

**Integrated approach to planning and management of land:  
operationalization of Chapter 10 of UNCED's Agenda 21**

**Report of the international workshop  
International Agricultural Centre  
Wageningen, The Netherlands, 20-22 February 1995**

**C. Kwakernaak (ed.)**

**Report 107**



**17 OKT. 1995**

**DLO Winand Staring Centre, Wageningen (The Netherlands), 1995**

10 012 419 4

## ABSTRACT

Kwakernaak, C. (ed.). International workshop on Agenda 21 - *Integrated approach to planning and management of land: operationalization of Chapter 10 of UNCED's Agenda 21*. Report of the international workshop in Wageningen, The Netherlands, 20-22 February 1995. Wageningen (The Netherlands), DLO Winand Staring Centre. Report 107; 102 pp; 1 Table; 5 Annexes.

The workshop was focused on three main themes. The first theme was the integration of objectives, goal-setting and policy formulation for planning and management of land resources in rural areas. The second main item was how to manage a planning process for the use of land resources in rural areas with all stakeholders. Finally, the potentials for sustainable economic development in the rural areas were discussed, with emphasis on non-traditional land qualities. The report contains all the conclusions and recommendations of the workshop.

Keywords: land use planning, rural area, sustainable development

ISSN 0927-4537

©1995

DLO Winand Staring Centre for Integrated Land, Soil and Water Research (SC-DLO)  
P.O. Box 125, NL-6700 AC Wageningen (The Netherlands)  
Phone: 31 837074200; fax: 31 837024812.

The DLO Winand Staring Centre is continuing the research of: Institute for Land and Water Management Research (ICW), Institute for Pesticide Research, Environment Division (IOB), Dorschkamp Research Institute for Forestry and Landscape Planning, Division of Landscape Planning (LB), and Soil Survey Institute (STIBOKA).

No part of this publication may be reproduced or published in any form or by any means, or stored in a data base or retrieval system, without the written permission of the DLO Winand Staring Centre. The DLO Winand Staring Centre assumes no liability for any losses resulting from the use of this report.

Project 7440

[Rep107LE.HM/07-95]

# Contents

	page
Foreword	7
1 Introduction	9
2 Opening session	13
3 Keynote addresses	17
3.1 The integration of objectives, goal-setting and policy formulation for planning and management of land resources in the rural areas	17
3.2 Managing a planning process for the use of land resources in rural areas with all stakeholders	19
3.3 The possibilities for sustainable economic development in the rural areas, with emphasis on non-traditional qualities of land	21
3.4 General discussion	21
4 Reports on the thematic working groups sessions	25
4.1 <u>Theme 1</u> : The integration of objectives, goal-setting and policy formulation for planning and management of land resources in the rural areas	25
4.2 <u>Theme 2</u> : Managing a planning process for the use of land resources in rural areas with all stakeholders	34
4.3 <u>Theme 3</u> : The possibilities for sustainable economic development in the rural areas, with emphasis on non-traditional qualities of land	39
5 Final discussion	45
5.1 Selection of recommendations reported by the working groups	45
5.2 Final discussion on all proposed conclusions and recommendations	45
6 Final conclusions and recommendations of the workshop	47
7 Closing statement	51
Tables	
1 Succes-factors for integrated planning and management, derived from the cases submitted to the workshop	26
Annexes	53
1 Programme of the workshop	55
2 Organizing committee and secretary of the workshop	59
3 List of participants	61
4 Abstracts of the cases submitted to the workshop	69
5 Summaries of the Issues- and Background-papers	101
5.1 Integrated approach to planning and management of land: operationalization of Chapter 10 of UNCED's Agenda 21	101
5.2 Planning for sustainable use of land resources: towards a new approach	102

## FOREWORD

Since the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, the integration of policies on various fields with a view to sustainable development has become widespread. A distinct example is environment and land: planning, management and different uses, notably agriculture, are regarded as an integrated policy area. The basis for this concept is provided by the chapters of the land-cluster of AGENDA 21. Chapter 10: Integrated Approach to the Planning and Management of Land Resources constitutes an umbrella for the chapters dealing with different land uses, such as forestry, agriculture, biodiversity and the conservation of specific fragile ecosystems. It is the task of policy-makers to translate this concept into concrete action.

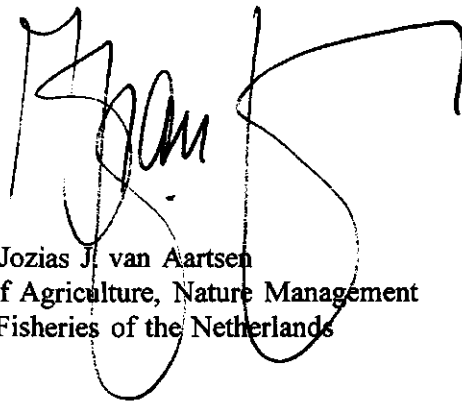
The problem that is at the centre of the discussion on the chapters of the land-cluster is land degradation. Although this problem is not new, it has only recently achieved the broad attention it deserves. In developing countries land degradation is closely linked to poverty. It is therefore hard to understand that after UNCED so little attention has been paid to chapter 10. This is remarkable because good planning and management of land resources can be considered the stepping stones on the path towards sustainable land use. In both developed and developing countries the various forms of land use, such as agriculture, forestry and nature management, should be planned and managed in an integrated approach. In the Netherlands we are carefully introducing this approach in some areas. It can have a strong impact on sustainable development as it may create win-win situations for agriculture and the environment alike. After all, particularly in developing countries, agriculture is still one of the cornerstones of economic and social development.

The initiative to organize the international workshop on chapter 10, which was taken by the Netherlands and FAO, was therefore a timely one.

The Netherlands delegation presented the conclusions and recommendations of the workshop to the Intersessional Ad Hoc Working Group on Sectoral Issues in March 1995 and to the third session of the UN Commission on Sustainable Development in April 1995. I am satisfied that the results contributed to the successful outcome of these meetings. Furthermore, I am glad that the workshop contributed to a useful exchange of information and to the development of a network of senior officials dealing with this subject. Bringing planners and developers of rural areas together proved to be a fertile and instructive exercise, which should be reinforced by a follow-up process. The Netherlands will continue to cooperate with FAO in taking initiatives for this follow-up. By giving this report the widest possible dissemination, the Government of the Netherlands accepts the invitation in the report of the CSD.

The cooperation with the FAO in organizing the workshop was much appreciated. I also express my gratitude to Mr. Hans Alders, former minister of Housing, Spatial Planning and the Environment of the Netherlands, for chairing the workshop.

I hope that this report gives rise to a further exchange of knowledge and experience on the planning and management of land resources at various levels and, eventually, to concrete actions.



Jozias J. van Aartsen  
Minister of Agriculture, Nature Management  
and Fisheries of the Netherlands

# 1 Introduction

The International workshop on Agenda 21 - Chapter 10: Integrated Planning and Management of Land Resources was held in Wageningen, the Netherlands, from 20 - 22 february 1995. The objective of the workshop, for which the initiative was jointly taken by FAO and the Government of the Netherlands, was

- (i) to formulate recommendations and policy options on the implementation of Chapter 10 to be submitted to the Commission on Sustainable Development (CSD) for consideration at its third session in April 1995, and
- (ii) to exchange knowledge and experience on the planning and management of land resources.

The workshop was attended by more than 80 senior officials from 32 countries from all regions, 6 intergovernmental organizations and 6 non-governmental organizations.

Chapter 10 calls for an integrated approach to the planning and management of land resources through re-organizing and, where necessary, strengthening of decision-making structures, including policies and planning and management structures. Such an approach recognizes the need for participation of all stakeholders in land use decision making, and bridges the gap between the production and income objectives of land users and the long term objective of preserving natural resources. Chapter 10 has an umbrella function for the other land-related Chapters which deal with forests, mountains, desertification and sustainable agriculture and rural development as more specific forms of land use.

It has, therefore, many linkages with the other Chapters, but clearly has its own objectives for the integrated process of planning and management of land resources, as set out in para. 10.5:

- (i) to review and develop policies to support the best possible use of land and the sustainable management of land resources, by not later than 1996;
- (ii) to improve and strengthen planning, management and evaluation systems for land and land resources, by not later than 2000;
- (iii) to strengthen institutions and coordinating mechanisms for land and land resources, by not later than 1998;
- (iv) to create mechanisms to facilitate the active involvement and participation of all concerned, particularly communities and people at the local level, in decision-making on land use and management, by not later than 1996.

The workshop had selected the following three themes for discussion:

- (i) the integration of objectives and policy formulation for planning and management of land resources in rural areas,
- (ii) managing a planning process for the use of land resources in rural areas with all stakeholders, and
- (iii) possibilities for sustainable economic development in rural areas, with emphasis on non-traditional uses of land.

These were also the subjects of the keynote addresses and of the working groups and were elaborated on in the Issues-Paper prepared by the DLO Winand Staring Centre for Integrated Land, Soil and Water Research in Wageningen (see Annex 5.1). The workshop took the "meso-level" (intermediate between central government and local community) as a starting point for analysis of the possibilities of integration of goals. During the discussions it was recognized that, given the specific characteristics of regions, a ranking of goals (ecological, economic, social) has to be made.

The workshop had before it the Issues-Paper mentioned earlier and the background paper Planning for Sustainable Use of Land Resources: Towards a New Approach, prepared by FAO (see Annex 5.2). Furthermore, 31 completed questionnaires on a specific national case of intermediate-level planning and management of land resources were returned by participants, of which a summary was presented and made available to the workshop. These cases showed the progress achieved by individual countries in the implementation of Chapter 10. This report of the workshop contains an extensive summary of the cases (Annex 4). It is planned to also prepare a more extensive study on the cases. Both activities can be regarded as a contribution to the fulfilment of the requirements set forth in para. 10.12.d.

The workshop actively discussed, especially in the working groups, many items relating to the integrated approach to planning and management of land resources and agreed upon a set of conclusions and recommendations. The country cases submitted by the participants turned out to be a valuable source of information for additional recommendations on the implementation of Chapter 10. A number of recommendations are already included in the text of Chapter 10 or other chapters of the land cluster. The outcome of the discussions emphasized the importance of many of these recommendations, but these are not repeated in final conclusions and recommendations of the workshop, reported in Chapter 6. The other recommendations that were formulated by the meeting are either a further specification of existing points in Chapter 10, or are new and additional points; these are included in Chapter 6.

Discussions were held in the spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's terrestrial ecosystems. Referring to principle 7 of the Rio declaration it was recognized that States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear for the international pursuit of sustainable development in view of the technologies and financial resources they command. Concerning the latter aspect reference was also made to Chapter 33, para's 33.13 and 33.14.

The Government of the Netherlands has presented the conclusions and recommendations of the workshop to the Intersessional Meeting on Sectorial Issues in March 1995 and to the third session of the CSD in April 1995.

#### Acknowledgements

The participants expressed their appreciation to the Government of the Netherlands and to FAO for the organization of the workshop on the important subject of Chapter 10 of Agenda 21. They also thanked the authorities and the director of the International

Agricultural Centre for their generous and warm hospitality in Wageningen.  
Thanks are also due to the DLO Winand Staring Centre for Integrated Land, Soil and Water Research in Wageningen for preparing the Issues-paper for the workshop and for providing technical services to the secretariat, as well as to the INRO Centre for Infrastructure, Transport and Regional Development (INRO-TNO) for preparing the final report.

## 2 Opening session

In his welcoming statement the chairman of the workshop **Mr J.G.M. Alders**, former Minister of Housing, Spatial Planning and the Environment of the Netherlands, stated that a general guideline for sustainable landuse does not exist. An integrated approach of landuse planning and management is however essential in order to come to sustainable use of land resources and to tackle land degradation. This is also the conclusion of Chapter 10 of UNCED's Agenda 21. An integrated approach needs an institutional integration in landuse planning and management. Governments should act together with local authorities. A bottom-up approach with all major groups involved is a key to structural problems in land management. Chapter 10 of Agenda 21 calls for mechanisms aiming to promote a dialogue between the full range of stakeholders. The chairman stressed that Chapter 10 can only be implemented by concrete conclusions and recommendations, based on experiences with integrated landuse planning and management.

The opening speech was delivered by **Mr C.M. Coops** (Ministry of Foreign Affairs of the Netherlands). Three themes of Chapter 10 have been selected to be focused on during this workshop.

Integrating social, ecological and economic goals is the first theme. This theme is very urgent in degraded semi-arid areas. In many of such areas there is a conflict between short-term survival as a social goal, and long-term sustainable management as an ecological and economic goal. In such cases integrated planning and management has to deal with a hierarchy of goals. The measures which have to be taken depend on the specific situation in the area, its possibilities and limitations.

The second theme is the participatory planning process, involving stakeholders in planning and management. Mr Coops mentioned that it proved to be practically impossible to formulate standard procedures and approaches in rural development projects. Governments should facilitate rather than direct, and the local population should play a significant part in rural planning and management. A major success factor in the participatory planning process is the presence of local NGO's, farmer groups or women-organizations. Participatory planning however often needs a lot of time.

The third main theme of Chapter 10 concerns the economic aspects of landuse. Agriculture is the dominant kind of landuse in rural areas, but also other sources of income, such as wildlife management, forest exploitation and ecotourism are being regarded more and more as real options for local population groups to earn a living in a sustainable way.

**Mr W.G. Sombroek**, representative of the Director-General of FAO, expressed the thankfulness of FAO to the government of the Netherlands for her initiative to organize this workshop. He underlined that sustainable use of land resources should be regarded as a wise way of using land in all circumstances. This should be the leading thread running through this workshop.

The representative of the CSD-secretariat, **Mr P. Najlis**, emphasized that many problems in rural areas, such as deforestation and desertification can only be solved by suitable



land management policies. In developing countries, world population will increase enormously during the next decades. This growth will create a need to double the food production. This is an important problem because enhancement of food production has to be achieved together with an competition for land and water caused by urban and industrial expansion. An integrated approach to land management, based on involvement of parties at the regional and local levels, is essential. It requires a mix of institutions and mechanisms that locate responsibility for specific functions at the most appropriate management level. For many countries, inadequacies concerning the collection, processing and analysis of information is a serious constraint. Mr Najlis summarized that a set of recommendations is needed to ensure that the development and use of land resources will provide enough food for a world population of 8.5 billion people in 2025, and to ensure that land is utilized as a resource for development and the eradication of poverty. He warned that the mindless degradation of land, which is becoming a more and more limited and precious resource, should be arrested.

*Sustainability indicators defined in the FAO-background paper.*

## **Sustainability indicators**

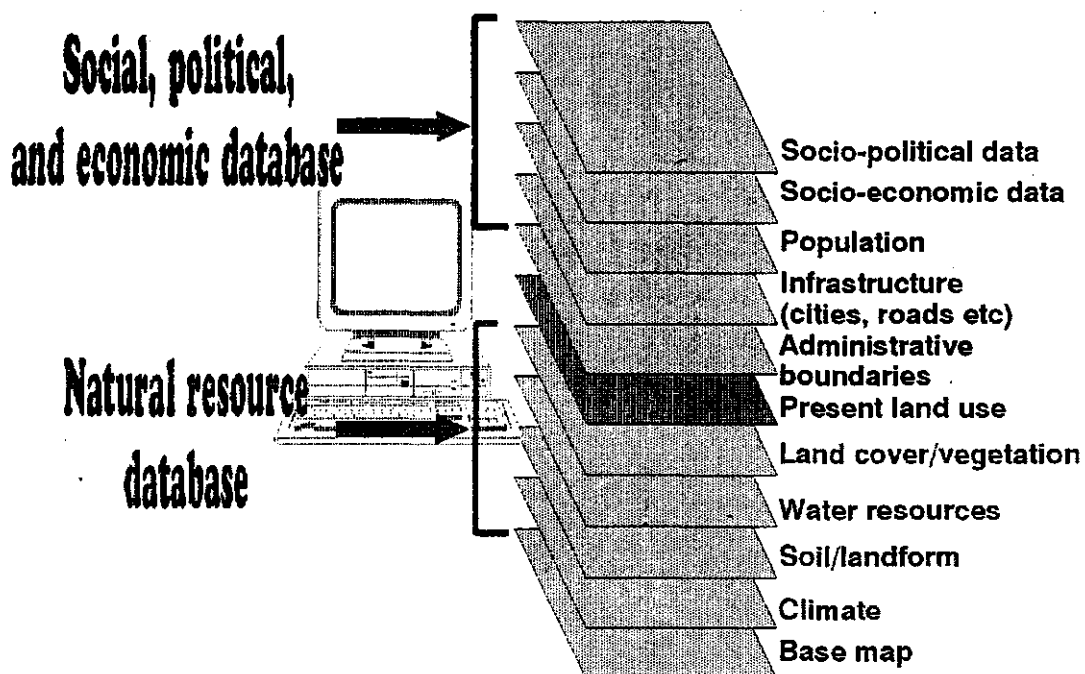
### **Bio-physical indicators:**

- *land cover related*
- *land surface related*
- *soil quality related*
- *substratum related*

### **Socio-economic indicators:**

- *absence of rural migrations to urban centres*
- *stability or increase in rural labour opportunities*
- *constancy or increase in primary school attendance*
- *maintenance of food self-sufficiency*
- *stable herd structures in grazing areas*
- *maintenance or increase of human health conditions*
- *harmonious relations between different land users*
- *constancy or increase of per capita produce from the land*

*Required data basis for integrated planning*



### **3 Keynote addresses**

In the field of Integrated planning and management of land resources three main themes have been selected to be worked out in this workshop. In order to start the discussions on these themes three keynote addresses have been presented by experts.

