di Bacino dei fiumi LIRI-GARIGLIANO e VOLTURNO - Centro Direzionale Isola B 3			
Bundesanstalt fuer Gewaesserkunde			
French Civil Protection, CIRCOSC Bordeaux			
<b>Name</b>	<i>Application of Remote Sensing in recognising settlement patterns and land occupation in the territory of Baalbeck</i>		
<b>Acronym</b>	Settle Land Baalbeck	<b>Location</b>	Lebanon
<b>Involved Organization (s)</b>			<b>Acronym</b>
National Center for Remote Sensing			NCRS
Centro Ricerche Archeologiche e Scavi di Torino			

**Name**      *Application of Space Techniques to the Integrated Management of a river basin water Resources*

**Acronym**      ASTIMwR      **Location**      Sub-regional

**Involved Organization (s)**

GEOSYS, S.R.L.

Instituto de Desarrollo Regional

Università di Napoli "Federico II"

The Winand Staring Centre for Integrated Land, Soil and Water Research

International Institute for Aerospace Survey and Earth Sciences

Consorzio di bonifica ed Irrigazione di Paestum

Instituto da Agua

Confederacion Hidrografica del Guadiana

**Acronym**

GEOSYS

IDR

UNAP IIA

SC-DLO ISW

ITC

SINSELE

INAG

CHG

**Name**      *Application of Space Technology to Environmental aspects of suRface mIning - a Surface Mining decisiOn support System*

**Acronym**      ASTERISMOS      **Location**      Sub-regional

**Involved Organization (s)**

Integrated Information Systems S.A.

Aristotelian University of Thessaloniki

Resources Analysis B.V. - Policy Analysis and Environmental Management

Consejo Superior de Investigaciones Cientificas - Institute of Earth Sciences "Jaume Almera"

General Mining & Metallurgical Company S.A. - R&D Dpt., Geology Dpt.

Clear Communication Associates Ltd.

Joanneum Research - Institute for digital Image Processing

**Acronym**

IIS

CSIC

LARCO

CCA

JRI

**Name**      *Assessment of natural resources and soil conservation issues in the coastal area of Fuka-Matrouh, Egypt*

**Acronym**      CAMP for Egypt      **Location**      Egypt

**Involved Organization (s)**

Centro di Telerilevamento Mediterraneo - Environment Remote Sensing Regional Activity Center

University of Alexandria - Institute of Graduate Studies and Research

Egyptian Environmental Affairs Agency - Arab Republic of Eryp, Cabinet of Ministers

**Acronym**

CTM-ERS/RAC

IGSR

EEAA

**Name**      *Assessment of the Environmental Impact from the Construction of a Dam and Reservoir*

**Acronym**           **Location**      Greece

**Involved Organization (s)**

National Agriculture Research Foundation - Institute for Soil Mapping and Classification

**Acronym**

NAGREF - ISMAC

**Name**      *CALamities Information System*

**Acronym**      CALIS      **Location**      Sub-regional

**Involved Organization (s)**

Matra Cap Systèmes

Geoapikonisis L.t.d.

University of Edinburgh - Dpt. of Geology and Geophysics

GEOSYS

**Acronym**

GEOSYS

**Name**     *Cereal Yield Estimation System***Acronym**     CEREAL YES**Location**     Spain**Involved Organization (s)**

IBERSAT, S.A.

**Acronym**

IBERSAT

**Name**     *Changes in Arid Mediterranean Ecosystems on the long term and Earth observation***Acronym**     CAMELEO**Location**     Sub-regional**Involved Organization (s)**

European Union - Directorate General Joint Research Center - Space Application Institute

**Acronym**

JRC - SAI

Sahara and Sahel Observatory - UNESCO

OSS

Istituto di analisi Ambientale e Telerilevamento per l'Agricoltura

CNR-IATA

Institut français de recherche scientifique pour le développement en coopération

ORSTOM

**Name**     *Classification and monitoring of the mediterranean vegetation relying on satellite data***Acronym**     DAPHNE**Location**     Regional**Involved Organization (s)**

Centro di Telerilevamento Mediterraneo - Environment Remote Sensing Regional Activity Center

CTM-ERS/RAC

MAP/UNEP Coordinating Unit

MEDU

**Name**     *Coastal Waters Monitoring System***Acronym**     ICAMS**Location**     Sub-regional**Involved Organization (s)**

Earth Observation Sciences Ltd

EOS

European Union - Directorate General Joint Research Center - Space Application Institute

JRC - SAI

Food and Agriculture Organization of the United Nations

FAO UN

**Name**     *Coastal zone management and Environmental Impact Assessment for industrial development in Northern East Tunisia.***Acronym****Location**     Tunisia**Involved Organization (s)**

International Centre for Science and high technology - United Nations Industrial Development Organization

**Acronym**

ICS - UNIDO

**Name**     *Concertation on European Validation Experiments for Coastal/shelf water remote sensing***Acronym**     CEVEx**Location**     Sub-regional**Involved Organization (s)**

European Union - Directorate General Joint Research Center - Space Application Institute

