

Analysis and planning using Strategic Environmental Analysis

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Given the growing need for systematic participatory environmental analysis, planning and stakeholder coordination of activities to combat poverty and land degradation, AID Environment and the Netherlands Development Organisation (SNV) developed the Strategic Environmental Analysis (SEAN) methodological tool kit. In this article, the main characteristics of SEAN are discussed, using its application in Atacora Province in Northern Benin as an example.



Active community participation in strategic environmental analysis and planning.

In regions with limited economic potential where there are environmental problems such as desertification, there is a growing need for systematic environmental analysis to answer such questions as:

- What are the insights and interests of different actors as far as the proper management of natural resources are concerned?
- What level of land degradation is acceptable and can be considered as reversible?
- How can coalitions of stakeholders be formed to deal with the root causes of land degradation?
- Are there any so-called win-win opportunities that can improve both the economic and environmental situation?
- How can environmental priorities be integrated with economic, social and gender priorities?

In many places the absence of a clear vision of the future has led to confusion, lack of coordination and the setting of incorrect development priorities. This is especially so when many activities have been undertaken by different actors. Poor experiences with national environmental planning have made clear that the analysis and planning of rural development must take place at sub-national level and actively involve the population. There is a need to pay more attention to root causes rather than symptoms and to make use of existing opportunities, ongoing changes and the promising initiatives being taken at various levels.

SEAN has been designed to meet these needs. It is a comprehensive and practical methodology with the long-term objective of including environmental issues in devel-

opment planning. Concrete short-term objectives are:

- to analyse the environmental context of human development, its potentials and constraints,
- to integrate environmental key issues with economic, social and institutional aspects of sustainable development,
- to provide inputs for planning sustainable development policies and strategic action plans during the early stages of decision making.

SEAN aims to achieve these results by initiating and supporting a participatory process of mutual learning and by generating insights and creating transparency on the complex interrelations between the environmental context and other dimensions of land use.

Procedural and analytical principles

There are a number of procedural and analytical principles relating to the application of SEAN. First, there is need for broad participation, including actors from different institutional levels (vertical integration) and different interest groups (horizontal integration). Analytical principles include, for example:

- the multi-functionality of the environment: elements (fields, trees, etc) have multiple functions and attract varied amounts of interests from different actors;
- limitations to exploitation and the use of environmental elements;
- linkages between the different dimensions of sustainable development.

Box 1: Some key underlying factors for the environmental problems in Atacora

- Increasing incidence of drought even in sub-humid zones
- High-level of seasonal rural emigration and lack of investments of revenues in the area of origin
- Low-level of education among rural farmers
- Poverty and poor access to credit
- Lack of organisation and power in civil society
- Predominance of traditional regulations of access and control of land resources
- Leveling, a strong social phenomenon discouraging private initiative (jealousy)
- Prevailing negative elements of local traditions
- Poor organisation of production sectors other than cotton
- Limited income opportunities outside the agricultural sector
- Non-application of organic fertilisers to improve soil fertility
- Absence of a good pastoral legislation and planning in which relevant actors have been involved
- Poor quality of urban development plans, poor management of urban wastes
- Poor agricultural extension services

Box 2: The 10 analytical tasks of the SEAN methodology

Cluster I: Ecological system – human society context analysis

- **Task 1:** Identification of the main stakeholders within an area (including gender distinctions), identification of the main environmental functions (environmental production, carrier, regulation and cultural functions) upon which stakeholders depend, setting priorities among environmental functions and stakeholders.
- **Task 2:** Assessment of past and present trends in environmental functions (quantity and quality), using various types of indicators. Elaboration of environmental impact chains to clarify linkages between different environmental trends.
- **Task 3:** Assessment of the consequences (impacts) of current trends on stakeholders, as well as outside communities (off-site impacts), future generations (by extrapolating current trends) and natural values (eg biodiversity).
- **Task 4:** Defining the norms, standards and thresholds involved, to assess whether and when current trends may lead to the collapse of the environmental function, or to unacceptable change for certain stakeholders. As norms are difficult to assess, standards may be absent and thresholds not yet clearly defined. Generally qualitative assessments are made using insights and views from different actors involved.

Cluster II: Environmental problem analysis

- **Task 5:** Definition of the main environmental problems, using information from Steps 1-4 in a way that is as objective and specific as possible. This based on shared insights into the impact of current trends, a risk analysis and the type of stakeholder affected.
- **Task 6:** Listing the main causes and actors involved; analysing the underlying factors explaining actor's motivations. Underlying factors are mainly sociocultural, economic and/or institutional. This definition of underlying factors is essential if the root causes of environmental problems are to be tackled and key actors addressed. Priorities are set among those underlying factors identified.