#### **3.1 The integration of objectives, goal-setting and policy formulation for planning and management of land resources in the rural areas**

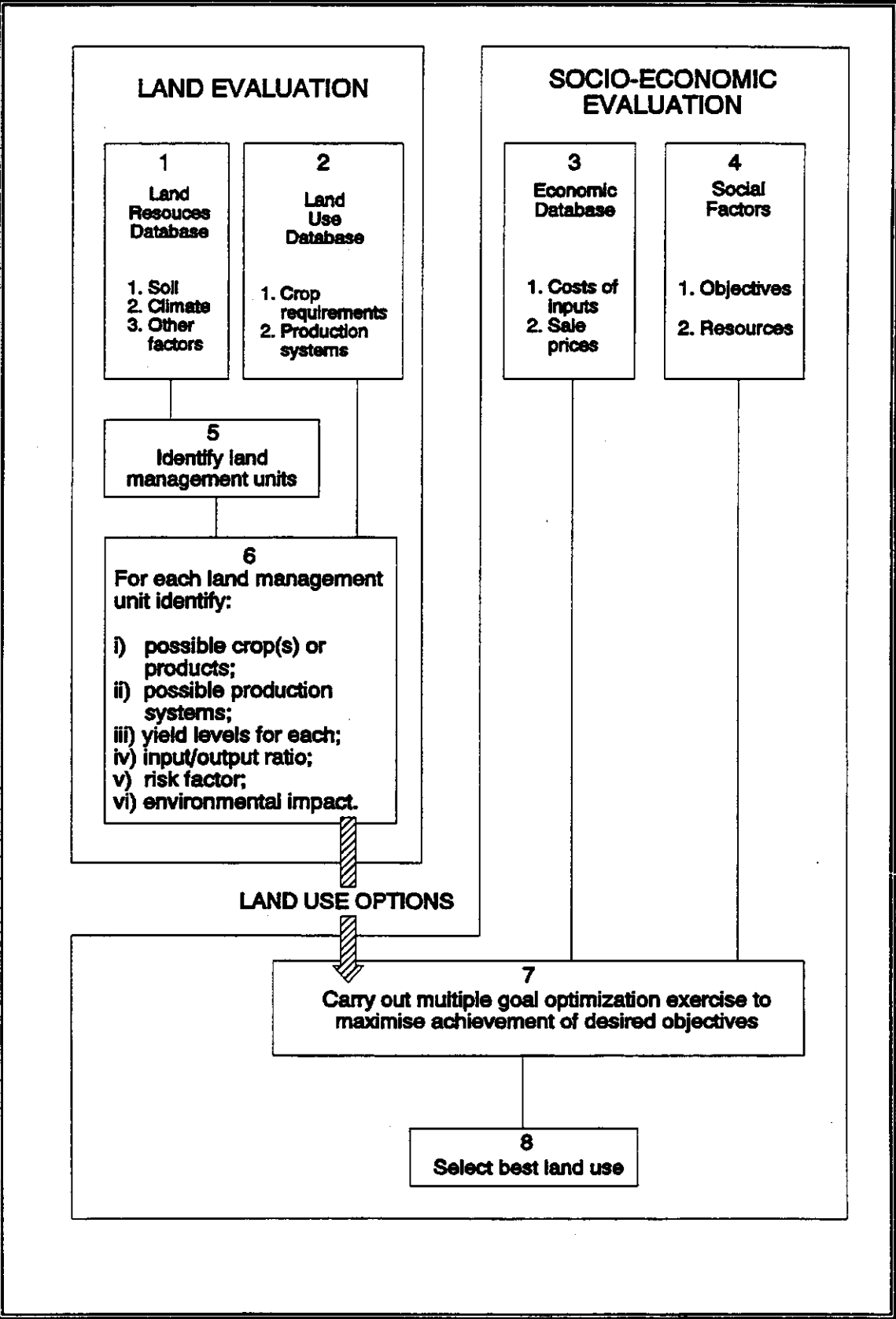
In his introduction **Mr W.G. Sombroek** summarized the highlights of the FAO background paper "Planning for sustainable use of land resources". The goal of an integrated approach to planning and management of land resources is to make optimal choices on the future uses of land and water. This will be achieved by interactions and negotiations between planners, stakeholders and decision-makers at national, provincial and local levels. An integrated approach to land planning and management requires the identification and establishment of a use, of non-use, per land unit that is technically appropriate, economically viable, socially acceptable and environmentally non-degrading. Sustainability indicators have to be defined in order to make optimal decisions in land use and rural development. Such indicators are also necessary in monitoring the rural developments related to the goal-setting. FAO distinguished some useful bio-physical and socio-economic indicators for sustainability.

Also statistical and georeferenced data bases on all land resources, actual land uses and functions as well as on socio-economic conditions are needed in order to arrive at sound decisions on sustainable land use. Decision support systems and geographical information systems can be used as very useful tools in the decision-making process, because sustainable use of land resources has to do with a wide range of aspects. A possible form of such a decision support system is presented at the opposite page.

Most important is people's participation in the landuse planning process. All relevant stakeholders in a certain area, organized in an integrative platform, have to be involved in the development of local or regional land resources development plan, in order to get a bearing surface for implementation.

Mr Sombroek concluded that integrated planning should only be applied in certain circumstances, because integrative platforms require relatively much time, patience and goodwill. A fully integrated approach may be worth the effort if the conflicting demands on the land concerned are seemingly intractable. If the optimal and sustainable land use is readily apparent, then time need not be spent on ensuring full integration and participation of all interested parties. In the wake of major natural or man-made disasters, affecting large sections of rural land use and human settlements, emergency planning without full stakeholder participation may be called for.

*A possible structure of a decision support system for land use planning (FAO Background paper Planning for sustainable use of land resources).*



### **3.2 Managing a planning process for the use of land resources in rural areas with all stakeholders**

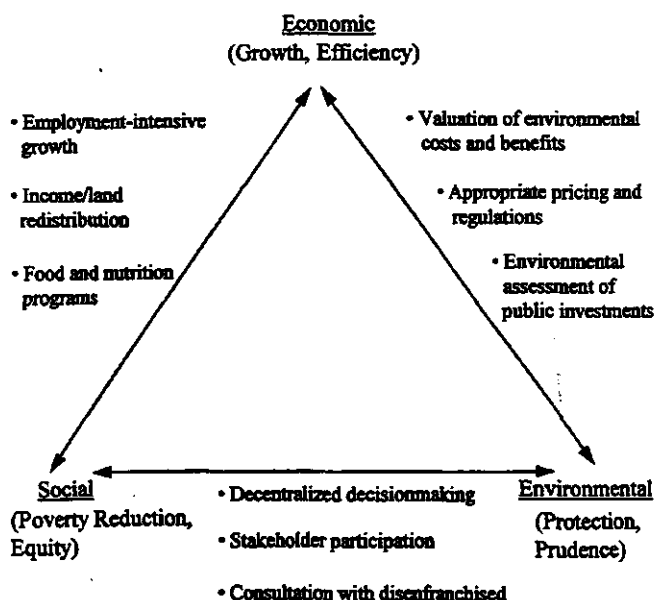
**Mr T. Byrne**, coordinator of the Australian Landcare Program, gave an introduction on a very successful process of integrated planning and management of land resources in Australia. The National Landcare Program (NLP) of Australia has attracted international interest as a practical example of how to implement sustainable resource use practices on a community wide basis. Key elements of the NLP are the identification of problems via a group approach, allocation of responsibilities and coordination of activities. The Landcare approach has been developed because it became clear that a top-down approach did not work in solving environmental problems, such as land degradation, erosion and salinization.

The National Landcare Program was established in 1992. It linked elements of a number of already existing programs. At the moment there are about 2200 community based self-help groups throughout Australia. The Landcare movement started in 1985 with some 70 groups. An essential feature of the group approach is that it is voluntary. This means that all members of the group are responsible for implementation of their own local landcare plan.

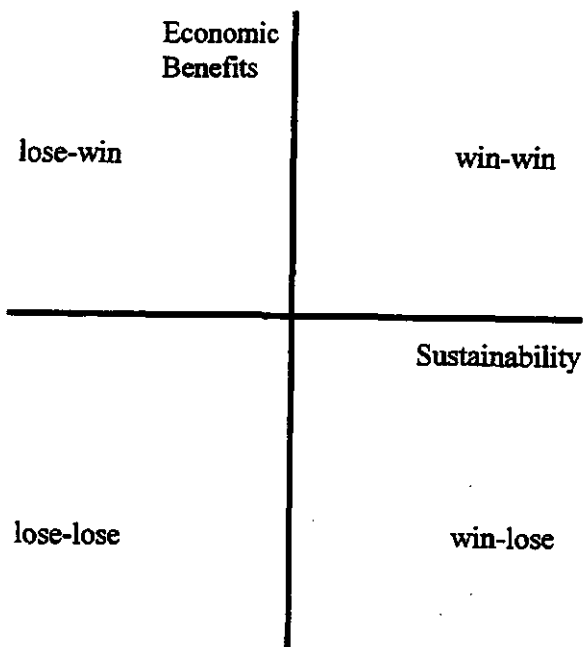
The national government plays a coordinating and facilitating role in the NLP; direct responsibility for natural resource management lies with state and local governments and individual landholders. Mr Byrne summarized five success factors for integrated land management: good partnership, local responsibility for problems and solutions, integrated approach to management of land, water and vegetation, responsibility of land managers for their own land, and government funding to be used as a catalyst for plan implementation.



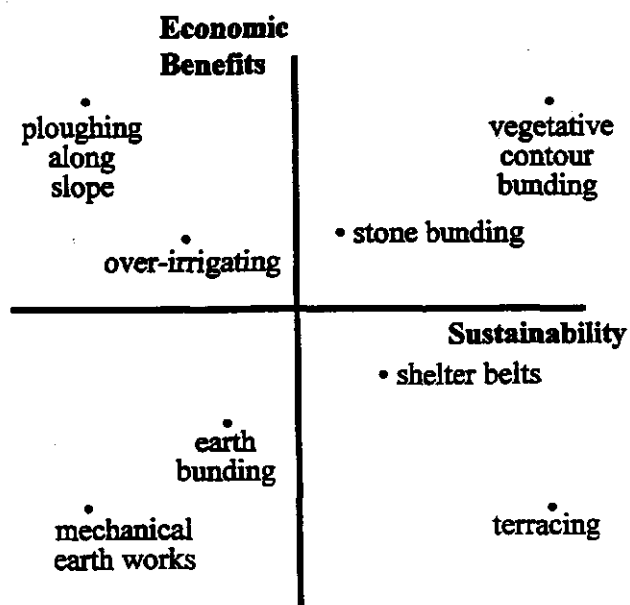
## (Conflicting) Dimensions of Sustainable Development of Rural Areas



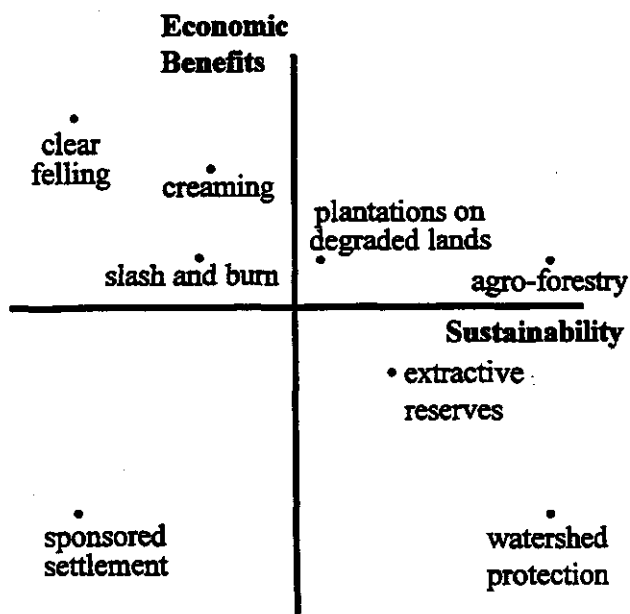
## A Framework for Comparing Impacts



## Soil and Water Management Techniques



## Forest Management Techniques



### **3.3 The possibilities for sustainable economic development in the rural areas, with emphasis on non-traditional qualities of land**

**Mr. D.R. Steeds**, chief of the World Bank's National Resources Division, stated that good economic management and effective poverty reduction are good for sustainable agriculture and land use. He distinguished a number of strategies for sustainable economic development. The most important strategy is to move away from 'command and control' towards 'market-based mechanisms'. This strategy can be worked out by developing a typology of impacts of different land uses, assessing economic costs and benefits, making a qualitative assessment of sustainability, developing a framework for comparing impacts and finally by devising taxes and subsidies and public investments to penalize bad land uses and to reward good kinds of land use. He showed a possible framework for comparing impacts using measures for economic benefits and for sustainability (see the illustrations at the opposite page).

Based on experiences in several developing countries, he concluded that in poorer countries a more sustainable land use proved to be possible by improving the traditional land use practices. Also abandonment of less sustainable land use and management proved to be effective in order to come to more sustainable land use practices. Imposed large scale land reform projects proved to be less successful. Creating opportunities for small scale changes in land use and management at local scale proved to be much more effective.

Experience in richer countries learned that a more sustainable way of land use can be reached by more radical changes to less traditional kinds of land use.

### **3.4 General discussion**

In addition to the keynote address by Mr Sombroek, the representative of **UNEP** referred to the UNEP land information data base, containing information on soils, climate and other land characteristics. This data base proved to be successfully applied in for instance Latin American countries.

The representative of **Canada** pointed out that present laws and regulations are mainly determined by the history of centralized planning. Now planning decisions are more and more taken at local and meso-level, so the levels of planning decisions and regulations are not matching any more.

A plea for broadening the scope of this workshop was made by the representative of **Algeria**. CSD should have to find solutions for land degradation by taking all factors into account that have impact on the problem of land degradation. Land degradation is a major problem that is asking for an integrated and global approach. He made a proposal for the development of an international network for scientific information and experiences with respect to landcare projects. It was also proposed to find possibilities to raising financial funds by international bodies and by developed countries. Also he made a plea to change the present production and consumption cycles in a more rational and sustainable way. **The chairman Mr. Alders** confirmed that integrated planning and management (Chapter 10) are related to problems as land degradation and sustainable production and consumption cycles, but that these items are subject in other Agenda 21 workshops. At the next CSD-meeting the interlinkages between the items of the several Agenda 21 Chapters will be worked out.

The representative of **India** pointed out that the mapping scale of land resources data generally does not fit as suitable base for local planning purposes. Land cadastral data and land resources data have to be matched for integrated planning. Many different governmental institutes on separate land attributes (soil, water, agriculture, mining etc.) exist in India. This is felt as an obstacle for an integrated approach. One department on land-based issues should be an important step forwards to come to sustainable land use. Development of an information system on regional sustainability measures and development of training programmes for regional planning have been mentioned as important conditions for an integrated approach in land use planning and management. Special attention has been called to the problem of urban versus rural planning by the representative of **Germany**.

In the **Philippines** a main problem was to find the way to motivate people at the grass-roots. The government should act as a facilitator by training local groups to manage their own resources in a sustainable way. Consultative mechanisms are necessary in order to involve all stakeholders in the planning and management processes.

The representative of **Peru** noticed that a government should only act as a facilitator and not as a stakeholder. **Mr Sombroek** answered that a ministry has to play a facilitating role and should not be regarded as a stakeholder, but that a government can really act as a stakeholder in an integrated planning proces.

It was referred by a representative of the **United Nations Environmental Program (UNEP)** that a proper use of rural and urban land resources needs quite different approaches.

The representative of **Botswana** warned that the CSD-timetable for goal-setting of the contents of Chapter 10 will prove to be too short for many countries. He mentioned that it will be impossible to get all goals realized by all countries within the chosen timetable. He plead for permitting different speeds in implementing the Chapter 10 goals and recommendations.

Recent changes in agriculture have been mentioned by the representative of **France**. The total surface area needed to produce food is strongly diminishing as a consequence of intensifying agriculture. Choices have to be made on what kinds of agriculture will remain during the next years, and what the function of agriculture will be in the future. Economic incentives from the European Union are needed to maintain agriculture in some distant areas that cannot survive in purely free market circumstances. An important question is how sustainability factors can be injected in planning and policy processes. The **Zambian representative of the International Federation of Agricultural Producers (IFAP)** mentioned that a kind of Landcare program has been started in Zambia. It concerns planting and cultivation programmes aimed at combatting problems of land degradation, caused by overgrazing, deforestation and cultivation of steep slopes. The landcare programmes are aimed at a new land tenure system, directed to make farmers responsible for the quality of their land. Governments, waterboards and farmer groups are involved in these landcare programmes. Political interference is however felt as a serious threat.

The representative of the Environmental Liaison Centre International **ELCI** stressed the need for 'streamlining' ministries in order to avoid duplicating activities and bureaucracy. Integrated planning is not a luxury but a necessity for governments. Governments should facilitate the process of integrated planning by bringing information to the people but also by listening to the people.



The representative of **Vietnam** presented some experiences with the allocation of unused land to farmers. This was done for reforestation purposes in a mountainous area that was cultivated because of food needs. Success factors proved to be the open planning process and the availability of some governmental seed money for planning, communication and promotion purposes.

The representative of **Burkina Faso** mentioned the main problems of a Sahel-country: desertification, rapid reduction in soil fertility and insufficient water supply. Based on experiences in his country, he determined some conditions for success in integrated land management. In Burkina Faso the land tenure system had to be tackled by a land reform program. A second condition was to carry out an integrated land management program not as a separate process, but accompanied by a human resource program. The latter program contained basic education and primary health care. A third condition is the availability of sufficient information and knowledge.

The representative of **Fiji** also stressed the needed change in land ownership in order to make farmers more responsible for a sustainable use of their land. This is very important because the Fiji islands consist of very fragile ecosystems.

**Prof. L.O. Fresco** presented an impression of the general discussion. She suggested some main points to be worked out in the working groups. Integration should be applied only as a means to be used in some circumstances, and not as an general goal. For instance, an integrated approach to land use planning and management should not be followed in cases of natural disasters. Also in cases of major conflicts to be tackled, or if there are no conflicts at all, an integrated approach will be avoided because in those circumstances it will not be a very effective way of planning and policy.

Sustainable development should be defined by economic, social and environmental dimensions. Sustainability indicators belonging to these three dimensions could be 'economic viability', 'degree of participation' and 'sustainability'. Different time and spatial scales to be followed in integrated land use management and planning should be kept in mind. Emergency needs as well as future needs should be met. The meso-scale is the level where local and national scale meet each other, but it has to be kept in mind that not all decisions are to be made at meso-level. Some issues of overriding national or international importance can not be managed by a bottom-up approach. It seems to be broadly accepted that integrated planning and implementation at local and meso-level should be carried out as a participatory process. The presence of adequate structures and community awareness have been regarded as important success factors in participatory planning. Positive experiences with successful integrated projects and programmes should be propagated.

The role to be played by governments in integrated planning and management has been mentioned by several representatives. In some countries there is a need to create an independent body to coordinate institutes working at different levels and different disciplines. The governmental role should merely be facilitating by funding sustainable land use and by discouraging less sustainable utilization types of land resources, and also by taking care of adequate information supply and of proper indicators in order to monitor projects during implementation.

At the end of the first day **Mr. A.F. van de Klundert** presented a summary of the 30 cases submitted to this workshop as examples of integrated projects on land use planning and management at intermediate level. Abstracts of these cases can be found in Annex 4.

A full description of the cases will be published as a separate report. The presented cases contain important information about success and fail factors, that have to be taken into account when setting up integrated projects (see Table 1). It was surprising to see many similar success-factors in these cases, in spite of large economic and environmental differences between the countries. An interesting experience in many cases was that often only a limited amount of money proved to be already very effective to get integrated practical projects going on local and regional scale. Among the most important factors for successful integrated land use planning and management projects are also a strong leadership and enthusiasm.

## **4 Reports on the thematic working groups sessions**

In this Chapter the results of the discussions, held in three separate working groups, are presented. The working groups were organized along the three main theme's of this workshop. The discussions in the working groups were aimed at the formulation of conclusions and recommendations as concrete as possible. These have been discussed again in the following plenary session, presented in Chapter 4.

### **4.1 Theme 1: The integration of objectives, goal-setting and policy formulation for planning and management of land resources in the rural areas**

Chairman : T. Dorsey

Secretary : W. Andriesse, J. Scholten.