**Acronym**

JRC - SAI

Netherlands Institute for Sea Research

NIOZ

Institute for the Study of Large Masses

CNR-ISGM

Plymouth Marine Laboratory

NERC-PML

<b>Name</b>	<i>Concerted action on algal bloom detection monitoring and prediction</i>		
<b>Acronym</b>	ABDMAP	<b>Location</b>	Sub-regional
<b>Involved Organization (s)</b>	<b>Acronym</b>		
University of Dundee			
University of Crete			
Ecole Nationale Supérieures des Mines de Paris			
University of Wales, School of Ocean Sciences			
Istituto Superiore della Sanità - Laboratorio di Igiene Ambientale			
University of Stockholm			
<b>Name</b>	<i>COnstellation of Small Satellites for Mediterranean Observation</i>		
<b>Acronym</b>	Skymed COSMO	<b>Location</b>	Regional
<b>Involved Organization (s)</b>	<b>Acronym</b>		
Alenia Aerospazio's Space Division			
<b>Name</b>	<i>Control and Surveillance of Non-point Source (NPS) Mediterranean (MED) Pollution via GIS: A "Corine" and "Eurostat" database extension.</i>		
<b>Acronym</b>	MED-NPS	<b>Location</b>	Regional
<b>Involved Organization (s)</b>	<b>Acronym</b>		
Epsilon International SA			
<b>Name</b>	<i>Coverage of the main urban and mountainous areas of Italy with Digital Elevation Models (DEM) and orthoimages for telecom applications</i>		
<b>Acronym</b>		<b>Location</b>	Italy
<b>Involved Organization (s)</b>	<b>Acronym</b>		
GEOIMAGE	GEOIMAGE		
Telespazio S.p.A.			
<b>Name</b>	<i>DEcision Support for Integrated coastal zone Management</i>		
<b>Acronym</b>	DESIMA	<b>Location</b>	Sub-regional
<b>Involved Organization (s)</b>	<b>Acronym</b>		
European Union - Directorate General Joint Research Center - Space Application Institute	JRC - SAI		
Matra Cap Systèmes			
Satellite Observing Systems Ltd	SOS		
ACRI - Mécanique Appliquée at Sciences de l'Environnement	ACRI S.A.		
<b>Name</b>	<i>Delineation of urban areas: spatial accuracy contribution of the future SPOT 5 data (Bordeaux conurbation, France)</i>		
<b>Acronym</b>		<b>Location</b>	France
<b>Involved Organization (s)</b>	<b>Acronym</b>		
GEOIMAGE	GEOIMAGE		
French Space Agency	CNES		
<b>Name</b>	<i>Development and implementation of an expert geographic information system for the management of sugar beet cultivation</i>		
<b>Acronym</b>		<b>Location</b>	Greece
<b>Involved Organization (s)</b>	<b>Acronym</b>		
National Agriculture Research Foundation - Institute for Soil Mapping and Classification	NAGREF - ISMAC		
Hellenic Sugar Industry	HSI		

**Name**     *Development and Testing of Algorithms for a Global Burnt Area Product from ERS ATSR-2*

<b>Acronym</b>	<b>Location</b>	Regional	
<b>Involved Organization (s)</b>			<b>Acronym</b>
Instituto Superior de Agronomia (PT)			
European Union - Directorate General Joint Research Center - Space Application Institute			JRC - SAI
European Space Agency/ESRIN			ESA/ESRIN

**Name**     *Development of Advanced Remote Sensing Technology in the initial phases of Mineral Exploration*

<b>Acronym</b>	DARSTIMEX	<b>Location</b>	Sub-regional	
<b>Involved Organization (s)</b>				<b>Acronym</b>
Telespazio S.p.A.				
EARTH S.r.l.				EARTH
IBERSAT, S.A.				IBERSAT

**Name**     *Earth Observation technologies: operational tools for Local*

<b>Acronym</b>	<b>Location</b>	Italy	
<b>Involved Organization (s)</b>			<b>Acronym</b>
European Space Agency			ESA
Associazione Italiana di Telerilevamento			AIT
Consiglio Nazionale delle Ricerche-IRRS-Telerilevamento			CNR-IRRS
EURIMAGE			EURIMAGE

**Name**     *Earthquake source studies: Joint inversion of broadband seismological data and SAR interferograms*

<b>Acronym</b>	<b>Location</b>	Africa	
<b>Involved Organization (s)</b>			<b>Acronym</b>
Institute of Geophysics, ETHZ			ETHZ

**Name**     *Environmental Management Architecture for Information Delivery*

<b>Acronym</b>	E-MAIL	<b>Location</b>	Sub-regional	
<b>Involved Organization (s)</b>				<b>Acronym</b>
Analysis Automation Trading				AAT
ALBAnet L.t.d.				ALBAnet
PIN - Centro Studi Ingegneria				PIN
Regione Toscana				
Fife Regional Council				FIFE

**Name**     *Environmental Monitoring Warning and Emergency Management Systems*

<b>Acronym</b>	ENVISYS	<b>Location</b>	Sub-regional	
<b>Involved Organization (s)</b>				<b>Acronym</b>
Impetus Systems and Telecommunications S.A.				IMPETUS Ltd
Prefecture of Cyclades				
Sociedad Estatal de Salvamento y Seguridad Maritima				
APEX S.A.				APEX
National Observatory of Athens, Institute of Ionospheric and Space Research				NOA/IISR



