

**NATIONAL AND REGIONAL SCIENTIFIC NETWORKING FOR
SUPPORTING THE IMPLEMENTATION PROCESS OF THE UNCCD –
THE EXAMPLES OF DESERT*NET GERMANY AND THE EUROPEAN
DESERTNET**

M. AKHTAR-SCHUSTER

Biocentre Klein Flottbek and Botanical Garden, Ohnhorststr. 18, 22609 Hamburg, Germany

Abstract

At the Third Session of the Committee for the Review of the Implementation of the Convention (CRIC 3, 2-11th May 2005 in Bonn, Germany) the German Scientific Network to Combat Desertification (Desert*Net, www.desertnet.de) together with representatives of the French Comité Scientifique Français de la Désertification (CSFD) and the Belgian Expert Group held informal talks to develop a European network on Desertification to enhance the political awareness for the desertification issue at the European level, and to support the implementation process of the UNCCD.

In June 2005, the European network was created. The interim secretariat is located at the German Desert*Net office in Hamburg, Germany. In the Year of Deserts and Desertification (IYDD 2006), the further structuring of the European DesertNet will start creating a scientific platform for sharing and discussing initiatives and research related to combating and preventing desertification, and thus, to identify up scaling and multiplier effects for best practice solutions.

The network is open to scientists and research institutions from Europe who are interested in the topic, and who share the vision delineated in the European DesertNet Declaration. On 1st February 2006, scientists from 59 European research institutes from 10 European countries (Austria, Belgium, France, Germany, Greece, Italy, Romania, the Slovak Republic, Spain and Switzerland) had signed the European DesertNet Declaration.

The UNCCD, UNESCO and the European Commission have been informed of this initiative, and have signalled keen interest for European DesertNet as a science-based initiative to support the UNCCD/CST, and to stimulate and promote European research on desertification.

Key words: Scientific networking, knowledge sharing.

INFORMATION CIRCULATION SYSTEM FOR COMBATING DESERTIFICATION AND SOCIETAL DEVELOPMENT IN INDIA USING SATELLITE BASED PROGRAMMES: A HOLISTIC APPROACH

A.S. ARYA

Space Applications Centre, Indian Space research Organisation (ISRO)

The fore-most and instantaneous information need in any desertification programme is the **inventory** of the land-degradation and its present status. This carves out the present condition of existing land and its resources vis.a.vis the past status. The present and the past conditions of desertification, helps in assessing the trend of desertification in time and space domain and determines the future course of action to mitigate desertification. In India, Desertification Status Map (DSM) of entire India is prepared on 1:1 million scale using Indian satellite wide field sensor (IRSA-WiFS) data . The results would be a DSM map of entire country where various processes of desertification have affected the land with varying degree of severity. This project is taken up for dove-tailing the results with the UNCCD-TPN1 mandate of having a desertification Status Map of entire Asia.

We have a well woven **institutional set-up** in India for **development of the society** through a balanced blend of **state-of-the-art technology** and **national development programmes**. It involves **information generation, sensitization, facilitation, participation, linkages , implemenation**.

We have a programme called VRC (**village resources development**) and this programme is aimed at taking the benefits of information technology of satellite to the grass root levels of the society e.g villagers, for eradication of illiteracy, better health care, training on better jobs, skill development, enhancing agricultural productivity, ensuring drinking water availability/management etc, facilitated by digital connectivity through Space based services, emanating from Satellite Communication (SatCom) and Earth Observation (EO) satellites. This well-proven institutional and technological capabilities are to be percolated through Village Resource Centre (VRC) in association with other Central and State agencies as well as with NGOs community centric services down the line at the grassroots. VRC, conceptualised as community resource, aims to deliver space enabled as well as other IT based and E_GOVERNANCE related services in the **backward region of India** where terrestrial infrastructure is not adequate to provide information and space technology provides 'the last mile'. In fact we have had very successfully carried out implementation of technical combating plans in practicable way by interlinking the Non-governmental organisations (NGO's), the beneficiaries (farmers) and the funding agencies government agencies) in India. This involved **sensitizing the implementers** about the role of technology, training them through various methods and creating an awareness among the **end-beneficiaries** (villagers) about the implementation-benefits of the technical plans of combating desertification for a sustainable development. This is the approach to **capacity building** . The benefits of implementing sustainable development programmes like construction of check -dams, rain water-harvesting structures, agro-forestry etc are **systematically monitored** through ground based surveys and multi-temporal satellite coverage. This **monitoring system** works in most cases.