#### **subtheme 1 Developing and facilitating frameworks, structures and policies for sustainable land use planning**

The first part of this working group session concentrated on the role of central governments in developing and facilitating frameworks, structures and policies for sustainable land use planning. The participating country representatives gave examples from their own experiences and situations.

General points raised in the discussions on the above included:

1. Not all situations and structures sketched do actually exist in practice. Particularly in developing countries the actual structures to implement multi-level and integrated planning are not always in place.
2. Crucial factors identified as belonging to the role of central governments are:
  - taking care of economic stability
  - stimulating participation of all planning levels involved, and of all sectors/disciplines.
  - improving national legislation on land tenure, environmental control, conservation practices, etc.
  - improving awareness and consciousness in both the government and the public-at-large.
3. In many countries, particularly in developing countries, there are no structures and/or institutions to facilitate participation. In these countries there is a need for institution building.
4. The differences in stages of institutional development, level of legislation, and participation platforms, should be seen in context of different stages of economic development of individual countries. These should be compared with the timetables set for the different goals as formulated in Agenda 21.

*Table 1. Success-factors for integrated planning and management, derived from the cases submitted to the workshop*

## **IMPORTANT FACTORS FOR SUCCESS**

### **conditions for integration:**

- common goal
- good scientific information
- public information
- (government) funding
- availability of funds for proces
- clear property rights
- no bureaucracy
- skilled agencies or technical professionals
- stable political climate

### **economy:**

- economic perspective
- marketing perspective

### **process:**

- wide recognition
- recognition of mutual dependency
- clear identification of issues
- participation by all stakeholders
- involvement of farmers
- landowner support
- commitment by local politicians
- open process
- presence of facilitator or mediator
- strong leadership (in case of concrete, well-defined aim)
- consensus in decision making
  
- interest of central government for local problems
- voluntary nature of process
  
- good public relations
- no manipulation of data
- acceptance of findings
- no hidden agenda
  
- no creation of losers

The contributions to the discussion by the several countries is presented below in more detail.

#### Austria

In Austria, the central planning role of the government is limited. There is a mechanism (a 'national planning conference') where all levels of planning (national, regional and local) come together, including NGO's as well as social partners. This conference establishes planning concepts and goals for the whole country. Recommendations from this conference go up (to central level) and down (to regional and local levels).

#### Germany

Germany has a stepped planning approach. The federal government establishes, in collaboration with the 16 states ("Länder"), the guidelines for regional planning, in form of maps and reports which show a broad allocation of land to different uses. These guidelines provide a starting point for dialogue at the state level. In a next step they are converted into action plans at regional level.

#### Algeria

Planning in Algeria is based on the principles of integration, coordination and multi-disciplinarity. The national government needs to assure that the entire planning process (e.g. for desertification control) is executed with full participation of the local parties involved, the relevant governmental organizations, NGO's, farmer communities and farmer organizations.

Also, the central government needs to develop a conducive environment for the implementation of plans. The central government is primarily responsible for the relevant macro-meso linkages. In the latter, public organizations that are involved in the action planning and implementation at the level of the land user (e.g. farmers), take an important position.

In summary (for Algeria):

- Planning approaches are based on integration of physical, economic, ecological and social aspects;
- The central government needs to take away any negative factor, including adverse land-ownership structures, and therefore should provide relevant legislation;
- The central government aims mainly at reaching long- and mid-term objectives;
- Central government needs to mobilize financial means for example to implement legislation;
- The central government needs to develop/establish links with other countries for the development and implementation of common planning approaches, for exchange of information, etc;
- The central government plays a mayor role in the raising of awareness at all levels of planning and implementation.

#### The Philippines

Three levels of planning exist in The Philippines: (1) The national level, at which general guidelines for development are formulated (a so-called 'broad vision'); (2) The regional level, which develops a regional framework for planning; and (3) the town level, which is responsible for the development of actual action plans.

The central government is to play an important role in the sectoral integration, and in the linkages between the different planning levels. Also, it should facilitate the participation of stakeholders. The Philippine representatives emphasized the role of legislation, both at the national and at the regional level. Legislation on land ownership is extremely important in, for example, land re-allocation programmes, the implementation of forest action plans, the law on public lands, and the law on degraded areas. Experience so far calls for general legislation on land use. Also, enforcement of environmental legislation is often a problem.

### Brasil

Brasil brought up two contrasting examples of governmental roles in planning:

In one case there was total absence of governmental involvement in a development project: no central decisions were taken in this particular project in the Amazon area; no assessment was made, prior to implementation, of the potential for development of the area; 'wild' settlement of immigrants from south Brasil caused very severe social problems; etc.

In another case, through timely consultations with the different sectoral stakeholders, concrete development alternatives could be formulated, selected and implemented including agricultural production, fisheries, tourism, etc. Successful factors in the process were (as far as government role is concerned): economic stability, timely consultation and involvement of the stakeholders, timely provision of adequate funds (in general this is 'seed money' only, no large amounts involved), central research organizations provided adequate information for example on soils, hydrology, economics, etc.

### Benin

The central government, through its specialized organizations, plays an important role in assessing land potential (e.g. agro-pedologic surveys and land evaluation studies) and these form the basis for developing land use plans. This is done in close collaboration with meso-level governmental planning units. These land use plans require legal status in order to enforce their implementation and to overrule local intervention. The latter, for example, occurs where big landholders use land for speculation purposes, or as a form of savings-investment. Central government also plays an important role in promoting soil conservation programmes through research, training, education, and awareness raising.

A central government is to initiate donor help (technical and financial) for projects on sustainable land use, with full regard to the production function of land: food, fibre, wood, etc.

A central government also needs to simulate cooperation between the different planning levels, and between the different sectors, as well as participation of the people, particularly at village level.

### Burkina Faso

Among the main environmental issues in Burkina Faso are: desertification, soil fertility decline, water shortages, and water quality.

Central government plays a long- and mid-term role in the planning process, mainly by the setting priorities for development. Land tenure is regarded as a main obstacle to implementation of progressive development. There is a governmental committee on land tenure.

Burkina Faso applies a 'frontal' approach: an integrated, multi-sectoral master plan is developed at central level, which also supports financing of implementation, or seeks donor assistance.

Central government seeks the participation of local farmer organization and of NGO's.

### South Africa

South Africa has established a physical planning act at national level which authorizes the central government to draw-up, in collaboration with provincial governments (i.e. the meso-level), a 'national guide plan' which shows the broad delimitation of land use zones (urban areas, agricultural lands, forest lands, national parks, mining areas, etc.). The national physical planning act authorizes provincial governments to draw-up more detailed plans, in collaboration with lower governmental units. These plans are based on natural resources inventories. At the next planning level (i.e. townships), local authorities add further detail to these plans, in collaboration with the main stakeholders/land users.

The central government sets minimum norms and standards in consultation with lower levels. It also plays an important role in control and monitoring.

### Peru

Peru has established national coordination bodies for environmental issues, for example on biodiversity, sustainable development, climate change, and environmental protection. These coordination bodies include representatives from the national government and its specialized agencies, the private sector, NGO's, regional governments, and social groups.

#### Hungary

Hungary explained the particular problems existing in that country and perhaps in several other 'countries in transition'. The change from a centralized decision-making system to a decentralized planning process as well as the concurrent move towards privatization implies great economical, structural, organizational and social changes. For many of these changes these countries still need to develop legislation. In many cases however they lack the basic institutional capacity to do so. Similarly the institutional capacity is insufficient to develop planning procedures and monitoring units. These are among the reasons why East European countries seek to link up with the European Union and get its support.

#### France

The French delegate noted that there are two mechanisms of participation:

- structural (or 'cool'), as in regular institutional platforms and coordination bodies;
- incidental (or 'hot'), as exercised by action groups acting on specific incidental developments, such as road alignments cutting through a national forest area, the closing of a big factory, etc.

#### Canada

In Canada, presently the involvement of the federal government in meso-level planning (i.e. state-level) is being reduced. What remains is the role of the central government in broad goal setting at the national level, and as facilitator and stimulator of planning activities at the meso-level.

Also, the federal government provides sound scientific contribution and support. Examples of the latter are the eco-zone analysis and ecological mapping which is carried out at national level. Nevertheless these are not exclusively federal activities, and results are to be channelled into regional planning activities. Additionally, the federal government plays a substantial role in getting the different sectors involved in various stages of the planning process. This includes industries (especially those with high environmental impacts) and the agricultural sector. In Canada the agricultural sector is mainly organized along commodity lines with weak inter-commodity lines of communication. The creation of these platforms is not very costly (some 200-300.000 dollars annually).

Canada notes the increasing burden of over-participation of action groups and stakeholders in planning platforms. These are going to affect the effectiveness of the planning process beyond acceptable levels: a 'luxury problem'?

### subtheme 2 The need for regulation and legislation

The second part of this working group session concentrated on the role of central governments in developing and facilitating regulation and legislation related to sustainable land use planning.

With regard to regulations and legislation, a general feeling among the participants was (and this was already expressed in the discussions on the subject above), that the implementation of planning requires a sound legislative cadre at national and sub-national levels (see the examples of the Philippines and of Benin). This legislation should not only aim at nature protection, forest protection, water, mining, etc., but also, and perhaps most importantly, it should aim at cadastral aspects (land tenure).

Legislation and regulations are also needed in cases of drastic changes of land use (e.g. the mining of natural gas from agricultural lands in Algeria; or the construction of water reservoirs, for hydropower plants or irrigation and drinking water supply in nature conservation areas).

In many cases it was observed/experienced that existing legislation (laws) form no guarantee for either the 'maintenance of what is desirable' or the 'change towards better'.

Under the issue of legislation/regulations, a number of other issues was brought forward including the need for schemes for (balancing) production and consumption; the need for agricultural reform; and the use of chemicals, pesticides and herbicides in agriculture.

#### Algeria

Algeria stressed the need for:

- schemes of production and consumption;
- agricultural reformation;
- legislation, particularly on the use of chemicals in agriculture;
- national legislation offices, or courts of justice

#### Canada

Canada mentioned the need for sectoral codes for sustainable practices, which may not only serve the sustainability issue as such, but may also be required for trade competitiveness. Additionally, it was mentioned that ISO-standards are currently being developed for sustainable land use practices. Once elaborated, these should be accepted by the international community. (ISO: International Standards Organization)

### subtheme 3 Capacity building, information supply and monitoring

In the next session, workgroup discussions centred on capacity building, information supply and monitoring.

There was general consensus on the importance of capacity building, at all levels and sectors (planning structures, participatory approaches, legislation formulation, research, implementation, etc.).

In addition to recognizing the importance of information and education, the working group identified the need to communicate, particularly between technicians and policy makers. It was observed that, often, technically-competent staff is having difficulties in expressing themselves clearly toward policy makers and planners. Technical messages should be made simple, and understandable for 'generalists'. Hence, the need to 'translate science into common sense'.

#### Algeria

The Algerian delegate stated the need for:

- strong institutional capacity in terms of planning and research organizations, as these are responsible for facilitating timely supply of adequate information;
- national agencies on land protection, forest protection, water protection, mining, etc., which should also have a strong interacting capacity;
- good training capacity, both at local and national levels;
- organizational structure which allows full participation of local levels of government.

#### Peru

Peru stressed the importance of information availability and dissemination. Lack of consciousness by public and governmental institutions is mostly due to insufficient (access to) information. Central governments should play a key role on these aspects.



#### Hungary

In addition to the need for information, Hungary stressed the importance of education. People need to understand the information supplied, and officials and other stakeholders need to know, and form ideas on how to use/interpret information for development planning.

#### The Philippines

The Philippines remarked, in this respect, that capacity building has two dimensions: one which makes decisions and one which implements decisions, and there is a great need to raise awareness on both sides. In this respect, others argued that there is a third dimension, namely one which prepares decision-making: surveys, inventories, their interpretation and additional research. The communication gap, as referred to earlier, exists mainly between this level and the policy makers.

#### Brasil

As to capacity building, one needs to put emphasis on knowledge, or basic information. That should be in place, factual as well as institutional, before any meaningful planning can start.

Also, if there is a need to change (e.g. the use of environment/land resources), then, automatically there is a need for capacity to change (research, planning, policy instruments, monitoring). Without basic information, however, it is impossible to develop the motivation to change.

### subtheme 4 Regional and international linkages

The role of central government in linking regional and international organizations was the subject of the fourth working group session.

There was general agreement on the need to intensify exchange of information and experiences with respect to sustainable development and management of land resources. The already existing kinds of cooperation between countries should be largely extended.

#### Algeria

Algeria proposed to establish:

- an international network for the exchange of scientific, technical and policy information on sustainable land use planning;
- national local points for international information dissemination;

#### Peru

Peru also stressed the need for information linkages between national and international levels. Developing countries in particular need to exchange information through workshops, mutual working visits, networks, etc. This exchange would be most effective if it were between countries with great physical and policy similarities. Raising of environmental consciousness could be promoted through joint regional and subregional planning approaches, research efforts and implementation.

Also, Peru pleads for global cooperation on global issues (global warming, ozone layer, etc.)

Regional and international cooperations between developing countries however, would need additional financial support.

#### Benin

Benin agreed with the above ideas but likes to add the importance of bilateral cooperation, for example as in the framework of the collaboration on sustainable development between the Netherlands, Benin, Bhutan, and Costa Rica. As a tangible follow-up to UNCED-Rio, this collaboration framework was established on the basis of equality, participation and reciprocity. It seeks to develop joint projects, based on the sharing of expertise and experience in planning for sustainable development.

### IIED

The delegate of the International Institute for Environment and Development (IIED) emphasised the importance of structured urban-rural linkages. In many countries there is a strong migration into urban areas, which upsets, or further deteriorates the existing economic, social and commercial balances. This results in labour shortages and, subsequently, in production deficits in the rural areas. On the other hand, unemployment and food shortages are the fate of many living in the metropolises. To counter this adverse situation, cash, generated in the industrialized and commercialized urban areas is to be 'ploughed-back' into the rural economies.

### Burkina Faso

Burkina Faso pointed at the already existing regional collaboration networks, such as, in the Sahel: CILSS (Comité Inter-État de Lutte contre la Sécheresse dans Le Sahel). Others add more regional examples (Amazone networks in South America, SADC in Southern Africa, etc.).

### FAO

The FAO representative recalled several cases of divergent planning goals between different countries, and even within countries. Therefore regional approaches will not be easy to implement. Nevertheless, there are a number of modules/guidelines for planning that apply at regional level (see FAO's Task Managers Report and FAO Guidelines for Land Use Planning).

## subtheme 5 National and international funding mechanisms

The working group expressed the need to apply taxing and subsidizing mechanisms to counter negative trends and to stimulate positive developments, in order to come to a more sustainable land management. Also, a proposal was made to introduce pooling of resources if the common goal of sustainability is at stake, rather than to maintain sectoral budgets. This should have a positive effect on interdisciplinary approaches. Central governments are to provide at least part of the financial means for application of land use planning at local level. This requires a centralized budgetary system. Several delegates stressed that often the initiation of activities at local level requires relatively small amounts of money (seed money; refer to Canadian example; but similar cases were mentioned by Algeria, Brazil, Burkina Faso, among others).

A discussion evolved on the need for fixed or flexible involvement of central governments as to the financing of planning activities at meso level.

Central governments could also collect and distribute money through a system of penalties and incentives (i.e. taxes and subsidies). Incentives could apply for regions with sound cadastral systems, and with policies aiming at formalizing land tenure and land titles. Taxes could apply to land users applying unsustainable practices. However, (legal) control mechanisms are an absolute requirement.

Also, participants felt that contributions from the private sector are still very limited. This applies particularly to the situation in developing countries. Here taxes, if existing, generally are not very high and have a symbolic function only.

Sources of funding identified:

- Multilateral donor organizations (WB, FIDA, Regional Development Banks, GEF);
- International technical assistance and cooperation agencies (FAO, UNEP, UNDP, FIDA, etc.):

- NGO's, private sector;
- Bilateral cooperation (north-south; south-south).

#### Algeria

Algeria recommended that the Global Environmental Facility (GEF) opens a new window (in addition to the existing ones on climate change, etc.), especially for land degradation and desertification. At present, these important issues have not been earmarked separately under the GEF.

Algeria distinguishes 3 funding levels, international, national, and local.

The protection of the land resources depends to a large part on international financing. National funds are hardly ever sufficient, particularly in developing countries, but in developed countries too. See for example present actions from the government of the Netherlands to acquire international funds (from EU) for its flood protection programme. Of course this is based on the partly international (read: European) scale of the problem: both the Rhine and Meuse river basins stretch beyond national boundaries.

#### The Netherlands

A representative of the Netherlands reported that in this country the extensive differentiation existing in funding mechanisms at intermediate level causes considerable problems in the integration of activities. Therefore attempts are being made to collect finances at central (= national) level. From there, the distribution to regional levels should be organized. Again: the role of the central government is to facilitate.

### **Recommendations on theme 1**

The working group presented the following recommendations with respect to the role of central governments in goal-setting and policy formulation.

- \* Governments should develop a framework or guidance for integrated landuse planning and management including explicit aims.
- \* Governments should encourage participation in the planning process on local level by supporting public awareness and participation programmes.
- \* Governments should review, with participation of all stakeholders, land tenure arrangements or legislation with the objective of providing longterm security on the land.
- \* Governments should review their institutional linkages with the objective of effective integration of sectoral interests.
- \* Governments should develop a framework of social, economic and environmental goals and policies for sustainable land use; the role of the central government should be to initiate involvement of all other governments and stakeholders at all levels and sectors.

- \* Recommendations should be tailored to the situation within countries and national integration strategies have to recognize differences relating rural versus urban contexts, regular versus emergency situations, and variations in preparedness in terms of the state of development of legislation, policies, institutions and participation.
- \* All countries have committed to the timetable for Chapter 10, but constraints mean that some will take longer to fully meet the objectives and will have to intensify efforts to achieve them.
- \* Governments should revise economic instruments to reinforce the positive and decrease the negative consequences for sustainable management of land resources.
- \* Governments should assess and if necessary redress the balance of resource flows between rural and urban areas.
- \* For targeting common sustainable development goals and an integrated approach, governments should not only review the mandates of institutions but also pool budgets of sectors.
- \* Governments should provide for a rapid alert and response capability involving all levels.
- \* Governments should establish coordinated monitoring systems.

#### **4.2 Theme 2: Managing a planning process for the use of land resources in rural areas with all stakeholders**

Chairman: R. Issar

Secretary: N.R. van Ravesteijn, C. Kwakernaak

##### **subtheme 1 Integrated planning and management experiences in several countries**

This working group started with an inventory of experiences with integrated planning and management processes in local and regional projects. There proved to be different kinds of experiences in the several countries represented in the working group.

At national level integrated land planning hardly exists. A special problem is that in many countries to many institutions are responsible for parts sustainable landuse, which can cause some over-planning. At intermediate or regional level some countries mentioned of the first successful experiences with integrated planning. The intermediate policy level was regarded by many representatives as a useful scale for planning land utilization in an economically, ecologically and socially sound way. Experiences with sustainable use of land resources by integrated planning and management at local level were mentioned from developing as well as developed countries. Awareness raising in problem identification and in finding solutions is a main success factor in order to get all stakeholders to be involved in the planning process.

