
NATIONAL CONSERVATION STRATEGIES

A
FRAMEWORK
FOR
SUSTAINABLE
DEVELOPMENT

January 1984

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OVERVIEW

The World Conservation Strategy (wcs) was launched in 1980. It recommended the preparation of national conservation strategies (ncss) as the best way of helping countries to find their own paths towards sustainable development. Many countries have begun to prepare their own ncss and others wish to follow. The need for a practical guide on how to translate the ideas of the wcs into operational conservation strategies has become apparent. This document is a response to that need.

Development represents the principal means of meeting human needs and improving the quality of life so that, where there is poverty and suffering, development efforts must be extended and accelerated. Yet the inappropriate nature of many development efforts increasingly threatens human welfare. Because of careless narrowly conceived development, the resource systems – soils, water, air, plants and animals – which support human life are being degraded in almost every country. Most countries, moreover, still rely on a narrow concept of development as the only solution to their problems.

What is needed is a new, broader pattern of well-balanced, sustainable development, and that will depend upon the conservation of natural resources. Great and lasting benefits are to be gained by bringing the processes of conservation and development together. The preparation of national conservation strategies will assist countries to realise this potential in that they facilitate the definition of actions which lead toward sustainable development. Preparing an ncs involves government agencies, non-government organisations, private interests and the community at large in analysis of natural resource issues and assessment of priority actions. In this way, it is hoped that sectoral interests will better perceive their interrelationship with other sectors and new potentials for conservation and development will be revealed.

The activity of preparing an ncs is of fundamental importance, for the whole process provides a major opportunity for building awareness and consensus amongst a wide range of institutions and individuals. Indeed, unless those responsible for implementing the strategy have been involved in the process and are convinced of its message, the ultimate effect of the ncs will be severely limited.

While there will be similarities in the process of preparing an ncs in different countries, there will inevitably be substantial differences. There are many legitimate responses to the objective of integrating conservation and development. For example, in the industrialised world, reconciling conservation with development may mean less consumption of raw materials, less use of agricultural land for urbanisation, less waste of resources. In less developed countries the need for economic development is more stark. Building conservation into the whole process of development is the challenge. In certain cases in less developed countries the help of development assistance agencies may be required. In such cases these agencies may have a great part to play in promoting the ncs concept, and providing technical assistance and funding for preparing and implementing conservation strategies.

A national conservation strategy cannot, and should not, be produced through strict adherence to pre-defined formulae and thus this document can present no more than broad guidance based on the early experiences of a few countries. The next several years should reveal more clearly the ways and means to achieve sustainable development.

FISHING



Many millions of people rely on fish as their main source of protein. In some countries, fishing is the most important economic activity. Although the future of fisheries depends upon managing fish populations so that the highest level of catch can be sustained, over-fishing is widespread, especially in some of the seas shared by industrialised countries. This short-term over-exploitation of the resource threatens the future yield, as well as the quality and size of individual fish in the catch. The New Zealand and Uganda NCSs, among others, are giving special attention to monitoring fish stocks and regulating exploitation levels.

MINING



Mining has sterilised vast areas of potentially productive land, although in recent years steps have been taken in some countries to ensure its productive after-use. In the UK, the china clay tips at St Austell and the ironstone spoils at Cerby are progressively being restored to agricultural and forestry use; it is now a condition of any new mining permit that the land should be properly restored. Some countries, such as Zambia, are highly dependent on mining at present, but in the light of unpredictable world mineral prices, there is inevitably a need to diversify the economy and put greater emphasis on agricultural production. The Zambia NCS is looking at ways of ensuring that the adverse effects of mining might be limited to acceptable levels.

1

INTRODUCTION

Development has several meanings: in this document it is taken to mean the modification of the environment and the use of resources to satisfy human needs and improve the quality of life. Development is a dynamic process which must not only meet the needs of today but also maintain prospects for the future. But, with population growth in many countries largely outstripping food, water and fuel supplies, the capacity of natural resources to support human populations has been severely impaired despite, and in many cases because of, intensive development. Examples of natural resource misuse and destruction are well-known. Soil loss, the destruction of forests, over-exploitation of fish stocks, desertification as a result of over-grazing, and the fuelwood crisis, are all examples. Most of this resource depletion is avoidable through better management. Better management means ensuring that life support systems continue to function effectively – that the fertility of soils is maintained, that waters remain clean and productive and that the air is fit to breathe. Better management means using living resources such as fish and trees at rates such that they may continue to produce useful crops. It means preventing the loss of valuable forest and pasture species, for example, thus maintaining genetic variety and keeping open options for the future. In short, better management is aimed at the long-term productivity of natural resources and at sustainable development.

Promoting short-term economic growth to meet immediate needs *and* protecting the long-term productivity of natural resources are often seen as conflicting objectives. The interests that promote and support rapid economic growth are usually more powerful and better organised than those that espouse the priority of the longer term: the former often dominate development planning, and long-term planning is put off until later. The effect is often aggravated by changes in administration which always introduce delays, by the fact that the human, financial and natural resources at present available to most countries are generally insufficient for undertaking anything more than the most urgent tasks and by the frequency with which uncoordinated development efforts frustrate each other and actually diminish the potential of natural resources to support sustainable development.

In the late 1970s, IUCN was commissioned to develop a strategy for the achievement of conservation on a global scale. The product, the World Conservation Strategy (WCS), is not simply the view of one conservation organisation but the result of an extensive process of consultation with experts from many different fields, countries and organisations. (UNEP and WWF were particularly central in providing support and assistance in the development of the WCS and both FAO and Unesco collaborated on a day-to-day basis.) The WCS was launched in March 1980 and was widely endorsed by international organisations, governments and non-government organisations throughout the world. The strategy emphasises that conservation and development are two sides of the same coin, conservation being defined in terms of – *managing the use of the environment and natural resources to ensure the maximum sustainable benefits for present and succeeding generations.* (This is the definition of conservation that is used throughout this document; “Preservation of Wildlife”, the theme linked with “conservation” in many people’s minds, is but a small part of the overall picture.)

A major opportunity for the introduction of conservation is at the national level, where the long-term development aims of a country can be defined, and where the

administrative structure and professional capabilities for an analysis of development and conservation are often already in place. The wcs is now being used as a basis for discussion, programming and action in a number of less developed and industrialised countries.

The effects of inappropriate development procedures have been felt in all countries, directly as a result of each country's own development pattern and indirectly through the linkages of trade, aid, technology transfer, shared ecosystems and transboundary pollution. In many developing countries, dependence on external aid and financial support have been increasing where they might once have been expected to diminish. In industrialised countries, excessive consumption has led to the over-exploitation of resources, not only at home but also in trade-linked developing countries. Damage to life support systems from pollution occurs throughout the world.

A major obstacle to the achievement of sustainable development is the absence in overall development planning of a strategic long-term approach to the management of natural resource use. Too often, scarce technical and financial resources are deployed in reaction to natural resource crises, rather than according to a plan for optimal long-term use. A strategic approach to the management of natural resource use calls for:

- preparing a strategy for addressing environmental and natural resource issues so as to ensure that the greatest number of people benefit on a sustainable basis;
- identifying urgent resource problems likely to impede development objectives;
- assessing the supply of, and demand for, natural resources over the short, medium and long term;
- defining projects, within the strategic framework, to make the best use of limited resources;
- assigning responsibilities for action;
- generating better awareness of the problems of natural resource use, and how to deal with them, within government and all other bodies concerned with development.

Preparing a national conservation strategy can help meet these requirements.

Many countries are, in fact, already preparing NCSS, using the wcs as a basic guide. But the need for a practical "bridge" between the wcs philosophy and a functioning NCS has become apparent. This document, which seeks to provide that "bridge", builds on experience gained so far and is intended to:

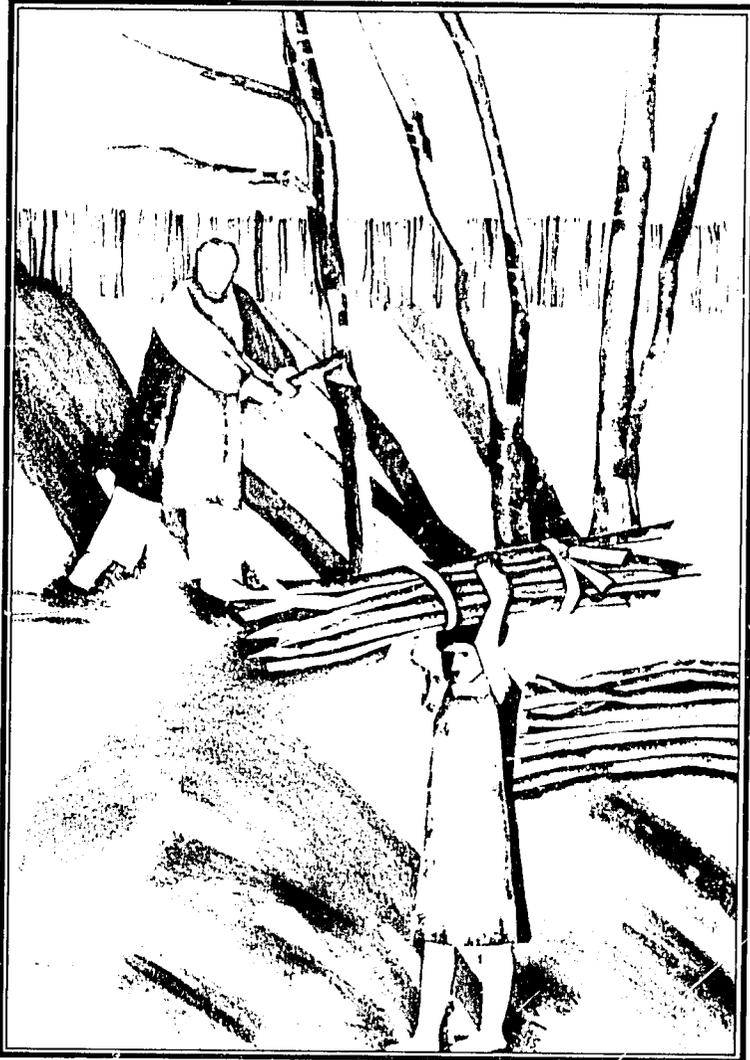
- encourage countries to prepare conservation strategies;
- provide ideas and guidance for preparing conservation strategies;
- suggest the priorities to be considered in their preparation;
- illustrate, through examples, the progress made in various countries. (This will be supplemented by the "World Conservation Strategy in Action", a brief report published by IUCN every three months);
- stimulate appropriate agencies to promote and support the preparation of NCSS.