Tele-education is an important governmental policy in India. This is done through satellite communication based **24 hours T.V-education at the door steps of rural sector** in India. The programme is called Gyandarshan.

However, the **challenges** are not about the **institutionalization** or **inventory** of information or **dissemination** of information. It is about the way the information is **perceived** by the **end-beneficiary** (the farmer). It is about how much are we able to **convince people** about the need to conserve, preserve, manage the existing natural resources and rejuvenate the lost ones, as best possible, through innovative, but mostly simple desertification mitigation measure.

Second challenge is about the expectations of the people from institutions. It is a general norm that the end-beneficiaries always expect that they will be helped financially and materialistically. The challenge is about sensitizing people that they can't be helped for all the generations. This has been understood by many enterprising farmers and they have started to continue the developmental activities in their villages through **people's participation and common funds resources**. It is very important to educate people about the existing governmental schemes about loans to buy cattle, tractors, water pumps etc. so that there is continuation of development and the people do feel a sense of involvement in all the developmental activities. There is another challenge about explaining to the **decision makers** about the benefits of global desertification monitoring and assessment programmes to the address the local land degradation issues.

The **lessons learnt** from each developmental programme on technical feasibility, financial sustainability, legal viability etc. are always used to modify and improve the new programmes.

The paper describes in detail the **models** applied in **information circulation** among various levels, **case studies**, **results** achieved, **challenges and lessons learn**. This is supported by case studies and logical sequence of pictorial presentations.

DESERTIFICATION INFORMATION SYSTEMS – INFORMATION SYSTEMS AND ENVIRONMENTAL MONITORING ON INTERNET: COMMENTARY AND OUTLOOKS

N. BEN KHATRA AND W. ESSAHLI
Sahara and Sahel Observatory

There is no longer any doubt that possessing salient information and data is critical to sound policy-making, especially when it comes to managing natural resources in arid areas threatened by degradation. Without information on the condition, evolution and use of natural resources, no sustainable strategies for managing them can be devised and implemented in these regions, meaning valuable ground will be lost in the combat against degradation.

The UNCCD accentuates in several places how crucial it is to control the various stages of the production and use of information. In particular, it advocates adopting measures to set up local, national and subregional integrated information systems (IIS) to help anticipate the effects of drought (early warning systems, prevention devices and drought management, etc.).

Collecting and disseminating pertinent, accurate and up-to-date information is of paramount importance for gaining awareness of our environment. Being able to quickly access such data is a prerequisite for the drafting of effective policies for combating desertification and protecting the environment in general.

All these conventions and initiatives highlight the importance of crafting environmental policies on the basis of salient information, and indicate priority activities for achieving this objective; but identifying and drawing up such information remains the responsibility of the actors tasked with implementing environmental policies at various levels. Moreover, information needs can only be identified by taking account of the specificities of the entities concerned (zones/geographic areas/countries) and the levels of operation (local, national and regional).

Since policies and strategies attach increasing importance to producing and distributing information, national, subregional and regional institutions have drawn up and applied strategies that reflect their eagerness to equip themselves with protocols for producing, processing and transmitting environmental data.

Desertification Information Systems – Information Systems and Environmental Monitoring on Internet (Systèmes d'Information sur la Désertification – Système d'Information et de Suivi Environnemental sur Internet: SID - SISEI) represent an important experience to circulate information specifically for actors involved in the combat against desertification.

Launched by OSS as part of its 2000 strategy, and reflecting the principles and recommendations of the CCD, SID-SISEI strive to facilitate the dissemination of pertinent, validated information concerning desertification and related environmental problems. The idea is implemented using New Information and Communication Technologies (NICT).

The concept entails setting up information systems featuring tools that support (i) the implementation of anti-desertification action programmes at various levels and (ii) the planning of natural resource management activities and the monitoring and evaluation of their impact. Another goal is to foster greater dialogue between the actors involved, encouraging them to share their experiences and information resources in the interests of a genuine partnership.

A more general objective of the SID-SISEI is to provide an efficient communication tool for Environmental Action Programmes (EAPs), as championed by the World Bank in its structural adjustment programmes in Sub-Saharan Africa. Concretely, this means creating a tool to support good environmental governance through the exchange and use of salient environmental data and information.