#### Bhutan

In the planning process three decision making levels can be distinguished. A decentralization policy is going on. However a strong political leadership is still regarded as a success factor for an integrated approach in land use planning and management. It is stressed that a bottom-up approach in planning and management needs good guidelines from the national government. Participation of people in land use planning and management is raising. At farm level there is awareness of possibilities of using land resources in a sustainable way. Major issues are coordination mechanisms for planning at several scales, communication, awareness and enforcement of rights.

#### Philippines

There is some over-planning in the Philippines. As a consequence at national level, a planning agency is responsible for the national landuse plan. This contains guidelines for regional development plans. At the local level, local development plans have been carried out. Private sectors and NGO's are involved in local planning and decision making. These local plans contain mainly short-time visions. Land conversion issues are a problem for a balanced regional development. There is a need for improved data availability and training facilities at the local level.

#### Botswana

Integrated planning is mainly restricted to the district level. This meso-level is however in many cases not a geographical entity. At local scale, the community makes a community action plan. For implementation finances need to be found elsewhere. A specific problem is the competition between wildlife conservation and agriculture. Overgrazing by elephants is a major problem in the desertification process of the Kalahari region.

Good relations with national and international organisations are essential to tackle these environmental problems. However the involvement of politicians in landuse planning is a problem. There is also a lack of support of legislation to enforce sustainable solutions.

#### Netherlands

Policy plans for spacial planning, environmental and water management are going to be more and more tuned. Common principles of integrated planning have been developed. Especially at local and regional level, cooperations of farmers play an active role in bottom-up planning processes.

#### Zambia

A number of institutions is involved in landuse planning and implementation: farmer communities, industries and environmental councils. Communication and awareness are difficult issues because of several different languages in this country. Also land tenure is a problem for sustainable landuse planning and management. As land belongs to the president and tribal land to the chiefs, land has no value. A pricing policy for land is necessary in order to make improvements in planning and management. Funding proved to be possible from donor communities.

#### Denmark

There is a strong legislation on environment and spatial planning at three levels. The regional level creates the framework for what is going to be carried out. NGO's and local groups are involved in the planning process by giving comments on concept plans. For plan implementation local plans have to be made up in communication with stakeholders. Key success factor for landuse policy is the constant dialogue between government and grassroots.

#### Germany

Planning in Germany is somewhat over-organized. There is a strong federal legislative support of landowners which gives landowners a strong position as stakeholder. Main problem in planning is a lack of integration in sector planning at any level. There is a need for integration of state planning to avoid conflicts between sector plans. Also tools for integrated implementation of plans are needed.

#### Iran

As a consequence of the population explosion in Iran urban expansion is a main problem for sustainable landuse planning and management. The main planning objective is the site selection for new urban areas. A technical problem is the lack of landuse data and maps for planning purposes. A national physical plan and a first regional plan will be developed before 1996.

#### Costa Rica

Funded by the Netherlands and the FAO a land management methodology has been developed. Essential in this methodology is the participation of representatives of all parties in the project. People are involved in identification of the problems and in finding solutions to be worked out in an action plan. All groups are responsible for carrying out the action plan which deals with changes in land management. The role of women is stressed in this methodology. The role of governmental parties in this land management process should mainly be facilitating and not deciding.

#### United Kingdom

Guidance notes on promoting integrated planning at three levels are available. Good experiences have been obtained on providing a single (window's) fund for a regional plan for the Peak District, which is an area with declining population, environmental and economic problems. In this integrated rural development project, local communities have been actively involved in deciding their own destiny, with appropriate advice and financial support. The approach will possibly be applied in other ambitious projects with external funding.

#### Colombia

An important recent development was the installation of a Ministry of Environment in 1993. Also there is some experience with integrated landuse planning and management at local level. An important success factor proved to be the availability of a steering committee that is able to coordinate a planning process with all stakeholders. A constraint is the lack of capacity at local level.

#### Australia

The success factors of the already mentioned Landcare Program in Australia are capacity building at regional and local level, awareness raising at local level and integration of landuse programs and policy in one central department.

#### ISNAR

The representative of the International Service for National Agricultural Research (ISNAR) stresses awareness raising as a main issue in sustainable landuse planning and management. ISNAR promotes awareness of impact of agriculture by international agricultural research programs, following an interdisciplinary methodology. However, institutions are mainly thematically organized which is a bottleneck for an integrated approach. Also information on policy options is needed in order to avoid conflicts.

#### Japan

In Japan planning problems focus on pollution problems caused by industrial activities and on urban expansion. The national land use plan contains guidelines for land use master plans on the regional level. At local level implementation is coordinated by a committee. In the planning process good use is made of mediators and facilitators in coordinating and integrating the several interests.

#### IFAP

The International Federation of Agricultural Producers is an independent farmers organisation with important networks. This farmers organisation plays an important role in communication and coordination; it reflects the view of farmers from the level of the individual farm to local, regional and national level. Participation of women in projects on landuse improvement is very important. IFAP has good experiences with a persuasive approach in landuse planning and management using tangible incentives.

## subtheme 2 Main issues in managing integrated planning processes

Based on the experiences mentioned above a number of important issues in integrated planning and management of landuse has been distinguished by the chairman of the working group. He regarded these issues as main success factors in appropriate integrated landuse management and planning. The issues have been classified into three clusters. The working group was divided into three subgroups, which discussed the items mentioned below in order to formulate recommendations as concrete as possible. There was however not enough time available to discuss all recommendations from the subgroups in the working group and to make a selection of recommendations on subtheme 2 to present in the plenary session.

### \* integrated planning on national and regional level

- . institution building of stakeholders
- . institutional integration of landuse planning
- . coordinating mechanisms in planning for rural and urban areas
- . linking different levels of planning

### \* participation of stakeholders

- . participation of all stakeholders
- . organization of stakeholders
- . communication and awareness at grass-root level
- . decentralized decision making
- . involvement of farmers
- . special role of women; women's right on land
- . capacity building
- . goal setting, review of short-term and long-term goals

### \* supporting mechanisms

- . co-regional planning based on thematic of agro-climatic similarities
- . monitoring and evaluation
- . sharing experiences and networking

## **Recommendations on theme 2**

Based on the experiences described above, completed by the case descriptions from the questionnaire, a set of supposed recommendations to governments has been formulated. These recommendations have been presented at the following plenary session of the workshop.

- \* Governments should promote capacity building for communities to participate of initiate local landuse planning and implementation including development of leadership skills. Funding for upgrading technical skills and training would need to be provided.
- \* Governments should build legal institutions at the subnational and local level.

- \* Governments should establish institutions for coordination between governmental agencies and between the levels of government.
- \* Governments should focus on financial support for a catalytic approach to start community participation processes.
- \* Planning of landuse should take place on the basis of the participatory negotiating processes in which all stakeholders are involved.
- \* Governments should develop mechanisms to involve all stakeholders, including women, non-organized and vulnerable groups as well as to secure their representation in the negotiating process.
- \* Governments should recognise all stakeholders, their roles and responsibilities.
- \* Governments should develop awareness and consciousness and motivate change among all stakeholders
- \* Governments should enter into partnership with stakeholders to develop local action strategies for development for the security of individuals and alleviation of poverty.
- \* Governments should review their commitment to strengthening grassroots organisations and provide legislative and organisational support to them.
- \* Within the overall parameters of a National land resources policy it is necessary to delegate additional powers to the community and implementors of landcare programmes to enhance the support and implementation of landuse planning.
- \* There is a need for a two way dialogue between the National government and the community on landuse planning.
- \* Governments should include more indigenous methods and knowledge into research.
- \* Voluntary agencies (e.g. Farmers' Organisations, NGO's) should be encouraged to interface between the community and the sub-national level, to take up awareness raising and actual delivery of services. Adequate funding would need to be provided for this purpose.
- \* Governments should develop or strengthen the framework for goal setting and policy formulation on integrated planning and management.
- \* Governments should establish or strengthen institutions to develop policy for sustainability.
- \* Governments should develop sustainability standards, allowing flexibility for sub-national and local variations.



- \* Governments should review and if necessary initiate gradual and progressive land reform as part of long term solutions.
- \* Governments should develop information systems on land use options and limits including indigenous knowledge and other national maintained databases and improve access for all stakeholders.
- \* Governments should establish environmental assessment procedures.
- \* Governments should take account of the life support capacity of the land resource and its scarcity value.
- \* Governments should establish a framework for information strategies.
- \* Governments should strengthen and establish training institutions.
- \* Governments should develop communication abilities between technical specialists and implementers.
- \* Governments should ensure sufficient technical and research expertise.
- \* Governments should focus information generation efforts on poverty topics.
- \* Governments should promote the flow of information between international, national, regional and local levels.
- \* National governments should cooperate formally and informally on funding, training and technical support involving multilateral, regional, U.N., NGO and bilateral external support agencies, guided by principles of equality, participation and reciprocity.
- \* Governments should seek regional collaboration on environmental, economic and social aspects of land use.
- \* International organisations should develop modules of planning tools and procedures applicable to all cases and conduct capacitating workshops for land use planning with appropriate regional emphasis and at various levels of detail.

#### **4.3 Theme 3: The possibilities for sustainable economic development in the rural areas, with emphasis on non-traditional qualities of land**

Chairman: A.T. Ayoub

Secretary: P. Visser, F.R. Veeneklaas

In this working group the discussion did not start with a presentation of experiences from the countries represented in this working group. Instead of this, the chairman

started the discussion by presenting a list of twelve points. Some, not all points were discussed in the working group, not bound by a strict order.

The suggested points of discussion were the following:

- 1 Collection of a biophysical and socio-economic database.
- 2 Characterization of land use, and identification of desired and viable land use. Public hearings are very important in this context.
- 3 Networking approach rather than hierarchical procedure to ensure full cooperation.
- 4 Decentralization of land tenure control; stimulation of land privatization within legal institutional structure.
- 5 Environmental impact assessment, cost-benefit analysis and environmental and natural resource accounting.
- 6 Tax incentives to reward those who invest in improving degraded land.
- 7 Subsidy for adaptation of environmental issues such as carbon sequestration.
- 8 Encouragement of alternative approaches to chemical pest control.
- 9 Encouragement of the utilization of farm crop residues. Opportunities to recycle agricultural and agro-industrial residues.
- 10 Attaching market values to resources such as land, water, genetic diversity, etc.
- 11 Maintaining and improving the capacity of the higher potential agricultural lands to support expanding needs.
- 12 The role of women in land management.

The outcome of the discussions can be summarized as follows.

#### ad 1. Databases

For sustainable land use, it is paramount that first the regional assets are known. Therefore, a clear classification of (agricultural) land is necessary. It is furthermore useful to make a clear distinction between land use (designation) and land management (e.g. extent of intensification). Although the usefulness of good databases was generally endorsed by the working group, the importance of how the database was used was also stressed ('who has access to it and when?'; 'are the relevant data communicated to those in the field?').

#### ad 5. and 10. Environmental Impact Assessment and valuing resources

Recently, a large amount of literature has been published on the issue of attaching (market) values to natural resources. This does, however, by no means mean that the problem is solved and e.g. degradation of natural resources can easily be included in national accounting. A major problem remains that valuation changes in time and across different stakeholders. Clearly cost-benefit analysis does not sufficiently capture the sustainability issue.

Since around 1990 the World Bank does not assess ex ante its projects on mere return on investment rates. It extends its evaluation to 'performance indicators', covering both economic, social and environmental objectives (preferably a handful of indicators only). Moreover, the World Bank evaluates projects (ex ante) on potential environmental impact.

Examples of the Fiji islands were given, where an attempt has been made to value a natural mangrove forest and compare it with the potential benefits from fishing exploitation and income potential from (eco)tourism.

A tendency can be observed to leave old-style impact analysis. The generally felt tension is between short-term gains (most strongly at local level) and the long-term objective of conservation (most strongly at regional and national level). It was remarked, however, that in cases it can be perfectly rational to opt for the short term gains in order to generate income for long term protection. The analogy with mortgaging one's house was mentioned in this context.

A general conclusion was that, in order to value natural resources a macro policy must be existent. Only then different sacrifices can be weighed and integrated planning can succeed.

#### ad 3. Networking, role of governments

Observation 1: The government (in some developing countries) is not the true representative of the people. Therefore, additional mechanisms to represent and involve the people are required.

Observation 2: Decision on land use and land management are, ultimately, made by individuals: the primary producers.

Observation 3: A bottom-up approach does not imply that all wisdom comes from the lowest levels; a bottom-up approach must be complemented with a top-down flow (of information for instance).

Observation 4: Bottom-up processes are not very predictable in terms of the way things will be carried out exactly. In a broader sense (e.g. 'enlargement of regional income'), however, performance indicators (see under ad 5/10) can be formulated for ex ante or ex post evaluation.

#### ad 4. Land tenure

Land tenure is an important issue to address as it will very likely be a potential impediment to integrated planning. A clear distinction should be made between land administration issues and land redistribution.

World-wide there is overwhelming evidence that both the most efficient and most equitable management of land occurs by family-run holdings. Then why do schemes to promote redistribution land to family holdings so often fail? Three reasons:

- Redistribution is managed by government agencies which are prone to corruption.
  - Handing out land to an often ill-defined group of beneficiaries creates another opportunity for corruption.
  - The new landowners can sell the newly acquired land to those with purchasing power, normally the big landowners, thereby perverting the idea of redistribution of land.
- In general, there is a tendency, ruled by the economic law of economics of scale, of large holding to grow larger and larger.

To arrive at a recommendation on the tenure of land issue that is acceptable for all, the Working group decided to focus on the process rather than the content of land

redistribution, because of the varying circumstances in the different parts of the world. Three recommendations emerged:

- The issue is not so much who owns land, but it is more often the security of land rights.
- In many countries there are (rather effective) ways of distribution the right of land use. Do not replace these systems (that maybe need some adjustment in view of new developments, in particular increased population pressure) by something completely new and alien, but try to build upon existing mechanisms.
- The latter should not mean that the actual land tenure distribution is to remain. On the contrary: traditional land tenure is, as a rule, inflexible and focused on traditional, normally extensive, use of land. This does not meet the present day demands of the growing population dependent on the land resource.

#### ad 6. and 7. Funding, taxes and subsidies

General principle: as financial instruments are commonly coming out of tax payers' pockets, they should be applied strategically (e.g. to trigger off better land management) rather than structurally. Sometimes small amounts suffice as incentive, for instance through mediation of a facilitator. The setting up of pilot schemes can also be very (cost) effective.

#### ad 12. Role of women

Women can be very instrumental in the conservation of the environment, as they normally provide the family with natural products such as fuel wood. They are the first to know of (and to suffer from) degradation of the environment. Examples of successful involvement in projects of women in developing countries were given (design, maintenance and repair of hand pumps for instance), though it was acknowledged that much was left to be done in this respect.

### **Recommendations on theme 3**

- \* Governments should provide a national framework to assess the costs and benefits of different land use options or developments.
- \* In order to play an enabling and facilitating role an integrated national planning is prerequisite; this means that governments should speak with one voice by:
  - . defining broad, coordinated policies through which the different policy instruments may be used in a coordinated manner.
  - . establishing a national macro framework comprising knowledge on the assets of a country.
  - . establishing a legal framework in which land use policies fit.
- \* Governments should underline the importance of long-term security in tenure for a sustainable land use by:
  - . re-enforcing systems / structures on sustainable land use that already exist and function well;

- . examining the impact of tenure systems on land use and undertaking reforms where needed
  - . enhancing and promoting land use planning initiatives from communities.
- \* Governments should ensure and enable a participatory approach. In order to do that there is a need to identify the actors who will participate in this process. This should be followed by the legitimizing and where needed strengthening of the capacities of these actors, with special attention to women as important land users. This should be done before these capacities and needs are integrated into national policy frameworks.
  - \* National governments, institutions and UN agencies should collaborate in the development of Natural Resource Development including maps of land resources and their uses, e.g. using GIS. This may include collection and information from different levels. Governments need to develop mechanisms to monitor land uses and information sharing with the land users.
  - \* Governments should apply financial incentives as one of the instruments in the allocation of land to its most efficient sustainable use.
  - \* Governments should promote the adaptation and adjustment of sustainable land use to the modern economy and the world market prizes.
  - \* Governments should target economic incentives, e.g. non-structural subsidies, to sustainable public benefit.
  - \* Governments should link the extension of land rights and land use concessions to good land care.
  - \* Governments should fund facilitators, training and education, platforms and other instruments to involve land users in a sustainable planning process.
  - \* Governments should play a role in funding small initiatives e.g. on physical improvements.

## **5 Final discussion**

### **5.1 Selection of recommendations reported by the working groups**

Many of the recommendations reported by the three working groups proved to be already covered by the present text of Chapter 10. These working group recommendations were regarded to confirm the importance and comprehensiveness of Chapter 10, but they gave no extension or sharpening of the present text. Therefore, it was agreed that these recommendations should be deleted as workshop recommendations to be presented in the next CSD-meeting.

A first plenary discussion on the remaining conclusions and recommendations formulated in the working groups learned that many participants wished to make amendments on the draft recommendations. Moreover a large number of additional new recommendations on the three main themes have been proposed during the plenary session.

In order to come to a complete set of recommendations, the chairman gave a last chance to the delegates to bring written text proposals to new recommendations and amendments into discussion.

This opportunity resulted in a total number of 22 new recommendations to be discussed in the final plenary session.

### **5.2 Final discussion on all proposed conclusions and recommendations**

Apart from discussions on precise formulations of the proposed recommendations, the discussion concentrated on a small number of issues. The results of the discussions on the precise text of the several recommendations can be found in the final Conclusions and Recommendations of the workshop, presented in the following Chapter of this report, which have been presented to the Intersessional Ad Hoc Meeting on Sectoral Subjects in March 1995 and to the third CSD-meeting in April 1995.

The main points of discussion proved to be the timetable to be followed for implementation of goals and recommendations of Chapter 10, recommendations on the role of women in integrated policy, planning and management, the interlinkages between Chapter 10 dealing with integrated planning and management and following Chapters of UNCED's Agenda 21, and finally the financial support by developed countries and international organizations to help developing countries to tackle land degradation and poverty. The following text reflects these discussions.

The representative of **Botswana** mentioned again that for some developing countries the time-table of Agenda 21 can not be reached. The meeting agreed to mention in the final conclusions and recommendations of this workshop that in some situations it will take more time to reach the goals.

On behalf of a number of participants, Mrs Leesberg from **the Netherlands** proposed, in addition to the present recommendations, to recommend that central governments should use land reform projects to come to a strengthening of women's social and

economic position. The **chairman** referred to Chapter 24 as a more proper part of Agenda 21 for recommendations on strengthening the role of women. This item will be discussed at a special meeting in Beijing. The representative of **Algeria** stated that decisions about women's role have to be taken at national level. The meeting agreed with the chairman that proposed recommendations on women's role should not be taken up in the Chapter 10 - recommendations.