HYDRO-ELECTRIC POWER



Hydro-electric power is cheap, does not pollute and is not intrinsically limited like fossil fuels. Many countries are placing hopes for the future on its development. In Nepal, of the enormous 83000 MW potential, only 112 MW are currently tapped. The NCS for Nepal will aim to ensure that the site selection process for further dams will be sensitive to competing demands for the land, so that, where possible, the flooding of scarce valley-bottom farmlands will be avoided.

FUELWOOD



In 1980, more than 100 million people lived in areas of acute fuelwood shortage. More than a billion could only meet their energy needs by using fuelwood faster than it was being replaced. A lack of fuelwood means that people cannot cook food or boil drinking water adequately, the consequence of which is a needless increase in malnutrition, disease and death. Because there is no alternative for them, people cut more fuelwood from an area than will regenerate. In sensitive areas this often leads to increased soil erosion and, ultimately, the spread of deserts onto land which previously supported life on a sustainable basis.

Fuelwood is the most suitable form of energy for many developing countries, being renewable, potentially available everywhere, and far cheaper than oil imports. In Nepal, attention is being devoted in the NCS to the fuelwood problem, its interrelationship with other conservation issues and the ways in which the problem might best be addressed with the limited financial and administrative resources available.

2

NATIONAL CONSERVATION STRATEGIES: CHARACTERISTICS AND PROCESS

- 2.1 THE PURPOSE OF AN NCS**
 - 2.2 RESPONSIBILITY FOR AN NCS**
 - 2.3 SUPPORT FOR THE NCS**
 - 2.4 THE NCS PROCESS**
 - 2.5 PREPARING AN NCS**
 - 2.6 IMPLEMENTATION**
-

2.1 THE PURPOSE OF AN NCS

An NCS enables a country to better determine how to find its way towards sustainable development. It involves consideration of the present and future needs and aspirations of the people, the institutional capabilities of the country, and the status of its natural resources. It also takes account of the national development plan and associated aid programmes.

An NCS clarifies the present and projected natural resources situation in the country under prevailing technological conditions. It reviews all activities which have an effect on the status of natural resources, identifying obstacles to ensuring that natural resources provide a basis for sustainable development.

On the basis of review, analysis and assignment of priorities, an NCS seeks to define the best possible allocation of human and financial resources to achieve the goals of sustainable development — development with conservation. It brings together clear statements of the activities required to achieve conservation, estimates of the resources needed to implement those activities and schedules for their implementation. It should also include a proposal for monitoring the implementation of the strategy and methods for its regular updating.

The purpose of the NCS process is not simply to prepare a strategy but at the same time to achieve, within the country, an appropriate understanding and knowledge of the interdependence between conservation and development and ensure the ability and commitment to implement the strategy.

2.2 RESPONSIBILITY FOR AN NCS

Normally, governments will bear the main responsibility for implementing NCSs and thus they should take a leading role in their preparation. The NCS will normally require the official endorsement of the bodies responsible for planning and budgeting, as well as the Cabinet or Council of Ministers. That said, there are a number of reporting points which can be chosen for an NCS.

If the country is one in which development is largely defined by "National Plans", then the task force committee that is responsible for the NCS might best be prepared under the auspices of the central planning authority. If such an arrangement would risk dominance by the narrower interests of development, it might be preferable to arrange that the NCS be prepared under a parallel organisation, with a requirement for constructive interaction between the interests of 'development' and 'conservation'.

Whichever body is allocated ultimate responsibility for implementing the NCS, it will be necessary to establish responsibility for the *preparation* of the NCS and a means whereby the interests of development and conservation, including various sectoral interests in natural resources, can be represented. The following types of *task force/committee* have been established to date:

- a *national task force or committee*, constituted by the head of state or head of government, comprising prominent ministers or their representatives, directors of relevant government departments, representatives of prominent NGOs, universities and external agencies;

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- *a subcommittee of the national planning commission* (or its equivalent) with members drawn from government ministries and departments, NGOs, universities and external agencies;
 - *an interministerial task force*, chaired by the minister of science and technology to cover the research aspect of NCS development work and to provide a position of relative independence from the sometimes competing requirements of other ministries.

In such committees or task forces the following ministries would normally be amongst those represented: agriculture, forestry, industry, energy, environment, natural resources, tourism, soil conservation, education, parks and wildlife, transport, economic planning, finance, law and justice. In other words, all those sectors of government concerned with managing, planning or providing legislation for the use of natural resources should be involved.

In some countries, government has so far played a less central role in the formulation of conservation strategies. In the UK, NCS work has been assumed primarily by NGOs, although it is recognised that Government will have to play a more active role if the NCS is eventually to permeate all development activity. In India, a private organisation has been working with the Government in formulating the framework for an NCS, whilst in Malaysia, the state-by-state strategies have been prepared entirely by a major NGO working closely with government.

Day-to-day coordination of NCS preparation should be undertaken by a professional *secretariat* to the task force committee. The secretariat must be experienced, committed and imaginative, with direct access to the chairman of the task force/committee and to other centres of expertise. Because, in developing countries, suitably qualified people usually lack the time to take on the additional task of preparing strategies, there will sometimes be a need for technical assistance. It is through the secretariat that any consultants should operate, so that their work falls under the official auspices of the secretariat and is not seen as an independent activity.

One of the first steps in preparing an NCS is to define a work programme for endorsement by the NCS task force committee. This is normally undertaken by the secretariat (or by people with relevant experience who might eventually participate in the secretariat), but the input of advisors who have previous experience of NCS work can be helpful at this stage.

Once the work programme has been approved, NCS preparation can be carried out by the different (government) agencies and coordinated by the secretariat.

2.3 SUPPORT FOR THE NCS

If an NCS is to contribute to sustainable development, there must be substantial commitment to it on the part of government. Timing is crucial. There may be a danger, however, in pressing for a commitment too soon – before the government has fully recognised the relationship between conservation and development. There can also be danger in moving too slowly or in losing momentum when activities have already begun.

Every possible chance of success should be given to the NCS team at the outset. Endorsement by the head of state, for example, can boost the prestige of an NCS, and thereby the attention paid to it by officials in government and by private developers; so too, in many less developed countries, can the support of development assistance agencies. Their interest in an NCS, in terms of funding or their readiness to participate in the elaboration of the NCS, will undoubtedly contribute to its eventual success and in turn enhance the effectiveness of their own aid programme.

2.4 THE NCS PROCESS

By preparing an NCS, a country makes it possible to build the objectives of and capacity for "sustainability" into its development programme. Preparing an NCS is a process of exchanging information and views, carried out among ministries, departments, NGOs, the business community, the public and, where relevant in less developed countries, international organisations and development assistance agencies. Through this process, an awareness of the benefits to be derived from conserving natural resources can be created, and the role of various agencies and individuals in achieving sustainable development can be clarified and encouraged.

The NCS process can be divided into four overlapping phases (elaborated in Overa's Sequence of Events 2.5.9):

- initial promotion of the NCS concept in the country in question and assessment of feasibility of successfully developing the NCS;
- definition of the conceptual framework and institutional arrangements for preparation of the NCS;
- assembly and collation of data, preparation of the NCS, including component sectoral strategies;
- implementing the various components of the NCS, monitoring and reviewing.

The first two phases may take considerable time and should be undertaken with great care if the NCS is to be a useful and constructive tool for the country. During the first two phases, attention must be given to the role of any external advisors who may be involved. At the very beginning it may be appropriate for them to encourage the Government to develop an NCS. But in most cases the Government itself should, as soon as possible, take the lead, external advisors lending support if and when necessary.

The concept of cross-sectoral, inter-ministerial planning must be introduced in a positive fashion. If the need is not presented clearly it will be seen as threatening rather than supportive. Well-articulated arguments need to be put forward to demonstrate that cross-sectoral planning and action are essential for solving most natural resource problems. Existing organisations, while they may need to be modified, often provide the best institutional basis for the preparation of an NCS.

Experience to date indicates that the third phase (setting up the whole process of dialogue and involvement of the concerned institutions and individuals, assembling and analysing the data and actually writing the NCS) may take between one and two years. The final phase is a continuous one, providing an up-to-date and balanced

framework for development planning. Thus the strategy aims progressively to modify development proposals, working towards greater sustainability.

2.5 PREPARING AN NCS

It should be understood from the outset that there cannot be a rigid, universally-applicable format for an NCS (or indeed a single approach to preparing one within any given country). A flexible format is suggested which can be adapted to the economic and social context in which a country develops. Such a format is outlined in Annex 1. In addition, there are a number of procedures and considerations that are likely to be relevant to the preparation of an NCS in any country; these are discussed below.