**Name** *environmentAl tyPolological space mapper facilitating the implemenTation of eURopean lEgislation*

<b>Acronym</b>	APERTURE	<b>Location</b>	Sub-regional	<b>Acronym</b>
<b>Involved Organization (s)</b>				
Ministerio de Medio Ambiente				
Integrated Information Systems S.A.				IIS
National Technical University of Athens				
GEOSYS, S.R.L.				GEOSYS
Istituto per l'Ambiente				
European Union - Directorate General Joint Research Center - Space Application Institute				JRC - SAI

**Name** *ERS SAR interferometry for monitoring natural hazards and disasters*

<b>Acronym</b>		<b>Location</b>	Sub-regional	<b>Acronym</b>
<b>Involved Organization (s)</b>				
Nigel Press Associates Ltd.				NPA
National Technical University of Athens				
University College of London - Dept. of Photogrammetry & Surveying,				

**Name** *Estimating the distribution of aerosols in urban areas with remote sensing*

<b>Acronym</b>		<b>Location</b>	Greece	<b>Acronym</b>
<b>Involved Organization (s)</b>				
Greek Ministry of the Environment				
University of Athens, Dpt. of Applied Physics				

**Name** *European Climatic Hydrological International programme on the interaction between Vegetation, Atmosphere and Land surfaces*

<b>Acronym</b>	ECHIVAL	<b>Location</b>	Sub-regional	<b>Acronym</b>
<b>Involved Organization (s)</b>				
University of Valencia				

**Name** *European Energy and Water Balance Monitoring System*

<b>Acronym</b>	EWBMS	<b>Location</b>	Regional	<b>Acronym</b>
<b>Involved Organization (s)</b>				
Environmental Analysis & Remote Sensing				EARS
Centro de Estudios y Experimentacion de Obras Publicas				
European Topic Centre on Inland Waters				ETC-IW
Wageningen Agricultural University - Dept. of Meteorology				

**Name** *European estationary Navigation Overlay Service*

<b>Acronym</b>	EGNOS	<b>Location</b>	Regional	<b>Acronym</b>
<b>Involved Organization (s)</b>				
VEGA Group PLC				VEGA
Thomson - CSF/ Syseca/ Systemes d'Imagerie et d'Information Geographique				SYSECA

**Name** *Fire events risk assessment through remote sensing*

<b>Acronym</b>	FIERS	<b>Location</b>	Regional	<b>Acronym</b>
<b>Involved Organization (s)</b>				
Telespazio S.p.A.				
Météo-France				

**Name** *Flood risk management*

**Acronym**

**Location** France

**Involved Organization (s)**

SCOT Conseil

**Acronym**

SCOT Conseil

**Name** *Flood Risk reduction by space borne recognition of indicators of excess runoff generating areas*

**Acronym** FLOODGEN

**Location** Sub-regional

**Involved Organization (s)**

Bureau de Recherches Géologiques at Minières

Université Lumiere - Lyon 2

Institut Nationale de la Recherche Agronomique

University of Trier, Remote sensing Department - Faculty of Geography/Geosciences

**Acronym**

BRGM

INRA

**Name** *Forest fires alarm using digital satellite images*

**Acronym**

**Location** Spain

**Involved Organization (s)**

Diputacion General de Aragon

Generalitat Valenciana

Infocarto Sociedad Anonima

**Acronym**

INFOCARTO S.A.

**Name** *Forest Image pRocessing supported by Expert System*

**Acronym** FIRES

**Location** Sub-regional

**Involved Organization (s)**

Integrated Information Systems S.A.

**Acronym**

IIS

**Name** *FUEGO*

**Acronym**

**Location** Regional

**Involved Organization (s)**

ISA - Engineering Department

Instituto Nacional de Técnica Aeroespacial

Alenia Difesa, Divisione Sistemi Avionici ed Equipaggiamenti, Unità Officine Galileo

SEMA Group - Division Systèmes de Défense et Espace, Délégation Sud/Ouest

**Acronym**

ISA

INTA

**Name** *Fuzzy Land Information from Environmental Remote Sensing*

**Acronym** FLIERS

**Location** Sub-regional

**Involved Organization (s)**

The University of Leicester - Dept. of Geography

European Union - Directorate General Joint Research Center - Space Application Institute

Aristotelian University of Thessaloniki

**Acronym**

JRC - SAI

**Name** *GEOMED*

**Acronym**

**Location** Regional

**Involved Organization (s)**

Mathematical Geodesy and Geoinformatics - Technical University

**Acronym**

MGGI

**Name** *Hydrodynamics and geochemical fluxes in the Strait of Otranto*

**Acronym** OTRANTO

**Location** Sub-regional

**Involved Organization (s)**

Osservatorio Geofisico Sperimentale

**Acronym**

OGS



NCMR/HNODC

NCMR/HNODC

Istituto di Biologia del Mare

**Name** *Improving satellite based mapping of burnt areas in Mediterranean ecosystems by image segmentation*

**Acronym** AZNAL**Location** Spain**Involved Organization (s)****Acronym**

Consejo Superior de Investigaciones Cientificas - Institute of Earth Sciences "Jaume Almera"