Specifically, the SID-SISEI ensure information is distributed to and discussed by the partners involved in implementing environmental actions programmes at various levels. This means they:

- Help de-compartmentalise the different bodies working on natural resource management;
- Valorise and better capitalise information resources to which it is, at present, difficult to gain access
- Offer decentralised access to dispersed information;
- Foster partnerships and synergies between actors at local and international levels;

The basic concept of the SID-SISEI recommends structuring them into three sections – institutional, topical and products. This structure may be adapted to suit the specifics of a certain country or region.

The institutional section covers not only the SID-SISEI framework and objectives but also the way in which the different actors involved in fighting desertification should be organised. In particular, this is where actors are described and information pertaining to them (missions, roles, structures, products, etc.) is reviewed.

In the topical section, information is classed by sector of activity (forestry, pastoral farming, combat against desertification, bio-diversity, early warning, etc.).

The product/information section provides access to tools for monitoring phenomena/issues related to the topic at hand. It presents information in the form of lists of data or indicators, dash boards and studies, all of which are designed to assist management policy-makers and operational actors.

Despite the clutch of positive experiences, most desertification information systems are yet to be fully developed, remaining in the demonstration stage. Actors have signalled their commitment to mastering technical tools but they have not yet translated this into the institutional measures and actions needed to incorporate them and make them operational.

The handful of success stories, from which the results are starting to be disseminated in several countries, confirm that embedding effective systems is a long-term endeavour that must take account of scientific, technical, institutional and organisational factors.

SCIENCE FOR GOOD GOVERNANCE: SCIENTIFIC INFORMATION AND
COMMUNICATION SYSTEMS IN THE CONTEXT OF THE UNITED NATIONS
CONVENTION TO COMBAT DESERTIFICATION

A. DE VANSSAY

Secretariat of the United Nations Convention to Combat Desertification (UNCCD) -

Abstract

"We argue that science and technology are so central to the implementation of the Millennium Development Goals that they should be considered as the driving force behind the achievement of the goals. Keeping leaders engaged with this process means that they need to be continuously informed and updated on the latest developments in science and technology. That means that they need mechanisms for receiving scientific advice, which should be considered just as important as economic advice." (Caletous Juma, former Executive Secretary of the CBD, Millennium Development Goals, January 2005).

Desertification related information is becoming more and more available through a profusion of Clearing House Mechanisms, Environmental Information Systems, networks, or WebPages. Those initiatives are strongly encouraged by the Article 16 and 18 of the Convention. However, too often, there is lack of a clear link between those initiatives and the implementation process of the Convention, the governance.

In order to advance the matter further, it is primordial to understand the flows of information in the context of the Convention and more specifically how this information is conveyed to and from the Committee on Science and Technology (CST). Four levels of information are addressed: National, Sub-Regional, Regional and Global and three major flows of information are identified. Scientific information should feed this process at all levels. For that purpose it is necessary to define common and strong scientific messages, not advocating, but informing policy makers about policy options and the possible impact of those options..

However, Desertification is a complex issue that needs a multidisciplinary and bottom-up approach, anchored into traditional knowledge and using modern technologies. Independent scientific networks, at all levels, should be major tools for addressing this issue, and defining and conveying the necessary messages from people to decision makers and other key stakeholders.

In this regard, Article 25 of the Convention calls for the elaboration of an international scientific network that would support the implementation of the Convention.

AN ICS FOR DESERTIFICATION MONITORING IN AFRICA CIRCUM-SAHARIAN ZONE : FOCUS ON ONE OF ITS COMPONENTS : THE SIEL-ROSELT

M. LOIREAU, J.M. D'HERBES, D. LEIBOVICI, J.C. DESCONNETS & B. GRANOULLAC
IRD, Montpellier, US Désertification

Under the context of UNCCD, using its regional network of local observatories the ROSELT/OSS program aims to contribute to the assessment of the environmental changes in order to understand and predict the desertification process, through the installation of an enduring device of environmental monitoring, useful for the decision-making process. For this challenge, the scientific and specific competence of the french research institute for the development (IRD) and the network established, decided to develop and implement a complete Information Circulation System, with a lot of exchanges between its members and about the components from this ICS. The whole process took over a 5 years period building concepts, methods and tools gradually and increasingly adapted according to a scientific consensus.

The ROSELT ICS is organised around technical, scientific and institutional tools in the circum-saharian area: SIEL-ROSELT, MDweb, thematic guides for the evaluation and monitoring, and a proposal of a charter of management and diffusion of information.