2.5.1 COLLECTION OF INFORMATION

The preliminary analysis (2.5.2) may highlight a paucity of detailed and recent information in certain areas. The NCS secretariat should collate existing data before planning any new inventory or research. Clearly the NCS should be based as far as possible on existing data. Elaborate research and data collection programmes may well be desirable for ultimate refinement of the NCS, but these are unlikely to be an important feature of a country's initial NCS work-programme.

Initial data necessary for the NCS team will usually be in the form of published reports and interviews with people who have long experience in the country, maps, aerial photographs, etc. The information should include:

- data on the *bio-physical characteristics* of the country (terrain, geology, soils, hydrology, climate, ecological zones) and the major *resource endowments* (minerals, plant and animal life);
- information on *human manipulation* of the environment;
- information on the *human population* including data on demography, population distribution, health, nutrition, shelter, sanitation, settlement patterns and employment;
- data on the *development characteristics* of the country, including the general development context and in particular sectors such as agriculture, forestry, energy, water, tourism, etc., that are based upon renewable resources and have a direct influence on the environment;
- information on *traditions and cultural characteristics* that have a bearing on lifestyles, attitudes to nature and resources, expectations from development, etc.;
- descriptions of buildings and monuments that are of cultural significance and aesthetic merit and of archaeological sites;
- information on the *planning mechanisms* and *organisations* and on the availability of trained *personnel* within the country, as well as on *legislation and control mechanisms* affecting conservation and development activities. Mechanisms and organisations dealing with environmental problems and lessons to be learned from previous *conservation action* are particularly important.

2.5.2 ANALYSIS OF CONSERVATION AND DEVELOPMENT INTERACTIONS

Based upon information available, and considering the goals of conservation on the one hand, and the stated goals and observed patterns of national development on the other, the interactions between conservation and development can be analysed. It is at this stage therefore that detailed consideration must be given to the identification of those long-term threats to the (national) environment which, if not arrested or reversed, will seriously undermine the nation's ability to use its renewable resources on a sustainable basis. Analysis of conservation development interactions is one of the most important elements in the formulation of an SCS. It leads to a more thorough understanding of existing problems, enables the emergence of unforeseen problems to be forecast and points to the most cost-effective solutions.

The analysis should eventually cover every part of the country and each sector, but great care should be exercised at all stages to ensure that the scope and depth of the analysis does not exceed the practical requirements of sustainable development or existing budgetary constraints. Where they can be quickly applied, tools such as cost/benefit analysis and environmental impact assessment may prove useful in achieving a full understanding of priority issues. The SCS itself should include provision for the introduction and refining of these tools where necessary.

2.5.3 DEFINITION OF CONSERVATION PRIORITIES

When the negative impacts of conservation development interactions have been defined, and when their significance, the urgency of their solution and their possible irreversibility have been assessed, priority actions to ensure sustainable development can be defined. Defining conservation priorities may make it clear that if development is to provide long-term benefits, a higher rate of investment in conservation will be required.

2.5.4 PRELIMINARY REASSESSMENT OF DEVELOPMENT PRIORITIES

The National Development Plan will normally be the central reference document in the development of the SCS, but at some stage the SCS task force or committee may wish to make a specific review of the stated national development goals and plans. It may initially find that a higher rate of investment in conservation just cannot be managed if budgetary allocations for development are to be maintained as planned. But on the other hand, having analysed both the insidious and the catastrophic consequences of the failure to conserve, it may ultimately conclude that the country cannot afford *not* to invest in conservation and that there should be some adjustment of development plans.

2.5.5 EXAMINATION OF OPTIONS FOR BETTER INTEGRATING CONSERVATION AND DEVELOPMENT

Having completed an initial analysis of the conservation and development priorities, the task force/committee may require a systematic assessment of the various options for conservation and development, for consideration by government. The characteristics of the various options should become more apparent when the following types of questions are answered:

- What would be the effects on income, employment, population distribution, health, shelter, etc., now and in the future, of different levels and types of resource use,

ranging from intensive exploitation at one extreme to virtual preservation at the other?

- What economically and ecologically acceptable techniques are available for the achievement of different levels of resource use?
- Do the planned development investments and present expenditures meet human needs? If not, can the same needs be met in other ways? Can investments or expenditures for other purposes be diverted to meet these needs?

2.5.6 MEANS OF ACHIEVING CONSERVATION FOR DEVELOPMENT

The recommendations arising from an NCS should not be limited to immediate "on-the-ground" conservation action. An NCS should also make recommendations with respect to organisations, procedures, legislation, incentives and penalties that have a bearing on conservation.

National and regional procedures for setting development goals and for economic and physical planning should be reviewed and where necessary redefined; the concept of ecosystem evaluation (as outlined in the WCS) and environmental planning should eventually become integrated with broader planning systems.

Education, training, extension and public participation in conservation are investments in the future capability of the country. Many of these activities will have to be designed to meet the specific conservation needs of the country, although the usefulness of existing arrangements should also be fully exploited. An NCS should recommend the steps necessary to ensure that these activities will help people to use resources sustainably.

2.5.7 INTERNATIONAL RELATIONS

Bearing in mind that no nation is isolated, the international implications of conservation development problems often need to be considered. The migratory habits of many species of animals, especially in drought conditions, the flows of important rivers from one nation to another and the sharing of regional seas, are examples that attest to the importance of international cooperation in conservation. In addition the state of natural resources in a developing country will inevitably be affected by the foreign policies of other nations, and particularly by the policies of industrialised countries for food, trade, armaments and development aid.

It is recommended that, in the course of preparing an NCS, special attention should be devoted to an analysis of how the policies and practices of other countries determine the sustainable use of resources in the country in question. This analysis should also look in detail at the impact of the country's own policies and practices on conservation in other countries.

2.5.8 PLANNING OF PILOT PROJECTS AND THE ACTION PROGRAMME

An NCS should be broadly conceived. It should look ahead, but it should also focus on specific carefully-selected conservation/development projects, some of which could be started while the NCS is being formulated. In this way, early results may be seen and the momentum of NCS preparation thereby more easily maintained.

In its conclusion, the NCS should articulate all the recommendations for action in programmatic form, with allocations of priority, estimates of costs, indications of

responsibility, and schedules for accomplishment. The form of presentation should be such that individual projects can readily be extracted from the programme as a whole. A programme for monitoring implementation should also be outlined, and criteria by which to judge the success of projects should be designed. Such criteria might include the reduction in the rate of soil erosion in an area, the diminution in level of particular pollutants, the recovery of particular decimated animal populations, for example. The planning and finance authorities should be encouraged to give these criteria the same order of weight as is given to the more conventional criteria such as simple output levels.

2.5.9 OVERALL SEQUENCE OF EVENTS

The process of preparing an SCS will vary greatly from one country to another, depending on such factors as the type of government, degree of centralisation and control, natural resource and economic characteristics, background data available, interest and involvement of the national and international community, etc. Many of the events will take place simultaneously or result from a process of continual refinement. The flow chart in Annex III illustrates this. The basic sequence of events is as follows:

- initial promotion of the SCS concept, including public participation if appropriate and feasible;
- definition of preliminary goals for the SCS (based upon the objectives of the WCS and the long-term development goals of the country) and how the strategy might be prepared;
- establishment of the authority (task force committee) responsible for the SCS;
- appointment of secretariat to the authority, with suitable staffing and facilities;
- accumulation of natural resource and development information;
- further publicity, including public debate, seminars, press releases, etc.;
- preparation by secretariat of prospectus or initial overview report outlining content, major themes of the SCS and interconnections between various sectors;
- agreement of detailed work programme with SCS authority;
- solicitation of views and involvement of commercial and business interests, local authorities, local political groups, the wider NGO community, etc.;
- assignment of responsibilities for various sections of the work to government departments, NGOs, international agencies, UN agencies, etc.;
- preparation of individual components of the strategy, such as inventory, strategies for each sector, project proposals, education programme, draft legislation (if necessary and appropriate);
- interim review by SCS authority to ensure compatibility and comprehensiveness and submission of final drafts to the secretariat;
- continued publicity;
- preparation by the secretariat of draft chapters to unite the various submissions, establish general and sectoral priorities and costs, and develop the comprehensive, integrated action programme;

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- review of draft strategy by the authority and its advisors (including possible conservation practitioners debate);
 - full debate, involving private developers and the community;
 - final review and revision of document following public debate;
 - printing and publication;
 - continued promotion of the strategy;
 - incorporation into the development planning process and implementation of action programme and pilot projects;
 - monitoring to provide basis for review of progress, seminars to analyse successes and failures;
 - regular updating of action programme; definition and implementation of new projects as required; permanent secretariat retained within development planning process (if appropriate).

Within this process, data collection, analysis, review, and dialogue are continuous activities, with the secretariat providing leadership and ensuring that the work is undertaken according to the work programme.

In the case of certain less developed countries, technical assistance may be required for the preparation of the NCS and appropriate discussions with international organisations and/or development assistance agencies should be held as early as possible to ensure the timely provision of such assistance.