The representative of **Algeria** insisted on broadening the scope of Chapter 10 by taking up additional recommendations on an integrated approach of soil degradation, desertification and drought as part of integrated planning and sustainable management of land resources. Furthermore he insisted again on stressing the necessary financial support for implementing tools to sustainable use of land resources by developed countries and international communities. The **chairman** referred to the text in the pre-ambule on interlinkages between Chapter 10 and Chapters 11, 12, 13, 14, 15 and 18. He reminded that this workshop or even the CSD itself does not have any mandate to change or broaden the text of Chapter 10. He insisted again to keep the references to interlinkages between the Agenda 21 - Chapters in the pre-ambule of the workshop's conclusions and recommendations. Representatives of other developing countries (**Benin, India**) however supported the proposals of Algeria. Finally the meeting accepted to take up two text proposals in the conclusions and recommendations of this workshop:

*'Governments and international organisations should cooperate in identifying national and international sustained sources of funding to carry out integrated land use planning and management with full stakeholder participation', and*

*'The various forms and degrees of land degradation, their socio-economic causes and effects, particularly poverty, need to be given prominence in all programmes for integrated planning and management of land and water resources, taking into account the linkages with the aims of other relevant Chapters of Agenda 21, such as 11, 12, 13, 14, 15 and 18'.*

## **6 Final conclusions and recommendations of the workshop**

The participants of the workshop submitted the following recommendations to the Commission on Sustainable Development. In this regard they recognized that recommendations should be tailored to the particular situation within countries. National integrated land resources planning strategies must recognize differences relating to:

- Rural vs. urban needs;
- Regular vs. emergency situations;
- Variations in preparedness in terms of the state of development of legislation, policies, institutions, concern for biodiversity as against other demands on land resources, and public participation in planning and decision-making.

All countries are committed to the timetable for Chapter 10 but various constraints mean that some countries will take longer to meet the objectives fully and will have to intensify efforts to achieve them.

### ***1. INTEGRATION OF OBJECTIVES AND POLICY FORMULATION FOR LAND USE PLANNING AND MANAGEMENT OF LAND RESOURCES IN RURAL AREAS***

Under this theme the workshop participants recommended that:

- 1.1 Governments develop a framework or guidance to implementing agencies for integrated land use planning and management including explicit aims and taking into account what has been achieved so far.
- 1.2 Governments review land tenure arrangements or legislation with the objective of providing long-term security on the land, taking into account the needs of all stakeholders, especially the farmers and all those that are effectively involved in the agricultural sector, both men and women.
- 1.3 Governments review economic policies and revise economic instruments to reinforce the positive consequences and decrease the negative consequences of public and private activities for sustainable management of land resources.
- 1.4 To provide the investment in rural areas that is needed to implement Agenda 21, governments assess and, if necessary, redress the balance of resource flows between rural and urban areas.
- 1.5 For targeting common sustainable development goals and an integrated approach, governments not only review the mandates of institutions but also pool budgets of sectors.
- 1.6 To cope with emergency situations beyond the normal planning scenario, governments provide for a rapid alert and response capability.



- 1.7 Governments formulate and adopt legal and technical adjustment mechanisms for the effective promotion of and the support to the stability of agricultural land use, and for sustaining competition and complementarity, in economic terms, of agriculture and other forms of land use.
- 1.8 Governments design land valuation systems and standards for agriculture that will quantify the social, economic, environmental and demographic impacts associated with the transfer of productive arable land to other uses.
- 1.9 Governments and international organizations cooperate in identifying national and international sustained sources of funding to carry out integrated land use planning and management with full stakeholder participation.
- 1.10 The various forms and degrees of land degradation, their socio-economic causes and effects, particularly poverty, need to be given prominence in all programmes for integrated planning and management of land and water resources, taking into account the linkages with the aims of other relevant Chapters of Agenda 21, such as 11, 12, 13, 14, 15 and 18.

## 2. *MANAGING A PLANNING PROCESS FOR THE USE OF LAND RESOURCES OF RURAL AREAS WITH ALL STAKEHOLDERS*

Under this theme the workshop participants recommended that:

- 2.1 Governments promote capacity building, including leadership skills, so that communities and people's organizations, with special attention to women and youth, can participate in, or initiate local land use planning. Funding for upgrading of technical skills and training will be needed.
- 2.2 Governments focus on financial support for a catalytic approach to start community participation processes at all levels. This should include capacity building of grassroot-level and voluntary associations. Financial support can be more effective if it addresses causes instead of symptoms.
- 2.3 Governments incorporate indigenous knowledge and methods of land resources management into their policies and development programs and assist people's organizations to do likewise. Research will be needed to uncover this knowledge and incorporate it into formal data bases and planning procedures.
- 2.4 Governments develop criteria and performance indicators for sustainable land use, allowing flexibility for sub-national and local variations.
- 2.5 Governments establish and strengthen conflict resolution mechanisms, in particular at the local level.
- 2.6 If land reforms are considered necessary, these should be introduced in a gradual and progressive manner so as to maintain a minimum support of all stakeholders.

- 2.7 Governments cooperate on funding, training and technical support involving multilateral, regional, U.N., NGO, farmers' organisations and bilateral external support agencies.
- 2.8 No set planning procedure is applicable in all situations. International and national organisations should develop modular planning tools so that specific combinations of modules can be applied to individual situations. Workshops for land use planning should be conducted to familiarise policy makers and technical specialists with these new tools.
- 2.9 Stakeholders at the meso-level should be informed by their national authorities about the framework within which they participate in the planning process and about the extent to which they can influence the framework itself as well as the outcome of the planning process.
- 2.10 Public authorities should enter into partnerships with stakeholders to produce local plans and action strategies for development, for the security of individuals, and for the alleviation of poverty; they should provide the link between broader land use and sectoral planning, bringing together the resources necessary to achieve optimal results.
- 2.11 Governments and organizations recognize differences in interests of stakeholders and their representative NGO's and, in particular, to ensure incorporation of legitimate concerns and participation by land users including women.

### 3. *POSSIBILITIES FOR SUSTAINABLE ECONOMIC DEVELOPMENT IN RURAL AREAS*

Under this theme the workshop participants recommended that:

- 3.1 Governments provide a national framework to assess the costs and benefits of different land use options or developments.
- 3.2 For any public intervention or expenditure (a tax, a subsidy, a regulation, a program of activities, an investment project), governments select at least one performance indicator and monitor it.
- 3.3 Governments follow sound macro-economic and effective poverty reduction policies as a necessary condition for more sustainable management of land resources. An enabling legal framework is also required.
- 3.4 Governments use economic instruments to express environmental costs and benefits in market prices, whereby all land resource users will be enabled to take account of environmental costs and benefits in their decision making.
- 3.5 Where environmental costs and benefits cannot be fully captured in taxes, subsidies or other economic instruments, governments provide incentives for

voluntary action by land resource users, or use regulations to enable land resource users to take account of environmental costs and benefits in their decision making, with due consideration for the administrative costs of these regulations.

- 3.6 Economic instruments will be necessary but are, often, insufficient to promote improved land use. When complementary measures are required, projects should be designed accordingly, including activities such as formation and promotion of groups of land users, technology dissemination, field demonstrations, capacity building of user groups and of government support services and adaptive research institutions.
- 3.7 Where new economic "carriers" are considered necessary for sustainable development of rural areas, projects should be designed to include activities such as ecotourism, joint wildlife management with local communities, joint forest management with local communities, watershed management (with upstream conservation funded by downstream beneficiaries of more regular flows, reduced silt load, and improved water quality), and nature reserves and parks (with employment generated by the policing function). More generally, governments promote labour-intensive growth throughout the economy, and reverse discrimination against rural areas in the allocation of public expenditure to health, education and infrastructure.

## 7 Closing statement

The workshop was closed by **Mr. De Leeuw**, Director-General on behalf of Mr. J.J. van Aartsen, the Minister of Agriculture, Nature Management and Fisheries of the Netherlands. In his speech he explained why the Dutch people are strong advocates of sustainable development. The Netherlands is a small and densely populated and intensively used country. As a consequence of the highly intensive land utilization, this country, perhaps more than any other country, is faced with declining nature values and environmental quality. Moreover, the Netherlands are situated at a vulnerable location, partly below the sea level and the level of large rivers. It is therefore not surprising that in the Netherlands there is very much attention to the question how to plan and manage the land resources in the most sustainable way. The responsibility for planning and management of land resources is, as it is in many other countries, shared by two ministries: that of Agriculture, Nature management and Fisheries, and that of Housing, Spatial Planning and the Environment.

The recent Dutch national policy plans paved the way for the process of planning and management of land at the regional level. Two examples of successful co-operation between the two ministries have been indicated. The first one are the 11 so-called 'ROM-areas', where instruments on behalf of the environment, spatial planning and sectoral policy are applied on a project basis and co-ordinated via action plans. As the second example Mr De Leeuw mentioned the 11 so-called 'Valuable Man-made Dutch Landscapes'. These are regions with major nature and landscape values that are of great cultural-historical and geomorphological importance. The aim is to bring about a change of attitude aimed at conserving and restoring the special characteristics of such landscapes with the active involvement of organizations and interested parties in the region.

Various opinions on sustainability do occur. Exchanging knowledge and keeping an open mind on different standards, values and risks assessments are imperative in order to receive maximum public support.

In this closing speech two topics were elaborated on that were singled out from the outcome of the workshop. One is the relevant experiences in smooth planning and management processes of land resources, which should be converted to minimum conditions national governments may take account of. The second one is the reassessment of the economic values of land, which concerns the habitability of the rural areas and which also generates much interest in the Netherlands.

Finally it was stated that the Dutch delegation will take the conclusions and recommendations of the workshop to the next Intersessional Ad Hoc Working Group on Sectoral Issues in New York, and to the third session on the Commission on Sustainable Development in April 1995.

## ANNEXES

1. Programme of the workshop
2. Organizing committee and secretary of the workshop
3. List of participants
4. Abstracts of the cases submitted to the workshop
5. Summaries of the Issues- and Background-papers
  - 5.1 Integrated approach to planning and management of land: operationalization of Chapter 10 of UNCED's Agenda 21. Issues-paper by the DLO Winand Staring Centre.
  - 5.2 Planning for sustainable use of land resources: towards a new approach. Background-paper by the FAO.

## **Annex 1 Programme of the workshop**

### **INTERNATIONAL WORKSHOP ON AGENDA 21 - INTEGRATED PLANNING AND MANAGEMENT OF LAND RESOURCES**

International Agricultural Centre, Wageningen, The Netherlands,  
20-22 February 1995

#### **Programme of the workshop**

##### Sunday 19th February 1995

Arrival of participants

Registration of participants 16.00 - 19.00 hrs.

Dinner at International Agricultural Centre (IAC)

##### Monday 20th February 1995

9.30 Welcoming statement by the chairman, Mr. J.G.M. Alders,  
Director UNEP Regional Office for Europe

9.40 - 10.00 Opening address by Mr. G.J. Storm, deputy Director General Inter-  
national Cooperation, Ministry of Foreign Affairs, The Netherlands

10.00 - 10.10 Statement by the representative of the Director General of FAO

10.10 - 10.20 Statement by Mr. Pierre Najlis, Representative of the CSD - secretariaat

10.20 - 10.50 Coffee/tea break

10.50 - 11.20 Keynote address: The integration of objectives, goal-setting and policy  
formulation for planning and management of land resources in the rural  
areas, by Dr. W.G. Sombroek, Director AGL, FAO

11.20 - 11.50 Keynote address: Managing a planning process for the use of land  
resources in rural areas with all stakeholders, by Mr. T. Byrne, National  
Landcare Branch, Australia

11.50 - 12.20 Keynote address: The possibilities for sustainable economic  
development in the rural areas, with emphasis on non-traditional  
qualities of land, by Dr. D.R. Steeds, Chief National Resources Division  
(AGR/NR), The World Bank

12.30 - 14.00 Lunch at IAC

- 14.00 - 15.45 General discussion on the Keynote addresses and the objectives of the workshop
- 15.45 - 16.15 Coffee/tea break
- 16.15 - 16.40 Summary of the general discussion, Prof. L. Fresco
- 16.40 - 17.00 Summary of the cases submitted and focussing on the main themes of the workshop, Mr. A.F. van de Klundert
- 18.00 Reception at IAC hosted by Mr. H.A.P.M. Pont, Director-General of Environment and Mrs. J.A.M. Kroese-Duijsters, Director-General of Spatial Planning, Ministry of Housing, Spatial Planning and the Environment, The Netherlands
- 19.15 Dinner at IAC

#### Tuesday 21st February 1995

- 9.00 - 12.30 3 working groups
- 14.00 - 16.00
- Working group 1: Integration of objectives, goal-setting and policy formulation
- Working group 2: Managing a planning proces with all stakeholders
- Working group 3: Economic carriers
- Participants to contribute to the discussion on the basis of experience in their own countries, indicating the role, desirable and possible, of the national government to create an enabling environment for the processes at the meso level
- 16.00 - 16.30 coffee/tea break
- 16.30 - 17.30 Reports of the working groups
- 19.00 Dinner at IAC

#### Wednesday 22nd February 1995

- 9.00 - 12.30 Discussion of the outcome of the working groups  
Conclusions and recommendations of the workshop
- 12.30- 14.00 Lunch at IAC
- 14.00 - 15.45 Conclusions and Recommendations of the workshop (continued)  
Discussion and adoption

15.45 - 16.15 Coffee/tea break

16.15 - 16.45 Closing statement by Mr. J.J. van Aartsen, Minister of Agriculture,  
Nature Management and Fisheries, The Netherlands

16.45 Closing of workshop

19.00 Dinner at IAC

Thursday 23rd February 1995

Departure of Participants



## **Annex 2      Organizing committee and secretary of the workshop**

### **CHAIRMAN, ORGANIZING COMMITTEE AND SECRETARIAT**

<b>Chairman</b>	ALDERS, J.G.M. United Nations Environment Programme 15 Chemin des Anemones 1219 CHATELAINE - GENEVE SWITZERLAND
<b>Secretary of the Workshop</b>	KLUNDERT, A.F. van de Winand Staring Centre P.O.Box 125 6700 AC WAGENINGEN THE NETHERLANDS
<b>Workshop co-ordinator</b>	NEETESON, J.J. Ministry of Agriculture, Nature Management & Fisheries, Directorate IZ P.O.Box 20401 2500 EK DEN HAAG THE NETHERLANDS
<b>Editor of the Workshop report</b>	KWAKERNAAK, C. INRO Centre for Infrastructure, Transport and Regional Development Present address: Winand Staring Centre P.O.Box 125 6700 AC WAGENINGEN THE NETHERLANDS
<b>Editor of the abstracts of cases</b>	VEENEKLAAS, F. Winand Staring Centre P.O.Box 125 6700 AC WAGENINGEN THE NETHERLANDS
<b>Organizing committee</b>	BERG, L.M. van den Winand Staring Centre P.O.Box 125 6700 AC WAGENINGEN THE NETHERLANDS  RAPPARD, P. van Ministry of Agriculture, Nature Management & Fisheries, Directorate IZ P.O.Box 20401 2500 EK DEN HAAG THE NETHERLANDS  SCHOLTEN, J. Ministry of Housing, Spatial Planning and the Environment P.O.Box 30940 2500 GX DEN HAAG THE NETHERLANDS  VERHEY, W. Ministry of Agriculture, Nature Management & Fisheries, Directorate IZ P.O.Box 20401 2500 EK DEN HAAG THE NETHERLANDS

VISSER, P.  
Ministry of Housing, Spatial Planning and the Environment  
P.O.Box 30945  
2500 GX DEN HAAG  
THE NETHERLANDS

BUNTE, A. van de  
International Agricultural Centre Section Organisation Courses and Conferences  
P.O.Box 88  
6700 AB WAGENINGEN  
THE NETHERLANDS

KENTIE, H.R.M.  
International Agricultural Centre Section Organisation Courses and Conferences  
P.O.Box 88  
6700 AB WAGENINGEN  
THE NETHERLANDS

MENS, C.  
Ministry of Agriculture, Nature Management & Fisheries,  
Directorate IZ  
P.O.Box 20401  
2500 EK DEN HAAG  
THE NETHERLANDS

## **Annex 3 List of participants**

### **COUNTRIES**

ALGERIA	AHMIA, M. Permanent Mission of Algeria to the UN 15 East 47th Street, New York, USA NEW YORK, N.Y. 10017, USA
AUSTRALIA	BYRNE, T. Department of Primary Industries and Energy, Land Resources Division GPO Box 858 CANBERRA, ACT 2601
AUSTRIA	QUENDLER, T. Austrian Institute for Spatial Planning Franz Josefs-Kai 27 1010 VIENNA
AUSTRIA	WAGNER, K. Bundesanstalt für Agrarwirtschaft Schweizertalstrasse 36 1130 WIEN
BENIN	DJOGBENOU, C.P. Direction des Forêts et Ressources Naturelles B.P. 06-2603 229 COTONOU
BENIN	HOUETO, D. Ministère de l'Environnement B.P. 01-3621 COTONOU
BHUTAN	DHONDUP, D. Ministry of Planning P.O.Box 127 THIMPHU
BHUTAN	WANGCHUK, P. Ministry of Agriculture P.O. Box 590 THIMPHU
BOTSWANA	MAKGOSA, S.N. Ministry of Local Government, Lands and Department of Lands P.O. Box 2 KASANE
BOTSWANA	MPHATHI, M. Ministry of Agriculture Private Bag 003 GABORONE
BRAZIL	CARVALHO DE OLIVEIRA, M. Ministerio da Agricultura, Esplanada dos Ministerios Bloco B, Sala 210 BRASILIA 70043-900

BRAZIL	JA'COMO, A. Ministerio do Meio Ambiente,dos Recursos Hidricos e da Amazonia Legal Esplanada dos Ministerios , Bl.3, 8e An. BRASILIA DF 70000
BURKINA FASO	KOAMA, E. Direction des Etudes et de la Min. de l'Agriculture et des Ressources Animales, B.P. 7010 OUAGADOUGOU 03
BURKINA FASO	NIKIEMA, P. Ministère de l'Economie des Finances et du Plan , Direction Générale de la Coopération OUAGADOUGOU 01
CANADA	DORCEY, A. School of Community & Regional Planning University of British Columbia 1450 Pennyfarthing Drive, Apt. 211 VANCOUVER BC V6J4X8
CANADA	LUCIUK, G. Agriculture Canada, PFRA-ARAP Room 603-CIBC Tower 1800 Hamilton Street REGINA, SASKATCHEWAN S4P 4L2
CANADA	ADAM, M.P Environment Canada 351 St. Joseph Blvd, Place Vincent Massey, 7th Floor HULL, QUEBEC K1A OH3
COLOMBIA	HIDALGO PAZ, M.S. National Planning Department Calle 26, 13-19 (P-7) BOGOTO 1
COSTA RICA	BALLESTERO, M. Ministerio Recursos Naturales Energia y Minas Calle 8, Avenida 8 y 10 SAN JOSE 10104-1000
COSTA RICA	DIAZ SANCHEZ, O. Ministerio de Agricultura y Ganaderia Sabana Sur SAN JOSE 10094-1000
DENMARK	IVERSEN, P.A. Danish Ministry of Agriculture Slotsholmsgade 10 1216 COPENHAGEN
FIJI	SERU, V.B. Ministry of Agriculture Land Use Section, Koronivia Research Station NAUSORI