Cluster III: Environmental opportunity analysis

- **Task 7:** The definition of main environmental opportunities is essential in order to look at the environment in a positive way. Opportunities occur in the ecological sphere (eg the potential for irrigation), economic (eg demand for certain products), institutional (eg new legislation), socio-cultural (eg women's potentials) and at the local level (eg an innovative community initiative). Priorities are set and packages are formed.
- **Task 8:** Analysis of the potential of opportunities to contribute to both solving environmental problems and solving or improving underlying factors ('win-win options') using insights from previous steps and a systematic approach (opportunity-impact matrix). Priorities are set on the basis of the potentials and constraints that surround realising opportunities in a sustainable way.

Cluster IV: Strategic planning and follow-up activities

- **Task 9:** Synthesis to define a vision and strategic priorities, defining inputs for strategic action planning, including both sectoral and inter-sectoral programmes. Operational plans based on the strategic plan can be worked out using a logical framework.
- **Task 10:** Formulation of a follow-up strategy, including issues internal to the implementing institution, establishment of an environmental monitoring system with indicators and procedures to adjust strategies or policies, external communication and capacity building.

The concept of sustainable development is made operational by long-term goals:

- ecological: stability and diversity
- socio-institutional: autonomy, health, security and equity
- economic: production and efficiency.

For each of these goals specific criteria are defined. These vary according to specific situations and context factors. SEAN takes the ecological dimension as its starting point for making the inventory and analysis of the potentials, constraints and risks. This starting point is justified by the need to overcome a historical and apparently intuitive human bias towards neglecting environmental issues in development planning. Second, it can be argued that environmental well-being is the basis for any sustainable socioeconomic activity. This is particularly important in many developing countries, where day-to-day

life in the rural areas depends on the quality of the environmental resources in the immediate surroundings, and where, in urban areas there is considerable dependence on food supplies from the surrounding rural areas.

Objectives and participants

SEAN has been used in a number of countries. Each time the objectives are different. The objectives of applying SEAN in Atacora province were:

1. To analyse the problems and opportunities within the region;
2. Elaborate a vision and strategic orientation for sustainable development that integrates environmental issues with economic and socio-institutional issues;
3. Creating synergy and coordination between ongoing development projects and activities by involving local

decision makers and other relevant actors;

4. Strengthening regional capacities as part of the decentralisation process;
5. Addressing the poverty and environmental fragility of the province.

Participants and parties involved were the following:

- **Funding agencies:** The 'Centre Béninois pour le Développement Durable' in Benin and SNV who runs several projects in the province.
- **Steering committee:** including representatives from the Ministry of Planning, Local Government and NGOs.
- **Owner of the SEAN process and outputs:** The elected 'préfet' of the province.
- **Participants:** during workshops and field work representatives of local communities, projects, NGOs, local government, private sector, donors and central government were involved. Special attention was given to gender equity.
- **SEAN executive team:** a local moderator (GERAM Bureau d'Etude), two staff from local projects and 2 staff from provincial services, one SEAN expert (AIDEnvironment).
- **Technical advisors:** on an ad-hoc basis advice has been obtained from University experts.

In total, about 25 different organisations have participated, and several actors joined voluntarily. Participants were involved in workshops (debates), joint analysis and feed-back. These were used to set priorities.

The 5 phases of SEAN

The SEAN process has 5 phases. In Atacora they were applied in the following way:

1. **Preparation and initiation:** this critical phase included defining of objectives, lobbying at national level, the selection of participants, discussion on ownership and reviewing of relevant experiences.
2. **Scoping:** during this phase, a five-day workshop was held and existing knowledge was captured by going through the SEAN methodological steps with selected participants.
3. **Fieldwork:** fieldwork focused on increasing the level of understanding on a number of issues identified in the previous phase. Particular attention was given to women, pastoralists and children, to urban areas, and to critical issues such as soil fertility, migration patterns, trans-boundary pastoralist movements, agricultural extension and local traditions and views.
4. **Synthesis and planning:** this phase brought together the insights and views of the actors involved to define a common vision and 'strategic orientation' (Box 3) on sustainable development in the province.

5. *Follow-up*: this is an ongoing phase and focuses on supporting and strengthening the way the strategy is applied, working out of action plans, ensuring a feed-back of results to all stakeholder levels, and the setting-up of a monitoring system.

The 10 analytical tasks

The SEAN structure consists of ten distinct tasks within 4 clusters. These tasks are mainly used during the process Phases 2 to 4, to structure discussions, debate, field assessments and workshops. The ten tasks are briefly elaborated in Box 2. The SEAN toolbox has a set of guidelines, tips, tools and suggestions for each task that should enable potential practitioners to decide for themselves what task is relevant and how these can be worked out.