The SIEL (Local Environmental Information System) is an original tool coupling GIS and models to be able to establish a complete diagnostic of natural resource use allowing prediction of future evolutions. The aim of the SIEL is to model the functioning of an observatory territory at local scale taking into account both biophysical data and socio-economic data together using an integrated spatial approach. Acknowledging the dynamic interactions of these two set of factors the integrated spatial approach is the core of the tool and the conceptual models derive from it. Using a minimum kit dataset the modeling of the functioning establishes a diagnostic: spatial description of the uses and resources interactions into spatial references units (SRU) and quantitative estimation of vegetation pressure spatialised on these SRU. The modeling structure allows some prevision to be made when setting a scenario of evolution of the parameters involved. The forecasted diagnostics can be compared for different scenarios while succession of diagnostics in a long term monitoring helps to analyse vegetation pressure evolution and to build realistic scenarii. Before being communicated to local or national authorities, as useful information for a better evaluation of desertification risks, balances maps can then be aggregated according to administrative units or to some biophysics units depending on a specific interest. Implemented under the same GIS software platform, the SIEL tool couples a geographic database and spatialisation models. At the moment, 8 countries out of 11 within the network are adapting gradually a device of monitoring compatible with the integrated space approach of the SIEL, three of them carried out their first diagnoses and prospective SIEL.

The MDweb is an open source generic metadata tool. This a server-side application for cataloguing and locating environmental datasets based on ISO geographic metadata standard (ISO 19115). It makes it possible to input and update metadata, import ISO 19115 XML, to manage metadata publication and the confidentiality. The locating user interface is based on data type search or a multi-criteria search (keywords, thematic and spatial index,). Both tools are installed in each national institution, inputs and outputs from SIEL can be catalogued within MDweb using XML file (via another little tool building the XML from GIS database), and all information can be consulted either

through the national ROSELT website or through the regional ROSELT website <http://mdweb.roselt-oss.org/>. At the moment, 7 MDweb have been installed in 7 countries; 6 out of them have a consulting catalog on line. From this integrated approach an organisation of data collected from biophysical and socio-economical origins can be analysed in an integrated schema according to an activity timetable for the observatories, an adaptation of the sampling and data collection for the study of long-term man/environment interactions, an harmonised framework for data surveying and processing from one observatory to another.

Today the experiment of the ISC of ROSELT is a success because African dynamics are strong ; the scientific appropriation is generally acquired at the national level and methodologies are shared in international research projects on desertification process (European IP Desurvey). The principal difficulty to implement a long term monitoring network is to be patient enough. The scientific and technical problems are never true barriers to the process : in all the cases, they are gradually solved. However, in the absence of a finalised process of acceptance of a charter of management and diffusion of information within institutional and political stakeholders fragilises the process. The commitment is unequal from one country to another and this makes today the information provided by ROSELT still too timidly shared and diffused to play the role which it aims in the process of decision-making aid, according the needs of UNCCD or in general AME agreements.

The current process of DOSE/OSS program implementation for the installation of the national devices of environmental monitoring, based amongst other things on ROSELT methodology, will allow to precise the contributing role of the local and regional observations in the national devices and to concentrate more on the institutional aspects about the relations between scientists and decision makers at various decision scales.

Within this complete schema of the ROSELT approach, our presentation will focus primarily on the explanation of the SIEL, its contributions towards desertification monitoring devices and its development perspective.

THE INFORMATION ON DESERTIFICATION IN THE EURO-MEDITERRANEAN CONTEXT: WEAKNESS, DIFFICULTIES AND THE WAY FORWARD

J. L. RUBIO

Presiden ESSC, Centro de Investigacione sobre Desertificacion, CIDE-CSIC, Valencia , Spain

Abstract

The existing information in EU Mediterranean Member States on various aspects of Desertification, being relatively abundant, is fragmented, heterogeneous, dispersed and originated from very different conceptual and disciplines-oriented approaches. The time scale of existing information cover a very wide time spam including old information, abundant ones coming from the seventies and eighties of past century and very recent data and observations. The intrinsic scientific-technological complexity of desertification processes is translated to difficulties on establishing efficient information methodologies. The quality of the information is variable and some times coming from expert judgment. Observed parameters in existing systems are strongly biased by sampling approaches, measurements methods, environmental classification systems, variability in the amount of information from the different media and processes and the lack of long temporal series of data. The accessibility to information is sometimes difficult for the lack of adequate orientation to identify sources and retrieval mechanisms. The administrative constrains owing to property right also complicate the access to information. The scarce societal perception and awareness of desertification impacts and consequences have also contributed to neglect the effort and resources needed to improve the desertification information aspects. Considereng the previous appraisal of existing weakness, some reflex ions and proposals are made to ameliorate the desertification information systems in their different compartments in order to integrate, facilitate and disseminate the knowledge and information needed to contribute to combat desertification menace.