2.6 IMPLEMENTATION

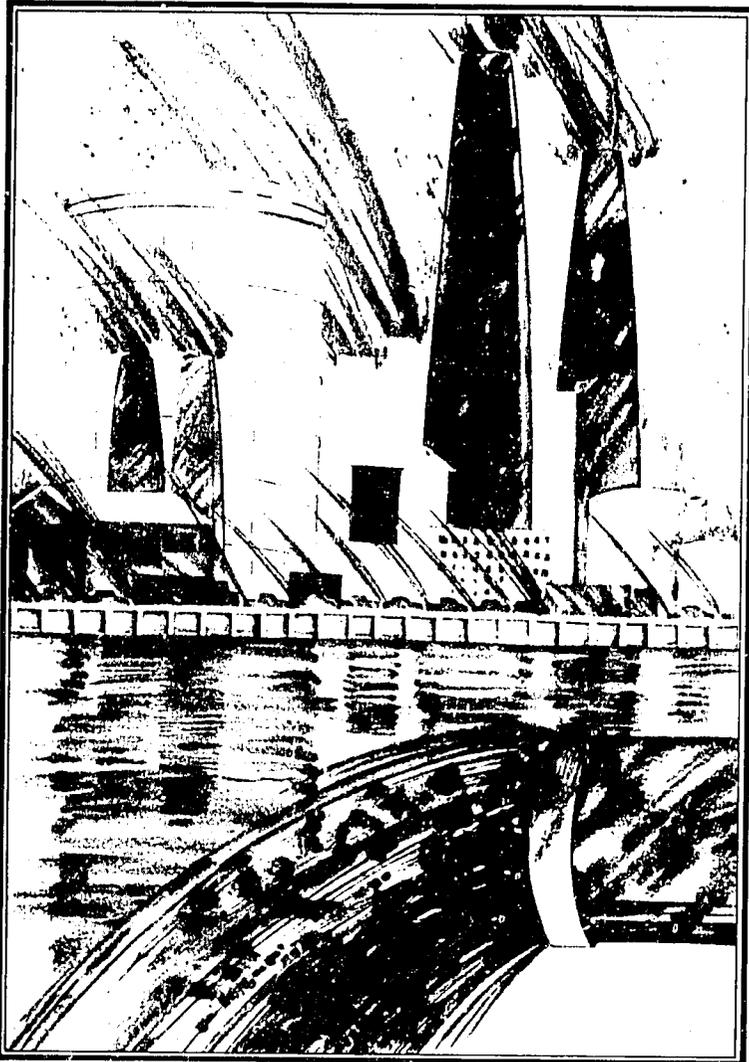
It has been stressed that the process of preparing an NCS is one of building consensus on the manner in which natural resources can be managed for the greatest overall benefit to the country. The actual activity of preparing the NCS is thus of fundamental importance.

The ultimate achievement of improvements in the management of natural resources as a result of the strategy exercise can be brought about in a number of ways:

- Through increased awareness amongst those concerned with preparing the national development plan, resulting in a plan which is more responsive to the natural resource priorities;
- Through increased awareness in the wider community, resulting directly in more efficient use of natural resources;
- Through endorsement by government of the NCS and its associated action programme, leading to implementation by government and other organisations with, in the case of certain less developed countries, the support of development assistance agencies and international organisations.

The relationship between the NCS action programme and the national plan will vary from one country to another but, however the strategy is implemented, monitoring, refinement and updating will be necessary. It is important to accept, however, that much of the benefit arising from the NCS will be in the form of small and often subtle changes to major development projects, (the addition of the "environment component") as well as new environmental projects.

POLLUTION



Many generations of people in industrialised countries have suffered the ill effects of pollution. However, it is only in the last two or three decades that widespread action to limit pollution to acceptable levels has begun. Large industries have now shown that waste recycling and pollution prevention can be cost-effective. Towns in the Ruhr Valley and in the north of Britain have proved that cleaning up wastelands can revitalise the local economy.

Even in spite of the massive efforts in industrial countries, acid rain is now destroying whole forests in Germany and Scandinavia and the international problem of air pollution now takes on staggering proportions.

Pollution is becoming a serious problem in many cities of less developed countries, where smog from increasing volumes of traffic and water pollution from uncontrolled waste disposal are already threatening the health and quality of life of the growing urban population. Strategies to tackle these problems must be planned now before pollution prevention becomes too huge a task.

URBAN ISSUES



Within 30 years, the population of many cities in less developed countries will have expanded into the 10-30 million range. Yet, even today, many large cities throughout the world find it increasingly difficult to sustain their present populations. Some cannot supply enough fresh water, whilst others are chronically short of energy, denuding surrounding land of trees for fuelwood. Urban sprawl consumes valuable agricultural land; shanties cling to steep slopes susceptible to landslides. The urban environment in many countries is becoming more degraded and unsanitary - especially for the poor who flock there and do not find jobs or homes. At the same time, cities are becoming wasteful of resources and expensive to run.

Conservation aims at providing sustainable benefits to people. Both development (securing a stable economic base for the poor) and conservation (ensuring the best possible use of natural resources - water, food and fuel - and mitigating adverse environmental conditions) are needed. The NCSs for the UK and Zambia, among others, have focussed special attention on conservation and the urban environment.

3

MANAGING THE PREPARATION OF AN NCS

- 3.1 CHARACTERISTICS OF AN NCS
THAT AFFECT MANAGEMENT
 - 3.2 THE NATURE OF MANAGEMENT
 - 3.3 AWARENESS
AND THE NCS PROCESS
-

3.1 CHARACTERISTICS OF AN NCS THAT AFFECT MANAGEMENT

Managing the preparation of an NCS is likely to be more complex and demand greater subtlety than managing most projects. This is because the preparation of an NCS:

- is an "exploratory" project with several aims; its end products cannot be precisely defined at the beginning of the project;
- requires an unusual degree of multi-disciplinary activity, often undertaken by teams drawn from various agencies;
- may require the harmonisation of seemingly incompatible goals;
- requires the integration of political and technical factors in an exceptionally careful exercise of judgement;
- involves the promotion of a philosophy *and* the undertaking of concrete activities;
- is a continuing process (component activities may start and stop at different times, and implementation and monitoring of the NCS itself may continue indefinitely);
- does not easily accommodate the exclusive use of conventional economic criteria for monitoring progress and measuring success;
- involves a considerable lapse of time between investment and production of benefits.

3.2 THE NATURE OF MANAGEMENT

Management is the establishment and maintenance of the conditions in an enterprise that enable the people working in it to achieve agreed objectives. The aim is to create a system of human effort which is "friction-free". Good management of the preparation of an NCS is particularly important because of the unusual characteristics of NCSs noted above. The chairman of the NCS task force/committee should be a skilled manager, as should be the person who will be responsible for the day-to-day work.

The functions of management are planning, organising, staffing, co-ordinating, communicating, directing and controlling. Because of the differences among countries it would serve little purpose to try to define the precise nature of the management functions and structures best suited to preparing an NCS, but the following observations are generally applicable.

3.2.1 PLANNING

To plan is to establish the schedule and responsibilities for actions needed to meet agreed objectives and move towards long-term goals. Since in the formulation of an NCS progress in one field is often dependent upon accomplishment in one or more other fields and because the overall task will usually be the responsibility of a team comprising different representative organisations, careful planning is mandatory.

Each objective of the NCS process must be formulated to operate within a given time frame and under a given responsibility. Between them, the objectives should cover every part of the work it is desired to undertake.

Planning of the SCS can be aided by methods and procedures as presented in this document (Annex I) and through the experience of other national conservation strategies. Any such method or procedure must of course be adapted to the particular situation in the country in question and must be constantly tested and where necessary modified to suit the local needs. Models are no more than useful tools to help ensure that nothing is neglected.

3.2.2 ORGANISING

To organise is to define roles, particularly in terms of assignment of responsibility and delegation of authority. For each person and agency involved in the SCS process there should be a clear statement of responsibility and of the deadlines to be met, e.g.:

- to prepare a conservation programme for schools; 12 months;
responsibility National Wildlife Club;
- to produce an agricultural sector conservation strategy; 8 months;
responsibility Director of Department of Agriculture.

It is important that the highest authority in the country should endorse the SCS as a "project" of major national importance, and see that the body charged with formulating the SCS has the necessary *authority* to ensure that the required contributions of the various concerned ministries and departments are made.

3.2.3 STAFFING

The SCS team leader should have experience in organising and directing the work of a multi-disciplinary group. He should be committed to the principles of conservation and have a knowledge of the characteristics and problems of the country. He should be able to gain the respect of people at all levels.

Other team members are likely to be environmental planners, agriculturalists, foresters, engineers, ecologists and economists. The size of the secretariat will depend upon the quantity and quality of work which can be done by existing agencies. Ideally the secretariat team should remain small, supplementary personnel being brought in on short-term secondment or consultancies as necessary.

Preparing an SCS is valuable in itself, and ultimately aims to ensure sustainable development and this must remain the responsibility of the country itself. Thus, from the very beginning of the SCS process, local staff should be given the major, if not the sole, responsibility for the SCS.

3.2.4 COORDINATION AND COMMUNICATION

Effective *communication* among all people involved in an SCS is essential; regular group discussions are particularly valuable for a project such as an SCS which is continually evolving. Although most people involved in the development of the SCS will be specialists, all must have a good knowledge of the multi-sectoral context in which conservation strategy work proceeds, and should be kept informed of decisions affecting the project as a whole. It will normally be useful to arrange regular meetings and to devise other systems of communication, upward *and* downward, to save time and avoid misunderstanding and wasted effort.

Coordination of the SCS process requires continuous attention. It will be most effective if it is carried out through *single* lines of communication reflecting clearly defined responsibilities and reporting relationships.

3.2.5 CONTROLLING AND MONITORING

Control entails establishing standards to measure performance, monitoring the performance, evaluating it against the plans and schedules, and correcting deviations.

Since the formulation of an NCS will involve many people and organisations in addition to those in the full-time secretariat, it will be necessary to control the whole process so that no part of it unduly limits the rest. Complete critical path analysis will not usually be applicable, because the precise nature and sequence of every operation in the NCS process cannot be predetermined. A more suitable approach might be to decide which *major* operations would, if not controlled, hold up the rest of the work (and conversely which operations are not "critical" in this sense, being relatively independent of the process as a whole). These decisions should be made while the NCS process is being planned.