CSIC

**Name** *Integrated use of RS-data for assessing enviromental risks from coastal industrial plants: example from Sicily*

**Acronym****Location** Italy**Involved Organization (s)****Acronym**

European Union - Directorate General Joint Research Center - Space Application Institute

JRC - SAI

**Name** *Interferometric Monitoring of slope motion and volcanic deformation for risk management*

**Acronym****Location** Sub-regional**Involved Organization (s)****Acronym**Institut fuer Allgemeine und Anewandte Geologie, Univeristaet Muenchen  
Institut fuer Geologie, Universitaet Wien

**Name** *Investigation of Episodic Erosion Caused by Extreme Rainfall Events in Badlands in SE Spain Using ERS SAR Multi-Temporal Coherence*

**Acronym****Location** Spain**Involved Organization (s)****Acronym**

Huxley School of Environment, Imperial College

**Name** *Investigation of the contribution of remote sensing to the detection of the sort and quality of vegetation and estimation of crop harvest*

**Acronym****Location** Greece**Involved Organization (s)****Acronym**National Observatory of Athens, Institute of Ionospheric and Space Research  
Hellenic National Meteorological Service

NOA/IISR

Benakio Phytopatological Institute

HNMS

Greece Ministry of Agriculture

Aristotele University of Thessaloniki, School of Physics, Laboratory of Atmspheric Physics

Agricultural University of Athens

National Technical University of Athens

University of Aegean

**Name** *Irrigation map production for river "Tajo" in Spain*

**Acronym****Location** Spain**Involved Organization (s)****Acronym**

Gesellschaft fuer Angewandte Fernerkundung - Company for Applied Remote Sensing

GAF

Minas de Almadén y Arrayanes S.A.

<b>Name</b>	<i>Island Satellite Observation for Local Exploitation</i>		
<b>Acronym</b>	ISOLE	<b>Location</b>	Sub-regional
<b>Involved Organization (s)</b>			<b>Acronym</b>
Vitrociset S.p.A.			Vitrociset
Sistemi per la Meteorologia e l'Ambiente S.p.A.			SMA
Centro de Estudios Tecnico Maritimos SL			CETEMAR
National Observatory of Athens, Institute of Ionospheric and Space Research			NOA/IISR
European Union - Directorate General Joint Research Center - Space Application Institute			JRC - SAI
Touring Club Italiano			TCI
ACRI - Mécanique Appliquée at Sciences de l'Environnement			ACRI S.A.
Centro Studi per l'Applicazione dell'Informatica in Agricoltura - Ce.S.I.A. - Accademia dei Georgofili			CESIA
Satellite Observing Systems Ltd			SOS
<b>Name</b>	<i>Land and Water Management in Mediterranean islands using earth observation data.</i>		
<b>Acronym</b>	ISLA	<b>Location</b>	Sub-regional
<b>Involved Organization (s)</b>			<b>Acronym</b>
GEOSYS, S.R.L.			GEOSYS
Geoapikonisis L.t.d.			
National Observatory of Athens, Institute of Ionospheric and Space Research			NOA/IISR
Environmental Analysis & Remote Sensing			EARS
The Eastern Crete Development Organisation			O.A.N.A.K.
Instituto Nacional de Técnica Aeroespacial			INTA
Junta de Aquas de Baleares			
Instituto de Desarrollo Regional			IDR
Alenia Aerospazio's Space Division			
<b>Name</b>	<i>Land cover changes in COASTal zones</i>		
<b>Acronym</b>	LACOAST	<b>Location</b>	Sub-regional
<b>Involved Organization (s)</b>			<b>Acronym</b>
European Union - Directorate General Joint Research Center - Space Application Institute			JRC - SAI
KLIMATOLOGIO S.A.			KLIMATOLOGIO
Institut Géographique National			IGN
European Environment Agency			EEA
The Winand Staring Centre for Integrated Land, Soil and Water Research			SC-DLO ISW
<b>Name</b>	<i>Lithostructural analysis of sedimentary basins (Ebro, Spain)</i>		
<b>Acronym</b>		<b>Location</b>	Spain
<b>Involved Organization (s)</b>			<b>Acronym</b>
ISTAR			ISTAR
<b>Name</b>	<i>Map revision using high resolution satellite data (Cyprus)</i>		
<b>Acronym</b>		<b>Location</b>	Cyprus
<b>Involved Organization (s)</b>			<b>Acronym</b>
Nigel Press Associates Ltd.			NPA