EFFORTS FOR COMBATING LAND DEGRADATION AND INFORMATION SHARING AT NATIONAL AND PROVINCIAL LEVELS IN WESTERN CHINA DRYLAND ECOSYSTEMS

SUN SIHENG

LD Assessment Specialist, Environment and Agriculture, ADB PRC Resident Mission, Beijing China

Academy of Forest Inventory & Planning/China National Desertification Monitoring Centre,

State Forestry Administration, Beijing China

Abstract

This paper will introduce a 10-years long program that is the China-GEF Partnership on Land Degradation (LD) in Dryland Ecosystems. It has approved as the Operational Program 12 (OP12) of GEF and managed by a Country Program Framework (CPF). The CPF will support a series of phased priority activities such as (i) strengthen the enabling environment and build institutional capacity for integrated approaches to combat LD; (ii) demonstrate viable Integrated Ecosystem Management (IEM) models for widespread replication. The partnership include 11 key agencies to adopt IEM at the central level and in six Provinces (Autonomous regions) that are the most degraded dryland areas of the western region. The partnership also include GEF, World Bank (WB), Asian Development Bank (ADB) and LADA (FAO), WOCAT etc. both in financial and technical support and/or cooperation.

In China as well as in its Provinces (Autonomous regions) many relevant government sectors as well other scientific and social organizations deal with LD problem. In most situation each one handle its own responsible problem of LD types. For example agricultural sector is for the improvement of vegetation degradation in grassland and soil degradation in farmland; water resource sector is for the improvement of water and soil erosion; forestry sector is for the improvement of forestry LD types and desertification combating etc.. They are normally not exchange and share information of each other. So the China central government and local government can't have the whole picture of the LD problem in the country as well as in particular Province (Autonomous region). The country's efforts to combating LD in the past couldn't be joined together. So even though a huge amount of investments have been put for Solving the problem of LD but still not be very effective. The Program now promotes adoption of integrated ecosystem management (IEM) approach to address land degradation problems, and provides technical and financial support to solving problems of inter-agency and cross-regional natural resource management. This is of significant importance to ensure sustainable development of the Western China.

A ongoing project in the first phase of the CPF is The Capacity Building to Combat Land Degradation Project. It will improve the capacity in national, provincial and local level on the Policy, Laws, and Regulations for LD Control, Strengthening National and Provincial Coordination, Improving Operational Arrangements at Provincial and County Levels, Capacity Development for LD Investment Project, Monitoring and Evaluation System for LD.

In particular the component of the Monitoring and Evaluation System for LD will have major output on (i) a national coordination mechanism for collecting, sharing, and analyzing LD related data as well as the compatible software and standards to facilitate sharing of data sets. (ii) Activities will be guided by an advisory group on monitoring and evaluation of LD including establishment of a unified geographic LD IEM information centre at each Province (Autonomous regions), training in LD assessment, development of indicators for monitoring LD, workshops, study tours and exchange visits.

In addition at the community level the direct stakeholders would be involved in pilot monitoring and assessment studies, and would actively participate in assessing the nature, severity and impact of LD in their local area. For this purpose a community based LD control demonstrations will be undertaken in at least 3-4 selected pilot areas per Province (Autonomous regions). A public awareness campaign on the IEM approach will be undertaken, and workshops on community based LD control, study tours/exchanges and publications will also be supported. Efforts will also be made to enhance the capacity of provincial and county agencies to work with rural communities in bottom-up participatory planning and implementation of field level LD control through an IEM approach.

Capacity will also be developed to support the implementation of the 10-year CPF, including future IEM projects and donor coordination. Logistical and technical support will be provided for the already established project coordination office (PCO) in Ministry of Finance (MOF), and the project management office (PMO) that has been set up in State Forestry Administration (SFA) for day-to-day management. Information exchange between projects, agencies, and other stakeholders will be a major activity to promote understanding of lessons learned, the role of IEM, and to improve cooperation and transparency. The experiences and lessons will be also shared with international community.