Since the concrete products of the process of formulating an NCS are mainly written information and ideas, the "monitoring" procedure should be simple and would normally entail the establishment of a schedule of regular meetings and reporting requirements. Monitoring can reinforce the process and point to change if it is needed, thus helping the process to maintain momentum while responding to changing needs and ideas.

The NCS process must be flexible and the people involved in it must be willing to change their minds as information is accumulated and interrelationships analysed. It is of little value to the country if persons working on the NCS cling dogmatically to preconceived ideas of conservation when evidence accumulates to show that they should be modified. It is not a case of "going through the NCS process" arbitrarily; rather it is a case of working systematically to define realistic ways to bring a nation's development onto a sustainable basis.

3.3 AWARENESS AND THE NCS PROCESS

In the development of the NCS there are two tasks relating to "public awareness":
to communicate the meaning of conservation and the NCS in particular;
to involve the public in the NCS itself.

The first task, communicating conservation principles, is most important in the *process* of NCS formulation. The concept of conservation, especially in the sophisticated form of the NCS, will be relatively new to large sections of the community in any country and a great deal of effort should be devoted to its dissemination.

The second objective is to involve the public in the NCS process: the extent to which it can be met will depend upon the nature of government and the feasibility of organising public involvement. Whilst public involvement in the formulation of the NCS is desirable for securing information and ideas from the grass roots, in the implementation of the NCS it is absolutely essential. Communication during NCS implementation will involve formal methods of education (in universities and schools, through adult literacy courses, teacher training, etc.) and media events, and will entail mobilizing local and national, religious, political and other appropriate structures to disseminate information and gauge public opinion.

It is thus essential that the communications strategy should be handled by someone who is both technically skilled and highly conversant with the various ways in

which conservation can respond to a country's needs. This person will have to define the different audiences, the types of message which will benefit them, the methods of putting the message over, and the tools with which this can be done. The communications "strategy" should be formulated to fit in with the various stages of the NCS process; hence the public relations expert should be very closely associated with or even be part of the NCS secretariat.

The communications strategy should concentrate on simple, direct messages, with no alien image attached. For this reason:

- the media used should exist already in the country, and a good relationship should be developed with key people in the media;
- local languages should be used where possible, the written word being avoided in favour of talks, slide shows, posters, comic strips, etc. in regions where illiteracy is common;
- the meaning of graphic images used should be readily perceptible (and therefore usually in a local style),
- the message that is to be put over should be framed so as to avoid needless offence to cultural tenets or religious beliefs;
- the manner of presentation in seminars, lectures and demonstrations should take into account cultural and traditional factors so far as possible;
- the method of approach should where possible avoid any notion of confrontation;
- communication should as far as possible be in both directions, i.e. information on the NCS disseminated and comment from the public actively sought.

3.3.1 ELEMENTS OF A COMMUNICATIONS STRATEGY

Both the long-term and the short-term advantages of conservation should be demonstrated, one of the most useful tools being to give publicity to past conservation successes in the country. The communications strategy might include the following elements:

- a "National Conservation Day", initially to launch the strategy formulation process, and thereafter as an annual event, portraying a coherent and positive message, involving universities, environmental groups, public personalities, wildlife clubs, school classes, etc.;
- regular press, radio and TV releases throughout the NCS process, particularly at the launch of the final document. These could incorporate public comment where relevant;
- series in the popular media highlighting the various aspects of conservation, e.g. a weekly radio-series discussing, for example, the need for afforestation, the value of wildlife, the benefits of good soil conservation in agricultural practice, the methods and advantages of energy conservation;
- a programme developed with professional artists, musicians and actors, illustrating the conservation message in traditional art forms;
- leaflets, posters etc. aimed at specific audiences - government officials, school-teachers, community leaders etc.;
- a series of seminars and conferences arranged with major universities, to select and involve professional and academic sectors.

DEFORESTATION



Tropical forests are being destroyed or degraded at an average rate of 12 square km every hour. These forests are most often on soils which cannot sustain the agricultural practices which are planned to follow clearing. Hence, in South and Central America, the great beef ranches in the rain forest are viable for only a few years while the soil loses fertility and erodes. Forests represent enormous resources for a country in terms of fuelwood, timber, wildlife, medicinal plants, etc. and, in addition, they act as a 'sponge', soaking up heavy rainfall and releasing it gradually into streams and rivers, providing the land downstream with a clean regulated water-supply. In many cases, conversion of forest land to agricultural use has been successful and has provided increased sustainable benefits to the country. Often, however, the soil is so poor that it cannot sustain continued cropping and after a year or two is left barren with resultant costs to the downstream land-uses, in terms of increased flooding and drought. An NCS will help to define which uses and levels of use are ecologically suitable, so that the greatest benefit can be derived from the areas in question on a sustainable basis.

AFFORESTATION



At present, ten times more trees are felled throughout the world than are planted. Many governments and communities are however realising the benefits to be gained from planting species of high timber, fuel, fodder and food value. And yet there simply are not the resources to undertake all the necessary afforestation at once. An NCS can help to show how and where efforts might be most useful, and to organise them along with other conservation and development projects.

4

**NCS
ACTIVITIES
THROUGHOUT
THE
WORLD**

**4.1 DIFFERENCES IN APPROACH
TO PREPARING AN NCS**

By November 1983, 31 countries were preparing or had prepared national or sub-national conservation strategies.

In the *developing world*, initial strategy development work has been completed in Indonesia, Malaysia, the Philippines and Thailand. Preliminary phases are underway or have been completed in Belize, Fiji, the Ivory Coast, Nepal, Nigeria, Pakistan, St. Kitts and Nevis, Senegal, the Seychelles, Sri Lanka, Uganda, Zaire, Zambia and Zimbabwe. The process is under discussion or has just started in Honduras, India, Madagascar and Tanzania.

In the *industrialised world*, final strategies have been prepared for Australia, South Africa, Spain and the United Kingdom. A draft document has been formulated in New Zealand. Czechoslovakia and Italy are presently working on their strategies. Canada, the Netherlands and Norway have reviewed the WCS with a view to preparing national strategies, and the development of strategies in Portugal and Greece is being planned.

A supplement to this document, "*World Conservation Strategy in Action*", is produced by IUCN every three months. It contains news and analyses of the progress of national conservation strategies (as well as of other initiatives deriving from the WCS). This supplement therefore provides a useful forum for sharing experiences of NCS work and developing its theory, so that the guidelines given here can be extended.

4.1 DIFFERENCES IN APPROACH TO PREPARING AN NCS

This document has continually stressed that no uniform approach can be applied to the preparation of NCSs. There are broad similarities, especially as regards aims, objectives and methodology for analysis. However, the exact form of the NCS process, the distribution of tasks (centralised or dispersed), the supervisory structure, the form and level of government and public participation and the role of NGOs, to name but a few factors, will vary from country to country. Perhaps the greatest differences in approach to NCS development lie between industrialised and developing countries, due to the basic differences in the natural resource problems faced by the countries, the resources available to address the problems, the degree of organisation of the NGO community, the effectiveness of the media, etc.

4.1.1 ROLE OF THE MEDIA

In industrialised countries, public opinion is of central importance. The support of the media not only helps to generate widespread public interest in the NCS exercise, but also tends to act as an incentive to the government to take up the NCS initiative.

In many less developed countries, public opinion may be of less importance in stimulating government action and the communications media often play less of a role in forming public opinion. Nevertheless, the media are valuable in spreading an understanding of what an NCS aims to do, especially in regions remote from the country's capital. In less developed countries, particular attention must often be devoted to soliciting comment from the public.

4.1.2 *ROLE OF NGOS*

In industrialised countries, NGOs may be well organised, and carry political weight: they may be capable of organising and coordinating the entire NCS programme with suitable support from government (e.g. UK, Italy). Even where they do not take the lead, they may be in an excellent position to provide support, to participate and to help communicate the value of conservation.

In most developing countries NGOs are less well organised and less influential; governments necessarily have to take a lead in planning and initiating development. Unless the government is a central partner in NCS development, the result will usually be of very limited value. Still, in some developing countries, NGOs have successfully taken the lead in NCS preparation, e.g. Malaysia, Philippines.

Clearly when strategies are developed by NGOs, unless the object of the exercise is simply to lay out an action programme for the NGO community itself, the endorsement and active participation of government will be of fundamental importance. Unless this is achieved the strategy may have little impact on the activities of government or on the national plan.