FRANCE	<p>LUU, P. Ministère de l'Agriculture et de la Pêche 3, Rue Barbet de Jouy 75007 PARIS</p>
FRANCE	<p>RACAPE, J. Ministère Environnement - DNP 20 Avenue de Segur 75302 PARIS 07 SP</p>
GERMANY	<p>LAEPPEL, E. Bundesministerium für Ernährung, Landwirtschaft und Forsten Rochusstrasse 1 BONN 53123</p>
GERMANY	<p>SCHMITZ, S. Bundesministerium für Raumordnung, Bauwesen und Städtebau Deichmanns Allee BONN 53179</p>
HUNGARY	<p>MOHÁCSY-TÓTH, G. Ministry of Agriculture 1054 Budapest Kossuth L. tér 11 P.O.Box 1860 BUDAPEST 55</p>
INDIA	<p>AHUJA, A.K. Ministry of Environment and Forests Paryavaran Bhawan, CGO Complex Lodi Road NEW DELHI 110003</p>
INDIA	<p>ISSAR, R. National Waste Lands Development Board, Ministry of Rural Development Krishi Bhavan NEW DELHI 40001</p>
INDONESIA	<p>DJOEKARDI, A.D. Ministry of Environment 15 Medan Merdeka Barat JAKARTA 10110</p>
IRAN	<p>SADIGHIAN, I. Ministry of Housing &amp; Urban Development, Physical Planning Center 69 Khoddami Street, Vanak Sqr. TEHRAN 19944</p>
JAPAN	<p>KODANI, Y. Embassy of Japan Tobias Asserlaan 2 2517 KC Den Haag, The Netherlands</p>
JAPAN	<p>MOTOSUGI, A. Ministry of Agriculture, Forestry and Fisheries 1-2-1, Kasumigaseki, Chiyoda-Ku TOKYO 100</p>
THE NETHERLANDS	<p>ANDRIESSE, W. Winand Staring Centre, SC-DLO P.O.Box 125 6700 AC WAGENINGEN</p>

THE NETHERLANDS	BOLSIUS, E.G.A. Spatial Planning Agency Netherlands P.O.Box 30940 2500 GX DEN HAAG
THE NETHERLANDS	BREEDVELD, R. Wageningen Agricultural University Dept. Studium Generale Gen. Foulkesweg 1 6703 BG WAGENINGEN
THE NETHERLANDS	FRESCO, L.O. Wageningen Agricultural University, Dept. of Agronomy Dept. of Agronomy P.O.Box 341 6700 AH WAGENINGEN
THE NETHERLANDS	GINNEKEN, P.C.W.A. van International Agricultural Centre P.O.Box 88 6700 AB WAGENINGEN
THE NETHERLANDS	HEIDEMA, A.P. Ministry of Housing, Spatial Planning and the Environment P.O.Box 30940 2500 GX DEN HAAG
THE NETHERLANDS	HESPER, I. IFHP Wassenaarseweg 43 2596 CG DEN HAAG
THE NETHERLANDS	JORRITSMA, H. Ministry of Foreign Affairs Bezuidenhoutseweg 67 2500 EB DEN HAAG
THE NETHERLANDS	KOFFIJBERG, M. NIROV Mauritskade 21 2514 HD DEN HAAG
THE NETHERLANDS	KUIJEN van, K. Ministry of Housing, Spatial Planning and the Environment P.O.Box 30945 2500 GX DEN HAAG
THE NETHERLANDS	LEESBERG, J.C.A.M. International Agricultural Centre P.O.Box 88 6700 AB WAGENINGEN
THE NETHERLANDS	RAVESTEIJN, N.R. Ministry of Housing, Spatial Planning and the Environment, DGM P.O.Box 30945 2500 GX DEN HAAG
THE NETHERLANDS	ROMEIJN, P. NGO Platform on Sustainable Development Prins Bernhardlaan 37 6866 BW HEELSUM

THE NETHERLANDS	VEENEKLAAS, F. Winand Staring Centre, SC-DLO P.O.Box 125 6700 AC WAGENINGEN
THE NETHERLANDS	WEG, R.F. van de International Agricultural Centre P.O.Box 88 6700 AB WAGENINGEN
PERU	BENAVIDES DE LA SOTTA, J. Ministry of Foreign Affairs Lampa no. 535 LIMA
PERU	GARNICA, L. National Institute of Natural Resources, Ministry of Agriculture Calle 17 no 355, El Palomar, San Isidro LIMA 27
PHILIPPINES	BACANI, M. National Economic and Development Authority 7th Floor, Amber Avenue PASIG CITY 1600
PHILIPPINES	CONCEPCION, R. Bureau of Soils and Water Management Cor. Visayas Ave. & Elliptical Road Diliman QUESON CITY
PORTUGAL	DOMINGOS PEREIRA, G. I.E.A.D.R./Ministerio da Agricultura Avenida Defensores de Chaves no 3 LISBOA 1000
SOUTH AFRICA	BACKEBERG, G. Department of Agriculture Private Bag X416 PRETORIA 0001
SOUTH AFRICA	GERBER, S.A. Department of Environmental Affairs and Tourism Private bag x447 PRETORIA 0001
TANZANIA	DUMEA, H.A. Ministry of Agriculture & Livestock Development Avalon House, P.O. Box 9071 DAR ES SALAAM
TANZANIA	NANAI, K. Ministry of Tourism, Natural Resources and Environment, Division of Environment P.O. Box 72243 DAR ES SALAAM
UNITED KINGDOM	CHILLINGWORTH, P.J. Ministry of Agriculture, Fisheries and Block C, Government Offices Brooklands Avenue CAMBRIDGE CB2 2DR

UNITED KINGDOM	GOSSOP, C. Department of the Environment 2 Marsham Street LONDON SW1P 3EB
USA	MARGHEIM, G. Natural Resources Conservation Service P.O.Box 2890 WASHINGTON, DC 20013
VIETNAM	NGUYEN, K. Ministry of Agriculture and Food Centre of Resources and Environment 61 Hang Chuoi Street HANOI
VIETNAM	NGUYEN, D.M. Vietnam General Department of Land Administration lang Trung Road, Dong Da HANOI



## UNITED NATIONS AND OTHER INTERGOVERNMENTAL ORGANISATIONS

FAO	SOMBROEK, W.G. Via delle Terme di Caracalla 00100 ROME ITALY
FAO	WAVEREN, E. van Via delle Terme di Caracalla ROME 00100 ITALY
ISNAR	GOLDSWORTHY, P.R. P.O.Box 93315 2509 AJ DEN HAAG THE NETHERLANDS
UN/CSD	NAJLIS, P. United Nations, Dept. for Policy Coordination and Sustainable Development NEW YORK, NY 10017 USA
UNDP	SCHMIDT, R.C. United Nations Development Programme Bureau for Policy & Programme Support One United Nations Plaza, Room FF-10118 10017 NEW YORK NY USA
UNEP	AYOUB, A.T. United Nations Environment Programme P.O. Box 30552 United Nations Ave. NAIROBI (Gigiri) KENYA
UNEP	ZHANG, J. United Nations Environment Programme P.O. Box 30552 United Nations Ave. NAIROBI (Gigiri) KENYA
WORLD BANK	STEEDS, D.R. 1818 H Street NW 204033 WASHINGTON D.C. USA

## INTERNATIONAL NON-GOVERNMENTAL ORGANIZATIONS

ECOOPERATION	MARWIJK, A. van P.O.Box 19023 3501 DA UTRECHT THE NETHERLANDS
ELCI	AGGARWAL, N. Environmental Liaison Centre International P.O. Box 72461 NAIROBI KENYA
ETC	BLIEK, J. van der P.O.Box 64 3830 AB LEUSDEN THE NETHERLANDS
IFAP	KAPITA, B.D.S. Zambia National Farmers Union P.O. Box 30395 LUSAKA 10101 ZAMBIA
IFAP	KINNON, F. International Federation of Agricultural Producers 21 Rue Chaptal PARIS 75009 FRANCE
IFAP	MONTEMAYOR, L. Federation of Free Farmers International Federation of Agricultural Producers 41 Highland Drive, Blue Ridge 1109 QUEZON CITY PHILIPPINES
IIED	DENT, D.L. University of East Anglia School of Environmental Sciences Chestnut Tree Farmhouse, Fornsett End NORFOLK NR16 1HT UNITED KINGDOM
PFS	BLOKLAND, K. Paulo Freire Foundation Willemsplein 44 III 6811 KD ARNHEM THE NETHERLANDS

## Annex 4

## Abstracts of the cases submitted to the workshop

### AUSTRALIA

T. Byrne, Dept. of Primary industries and Energy, Land resource division.

Title: **South West Queensland (SWQ) Strategy**

#### Problem

The strategy **compromises** components (i) for natural resource management and (ii) for rural adjustment in a semi-arid pastoral region. Ad (i): sustainable use of artesian water by reducing water wastages (e.g. by pipes instead of open bore drains). Ad (ii) assistance exit non-viable farmers and assisting others to overcome short term difficulties to improve productivity. The strategy will also encourage institutional reforms to nat. res. management and to land tenure. 2 maps.

#### Goals/ambitions

General: to encourage sustainable and economically viable use of artesian water and rangeland resources. The strategy could serve as a model for the management of Australia's semi-arid rangelands.

Environmental: see above; conservation of native flora and fauna

Economic: more innovative land and water management approaches and agricultural and pastoral industries (e.g. sustainable exploitation of native wildlife).

Social: reduced calls for government assistance to meet equity concerns created by droughts and non-viable land and water use.

Emphases on goals: Governments attach equal weights to the goals mentioned above; Pastoralists give highest priority to economic goals, followed by environmental goals.

#### Start/initiative/funding

Initiated by the Commonwealth and Queensland governments, 1994/95 (they also provided the funds), **following a request from industry groups to address the problems in the region.**

#### Organization/approach

Organization: see diagram

Approach: wide participation of governments, regional communities and landholders. Integration of policies for nat. resources and regional development

#### Results/solutions/successes/threats

Alternatives to agriculture: transport, road maintenance, fencing, sheep shearing, meat processing and tourism.

Success factors:

- widespread recognition within the region for the need to change
- **good scientific information on both the problems and the solutions required.**
- participation by landholders and community and industry groups in development and implementation of the Strategy

Threats:

- limited government funding;
- poor financial viability and high level of farm debt limit the ability to carry out management changes.

Losers: non-viable pastoralists have to leave, but support is available.

**AUSTRIA**  
**K. Wagner,**

**Title: Regional Development Concept for Lungau**

**Problem**

Lungau is a district in Austria in a high mountainous region with difficult agr. conditions and no central location for industries. There are however chances for tourism given the landscape values. Within the framework of EU objective 5b a concept for regional development will be made.

**Goals/ambitions**

General: **Integrated** planning

Environmental: protection of the landscape; sustainable agriculture

Economic: employment; tourism

Social: halt emigration

**Start/initiative**

Regional and federal authorities and EU, 1994.

**Organization/approach**

Organization: see diagram

Approach: endogenous. Gvt of the Bundesland acted as facilitator/mediator.

**Results/solutions/successes/threats**

Concrete results: project just started.

Alternatives to agriculture: tourism

Success factors:

- participation of all stakeholders;
- objectives formulated by locals.

## **BENIN - fuelwood plantations**

**C.P. Djogbenou**, Director Projet Bois de Feu, Direction des Forets et Ressources Naturelles

**Title: Fuelwood plantation project in southern Benin**

### Problem

Deforestation as a consequence of fuelwood harvesting, leading to depletion of tree stocks, decrease in soil fertility and, ultimately, a collapse of the cropping system with all its consequences. No map

### Goals/ambitions

General: To involve fuelwood consumers in tree growing to provide for their needs.

Environmental: Reduce human pressure on nat. vegetation, protect nat. forest; reduce CO2 emission.

Economic: Self-sufficiency in fuelwood and food; save foreign currency.

Social: Easy access to fuelwood by housewives.

Conflicting goals: Whereas local population wishes to collect fuelwood 'free' from nat. vegetation, the government insists on replanting.

### Start/initiative

National Government, 1986.

### Organization/approach

Monitoring board composed of representatives of the Agricultural Centres for Rural Development of each of the 3 departments + project staff. Convene once a year. Six members daily management team.

**Approach: Not so open:** the government carries out all project phases. **Approach was designed 12 years ago, by then participatory approach was not so common.** On state forest sites, farmers are represented by elected representatives. Facilitator is usually the sub-prefect, representing the local administration.

### Results/solutions/successes/threats

Main result: Establishment of 5900 ha of plantations.

Alternatives to agriculture: hired labour.

Success factors: availability to support project policy; full involvement of farmers.

Threats: insufficient marketing of plantations.

Losers: In state plantations, unlawful farmers cropping state-owned lands.

## **BENIN - carbon sequestration**

**D. Houeto**, Min. of the Environment, Director of Environment.

**Title: Village woodlot plantation and natural forest management for carbon sequestration**

### Problem

The project area is characterized by strong pressure on vegetation, by erosion and by silting of water courses. No map.

### Goals/ambitions

General: To achieve, in close cooperation with the local population, plantation activities, and improved forest and soil management.

Environmental: **abate global warming**; biodiversity; preserve vegetation.

Economic: to increase the rural poor's revenue; improve accessibility.

Social: education.

### Start/initiative/funding

Government, 1990. Subsidies by UNDP/GEF.

### Organization/approach

Organization: Director, technical adviser, 3 zone coordinators, daily management team (8 persons).

Approach: Participatory. The Bureau of the village development association is the main partner and act as facilitator/mediator, as does the administration at district level.

### Results/solutions/successes/threats

Main achievement: Cooperation of farmers and herdsmen.

Concrete results: tree planting; soil erosion control; training of farmers.

Alternatives to agriculture: Recreation/ tourism; hunting; bee keeping.

Success factors: **the distribution of gains from forest produce (fuel wood, forage) to farmers and herdsmen.**

Threats: Restricting farmers' encroachment on forest; **tax payments before access to forest land.**

**BOTSWANA - SE District**  
**Masego Mphathi, Min. of Agriculture**

Title: **South-East district**

Problem

Small district 1740 km<sup>2</sup>, high population pressure, 6% population growth rate. Low, erratic rainfall. Overstocking, overgrazing, deforestation (fuelwood) -> land degradation. 3 maps included.

Goals/ambitions

General: to provide a **sound technical base for making district land use planning decisions.**

Environmental: stopping land degradation and siltation downstream water resources.

Economic: agricultural productivity; food security.

Social: employment; alleviate poverty; accommodate growing resident population from nearby urban centres.

Min. of Agriculture and Phys. Planning want good agr. land reserved for agr. use, reduced land use conflicts and controlled urban growth.

Start/initiative/funding

Min. of Agriculture and Phys. Planning, 1991. Funding national project.

Organization/approach

Government both at national and district level.

Approach: experts.

Results/solutions/successes/threats

Application of **new methodologies** for determining the suitability of land for agriculture. Production of a land unit map for part of the district.

**BOTSWANA - Chobe enclave**  
**S. Makgosa, District administration Kasana**

**Title: Chobe Enclave Natural Resource Management Project**

**Problem**

Five villages, narrow economic base, conflict wildlife conservation and local population. Need to balance utilization and conservation. **Assignment of 'quota' to be managed by the residents.** 2 maps.

**Goals/ambitions**

General: Mobilization of all villages and consensus among them.

Environmental: abating overutilization wildlife and forest resources and overgrazing.

Economic: broadening tourism base; diversification; raising total revenue.

Social: Employment; increased participation women in resource management; less dependence on government; cooperation between the 5 villages; environmental education.

Conflicting goals: **National vs community - some people think national resources should not be 'given' to one section of the nation.** In general: competition for the same (bio)resources.

**Start/initiative/funding**

District authorities and the wildlife and National Parks headquarters, 1993. **Funding: Project must largely pay itself.**

**Organization/approach**

2 village representatives in a 10-member committee. District authorities assist and advise. USAID provides support.

Approach: very open, sometimes very emotional. Councillors acted as mediator, locally based civil servants as facilitators.

**Results/solutions/successes/threats**

Alternatives to agriculture: Handicraft (baskets); hunting; collecting field produce; building guest houses.

Success factors: **open process; transparency, not forcing; commitment by local politicians; initial activity not needing capital.**

Threats: non-homogeneity of the beneficiary population; poor p.r. between District planning unit and National Parks headquarters and the general public (hidden agenda suspected).



## **BRAZIL**

**M. Carvalho de Oliveira**, Min. of Agriculture

Title: **Small catchment management Program**

### Problem

Agr. areas in the tropical zone subject to very high erosion rates, inducing low crop productivity, loss of investments and water pollution.

### Goals/ambitions

General: An integrated approach with active community participation to achieve alternative practices of soil conservation (such as litter management). **Proved to be more effective than traditional physical measures.**

Environmental: reduce loss of seedlings during thunderstorms; reduce water pollution due to poor soil management and to planning decisions.

Economic: employment; income; stemming emigration to cities.

Social: education and health.

### Start/initiative/funding

**Group of farmers dealing with common problems**, 1986. Grants from federal, state and county levels

### Organization/approach

Organization: group of farmers; local governments and agr. organizations, state and feral authorities.

Approach: integrated planning at water catchment level on a cost sharing manner. Farm leaders and technician act as mediators.facilitators.

### Results/solutions/successes/threats

Concrete results: well organized and planned agricultural sector on county level.

Alternatives to agriculture: agro-tourism; fish farming; agr. product processing; handicraft.

Success factors: common problem (of farmers); support from the public sector.

#### **Threats:**

- **governmental policy instability;**
- **lack of nation-wide and state policy towards the use of nat. res.;**
- shortage of funds;

## **CANADA - Aquifer**

**G. Luciuk**, Agriculture and Agri-Food Canada, Prairie Farm Rehabilitation Administration (PFRA),  
Director Policy & Analysis.

**Title: Grimshaw aquifer management plan**

### Problem

The Grimshaw aquifer is a near surface deposit of water bearing gravels in North Alberta (595 km<sup>2</sup>) and has 7500 domestic users (private wells, industry livestock, irrigation). Protecting it from potential contamination (from septic systems, barnyards, storage sites and disposal pits, etc.) is a priority. Two maps.

### Goals/ambitions

**General:** to develop a **proactive management plan to ensure quality and quantity of water in the aquifer** for present and future users.

**Environmental:** see above

**Economic:** to protect the full economic potential of the resource.

**Social:** avoid health problem because of contamination.

**Conflict of goals.** Because the planning process is proactive rather than reactive, the stakeholders are in agreement with the common goal, though different interest are at stake.