Some results in Atacora

SEAN has been applied in Atacora province in a very elaborate way. The process involving Phases 1 to 4 has taken almost 2 years. However, it has frequently been stated that processes that genuinely pay attention to participation and the objectives of interactive learning take a long time to mature. Some concrete results include:

- A diagnostic analysis of the situation including environmental, economic, social and institutional trends. These have been projected into the future; problems have been listed and causes identified. In Atacora, the main environmental problems are declining soil fertility; cotton production competing with the maintenance of food production; deforestation and the decline of urban living conditions (see Box 1);
- A vision for the coming 10 years has been developed for 4 distinct zones within the province.
- About 20 strategic areas were defined where improvements could be made. Objectives, development priorities and environmental and social criteria for designing integrated programmes were established and the implications for sector and territorial policies elaborated;
- Strategy for monitoring environmental change and progress developed together with impact indicators.

SEAN has succeeded in showing that an environmental analysis can help define relations with other dimensions of sustainable development during a participatory process. Considerable vertical and horizontal integration was achieved. At national level, awareness of the importance of decentralised planning has increased and some key issues such as illegal gold exploitation were highlighted.

A flexible and holistic approach

SEAN is a holistic approach that can be called a 'sustainability analysis' (Dalal

Clayton, 1993). It provides a logical structure for analysis and planning and can be used as local needs and experiences demand. It also has the capacity to guide processes involving long-term negotiation. SEAN has been effectively used in initiating negotiations, creating stakeholder platforms and to create transparency by setting objective criteria for establishing priorities and taking decision.

Marginal areas in complex and unpredictable situations need management systems that are adaptive, and that can respond quickly to new threats and opportunities. Planning in these situations has limited value because many unpredictable factors are involved. Such an adaptive management system should be based on a broad and accepted vision and strategic orientations, a monitoring (or early warning) system that focuses at key issues, and flexible institutions and planning systems. SEAN can be helpful in defining visions and strategic orientations, and in identifying which factors and actors to monitor.

The level of participation in a SEAN process can vary greatly. Donors and development organisations often want such processes to be finalised quickly and this can limit broad participation. In most cases SEAN is used for a period of six months, enough to achieve a limited level of participation.

In some situations there is enough general knowledge available and the emphasis is put on tools to analyse the links between environmental, social and economic issues. Even if this is done quickly at a workshop of key actors, for example, it can be an important added value. An outline for such 'quick scan' workshop setting has been developed.

Certain challenges remain.

- To establish more explicitly linkages between local level problems and constraints and opportunities at higher levels, including global markets and international policies;
- Policy analysis and institutional analysis (in principle, this is part of Task 6);
- Elaborating a monitoring system that is simple but able to address key threats and opportunities.

Documentation available

There is a reader on the SEAN methodology available in English, French and Spanish. A toolbox has recently been published in English. This is based on recent experiences and should allow potential practitioners to use SEAN with minimum external assistance. The toolbox consists of a presentation, educational cards on analytical tasks, the process phases and checklists, a SEAN case study and a booklet containing theoretical background. Price about US\$50-. All publications can

be ordered at SNV (E-mail: informatie@snv.nl). More information and order forms can be obtained from SEAN website (www.seanplatform.org) or with the author of this article. ■

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References

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Box 3: Some of the main strategic orientations resulting from SEAN

Each orientation has been worked out in detail and objectives, linkages with other dimensions, actors, opportunities and impact indicators are carefully defined.

Ecological orientations

- Maintenance and management of water balance
- Maintenance and management of biodiversity, plants and animals
- Maintenance of soil fertility
- Maintaining and improving the integration of trees in land-use systems
- Better control and management of grazing and livestock densities
- Improvement of urban living conditions

Social orientations

- Improvement of literacy rate
- Improvement of the level of education
- Control of the negative aspects and strengthening of the positive aspects of tradition
- Control of demographic growth and rural migration
- Promotion of gender awareness

Institutional orientations

- Support to existing structures and services to improve negotiation and communication capabilities
- Adaptation of current legislation on natural resources to prevailing socioeconomic conditions
- Support to decentralisation processes
- Support to NGOs and community-based organisations as intermediary structures
- Support to improve morality of civil society
- Improvement of means and systems of communication and information
- Technical and logistical support to existing services
- Improvement of technical and professional training

Economic orientations

- Development of promising markets and cash crops
- Promotion of off-farm income opportunities (eg. gold exploitation)
- Improvement of road system and opening up of remote parts of the department
- Improvement and adaptation of credit systems to improve access by all social groups
- Improvement and introduction of transformation, storage and conservation technologies
- Support to existing organisations and creation of cooperatives (economic structures)
- Diversification and promotion of renewable energy resources