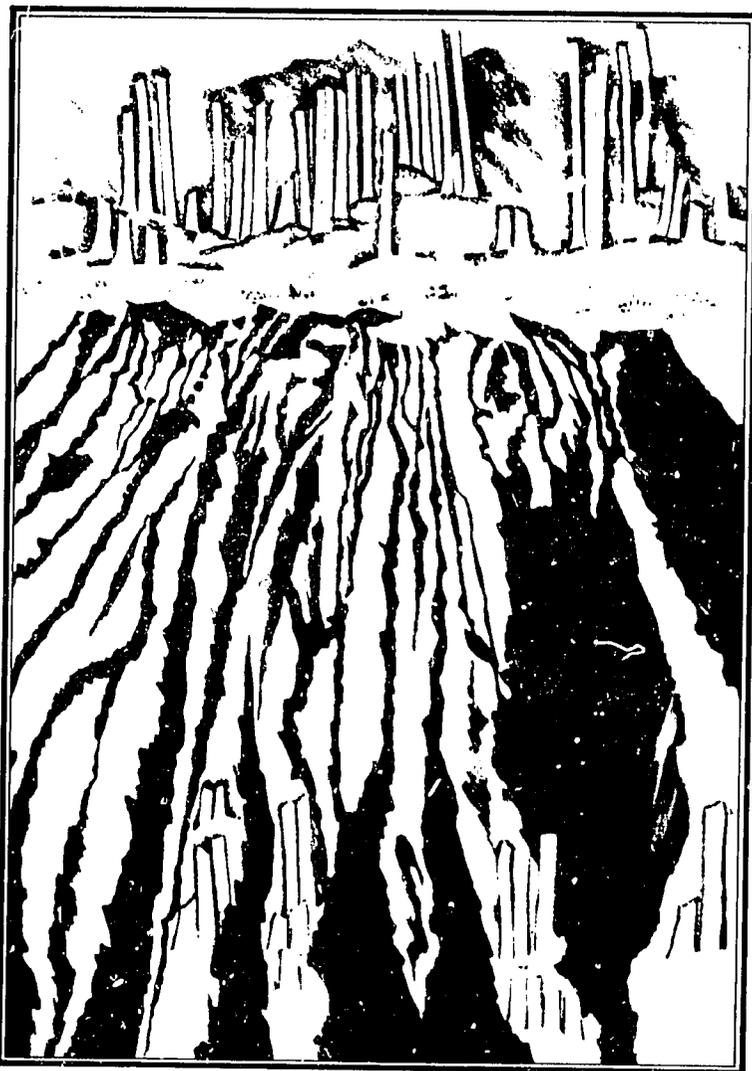
Normally there will be many opportunities for involving the government, by seeking comment on initial drafts and by inviting participation at NCS workshops and meetings of the NCS task force. But even if government is slow in participating it should be remembered that the eventual implementation of the strategy will normally depend very much on the government involvement.

4.1.3 *SCOPE OF STRATEGIES*

The nation state may not always be the most suitable entity for a strategic approach to conservation. There are examples of local or state-by-state approaches e.g. Czechoslovakia and Malaysia. There is also a good potential for multi-country strategies. But in many ways, the national level appears the most appropriate one on which to concentrate promotional efforts and resources, for it is normally at the national level that the major development and resource use decisions are taken.

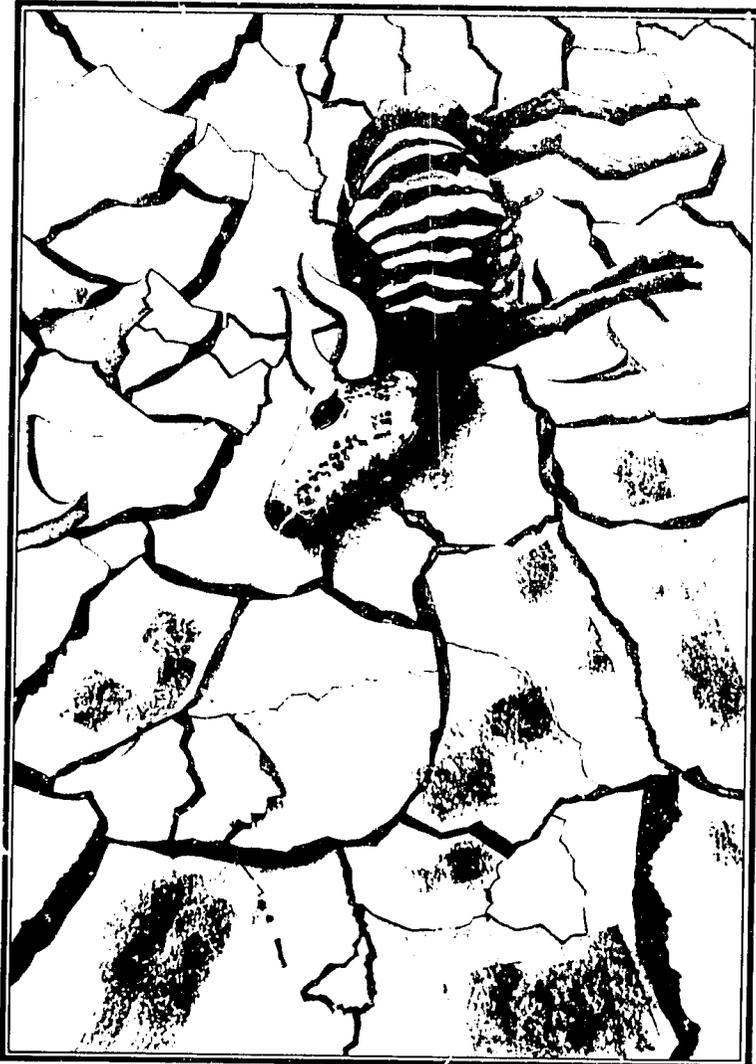
There exist a variety of approaches to determining the most useful scope for NCSs, for although the process proposed in this document calls for a comprehensive cross-sectoral analysis, a number of countries e.g. Pakistan and Indonesia have published initial strategies focussed on a limited range of sectors. A narrower approach may be necessary to ensure that the most urgent problems are promptly dealt with. However, although it may not always be cost-effective to cover every sector in the first stage, such strategies should be developed in the full knowledge of the ultimate need for a broader NCS.

SOIL EROSION



In almost every country the soil – which takes centuries to form – is being eroded by both poor agricultural practices and deforestation. In the 1930s, the ruthless exploitation of the Tennessee Valley soils for timber and food production caused many farms to be completely denuded of soil. The Tennessee Valley Authority was inaugurated to put into practice what was perhaps the first conservation strategy – a combination of reforestation, soil conservation works, agricultural techniques such as contour ploughing, the building of dams to supply hydro-electric power to farms and industries, and the opening up of river navigation. In the same way, NCSs should introduce soil conservation as a key component in all types of development, so that the soil is always ready to meet the new demands made upon it.

DROUGHT AND FLOODING



A lack of water is the major constraint to development in many regions. An objective of the NCS is to ensure that the ecological processes which help to maintain water supply are conserved. Bad management – over-grazing, deforestation, steep slope cultivation, etc. – reduces the power of the soil and vegetation to moderate water flow. This can lead, in the same locality, to both increased drought and a higher incidence of flooding. In 1983, most of the countries of the world suffered one or both of these disasters and in many cases the effects were worsened by bad land management. The problem is usually worse in monsoon climates: northern India has been devastated by floods four times in the last decade.

Conservation, in the form of wise land management, can significantly reduce the occurrence of these problems. Australia, the driest continent, suffers from regular droughts and salinised soils. The Proposal for an Australian NCS draws attention to the need to conserve water if development is to be sustainable.

5

THE ROLE OF INTERNATIONAL AGENCIES

**5.1 THE PROVISION
OF TECHNICAL ASSISTANCE**

5.2 THE ROLE OF THE UN SYSTEM

**5.3 THE ROLE OF IUCN,
ITS MEMBERS AND
COLLABORATING ORGANISATIONS**

**5.4 THE ROLE OF OTHER
INTERGOVERNMENTAL ORGANISATIONS**

5.1 THE PROVISION OF TECHNICAL ASSISTANCE

The concept of the NCS is relatively new and experience of NCS preparation is limited. Many less developed countries lack the capacity or experience to promote the concept throughout government, to establish the framework or actually to prepare the strategy. In such cases technical assistance may be appropriate.

Requests from developing countries (to organisations such as IUCN) for technical assistance in the development of NCSs have most often been made by ministries or departments of natural resources or environment. Although the central planning authorities of these countries have been kept informed of such dialogues, the requests have not usually been routed through the central aid negotiating system, and as a result, the development assistance agencies have not always been able to provide financial support or expertise.

Aid agencies should consider five means of promoting sustainable development:

- ensuring the active promotion of national conservation strategies through their resident representatives and special programmes;
- being sensitive to the needs of environmental agencies for limited but vital technical assistance at the earliest "awareness raising" stages of NCS development;
- contributing technical assistance for preparing conservation strategies;
- participating with governments in NCS development, particularly by contributing information and expertise (always in a supportive role);
- considering the priorities defined by NCSs as a guide to future development aid programmes and, where necessary, assisting aid recipient countries with implementation of components of the strategy.

5.2 THE ROLE OF THE UN SYSTEM

The UN agencies primarily involved in NCS activities are UNEP, FAO and Unesco. Currently, their activities in conservation are coordinated through the mechanism of the Ecosystems Conservation Group (ECG) which comprises the three agencies and IUCN.

UNEP provided financial support for the development of the World Conservation Strategy, and has supported IUCN in promoting and assisting in the preparation of NCSs. UNEP's role in NCS preparation includes ensuring the full support of the UN system and consists of:

- promotion of the NCS at all levels of government;
- provision of information, advice and technical assistance, especially through its information systems, its regional programmes and, more recently, its Clearing House Facility;
- provision of financial support for NCS formulation;
- coordination of UN activities in this and related fields through the mechanism of the UN System Wide Medium Term Environment Plan (SWMTEP).

The roles of FAO and Unesco are focussed on the provision of technical assistance and advice at the national level and on the integration of ncs activities with their existing and planned projects.

5.3 THE ROLE OF IUCN, ITS MEMBERS AND COLLABORATING ORGANISATIONS

IUCN is a union of almost 500 organisations. Its secretariat in Switzerland operates as the centre of a global network of members, advisors and consultants in the field of natural resource management, and includes a technical assistance facility (the Conservation for Development Centre). IUCN can support the formulation and implementation of ncss through the activities of its network as well as through its secretariat.