<b>Name</b>	<i>Mapping of the flooded zones using optical and radar satellite data in southern France</i>		
<b>Acronym</b>	<b>Location</b>	France	
<b>Involved Organization (s)</b>			<b>Acronym</b>
French Ministry of Environment			
French National Company of the Rhone River			
French Space Agency			
GEOIMAGE			
<b>Name</b>	<i>Marine Pollution using satellite borne instruments</i>		
<b>Acronym</b>	CLEAN SEAS	<b>Location</b>	Sub-regional
<b>Involved Organization (s)</b>			<b>Acronym</b>
University of Stockholm			
Satellite Observing Systems Ltd			
University Polytechnic of Catalunya - Dept. Of Applied Physics			
University of Hamburg - Institut fur Meereskunde (Oceanography)			
ACRI - Mécanique Appliquée at Sciences de l'Environnement			
Ecole Nationale Supérieures des Mines de Paris			
Southampton Oceanography Centre			
European Union - Directorate General Joint Research Center - Space Application Institute			
<b>Name</b>	<i>Maritime Satellite Telecommunication Architecture</i>		
<b>Acronym</b>	SIRIUS	<b>Location</b>	Regional
<b>Involved Organization (s)</b>			<b>Acronym</b>
VEGA Group PLC			
<b>Name</b>	<i>MARS STAT</i>		
<b>Acronym</b>	<b>Location</b>	Sub-regional	
<b>Involved Organization (s)</b>			<b>Acronym</b>
European Union - Directorate General Joint Research Center - Space Application Institute			
SCOT Conseil			
<b>Name</b>	<i>MED Connections</i>		
<b>Acronym</b>	<b>Location</b>	Regional	
<b>Involved Organization (s)</b>			<b>Acronym</b>
Satellite Observing Systems Ltd			
European Union - Directorate General Joint Research Center - Space Application Institute			
<b>Name</b>	<i>Mediterranean Desertification and Landuse</i>		
<b>Acronym</b>	MEDALUS	<b>Location</b>	Regional
<b>Involved Organization (s)</b>			<b>Acronym</b>
Department of Environmental and Territorial University of Milan			
Università di Napoli "Federico II"			
King's College of London			
University of Valencia			
Silsoe College, Cranfield University			
Istituto di analisi Ambientale e Telerilevamento per l'Agricoltura			

**Name** *Mesoscale Meteorology and air-sea interaction using microwave remote sensing*

**Acronym** **Location** Sub-regional

**Involved Organization (s)**

Centro Nazionale delle Ricerche - Istituto per lo Studio della Dinamica delle Grandi Masse

**Acronym**

CNR-ISDGM

**Name** *Modelling and prediction of soil salinity and water logging*

**Acronym** **Location** Egypt

**Involved Organization (s)**

University of Gent

Information and Decision Support Centre

National Authority for Remote sensing and Space Sciences

**Acronym**

IDSC

NARSS

**Name** *Monitoring Agricultural Resources in Europe - Crops*

**Acronym** MARIE-C **Location** Sub-regional

**Involved Organization (s)**

Environmental Analysis & Remote Sensing

Silsoe College, Cranfield University

European Union - Directorate General Joint Research Center - Space Application Institute

**Acronym**

EARS

JRC - SAI

**Name** *Monitoring and Assessment of Resources in Europe-Forest*

**Acronym** MARIE-F **Location** Sub-regional

**Involved Organization (s)**

Environmental Analysis & Remote Sensing

University of Freiburg - Forestry Faculty

CEMAGREF

European Union - Directorate General Joint Research Center - Space Application Institute

**Acronym**

EARS

CEMAGREF

JRC - SAI

**Name** *Monitoring Coastal Discharge Plumes in Southern Italy: A Synergistic Study*

**Acronym** **Location** Italy

**Involved Organization (s)**

University of Hamburg - Institut für Meereskunde (Oceanography)

European Union - Directorate General Joint Research Center - Space Application Institute

**Acronym**

JRC - SAI

**Name** *Monitoring of a rangeland ecosystem in the arid area of El-Ateuf and Oulad M'hamed (Eastern Morocco)*

**Acronym** PDPEO **Location** Morocco

**Involved Organization (s)**

SCOT Conseil

University of Marseille, Institut Méditerranéen d'Ecologie URA 1152,

**Acronym**

SCOT Conseil

**Name** *Monitoring of Nisyros Volcano (Greece) Using ERS repeat-pass interferometry*

**Acronym** **Location** Greece

**Involved Organization (s)**

Integrated Information Systems S.A.

National Observatory of Athens, Institute of Ionospheric and Space Research

**Acronym**

IIS

NOA/IISR

Geothermy Division  
University of Reading

IGME

**Name** *Monitoring URBAN Dynamics*

**Acronym** MURBANDY

**Location** Sub-regional

**Involved Organization (s)**

**Acronym**

Remote sensing Data Engineering

R.S.D.E. S.r.l.

European Union - Directorate General Joint Research Center - Space Application  
Institute

JRC - SAI

**Name** *Morphotectonic applied to active faults in a moderate seismicity area of Jura mountains*

**Acronym**

**Location** France

**Involved Organization (s)**

**Acronym**

Geosciences Consultants s.a.r.l.