### Start/initiative/funding

Federal and provincial agencies responded to local concerns, 1993. Technical support and volunteer time, in kind or financially, by the stakeholders; additional funding by the Alberta Sustainable Agricultural Agreement Committee.

### Organization/approach

**Organization:** The Grimshaw Aquifer Management Advisory Committee was formed of municipally elected officials and the water cooperative. The committee is advised by a government agency technical team. Each member of the committee is an equal partner; **all decisions are through consensus**, with a majority vote ruling at stalemate.

**Approach:** bottom up, government agencies acting as advisors.

### Results/solutions/successes/threats

**Main achievement:** the proactive nature of the plan.

**Concrete result:** Summary of all existing and available regional data.

**Success factors:**

- presence of facilitator;
- common goal and participation of all stakeholders;
- consensus decision making.

**Threats:** bureaucracy

**Losers:** those who fail to participate.

## **CANADA - stream rehabilitation**

**G. Luciuk**, Agriculture and Agri-Food Canada, Prairie Farm Rehabilitation Administration (PFRA),  
Director Policy & Analysis.

Title: **Dauphin Lake Management Plan**

### Problem

The Dauphin Lake Basin in western Manitoba is over 8000 km<sup>2</sup> in size (56% agr., mainly grain, 38% forest) and has 20,000 inhabitants in 5 communities. The basin is drained by 7 major streams that empty into Dauphin Lake. These streams have endured a century of degradation: meander cut-offs and channelization have resulted in increased stream gradients causing excessive bed and bank erosion. Livestock operation with uncontrolled access to riparian zones have contributed to the erosion. Water quality have been negatively impacted. No map.

### Goals/ambitions

General: A long term stream rehabilitation program addressing the problems with sediment and nutrient loading, along with programs for education, recreation and habitat development.

Environmental: Fight water pollution; health and biodiversity of riparian zones; flood control.

### Start/initiative/funding

Manitoba Dept. of Natural Resources, 1989. Funding: various grants, volunteer time from various government agencies.

### Organization/approach

Organization: Central is the Dauphin Lake Advisory Board, composed of 48 representatives covering 7 broad interest sectors. In addition there is a Technical Advisory Board and a Board Executive.

Approach: cooperation between government agencies and stakeholders; **decision making on consensus base**. The Manitoba Dept. of Natural Resources acts as facilitator.

### Results/solutions/successes/threats

Concrete results: **10 site rehabilitation plans and 5 stream rehabilitation partnership agreements have been signed between landowners and the Advisory Board.**

Success factors:

- **Clear identification of the issues, presentation of information.**
- Consensus decision making

Threats: limited financial support.

## **CANADA - Conservation Project**

**G. Luciuk**, Agriculture and Agri-Food Canada, Prairie Farm Rehabilitation Administration (PFRA),  
Director Policy & Analysis.

### **Title: Weyburn Conservation Project (WCP)**

#### Problem

The Rural Municipality (RM) of Weyburn has very little nat. tree cover, nearly everywhere cleared for agr. No map.

#### Goals/ambitions

**General:** To provide a conservation model for Saskatchewan by combined efforts in one RM. Having 3 levels of government, private agencies and landowners work together.

**Environmental:** Wildlife habitat; soil conservation; riparian protection and water quality.

**Economic:** Crop protection; rural development; diversification.

**Social: Quality of life for landowners: i.e. trees vs no trees.**

#### Start/initiative

The Rural Municipality and the PFRA Shelterbelt Centre, 1993.

#### Organization/approach

**Organization:** Cooperation between landowners (provide land and labour), Wildlife Federation (equipment and labour), Provincial Government (mulch), Municipal Government (**tax breaks** and P.R.), Fed. Government (trees, technical assistance and p.r.).

**Approach:** Low key promotion, one on one with the land owner and good incentives.

**Landowner is the key: if not interested, no project.** PFRA staff are facilitator.

#### Results/solutions/successes/threats

**Concrete results:** Land inventory.

**Success factors:** Cooperation; Landowner participation.

**Threats:** Lack of landowner support (some are near retiring and not interested); lack of funds.

**CANADA - permanent cover**

**G. Luciuk**, Agriculture and Agri-Food Canada, Prairie Farm Rehabilitation Administration (PFRA),  
Director Policy & Analysis.

Title: **Permanent Cover Program (PCP)**

Problem

**Soil erosion.** The program offers landowners a financial incentive to convert marginal land from annual crop production (mainly grains) to uses under permanent cover (mainly forages). 1 Map.

Goals/ambitions

General: An environmental program to protect land subject to soil erosion by converting it to other users.

Environmental: soil conservation; biodiversity; water quality.

Economic: agr. adaptation.

Social: rural sustainability.

Start/initiative/funding

Fed. Government (also funding?), 1989.

Organization/approach

Organization: Federal through the Prairie Farm Rehabilitation Administration.

Approach: proactive. Uptake by producers voluntary

Results/solutions/successes/threats

Concrete results: **Very rapidly fully subscribed. 15,000 producers converted, for the long term, 400,000 ha of fragile land.**

Success factors:

- responded to need identified by producers;
- **generated support from environmental interests by providing long term land use conversion.**

Threats: budget.

**CANADA - database study Northern Rivers**

Mrs. M.P. Adam, Environment Conservation Service, Ecosystem Conservation Directorate, Sustainability Branch.

Title: **Northern Rivers Basin Study**

Problem

The Alberta Government approved in 1990 a **pulp mill** despite concerns from aboriginal and environmental groups that insufficient baseline information was available regarding the impact on the aquatic ecosystem. 1 map.

Goals/ambitions

General: to gather this baseline information on water quality, fish health and river flow.

Start/initiative/funding

Initiative (1991) and funding (Can dollar 11.38 mill.) by the governments of Alberta and Canada.

Organization/approach

**Organization:** A unique management structure was set up under which control of spending and scientific research was handed to a 25-persons management board made up of stakeholders in the river basins. The Study Board is made up of aboriginal leaders, government officials, municipal representatives along with members of the environmental, health, educational, agricultural, industrial and public sectors.

**Approach:** The Study operates at arms length from its government funders and has endorsed an open communications policy under which all information is released to the public in a timely manner.

Results/solutions/successes/threats

**Concrete results:** Feb. 1995 90% of the scientific work completed or underway.

**Success factors:** strong leadership, staff and governmental support; open communications policy.

**Threats:** initial interference to influence the Study by individual stakeholders; possible non-acceptance of the findings by special interest groups and stakeholders.

**CANADA - multi-stakeholders organizations**

Mrs. M.P. Adam, Environment Conservation Service, Ecosystem Conservation Directorate, Sustainability Branch.

**Title: Atlantic Coastal Action Program**

Problem

Environmental degradation and unsustainable resource use, threatening the coastal ecosystem and limiting economic and social benefits. No map.

Goals/ambitions

General: Launching and supporting community based consensus driven approaches to sustainable development in ecosystems.

Environmental: Biodiversity (water fowl and fish stocks); abating pollution.

Economic: sustainable industries.

Social: controlled urbanisation; **cultural integrity**.

Start/initiative/funding

Communities involved, 1991. **Funding by multi-stakeholder organizations (Can dollar 5 mill., financially and in kind) from numerous sources.**

Organization/approach

Organization: **No organization at program level**; community organization vary.

Approach: The consensus decisions of multi-stakeholder organizations would not be subordinate to the authority of any one stakeholder, e.g. Environment Canada. A coordinator (facilitator) was hired by each multi-stakeholder organization.

Results/solutions/successes/threats

Concrete results: 13 ecosystem management initiatives underway.

Alternatives to agr.: aquaculture, ecotourism, entertainment sports.

Success factors: utilitarian values; independent body.

Loss: independence if an interdependent regime materialises.

## COLOMBIA

Mrs. M.S. Hidalgo, National Planning Dept.

Title: Sustainable conservation and exploitation of the "guandal" forest in the Dept. of Nariño

### Problem

The Pacific coast of Nariño has a valuable homogeneous forest, the "guandal", which provides for almost all domestic demand of soft wood. Its exploitation have been uncontrolled and unplanned, leading to overexploitation. Timber industries are opting out. For the local people the "guandal" is their primary source of income, otherwise there is extreme poverty. 1 map.

### Goals/ambitions

General: Sustainable exploitation of the 'guandal' forest thereby securing gainful employment.

Environmental: regeneration and conservation of the forest.

Economic: timber supply to industry; employment.

Social: quality of life.

**Conflict of goals: immediate exploitation preferred by local population whereas government, CORPONARINO (executive unit) and the University want to preserve the forest and its sustainable use. Timber industries want wood supply without too much worrying about long term availability.**

### Start/initiative/funding

CORPONARINO (regional corporation for the development of Nariño) and the University of Medellin, 1992. Funding by the Dutch and Colombian governments.

### Organization/approach

Organization: Head committee, interinstitutional committee, CORPONARINO, and a unit to manage Dutch funds.

Approach: Open, receptive. Active involvement of the communities, through participatory workshops with regional and national government representatives. **The technicians of the project, natives from the region, acted as facilitators.**

### Results/solutions/successes/threats

Concrete results: awareness of the forest's value by the communities, which are participating in the planning, evaluation and execution of the project. The research results are transferred to the community.

Alternatives to agr.: very few due to isolated location.

### Success factors:

- **The fact that in the eyes of the community in the region this was the first time the government showed some interest in their problems.**
- Availability of financial resources.

### Threats:

- no former experience with this kind of project;
- difficult access to the region.



## **COSTA RICA**

**Mrs M. Ballester**, Min. of Natural Resources, Energy and Mining

### **Title: Tempisque River Basin Project**

#### Problem

The Tempisque River Basin (5454 km<sup>2</sup>) in NW Costa Rica contains the largest **hydro-electric project** which supplies half of the country's electricity needs. The artificial lake supplies irrigation water for arable farming in the Basin. Besides agr., the Basin comprises 3 nature conservation areas (tropical dry forest and wetlands). The current use of the nat. resources creates environmental problems with serious social consequences. The demands of water from the river exceeds its capacity. The lack of regulations and the intensive use of the zone have led to low agr. productivity, deforestation and illegal development of river resources. In addition, the indiscriminate use of agro-chemicals creates a pollution problem. 2 maps.

#### Goals/ambitions

**General:** Raise awareness to the problems in the Basin through a **participatory** process.

**Environmental:** enlarge forest cover; **establish ecological corridors**; conservation of wetlands; pollution abatement of shallow and underground water supplies.

**Economic:** efficient use of land and water; to encourage private reforestation and agroforestry; sustainable gravel and sand quarrying in the river; to promote tourism.

**Social:** preserve rural aqueducts; equitable and efficient use of resources; a more fair distribution of income.

#### Start/initiative/funding

Min. of Nat. Resources, Energy and Mining (1994) as a reaction to protest by small scale farmers and sand miners. Funding in kind by governmental institutions, and financially by the Neo-tropical Foundation (primarily to pay consultants).

#### Organization/approach

**Organization:** see diagram

**Approach:** open and participatory. The Neotropical Foundation and the project management act as facilitators/negotiators.

#### Results/solutions/successes/threats

**Concrete results:** project in starting phase.

**Alternatives to agriculture:** sand and gravel quarrying; land sales; (eco)tourism; industry and commerce.

**Success factors:**

- securing outside funding;
- the presence of the Neotropical Foundation (made among others various studies).

**Threats:**

- current legislation remains behind decision making on adequate and efficient use of land resources.
- **weak local governments.**

**Losers:** agr. producers will have to ration their water use.

## **DENMARK**

**P.A. Iversen**, Min. of Agriculture

**Title: Baermose og Himmerig Skov**

### Problem

Highway construction in an open farmland area, close to a new residential area near the city of Aarhus, brought with it the need to improve the **recreational quality of the landscape**. Also the residential area should be shielded from the highway. A land consolidation scheme coordinated the compulsory purchase of land for the highway; in addition there was a voluntary scheme to improve the allocation of land to the remaining agr. holdings. 2 maps.

### Goals/ambitions

General: better opportunities for recreation.

### Start/initiative/funding

The community of Aarhus, 1990. **Joint venture of highway and forest agency funds.**

### Organization/approach

Organization: Coordination of Highway expropriation Commission and National Land Consolidation Agency.

Approach: very open, all landowners participated voluntarily; consensus paramount.

### Results/solutions/successes/threats

Concrete results: 170 ha of forest planted.

Alternatives to agriculture: employment in nearby town.

Success factors: open process; skill negotiator.

Threats: potential demagogues arguing against.

## **GERMANY**

**E. Läßle**, Bundesministerium für Ernährung, Landwirtschaft und Forsten (Min. for food supply, Agr. Economics and Forestry), Dept. of agr. economics and forestry.

Title: **Land consolidation procedure Sulingen, County of Diepholz**

### Problem

The area (6400 ha) is predominantly agricultural, partly with uneconomically shaped parcels. Moreover, the accessibility is insufficient. One map.

### Goals/ambitions

General: coordination of improvement measures of the private and the public sector; harmonized proceedings.

Environmental: avoiding water pollution by nutrients and pesticides; secure wet greenland; renaturalization of waterbodies; reduction of traffic congestion.

Economic: creating and securing agr. and non-agr. income sources; improve infrastructure for recreation and transport, and to attract new enterprises.

Social: support to exit farmers; reduce emigration of the younger generation.

Conflicts of goals:

- **competition for land between farmers and non-agr. users.**
- farmers do not recognize the extent of the problem of water pollution.

### Start/initiative/funding

Farmers and their association, the city of Sulingen, the nature conservation agency and the local land consolidation branch, 1981. Funding by the government of Lower Saxony. Cost of implementation to be paid by the body of participants (land owners). Cost that can be attributed to applications is charged to the applicants.

### Organization/approach

Organization: A 'body of participants' was formed, composed of land owners and 'participants of second order'. Nine of them are the executive board. This body is supervised by the local land consolidation agency, which is in turn supervised by regional government.

Approach: very open. The office for agr. structure (local land consolidation agency) acts as process manager and facilitator.

### Results/solutions/successes/threats

Alternatives to agr.: new jobs and **job combinations: e.g. farmers conserving nat. and landscape elements; recreation, holiday on the farm, etc.**

Success factors:

- availability of funds to support the process and purchase land;
- **general awareness that without plan everyone would achieve less.**

## **INDIA - watersheds**

**Mr Ranjit Issar**, Min. of Rural Development, National Wasteland Development Board

**Title: Development of rainfed, degraded watershed areas**

### Problem

Land degradation because of high land pressure, marginal investments and water erosion. No map.

### Goals/ambitions

Environmental: rehabilitation green cover; less soil and water run off; conserving biodiversity.

Economic: higher income; increased productivity of land.

Social: poverty alleviation; equitable access to rural employment (emphasis on women, the landless and tribals); community asset building; schools, roads, drinking water.

### Start/initiative/funding

Min. of rural development, 1995. Funding: Central Government.

### Organization/approach

- Parties involved:
  - Development agency (district level, elected representatives local institutions, monthly meetings)
  - Project Implementation Agency (sub-district, fortnightly meetings)
  - Watershed Development Association (village level)
  - Watershed Committee: women groups, user groups, self-help groups.
  - Daily management team.
- Approach: Participatory through meetings and discussions. Min. of Rural development facilitator

### Results/solutions/successes/threats

- Alternatives to agriculture: minor forest produce such as bee keeping, resin and leaf gathering; handicraft.
- Success factors: **watershed as overarching concept**; flexibility in delegations; reliance on people for implementation.
- Threats: Shortage of skilled voluntary agencies and of technical professionals.

## **INDIA - forests**

**Ms. A.K. Ahuja**, Min. of Environment and forests, National Afforestation and Eco-development board.

**Title: Country-wide programme of regeneration of degraded forest through Joint Forest Management (JFM). This case: State of West Bengal.**

### Problem

23% of India is forest; half of it degraded. West Bengal: 9% forest; 45% of the population below poverty line. Overutilization of forest, forest being virtually the only income earning/subsistence resource during the non-agricultural season. Degradation of forest resource lead to emigration to urban centres, loss of biodiversity and degradation agr. lands downstream. Constant conflicts between people's needs from forests and forests department's need to conserve these as State revenue resource. No map.

### Goals/ambitions

General: JFM programme aims at regenerate and conserve forests with the people's participation, through consultation with local communities.

Environmental: Forests as carbon sink; biodiversity; fighting land degradation.

Economic: poverty alleviation; fuelwood and timber produce; land productivity.

Social: employment; stemming emigration; drudgery of women.

Conflicting goals: **local stakeholders want immediate subsistence and income needs, regional and national levels want long term sustainability and environmental stability.**

### Start/initiative/funding

Local authorities in the Dept. of Forest of the State Government, 1972. Funded through internally as well as externally funded projects.

### Organization/approach

National: Min. of Environment and forests; National afforestation board and eco development board.  
State level: special committee.

District level: special committee.

Field level implementing agency: forest protection committees (FPCs) composed of families, particularly economically backward families living in the vicinity of forests and officials of the Forest Dept. Executive committees are composed of elected politicians, elected representatives of the beneficiaries and an officer of the Forest Dept.

Approach: interactive and open. Forest service officers as key facilitators.

### Results/solutions/successes/threats

Alternatives to farming: non-timber forest product based industries.

Success factors: **partnership of the people and openness of the process**; legitimacy by the Central Ministry of Environment and forest; good facilitators; **availability of funds.**

Threats: marketing forest products; danger of conflict in case of acquirement of new rights without considering existing ones.

## INDONESIA

H.S. Dillon, Min. of Agriculture

Title: **The integrated Agricultural Development Project in Irian Jaya**

### Problem

Disparity of income levels and development between Eastern Indonesia (least developed) and the rest of the country. No map.

### Goals/ambitions

General: Reduce the gap between Irian Jaya in terms of development and the rest of the country.

**Irian Jaya offers the greatest challenge in this respect due to its unique social and bio-physical environment, its size and dispersed settlement pattern, its pioneer conditions and its isolation.**

Environmental: reduce land degradation.

Economic: **greater equity**; employment.

Social: gainful employment to stem emigration.

### Start/initiative

Provincial authorities in cooperation with the Min. of Agr., 1991.

### Organization/approach

Approach: participatory for (small) farmers. Provincial government official proved an excellent facilitator.

### Results/solutions/successes/threats

Success factors:

- open process;
- availability of some funds to support the process and for implementation;
- a good mediator.

Threats:

- if one group gained nothing, it could block the whole process;
- **new political circumstances could disturb the process.**

## **IRAN**

**Iraj Sadighian**, Min. of Housing & Urban Planning, Physical Planning Centre

Title: **National Physical Planning in Iran**

### Problem

The next 30 years the urban population of Iran will grow from 32 to 95 million. Iranian cities are generally located in the midst or in the vicinity of prime agr. land. Uncontrolled urban sprawl has resulted in plundering these valuable assets. Other negative effects: squandering of green areas such as forests and ranges, pollution of water resources, and endangerment of sensitive ecosystems. 2 maps.