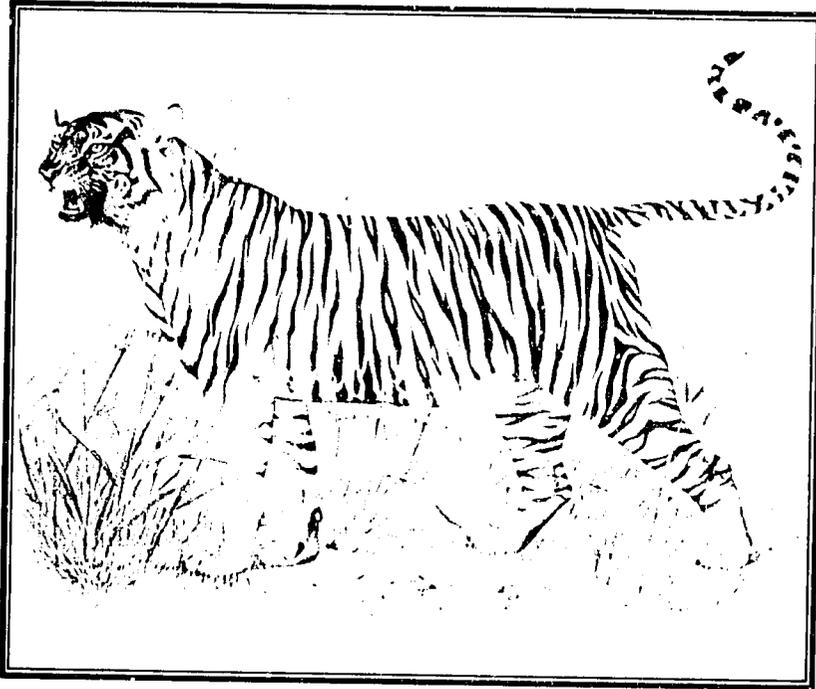
IUCN's role is:

- to promote awareness of the need for and the usefulness of conservation strategies, by special programmes and through its membership, among governments, development assistance agencies and other development-oriented organisations;
- to provide leadership in the advancement of conservation strategy theory;
- to provide advice and technical assistance for the preparation of conservation strategies;
- to assemble, analyse and disseminate information on conservation strategy activities throughout the world e.g. through the medium of the "World Conservation Strategy in Action" supplement.

5.4 THE ROLE OF OTHER INTERGOVERNMENTAL ORGANISATIONS

Encouragement and support from such organisations (e.g. ASEAN, SADC) for the preparation of ncss in each of their member countries is most important, as is also the provision of a forum for the discussion of trans-boundary considerations and regional implications. Preparation of regional strategies is seen by some experts to be a natural extension of the ncs.

SPECIES CONSERVATION



The preservation of genetic diversity is a matter of both insurance and investment. It is necessary to conserve genes in order to sustain and improve agricultural, forestry and fisheries production; to keep open future options for exploiting natural resources; to buffer against harmful environmental change; to act as the raw material for much scientific and industrial innovation; and as a matter of moral principle.

In the last few decades there have been many successes in wild species conservation, achieved in part by protecting the natural habitat in which the species live. Many, like Project Tiger in India, have had more widespread benefits; in the area surrounding the Corbett National Park, the vegetation conserved for the tiger has benefitted farmers by protecting water supplies. In Nepal, the Royal Chitwan National Park, known particularly for its rhino, tiger and gharial, provides a large annual thatch-grass harvest for neighbouring villages. The thatch-grass also helps to slow down river bank erosion.

EDUCATION



Communities throughout the world have depended for generations on traditional methods of managing their natural resources. With population growth and rapid development, people have often turned towards methods which provide better short-term returns, usually at the cost of longer-term benefits.

Conservation education is an investment in future generations. Its aim is to provide people with an understanding of how they can manage their environment so as to ensure sustained benefits, and this often involves a careful mix of traditional and modern methods. Some NCSs have begun the development of relevant education programmes, using existing media and institutions, and culturally acceptable techniques.

ANNEXES

ANNEX I
ILLUSTRATIVE OUTLINE FOR AN NCS REPORT

The following outline for a full SCS report is *not* a straightjacket; it draws from the various reports produced so far and is presented mainly as a checklist to illustrate the logic of a strategy. Much of the content of a final SCS will be specific to a given country. *Proposals* for the preparation of individual NCSs, and *Overview Reports* could also adopt elements of this outline.

PREFACE

The need for a National Conservation Strategy and the purpose it fulfills.

SUMMARY

1. INTRODUCTION

1.1 CONSERVATION FOR SUSTAINABLE DEVELOPMENT

a discussion of the philosophies of conservation and development.

1.2 THE NATIONAL CONSERVATION STRATEGY INITIATIVE

including a summary of natural resource issues as they affect national development; brief history of conservation activity to the present day; record of the initiative to prepare an SCS, the process and people involved so far.

2. THE CURRENT SITUATION

2.1 PHYSICAL AND INFRASTRUCTURE CHARACTERISTICS OF THE COUNTRY

very brief descriptions and only if appropriate (often these may be based on other recent documents such as USAID Environmental Profiles):

e.g.	Terrain	The economy
	Ecology	Industry
	Hydrology	Energy
	Climate	Population including health
	Land use	Human settlements
	Natural Resources	Cultural aspects

2.2 THE DEVELOPMENT CONTEXT

discussion of the development issues facing the country; regional and international context; recent economic history and forecasts; main development aims, problems, opportunities and constraints, etc.

2.3 DEVELOPMENT SECTORS AND THEIR CONSERVATION IMPLICATIONS

analysis of conservation/development interactions in each *sector*, with respect to:

- type and degree of consequences of interaction (positive or negative); e.g. soil erosion, flooding, deforestation;
- priority of conservation problems on the basis of their significance, urgency and possible irreversibility; (see WCS section 5);
- ecosystems affected;

- a description of conservation measures adopted so far and a concrete measure of their effectiveness;
- the obstacles to achieving conservation in the sector and the level of their severity;
- trends and forecasts for the future;
- identification of needs for action (summarised later if necessary).

2.4 INTERNATIONAL IMPLICATIONS

- | | |
|----------------------|---|
| Regional Issues e.g. | <ul style="list-style-type: none"> - use of shared resources - pollution problems, e.g., acid rain - desertification - flooding |
| Global Issues e.g. | <ul style="list-style-type: none"> - species protection - cultural heritage - conservation agreements - relationships with aid agencies |

2.5 OBSTACLES TO CONSERVATION

a national level analysis of inadequacies in e.g.

- environmental and natural resource planning
- organisation
- policy
- legislation
- available information
- conservation awareness
- financial and manpower capability to conserve
- consumption patterns and cultural attitudes
- other significant functions

This section should refer to the action needed now and why it is presently lacking.

3. THE STRATEGY

3.1 PURPOSES OF THE NCS

These would be along the lines of:

Goal

- to satisfy the basic material, spiritual and cultural needs of all the people of the country, both present and future generations, through the wise management of natural resources.

The Strategic Aim

- to define and establish policies, plans, organisation and action, whereby the sustainability of natural resource use will be fully integrated with every aspect of the country's social and economic development. The essence of a strategy is to analyse trends as well as current issues so as to better anticipate problems and plan accordingly.

Objectives

- to ensure the sustainable use of the country's natural resources (forests, agricultural land, wildlife, etc.);
- to maintain the country's genetic diversity (the range of genetic material governing the quality and productivity of plant and animal crops, as well as the rich diversity of wild species);
- to maintain essential ecological processes and life-support systems (soil regeneration and protection, nutrient recycling, protection and cleansing of waters, etc.).

3.2 OPERATIONAL PRINCIPLES TO BE USED IN IMPLEMENTING THE NCS

These will be specific to each country, but are likely to include:

- keep options for the future open;
- mix cure of environmental problems with their prevention;
- focus activity on specific projects and areas, as well as covering broad policies;
- build on existing institutions and procedures;
- maximise efficiency of resource use;
- coordinate understanding, commitment and activity between sectors;
- integrate conservation and development activities so that all are more cost-effective;
- educate, communicate and assess public opinion;
- highlight successes and draw lessons from successes and mistakes;
- establish priorities and act upon them first.

3.3 SUMMARY OF ISSUES AND CROSS-SECTORAL ACTIONS NEEDED

Priority *problems* in each sector will have been analysed earlier (Sec. 2.3). It would be possible to list the related solutions i.e. priority *actions*, under sectoral headings; indeed this will obviously be the procedure for sectoral strategies/work plans, which will be complementary to the central ncs document. However, one of the main themes of an ncs is that natural resource use in one sector can help or hinder use in other sector, and furthermore, that many natural resource problems cannot be solved by the customary single-sector activity. One way of emphasising the comprehensive, integrative approach that characterises the ncs concept is to present the recommendations for priority actions within the matrix of conservation/development interactions. This will clearly demonstrate the interrelationships among priority actions, link actions with objectives and at the same time allow the identification of sectoral responsibility for undertaking actions.

3.4 VEHICLES FOR PRIORITY CONSERVATION ACTION

recommendations, for example, relating to:

- organisations (which will be involved in the NCS)
- policy (cross-sectoral and sectoral, fiscal, investment)
- comprehensive planning procedures
- legislation
- education, training, extension, the media and public participation
- information and research
- need for new international arrangements
- projects (e.g. demonstration areas, projects to address urgent needs).

3.5 INTERNAL RESPONSIBILITIES

funding, staff allocation, office space, transport and administrative costs, etc.

3.6 EXTERNAL AGENCIES' RESPONSIBILITIES (if appropriate)

provision of funds, technical assistance personnel and consultancies (man-months and costs), etc.⁴

4. IMPLEMENTATION

(or "NCS preparation" in the case of an NCS Proposal/Overview Report)

A schedule stating timing, authority and responsibilities, and costs for each main task/project, arranged by sectors where appropriate.