GSC

Laboratoire de Géologie Géomorphologie Structurale et Télédetection

**Name** *Natural Hazards-Forest Fires*

**Acronym**

**Location** Regional

**Involved Organization (s)**

**Acronym**

European Union - Directorate General Joint Research Center - Space Application  
Institute

JRC - SAI

**Name** *New Technologies for mineral exploration and surveillance of environmental impacts of mining operations based on remote sensing and multidataset analysis (Spain & Germany)*

**Acronym**

**Location** Sub-regional

**Involved Organization (s)**

**Acronym**

Gesellschaft fuer Angewandte Fernerkundung - Company for Applied Remote  
Sensing

GAF

**Name** *Ocean Colour European Archive Network*

**Acronym** OCEAN

**Location** Regional

**Involved Organization (s)**

**Acronym**

European Union - Directorate General Joint Research Center - Space Application  
Institute

JRC - SAI

European Union - Directorate General Environment, Nuclear Safety and Civil  
Protection

EU-DGXI

European Space Agency

ESA

**Name** *Oil exploration in a salt-pan area, Central Turkey*

**Acronym**

**Location** Turkey

**Involved Organization (s)**

**Acronym**

Nigel Press Associates Ltd.

NPA

**Name** *Oil Slicks near real time monitoring in Mediterranean sea*

**Acronym**

**Location** Regional

**Involved Organization (s)**

**Acronym**

Agenzia Spaziale Italiana, Centro di Matera

ASI

**Name** *On the possibility to estimate ocean bottom topography from marine gravity and satellite altimeter data: an experiment in the Central Mediterranean*

**Acronym**

**Location** Sub-regional



<b>Involved Organization (s)</b>	<b>Acronym</b>	
Aristotelian University of Thessaloniki		
<b>Name</b>	<i>Orbital Remote-sensing for Crop Areas</i>	
<b>Acronym</b>	ORCA	<b>Location</b> Sub-regional
<b>Involved Organization (s)</b>	<b>Acronym</b>	
Groupe Compagnie des Signaux	CISI	
<b>Name</b>	<i>Pan-European Land Cover Monitoring</i>	
<b>Acronym</b>	PELCOM	<b>Location</b> Sub-regional
<b>Involved Organization (s)</b>	<b>Acronym</b>	
GEODAN IT BV	GEODAN	
European Union - Directorate General Joint Research Center - Space Application Institute	JRC - SAI	
The Winand Staring Centre for Integrated Land, Soil and Water Research	SC-DLO ISW	
<b>Name</b>	<i>Park Resources Information Management Via Environmental Remotely sensed data Analysis</i>	
<b>Acronym</b>	PRIMAVERA	<b>Location</b> Sub-regional
<b>Involved Organization (s)</b>	<b>Acronym</b>	
Touring Club Italiano	TCI	
National Observatory of Athens, Institute of Ionospheric and Space Research	NOA/IISR	
University of Athens		
Vitrociset S.p.A.	Vitrociset	
<b>Name</b>	<i>Permanent GPS Station Network</i>	
<b>Acronym</b>		<b>Location</b> Israel
<b>Involved Organization (s)</b>	<b>Acronym</b>	
Survey of Israel		
Tel Aviv University		
Geological Survey of Israel	GSI	
Israel Space Agency		
<b>Name</b>	<i>Physical and biogeochemical signature of intermediate and deep waters</i>	
<b>Acronym</b>	GEODYME	<b>Location</b> Sub-regional
<b>Involved Organization (s)</b>	<b>Acronym</b>	
Laboratoire de Physique et Chimie Marines	LPCM	
Institute for the Study of Large Masses	CNR-ISGM	
<b>Name</b>	<i>Pilot Study in the Field of Monitoring Forested Areas</i>	
<b>Acronym</b>		<b>Location</b> France
<b>Involved Organization (s)</b>	<b>Acronym</b>	
Agence MTDA		
<b>Name</b>	<i>Poplar development in Turkey</i>	
<b>Acronym</b>		<b>Location</b> Turkey
<b>Involved Organization (s)</b>	<b>Acronym</b>	
Istituto Agronomico per l'Oltremare - Italian Ministry for Foreign Affairs	IAO	
Agaclandirma Ve Erozyon Kontrolu Genel Mudurlugu		



**Name** *Project: "Paola"*

**Acronym**

**Location** Sub-regional

**Involved Organization (s)**

**Acronym**

King's College, Biology Dpt.

MEDASSET/GR

MEDASSET

**Name** *Realization of irrigation maps distribution and their evolution*

**Acronym**

**Location** Spain

**Involved Organization (s)**

**Acronym**

Infocarto Sociedad Anonima

INFOCARTO S.A.

Ministerio De Obras Publicas y Medio Ambiente - Servicio Geológico de Obras Públicas

Department of Water Engineering

INTECSA

**Name** *Remote sensing and hydrological watershed modeling*

**Acronym**

**Location** France

**Involved Organization (s)**

**Acronym**

SCOT Conseil

SCOT Conseil

**Name** *Remote Sensing and Urban Statistics: Toulouse Agglomeration (in the framework of EUROSTAT)*

**Acronym**

**Location** France

**Involved Organization (s)**

**Acronym**

SCOT Conseil

SCOT Conseil

EUROSTAT

EUROSTAT

**Name** *Remote Sensing contribution to the study of coastal areas (Var region, France)*

**Acronym**

**Location** France

**Involved Organization (s)**

**Acronym**

GEOIMAGE

GEOIMAGE

**Name** *REmote SEnsing Data Assimilation*

**Acronym** RESEDA

**Location** France

**Involved Organization (s)**

**Acronym**

INRA Bioclimatologie

INRA

The Winand Staring Centre SC-DLO - Dept. of Agrohydrology

SC-DLO A

Wageningen Agricultural University - Dept. of Water Resources

Bureau de Recherches Géologiques at Minières

BRGM

**Name** *Remote Sensing of Mediterranean Desertification and Environmental Changes*

**Acronym** RESMEDES

**Location** Sub-regional

**Involved Organization (s)**

**Acronym**

Centro Studi per l'Applicazione dell'Informatica in Agricoltura - Ce.S.I.A. - Accademia dei Georgofili