INFORMATION CIRCULATION SYSTEM TO COMBAT DESERTIFICATION IN PORTUGAL

V. LOURO

*Portuguese Commission to Coordinate the NAP
General Direction of Forest Resources*

Abstract

Portuguese ICS is described as a continuum process of scientific and technical experts involvement. Participation at concrete projects, calling personal responsibility of each one is determinant. Results are satisfactory. No need to create, like recommendation of COP 7, a scientific focal point: its role is played by the UNCCD Focal Point.

Key words

Participation, attitude, synergies

1. The Portuguese ICS was created through the work developed since the beginning of CCD application (1998), and it's being reinforced at each new project. In fact, the way adopted is founded on a constant participation of both stakeholders and scientific people, with the preoccupation of always enlarge the number of participants and to open the set of expertise.
2. Another European Concerted Action – CLEMDES – Clearing House Mechanism on Desertification to the Northern Mediterranean Region (2002 -2004) – has permitted to elaborate National Action Program website that is an important vehicle of public communication. However, it doesn't substitute direct communication to those who we want to collaborate on concrete actions.
3. MEDRAP – Concerted Action on support of Focal Points to the Regional Action Plan on Mediterranean Region (Annex IV) had a significant role, by the participation of about 30 Portuguese stakeholders and experts on the 5 workshops (2001 - 2003). The but was “to provide concrete technical and scientific contribution to the Focal Points and to the National Committees (...) in the five pioneer Country Parts of Annex IV; knowledge about the main constraints linked to desertification in the different Countries, and about the respective experiences on monitoring and mitigation can in fact contribute to attain a common and strategic view for the elaboration of an effective RAP” (Enne *et al.*, 2004).
4. In special, Mediterranean project DISMED – Desertification Information System to support National Action Programmes in the Mediterranean region had a relevant role. Among their objectives was the reinforcement of cooperation between all partners and facilitate exchange of information and the establishment of a common information system to monitor physical and social-economical conditions at affected areas. Adopted means were elaboration of thematic maps, establishment of metadata bases and access to I&D MED projects.
5. The capacity to involve the 10 National institutions that produce relevant information by the participation of some respective experts and showing to their maximum leaders the interest of the common work that was being done, has permitted an effective involvement of the team. Starting from a set of 19 indicators identified in Enne and Zucca (eds) (2000), the team leaded by an experimented and proactive and well oriented expert, identified and characterized the Information that was available.
6. On the basis of that relevant information, the team produced a proposal that have been discussed by about 50 scientific and technical people in 4 thematic expert workshops (soil, vegetation, clime and socio-economic aspects). Today more than 130 experts have participated or are participating on NAP process.

7. But those invited experts have been also confronted with the result of 4 workshops at local level that have been realized to create the pilot-areas on NAP: participating people (between 26 and 65, respectively) identified the respective desertification signs, and how they thought desertification should be combated. Experts have been asked to answer with appropriate indicators.
8. The result of those thematic workshops have been deepened by the initial team, with specific participation of some of those experts, and the final sensitivity map to Desertification and Drought has been produced and adopted by the National Coordination Body at June 2003.
9. So, the development of the DISMED process have involved in Portugal:
 - the institutions and their regional services represented on the NCB/NAP
 - the producers of basically geographical information concerned
 - local people at pilot-areas level
 - a large number of research and development institutions
 - environmental NGO representatives.
10. The adoption of realistic objectives has been determinant to the success of the project:
 - priority in short term results while considering medium/long term objectives;
 - adoption of pragmatic ways of approach on what concerns the definitions of activities and products;
 - building up activities based on products, methodologies, infrastructures, documents and standards already existing;
 - providing the participation of experts and a real cooperation between them, while sharing responsibilities;
 - developing processes of approach step by step, in order to improve the effectiveness of results;
 - promote synergies with other relevant programs at international, national and regional level;
 - strengthening the cooperation with specialized institutions working with desertification and in the Mediterranean region.
11. As a natural development of this scientific development, it has been decided (June 2003) to create the OCPCD – Portuguese Scientific Organization to Combat Desertification: a no formal association on the basis of scientific and technical people collaborating or participating on UNCCD/NAP events and works leaded by a elected direction for two years. The aim of OCPCD is to maintain scientific and technical people informed about desertification and drought news and projects; and to promote events to have the active participation of that people at some works.
12. Meanwhile (Dec 2003) European Spatial Agency (ESA) has decided, with the cooperation of National CCD focal points, to throw a new project to assess desertification at Mediterranean region Earth Observation-based – DesertWatch. In a certain view it continues the DISMED process, taking in account the recommendations presented at DISMED side-event at UNCCD COP 6 (Havana, Aug 2003): new developments with local approaches for regional planning and for municipality plans; development of dynamic indicators of desertification and drought at regional, national and local levels; Iberian approach to establish coherence and consistency in the large scales of work in border areas; establishment of basis of a perennial Information System of Indicators on Desertification at Mediterranean region.
13. The work done at DISMED process was able to prepare the Portuguese participation on DesertWatch project team (unfortunately it has not been possible to present a proposal as Contractor consortium, as a consequence of strange institutional reasons). A number of experts have answered to the invitation of OCPCD direction in cooperation with CCD Focal Point to discuss the new ESA project and to constitute the Consortium. Through this preparatory process