5. METHODS OF MONITORING PROGRESS AND MAINTAINING THE NCS

Stating relevant criteria for measuring conservation success and defining mechanisms for ensuring feedback to improve the usefulness of the NCS.

6. APPENDICES

Amongst the appendices there could be:

- a diagram showing the coordination among different organisations for the various conservation functions;
- a flow chart showing procedures which are developed;
- maps showing areas where priority natural resource problems/conservation activities have been defined.

ANNEX II
LIST OF PARTICIPANTS
WORKSHOP ON THE FORMULATION OF
NATIONAL CONSERVATION STRATEGIES
November 2-4, 1983 (Morges, Switzerland)

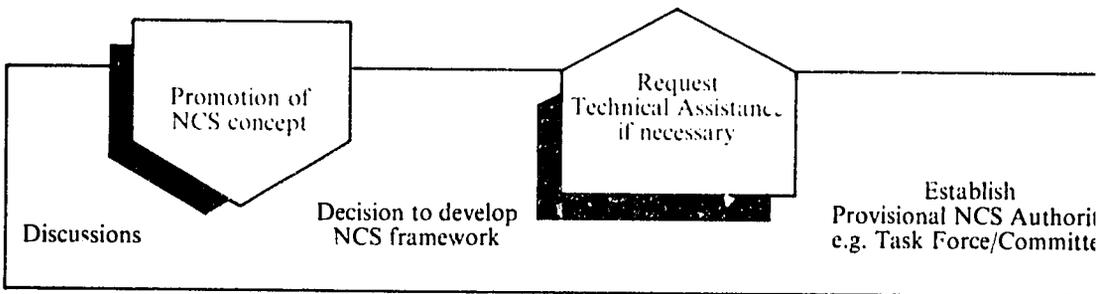
Dr. D. A. MUNRO* (Chairman)	Senior Advisor to CDC
Mr. S. M. J. BASS (Secretary)	Consultant to CDC Cobham Resource Consultants, UK
Dr. S. BERWICK	Director EPM Project JES/International Institute for Environment and Development Washington, D.C.
Dr. Dibya dev BHATT	Secretary Office of the Prime Minister His Majesty's Government of Nepal
Mr. M. J. COCKERELL	Director CDC IUCN Switzerland
Ms J. DAVIDSON*	Environmental Consultant Research Fellow University College London
Mr. J. DAVIDSON*	Assistant Director (Regions) Countryside Commission, England and Wales
Dr. J. FURTADO*†	Science Advisor Commonwealth Secretariat London
Dr. R. GOODLAND	The World Bank Washington, D.C.
Mr. M. HADLEY	Division Ecological Sciences Unesco Paris
Mr. C. KATSIGAZI	President's Office Government of Uganda
Mr. A. KHOSLA†	Society for Development Alternatives India
Ms. M. KUX	Office of Forestry, Environment and Natural Resources Bureau of Science and Technology USAID
Mr. M. MORELL*	Direccion Nacional de Parques Dominican Republic

Dr. F. J. MOUTTAPA	Environment and Energy Programme Coordination Unit FAO
Mr. K. RENNIE	Environmental Consultant Switzerland
Mr. R. SANDBROOK	Executive Vice President International Institute for Environment and Development London
Mr. E. SUMARDJA	Ministry of Population and Environment Indonesia
Mr. K. H. J. WIJAYADASA	Chairman Central Environmental Authority Sri Lanka

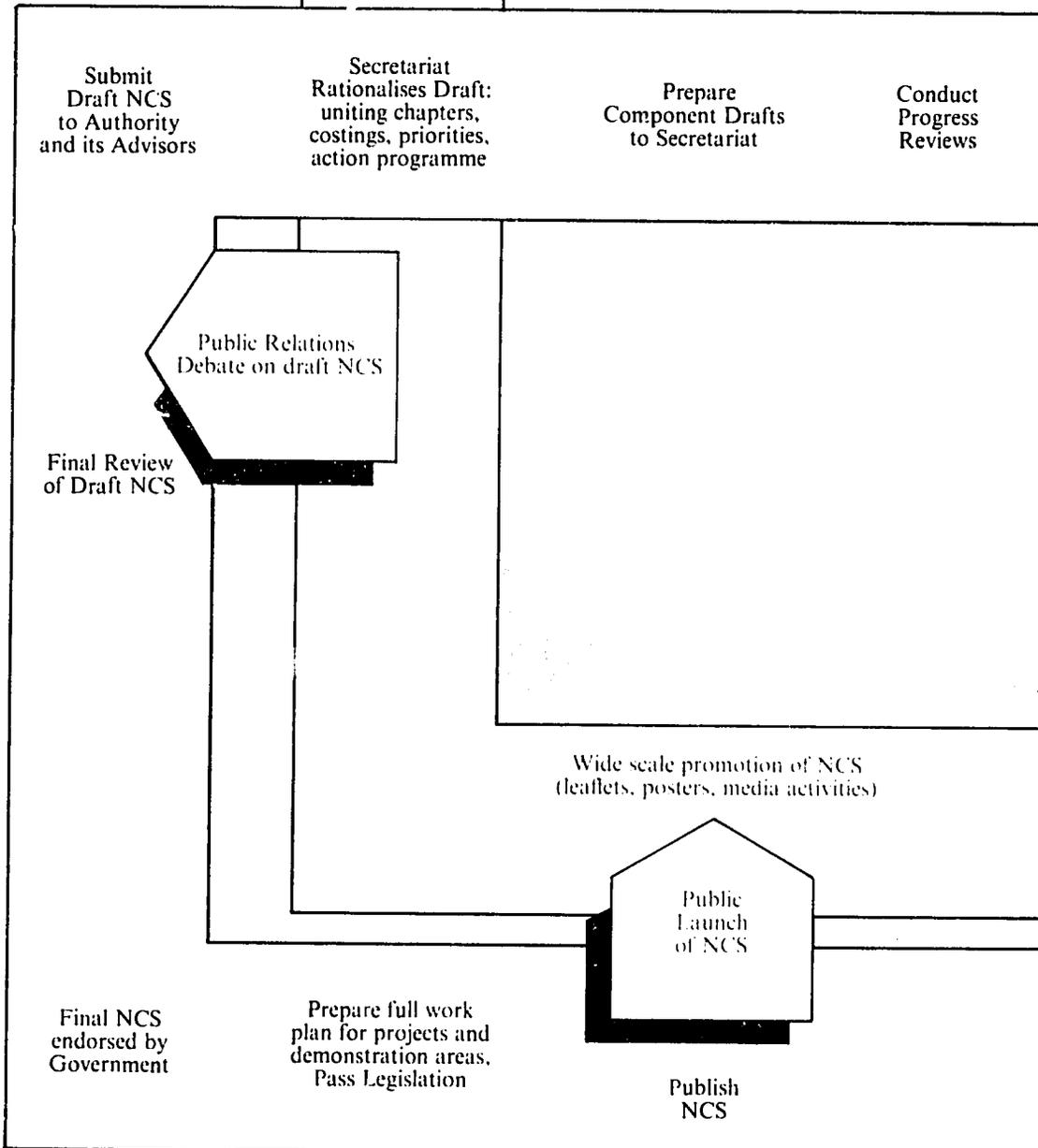
ALSO IN ATTENDANCE FOR PART OF THE PROCEEDINGS WERE:

Dr. K. R. MILLER	Director General IUCN Switzerland
Mr. D. MITCHELL	Director Public Affairs Division WWF International Switzerland
Mr. M. HALLE	Assistant Director CDC/IUCN Switzerland
Ms. H. HALLDEN	Information Assistant CDC/IUCN Switzerland
Ms. K. OLDFELT	Director of UNEP Regional Office for Europe
Mr. D. PITT*	Consultant France
Mr. D. RUNNALLS	Vice President International Institute for Environment and Development Washington, D.C.

*Member of IUCN Commission on Environmental Planning
†Member of IUCN Commission on Ecology



PUBLIC RELATIONS



OVERVIEW

FULL NCS

**Establish
Provisional NCS Secretariat**

Secretariat prepares
overview report involving
Ministries/NGOs etc.

INFORMATION

Establish
Data Retrieval
Mechanism

Prepare
Work Plan for
NCS formulation

Prepare and
Execute
Resource
Surveys
as defined by
Work Plan

Arrange funding

Arrange technical
assistance
if necessary

Ministers, NGOs and
Secretariat prepare
components of NCS
e.g. Sectoral Strategies,
Education, Legislation,
Define demonstration
and pilot projects

Formally set up
NCS authority
and Secretariat

Update
Surveys

Public Feedback,
Education
Programmes

ANNEX III
THE TYPE OF PROCESS WHICH COULD BE USED
FOR PREPARING A
NATIONAL CONSERVATION STRATEGY

Implement projects,
Incorporate NCS
into development plan

Monitor, Review
National/
International
Seminars

ANNEX IV
ABBREVIATIONS

ASEAN: Association of Southeast Asian Nations
CDC: Conservation for Development Centre
ECG: Ecosystem Conservation Group
FAO: Food and Agriculture Organization
IIED: International Institute for Environment and Development
IUCN: International Union for Conservation of Nature and Natural Resources
JES: Joint Environmental Service
NCS: National Conservation Strategy
NGO: Non-Governmental Organisation
SADCC: Southern African Development Coordination Conference
SWMTEP: System Wide Medium Term Environment Plan
UNEP: United Nations Environment Programme
Unesco: United Nations Educational, Scientific and Cultural Organization
USAID: United States Agency for International Development
WCS: World Conservation Strategy
WWF: World Wildlife Fund