### Goals/ambitions

The National Physical Plan (NPP) has three main objectives:

1. Recommendations on **site selection for urban development**.
2. The future urban network;
3. Land use/zoning regulations for the entire national territory.

Environmental: avoid loss of prime agricultural land to urbanization; avoid water pollution; protect ecosystems.

Economic: Accessibility; controlled urbanization.

**Social: Decentralization and poverty mitigation (priority given to remote, isolated and poor areas)**

### Start/initiative/funding

Min. of Housing and urban development, 1991. Funding by government.

### Organization/approach

Organization: see chart.

Approach: Technical. A three tier approach have been adopted: national, regional and local.

### Results/solutions/successes/threats

not relevant

## **THE NETHERLANDS**

**C. Kwakernaak**, Min. of Housing, Spatial Planning and the Environment

**Title: Drentse Aa catchment area**

### **Problem**

Changing water quantity (drainage, groundwater extraction) and water quality (nutrients and pesticides) conditions threaten characteristic wetland vegetation in the catchment area of the small river Drentse Aa. 3 maps.

### **Goals/ambitions**

General: Recovering characteristic wetland vegetation.

Environmental: Clean and sufficient groundwater and surface water for public water supply; creation of new nature areas

Economic: sustainable agr. development

Social: offering perspectives for regional agr.

### **Start/initiative/funding**

Min. of Physical Planning, Housing and Environment, 1992. Special funds by Ministry.

### **Organization/approach**

Organization: ROM (Spatial Planning and Environment) project, with steering committee, project group and advisory council.

Approach: practical, aimed at implementation.

### **Results/solutions/successes/threats**

Concrete results: a plan that should be realized 5 years after formal approval.

Alternatives to agr.: selling parcels to nature conservation agencies; recreation; landscape and nature maintenance.

Success factors:

- Consensus within the steering committee, as well as between governments and local agents.
- Financial support from 2 Ministries as 'grease'.

Threats: budgetary constraints.



## THE NETHERLANDS

Mrs M. Post, Spatial Planning Agency

Title: **Green Hart**

### Problem

The Randstad containing four major cities and both mainports Rotterdam and Schiphol Airport, is undergoing considerable urban expansion. As a contrast to urbanisation the 'Green Heart' concept was devised, being the agricultural (mainly grassland) open space in the middle. This concept is now at risk. 2 maps.

### Goals/ambitions

General: To retain 'green' functions to the Green Hart

Environmental: reduction water pollution and man-induced drought; **creation of tranquillity zones**

Economic: **promote 'economic carriers' to retain green functions**; recreation & tourism

Social: outdoor recreation city dwellers.

Conflict of goals: discrepancy across stakeholders; main conflict between urban sprawl and retention green functions.

### Start/initiative

Min. of Housing, Spatial Planning and Environment, 1992.

### Organization/approach

Organization: Three Ministries and three Provinces involved.

**Approach: Top-down** because otherwise, due to the large number of parties involved, a joint product will not be realized.

### Results/solutions/successes/threats

Alternatives to agriculture: outdoor recreation; alternative income sources from surrounding cities.

Success factors: the Green Hart **concept**.

Threats: Plan for High Speed Railway; planning delays.

Losers: Agriculture (land is converted to semi-natural use), and people who want to live and/or work in the Green Hart.

## **THE NETHERLANDS**

**A.F. van de Klundert**, Winand Staring Centre for Integrated Land, Water and Soil Research, Wageningen

Title: **Guelderland Valley**

### Problem

The Guelderland Valley is located between two major nature areas and contains many relatively small but very intensive farms. There are major environmental problems: ammonia pollution, nutrient surpluses in ground and surface water and disappearance of the originally small scale landscape. Many **small farmers** (up to 80%) are expected to opt out in the next 10 years. 2 maps.

### Goals/ambitions

General: Awareness and recognition of the environmental problem by all those involved. Formulation of a common strategy and of new perspectives for the region

Environmental: **abate water pollution**; abate acidification; **reverse process of fragmentation of the landscape**.

Economic: viability of small farms; tourism.

Social: regional gainful employment; controlled spill-over of population and business from urban West of the Netherlands.

### Start/initiative/funding

Provincial authorities in cooperation with the Min. of Spatial Planning and Environment, 1989. Funding by Provincial and Central Gvt.

### Organization/approach

Organization: **Special steering committee** composed of all parties involved.

Approach: Very open, participatory. A provincial civil servant proved to be an excellent facilitator.

### Results/solutions/successes/threats

Concrete results:

Alternatives to agriculture: selling parcels for housing; recreation; nature and landscape maintenance; jobs in nearby towns.

Success factors:

- open process;
- availability of funds;
- good mediator

Threats:

- new (political) circumstances may disturb process;
- if for one group there is nothing to gain, it can always block process.

## **PHILIPPINES**

**Mrs M. Bacani**, National Economic and Development Authority

**Title: Palawan Integrated Area Development Project**

### Problem

This main island of Palawan (425 km long) has a chain of mountains running along almost the whole length of the island, creating a major barrier to communication between the east and west coast. Agriculture is predominantly at subsistence level. Shifting cultivation, practised by tribal groups and settlers, is widespread and has affected 200,000 ha, creating soil erosion. Small farmers are not organized, thus having little leverage in marketing their produce. Fishing is primarily small scale and affected by overexploitation of the resource base by large commercial boats, poor landing and storage facilities and inadequate local markets. Nearly half of the island is covered by forest, threatened by illegal logging. Damage to the soil (with consequent silting of land and water downstream) and to the residual stand of trees is evident. 1 map.

### Goals/ambitions

General: Promoting a balanced regional development and more **equitable distribution of benefits**.

Environmental: reduce soil degradation and degradation of the uplands; fight forest destruction; biodiversity.

Economic: equitable distribution of benefits; employment.

Social: access to social services.

### Start/initiative/funding

(Former) National Council for integrated Area Development, 1991. Funded by the Asian Development Bank and credit programmes from the nat. government.

### Organization/approach

Organization: see figure

Approach: Mobilization and participation of the affected communities by organizing them and requiring their participation in the entire project. **Coordination between government agencies and NGOs.**

### Results/solutions/successes/threats

Concrete results: 54% of the project components have been implemented

Alternatives to agriculture: ecotourism; fishing; mining; forest plantation; timber industry.

Success factors: participation of communities and NGOs.

## **SOUTH AFRICA**

**G. Backeberg**, Dept. of Agriculture, Directorate of agr. economics, Deputy director agricultural resources.

**Title: Makhatini Irrigation Scheme**

### Problem

Natural resources have a high potential for irrigation. Release of water from dam and canal flow must be managed to keep an ecological balance. Customary rules and tribal authorities have strong influence on management of farms. Conflicts exist because of insecure property rights, a transitional phase in development approach and duplication of functions by government departments. A process is underway to involve local communities, development agencies, provincial and central government. 2 maps.

### Goals/ambitions

**General:** Settlement and development of small farmers. The task is to compile a comprehensive plan to promote sustainable farming operations.

**Environmental:** Water supply stabilization and flood prevention; flood plain replenishment for fish life; protecting plant growth on river banks; prevent erosion due to overgrazing; counteract malaria spreading.

**Economic:** **Security of private and communal land tenure and water rights;** food security.

**Social:** **Employment through local processing (value adding) of crops.**

**Conflicts between goals:**

- Preference for individual decision but no secure property rights.
- Immediate need for food and income but at the expense of ecological balance.

### Start/initiative

Central Government Dept., 1985. Funding by central and provincial government and development agencies.

### Organization/approach

**Organization:** see figure

**Approach:** **until 1988 prescriptive and centrally managed; since 1988 participatory and supporting individual initiatives.** Because of proven failure past approaches, divisive activities and lack of progress. **Involvement of new development agencies led to gradual changes.** Representation of interested and affected parties through management agent.

### Results/solutions/successes/threats

**Concrete results:** settlement of 259 commercial farms (2650 ha); local provision of inputs; processing of cotton.

**Alternatives to agriculture:** crafts (for tourists); backward and forward linking, e.g. co-operatives and crop processing.

**Threats:** insecure property rights.

**Losers:** dryland farming

## TANZANIA

H.A. Dumea, Min. of agriculture and livestock development

Title: **Soil conservation and agroforestry project (SCAPA)**

### Problem

Small district based project on the slopes of Mount Meru. Densely populated; severe soil erosion due to the nature of the soil overstocking and poor management practices. Map follows.

### Goals/ambitions

General: increased agr. yields.

Environmental: abating deforestation.

Economic: increasing agr. productivity; selfsufficiency in forest products; foreign exchange.

Social: (self) employment.

Conflicting goals along the lines of competition for the same resources (land, water).

### Start/initiative/funding

Land user through their Regional and District authorities, 1989. Funding by government and SIDA.

### Organization/approach

Organization: see figure.

Approach: participatory. The project coordinator is the regional soil conservation officer.

### Results/solutions/successes/threats

**Main achievement: increased yields which continually attracts more farmers to join the ever expanding project.**

Alternatives to agriculture: selling tree and fruit seedlings; fish farming; small industries.

Success factors:

- voluntary participation;
- simple cost effective technologies;
- material support from SIDA-RSCU.

Threats:

- **resistance to reduce livestock numbers;**
- resistance to use farmland for agro-forestry/trees;
- resistance to invest or spend on conservation.

## **UNITED KINGDOM**

**P.J. Chillingworth**, Min. of Agriculture, Fisheries and Food, Land use planning unit, regional planning adviser

Title: **The Broads Environmentally Sensitive Area**

### Problem

The Broads are one of the few remaining large tracts of lowland river valley grassland in Britain. It has important natural and landscape values (rare species of plants, over-wintering place for birds, visual expanse). This is under threat from modern agr. practises such as drainage and conversion to arable land and intensive grassland management. No planning mechanism existed to control damaging farming. 2 maps.

### Goals/ambitions

General: **Designation allows farmers to be paid annual amounts for voluntarily following management prescriptions (payments based on estimated income loss).**

Environmental: protection historic landscape and wildlife and flora.

Economic: agricultural economy; tourism; employment

Social: maintaining an unspoilt semi-natural landscape for future generations.

### Start/initiative/funding

Min. of Agriculture, Fisheries and Food, 1987. National and EU funding.

### Organization/approach

Organization: see figure.

Approach: very open, farming friendly. Project officer acts as both mediator and facilitator

### Results/solutions/successes/threats

Concrete results: involvement of farmers in environmental management.

Alternatives to agr.: tourism; conversion of farm buildings into residential or commercial use.

Success factors: voluntary nature of the scheme.

### **Threats:**

- **fear that designation would be used as planning tool;**
- initially, getting the levels of compensation payment right.

## **UNITED KINGDOM - Peak National Park**

**C. Gossop**, Dept. of the Environment, International Planning Division

### **Title: The Peak District Integrated Rural Development (IRD) Project**

#### Problem

The Peak National Park comprises three villages, with a total population of 748. In 1981 all three communities had experienced **prolonged decline in social, economic and environmental terms**. Populations were declining, jobs being lost, characteristic environmental features being damaged or lost through neglect. One map.

#### Goals/ambitions

General: The IRD project aimed to halt the trends of decline.

Environmental: environmental management alongside food production; nature conservation (wild flowers, bird nesting).

Economic: broadening economic base by new businesses; employment.

Social: touch a spark of initiative and pride in the local community.

#### Start/initiative/funding

**EEC research program**, 1981. Funding largely from the EEC and government depts (240,000 pound) and participants (224,000 pound).

#### Organization/approach

Organization:

**Approach: An experiment aiming to test the practical application of three principles (the 3 I's): Individuality, Involvement and Interdependence.** A user friendly 'one-stop shop' approach was applied, i.e. there was a single project fund and a single application form for any scheme whether for social, economic or environmental purposes (or combination).

#### Results/solutions/successes/threats

Concrete results: 24 non farm businesses were assisted and 60 new jobs created. 43 community schemes were encouraged creating new village institutions, reviving local traditions and encouraging a new 'pride of the place'

Alternatives to agriculture: small businesses.

Success factors:

- Public sector seen by local communities as ally rather than bureaucratic impediment by adopting a positive encouraging approach.
- Stimulation of community pride and growth in self-confidence

Threats:

- The variation in priorities and funding of the local agencies makes it virtually impossible to put together a local 'one-stop shop' on a significant scale.
- Separation of socio-economic and environmental interest in the administration.

## **VIETNAM**

**Nguyen Duc Minh**, Dept. of land administration, Dep. Director Land Investigation and Planning Institute

**Title: Land use planning at Vinh loi Commune, Son duong District, Tuyen quang Province**

### Problem

Vinh loi with 50% unused land is a commune in a mountainous area in the North of Vietnam. Food needs forced formerly forested areas to be cultivated. 2 maps.

### Goals/ambitions

General: allocate unused land to farmers for specific purposes.

Environmental: abate deforestation; sustainable agriculture

Economic: employment for farmers.

Conflicts in goals:

- Self-sufficiency in food will destroy the environment;
- Farmers prefer scattered settlement while authorities prefer concentration in order to provide water, health services, schools etc.;

### Start/initiative/funding

The people's committee at Vin loi, 1994. A small amount (US dollar 1000) for planning, communication and promotion.

### Organization/approach

Organization: The people's committee act as steering committee, composed of 2 politicians and 6 staff.

Approach: very open. Staff from the commune's land administration office acted as facilitator.

### Results/solutions/successes/threats

**Concrete results: The unused land has been allocated to the farmers for reforestation in the next 10 years.**

Alternatives to agriculture: handicraft; selling land for houses.

Success factors:

- open process;
- availability of (small) government money.

**Threats: marketing of agr. produce (state can not by all).**



## **ZAMBIA**

**B.D.S. Kapita**, Zambia National Farmers Union

**Title: The Impanga Yesu integrated conservation project**

### Problem

The Kafue is Zambia's most important river, generating electric power for Lusaka's over one million inhabitants and supplying irrigation water for 13,000 ha sugar cane estates, as well as other irrigation project. The river is threatened by deforestation of the head waters by 5000 squatters. It is silted and fill up within 20 years by sediment resulting in displacement of the stream. 1 map.

### Goals/ambitions

**General: squatter resettlement and reafforestation**

**Environmental:** abating water pollution by silting and sedimentation; soil erosion; water supply.

**Economic:** water need for sugar cane estates, for human population, for 500,000 head of cattle and for wildlife.

**Social:** resettling squatters and providing educational and health facilities.

### Start/initiative/funding

The Environmental Conservation Association of Zambia (ECAZ), 1995. **Funding by donors.**

### Organization/approach

**Organization:** Committee of ECAZ, Provincial and district authorities, NGOs, donors.

**Approach:** open and **persuasive with tangible incentives (use of force failed)**. The chairman of the ECAZ acted as facilitator.

### Results/solutions/successes/threats

**Concrete results:** project not yet started

**Alternatives to agriculture:** marketing copper based crafts; furniture making.

**Success factors:** persuasion with tangible incentives.

**Threats: political interference.**

## **Annex 5     Summaries of the Issues- and Background-papers**

### **Annex 5.1   Integrated approach to planning and management of land: operationalization of Chapter 10 of UNCED's Agenda 21**

*L.M. van den Berg, A.F. van de Klundert and E.M.A. Smaling*

ISSUES PAPER for the INTERNATIONAL WORKSHOP in Wageningen, The Netherlands, 20-22 February, 1995

#### **Summary**

The main thesis of this paper is, that for an integrated approach to be successful, government departments, non-governmental organizations and local stakeholders or their representatives should come together at what is called the "meso-level", not just for regular discussions of upcoming issues, but with the specific aim of coming up with a joint plan of action to reach a multitude of environmental, economic and social goals. Where exactly this "meso-level" is, varies from country to country. Hopefully, the cases presented by the participants will throw some more light on the optimum size (in terms of square kilometres and of numbers of landusers) of the area covered by this "meso-level". This size will depend on country-specific factors, such as administrative culture, physical geography, communication networks, income levels, etc.

In Part 2 of the paper it is discussed how a central government may work towards this 'speaking with one voice': the integration of environmental, economic and social goals at the national level is a laborious and continuous job. While this goes on, a clear commitment of different departments to work together at the meso-level would already give support to what needs to happen there. Integration of goals at the national leaves room for site-specific blends at the meso-level.

Part 3 deals with the management of a planning process at the meso-level. Once the various stakeholders agree to work together at the meso-level much depends on the attitude of central governments and of their various departments. Rather than restrictive and prescriptive this needs to be facilitating: helping the various stakeholders in finding acceptable ways out of dilemmas between conflicting goals. In this respect it is important for the various government departments to 'speak with one voice', not by settling for 'pre-cooked' solutions, but by showing clearly how much room for manoeuvring there is at the meso-level. The paper established the importance of the way in which local groups and categories of stakeholders are organized. Central governments can actively support the setting-up of new organizations of stakeholders. Central governments can also provide, directly or indirectly through funding, the necessary facilitators and mediators. This could include a professional secretariat. And finally, there is the factor of information management. Data and research findings are crucial for the negotiation and planning process, but the temptation of 'buying time' by asking for more information needs to be resisted. National governments can stimulate that existing information becomes available to the planning group and the various rank-and-files.

In Part 4 of the paper the development of new economic carriers for rural areas are discussed. The role of national governments is not only to support local experiments in this direction and to spread the news if they are promising, but also to provide economic (market-based) incentives to those willing to take environmental measures. It helps if the impact of this financial support is already visible during the negotiation and planning process: demonstration projects, trial runs, media presentations are activities that would encourage participants to go on.

## **Annex 5.2 Planning for sustainable use of land resources: towards a new approach**

BACKGROUND PAPER to FAO's Task Managership for Chapter 10 of UNCED's Agenda 21

### **Summary**

The increasing human population in developing countries is putting pressure on their finite land resources and causing land degradation. Sectoral approaches to planning for the alleviation of this situation have frequently not been effective, and an integrated approach is required that involves all stakeholders from the outset, accommodates the qualities and limitations of each land unit component, and produces viable land use options. Concepts and definitions relating to such a holistic approach are given, in support of the overriding need to create negotiating platforms for decision making at all levels of planning.

Current land use issues, which require a resolution formulated with the aid of this approach in the rural and peri-urban spheres, are frequently derived from environmental versus developmental conflicts. Those discussed include decision making on whether it is preferable to use scarce resources to rehabilitate degraded land or to improve prime agricultural land, whether smallholder settlements or large-scale mechanized farming will better support the expanding population, the encroachment of urban development onto high quality agricultural land, the correct uses of scarce water resources, and the particular requirement for integrated as opposed to sectoral planning of coastal zones.

The execution of the integrated approach, as described in Agenda 21, will depend on policies that support planning for the use and sustainable management of land resources, on the strengthening of implementing institutions and on ensuring the active involvement and participation of stakeholders in the decision-making process. These actions will in turn be supported by a variety of databases on natural resources and their uses, which are combined through the use of a geographical information system. Social and economic tools are also described, which when used will ensure the inclusion of the contributions from stakeholders in land use negotiations.