it has been easy to choose the Portuguese representative to the Expert Group and the host institution, despite various candidate institutions.

14. During DesertWatch life information from the Portuguese designated Expert has several been given to the National Coordinating Body of NAP. At actual phase is the time to validate at sub-national level the indicators proposed by the project. We'll do that with the cooperation of a lot of technicians among some participants at a DesertWatch seminar prepared to present the results at this stage (Lisbon, Jan 2006).

15. In spite of the success of all this work, a lack could be identified: Portugal had not a scientific organ to act formally on desertification and drought issues. So, part of university people working on DISMED and DesertWatch, belonging at OCPCD, has created a new organization: ROADS – Observation and Analysis Network on Desertification and Drought (June, 2005), on the basis of formal decision of 5 Universities and university Institutes. At this time ROADS is going with 4 short courses on GIS and Remote Sensing and is preparing two main actions in the framework of the International Year of Deserts and Desertification: a scientific project and an international conference on Forest Fires.

16. Natural and attentive evolution of Portuguese ICS is not exempt of feeblednesses, difficulties and fragilities. For example, it has been difficult to accede now at existing soil maps to validate the indicators produced by DesertWatch System: but discussing with the responsible of the Agricultural institution producer and owner of these information, that is a member of the National Coordinating Body, it has been possible to solve the problem in a satisfactory way.

17. Anyway the system is able to fulfil the main objectives of desertification and drought combat:

- to deepen knowledge;
- to propose solutions and instruments;
- to participate at appropriate *fora*;
- to develop initiatives.

In this sense we are convinced that it answers to the preoccupation of COP about CST: we don't need a *focal point* to the scientific level to facilitate the participation of scientists and experts – that is the part that UNCCD Focal Point has to play. Because in Portugal, differently from other affected countries, there is not a National Scientific Body, directed by a person nominated by the Government, and integrated by nominated persons: we work on a voluntary basis, where each one is asked for a single thing: to give his know-how and working time to a common aim, where each one foresee interest for the common aim and for himself.

18. Application of ICS for decision-making - the most relevant example is the elaboration of Desertification Sensitivity map at national scale:

- it has been used by the Government to define areas where a positive discrimination has been adopted to support forestation of agriculture abandoned lands, and to discuss at European level *criteria* to classify lands under social and environmental constraints;
- it is a main instrument to sensitise public opinion, and these is essential to encourage decision-makers to adopt active measures to combat desertification.

19. Lessons learnt:

At Annex IV level we there are divers national organization models related with the participation of scientific and technical expertise and the relation between this sector and national coordinating bodies. Quality of this relationship is also divers.

Also at UNCCD level the problem is not solved. CST has a lot of difficulties. COP 7 has decided to "encourage country Parties to select a science and technology correspondent to the CST under the coordination of the national focal point", to face part of those problems.

The main point on ICS is a question of **attitude**:

- involve experts (scientists and technicians) seriously and actively, proposing them to reflect on concrete problems and to discuss with other experts to build real and useful products;
- openly recognize his role;
- involve their institutions, specially those that produce information, demonstrating what they can obtain by participating on common issues, underlining everywhere the role played by those institutions and experts;
- act always as a team, where each one has his responsibility to the common objective, and where all people can get the utility of the results;
- solving difficulties by the inclusion of each one, refusing exclusion actions;
- getting opportunities to promote participation of experts, at national and international level.

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