CESIA

Free University of Amsterdam - Institute of Earth Sciences, Dept. of Hydrology

Geographisches Institut - Universität Basel

University of Valencia

Telespazio S.p.A.

Freie Universität Berlin - Institut für Meteorologie

The Winand Staring Centre for Integrated Land, Soil and Water Research SC-DLO ISW  
 Forschungszentrum Karlsruhe GmbH Inst. fuer Met. und Klimaforchung  
 Wageningen Agricultural University - Dept.of Water Resources  
 Ben-Gurion University of the Negev, J. Blaustein Inst. For Desert Research  
 Laboratoire des Sciences de l'Image et de la Télédétection ENSPS  
 Istituto di analisi Ambientale e Telerilevamento per l'Agricoltura CNR-IATA

**Name** *Remote Sensing Support for Analysis of Coasts*

**Acronym** RESSAC **Location** Israel

**Involved Organization (s)**

**Acronym**

Centro di Telerilevamento Mediterraneo - Environment Remote Sensing Regional Activity Center CTM-ERS/RAC  
 Geological Survey of Israel GSI  
 Nationaal Lucht-en Ruimtevaartlaboratorium NLR  
 SCOP MeteoMer sarl METEOMER  
 ARGOSS BV ARGOSS  
 Israel Oceanographic & Limnological Research IOLR  
 Ministry of Environment - Planning Dept. - State of Israel PD - MoE

**Name** *Resource Management in the Karstic coastal Mediterranean*

**Acronym** Res Man Med **Location** Sub-regional

**Involved Organization (s)**

**Acronym**

National Center for Remote Sensing NCRS

**Name** *Satellite Monitoring of Desertification in the European Mediterranean*

**Acronym** DEMON 2 **Location** Sub-regional

**Involved Organization (s)**

**Acronym**

University of Trier, Remote sensing Department - Faculty of Geography/Geosciences  
 European Union - Directorate General Joint Research Center - Space Application Institute JRC - SAI  
 University of Valencia  
 Utrecht University, Department of Physical Geography  
 University of Crete  
 Centre d'Ecologie Fonctionnelle et Evolutive CEFE

**Name** *Satellite-based Environmental Monitoring of European FORests*

**Acronym** SEMEFOR **Location** Italy

**Involved Organization (s)**

**Acronym**

The Swedish Environmental Research Institute IVL  
 Gesellschaft fuer Angewandte Fernerkundung - Company for Applied Remote Sensing GAF  
 Centro di Telerilevamento Mediterraneo - Environment Remote Sensing Regional Activity Center CTM-ERS/RAC  
 University of Freiburg - Forestry Faculty  
 Joanneum Research - Institute for digital Image Processing JRI

**Name** *SEa Level Fluctuation: geophysical interpretation and environmental impact*

**Acronym** SELF **Location** Sub-regional

**Involved Organization (s)**

**Acronym**

Dipartimento di Fisica - Settore Geofisica

**Name** *Seasonal hydric stress control using digital satellite images*

**Acronym** **Location** Regional

**Involved Organization (s)**

Infocarto Sociedad Anonima

**Acronym**

INFOCARTO S.A.

Confederation Hidrografica del Guadalquivir

**Name** *SeaWiFS applications in Greek Seas*

**Acronym** SAT-SW **Location** Greece

**Involved Organization (s)**

**Acronym**

Institute of Marine Biology of Crete/ Sonar and Remote Sensing Section

**Name** *Soil moisture retrieval by SAR in the arid and semi-arid environment.*

**Acronym** **Location** Israel

**Involved Organization (s)**

**Acronym**

Ben-Gurion University of the Negev - Department of Geography

**Name** *Soil survey of the greater area of the former lake "Karla" using GIS and Remote Sensing Techniques*

**Acronym** **Location** Greece

**Involved Organization (s)**

**Acronym**

National Agriculture Research Foundation - Institute for Soil Mapping and Classification

NAGREF - ISMAC

**Name** *Space systems and information technology for sustainable development in the Mediterranean area*

**Acronym** COSME Concept **Location** Regional

**Involved Organization (s)**

**Acronym**

Aerospatiale

Aerospatiale

**Name** *Spectral detection of Soil salinity over semi-arid areas in Israel*

**Acronym** **Location** Israel

**Involved Organization (s)**

**Acronym**

Tel Aviv University - The remote sensing and GIS laboratory, Dept. Of Geography

Land Development Authority, Keren Kayemet Le-Israel

**Name** *SPOT input for integrated hydrologic model (western Campania Region)*

**Acronym** **Location** Italy

**Involved Organization (s)**

**Acronym**

ISTAR

ISTAR

GEOLAB

GEOLAB

**Name** *Statistical Atlas of Urban Agglomerations in Europe*

**Acronym** ATHENS ATLAS **Location** Greece

**Involved Organization (s)**

**Acronym**

Geopikosis L.t.d.

Gesellschaft fuer Angewandte Fernerkundung - Company for Applied Remote Sensing

GAF

National Observatory of Athens, Institute of Ionospheric and Space Research

NOA/IISR

University of Gent

International Centre for Science and high technology - United Nations Industrial Development Organization ICS - UNIDO

Sahara and Sahel Observatory - UNESCO OSS

SERTIT SERTIT

The Winand Staring Centre SC-DLO - Dept. of Agrohydrology SC-DLO A

Telespazio S.p.A.

**Name** *Tectonic and Environmental Hazard Mapping of the Northern Segment of the Dead Sea Fault System Using a DEM from ERS Tandem Mission SAR Data*

**Acronym** **Location** Sub-regional

**Involved Organization (s)**

National Center for Remote Sensing

**Acronym**

NCRS

**Name** *The APPUIT project, support to Remote Sensing*

**Acronym** APPUIT

**Location** Morocco

**Involved Organization (s)**

GEOSAT Technology Company

**Acronym**

GEOSAT

**Name** *the MEditerranean DUSt Experiment*

**Acronym** MEDUSE

**Location** Regional

**Involved Organization (s)**

Mediterranean Research Center - Centro di Cultura Scientifica "Ettore Majorana"

Aristotele University of Thessaloniki, School of Physics, Laboratory of Atmospheric Physics

Universites de Paris7-Paris12 - Centre Multidisciplinaire du Creteil

University of Hamburg - Institut fuer Anorganisches und Angewante Chemie

Association pour le Developpement des Techniques Nouvelles

Commissariat a l'Energie Atomique

University of Crete

National and Kapodistrian University of Athens

**Acronym**

MRC

UMR CNRS 7583

CEA CFR

**Name** *Thermal infrared survey of fresh water sources in the marine environment*

**Acronym** TIR Mar Fresh Water

**Location** Sub-regional

**Involved Organization (s)**

General Organization for Remote Sensing

National Center for Remote Sensing

**Acronym**

GORS

NCRS

**Name** *Transfer pathways and fluxes of organic matter and related elements in water and sediments of the Northern Adriatic sea and their importance on the eastern Mediterranean Sea*

**Acronym** EUROMARGE-AS

**Location** Italy

**Involved Organization (s)**

University of Edinburgh - Dpt. of Geology and Geophysics

IGM/CNR Istituto Per la Geologia Marina

Osservatorio Geofisico Sperimentale

University of Dundee

**Acronym**

IGM/CNR

OGS

**Name** *Use of satellite imagery to assist oil exploration in sand-seas: Algeria*

**Acronym**

**Location** Algeria

**Involved Organization (s)**

Nigel Press Associates Ltd.

**Acronym**

NPA

**Name** *Use of Space Techniques for flood monitoring*

**Acronym**

**Location** France

**Involved Organization (s)**

SCOT Conseil

**Acronym**

SCOT Conseil



GEOIMAGE		GEOIMAGE	
French Ministry of Environment			
Infocarto Sociedad Anonima		INFOCARTO S.A.	
<b>Name</b>	<i>Using remote sensing data and derived information for the study of the Ouveze flash flood event of September 1992</i>		
<b>Acronym</b>		<b>Location</b>	France
<b>Involved Organization (s)</b>		<b>Acronym</b>	
SERTIT		SERTIT	
<b>Name</b>	<i>Volcano deflation monitored by spaceborne radar interferometry</i>		
<b>Acronym</b>	ETNA	<b>Location</b>	Italy
<b>Involved Organization (s)</b>		<b>Acronym</b>	
French Space Agency		CNES	
Groupe de Recherche en Géodésie Spatiale - Centre Nationale de la Recherche Scientifique, Observatoire Midi-Pyrénées		CNRS-OMP	
<b>Name</b>	<i>Vulnerability assessment of coastal cities to the Impact of Sea Level Rise (Climate Changes)</i>		
<b>Acronym</b>		<b>Location</b>	Egypt
<b>Involved Organization (s)</b>		<b>Acronym</b>	
Egyptian Environmental Affairs Agency - Arab Republic of Egyp, Cabinet of Ministers		EEAA	
University of Alexandria - Institute of Graduate Studies and Research		IGSR	
<b>Name</b>	<i>Water resources - quality management in Akkar</i>		
<b>Acronym</b>		<b>Location</b>	Lebanon
<b>Involved Organization (s)</b>		<b>Acronym</b>	
National Center for Remote Sensing		NCRS	
<b>Name</b>	<i>Web demonstration prototype of Earth Observation data possibilities for the monitoring of urban pressure in the Mediterranean area</i>		
<b>Acronym</b>	TANGER	<b>Location</b>	Morocco
<b>Involved Organization (s)</b>		<b>Acronym</b>	
SCOT Conseil		SCOT Conseil	
French Space Agency		CNES	



