Environmental Communication

Applying Communication Tools Towards Sustainable Development

1999

Contents

Acknowledgement

Introduction

Environmental Communication is the planned and strategic use of communication processes to support effective policy-making and project implementation geared towards environmental sustainability. Despite its acknowledged impact, Environmental Communication is rarely integrated in development cooperation programs as a strategic tool. For this reason, the Development Assistance Committee's Working Party on Development Cooperation and Environment established an Interest Group on Environmental Communication in 1997 to work on these issues. The Interest Group, with Germany in the lead, consisted of Canada, Belgium, Sweden, UNEP, and IUCN.

This working paper presents the final results of the Interest Group's work. The document is envisioned as a tool for policy-makers and planners to obtain an overview of the issues involved. The hope of the Interest Group is that this tool will quickly and convincingly show how Environmental Communication can become an integrated component of policies and projects, and thereby help ensure that adequate human and financial resources are allocated to this end.

1 Executive Summary

Background

On the basis of Agenda 21, the DAC has declared environmental sustainability as one of its strategic goals in 'Shaping the 21st Century: The Contribution of Develoment Cooperation'. Capacity development in environment (CDE) increasingly emerges as a key approach to this end, involving multi-faceted communication processes in inter-institutional cooperation, and interaction and consensus building between a wide range of actors. However, many implementing agencies realize that environmental projects and action plans often have limited success because the innovations and solutions they offer are not fully 'owned' by the people concerned.

Reasons for this limited success may include basic constraints resulting from the way people think or behave:

- Assumptions on the part of environmentalists believing that scientific facts and ecological concerns are convincing and compelling on their own. However, what affected people perceive is influenced by emotions and socialization, as well as by reason and knowledge.
- Inflated expectations that the 'cognitive power' of the word and the image alone will solve a given problem. By taking a shortcut from 'Said' to 'Done!', communication barriers are often disregarded.
- Conflicts of interest which are fought by stakeholders, not negotiated by 'shareholders'. Confrontational approaches lead to one-way information dissemination disregarding understanding, instead of relying on two-way communication towards 'shared meaning' and 'win-win' situations.

Also, practical limitations arising from the absence of a communication strategy lead to shortcomings. For example:

- A systematic and holistic communication strategy that takes into account people's perceptions and also saves funds is rarely considered - but it could determine the success or failure of a project.
- Communication activities are often conducted on an ad-hoc and sporadic basis, mainly using top-down mass media while neglecting public participation in community media.
- Many decision-makers do not know how to incorporate a communication strategy in their environmental project life cycles and, hence, are not willing to invest in this.

Major Findings on Environmental Communication

Environmental Communication (Env-Com) is the planned and strategic use of communication processes and media products to support effective policy making, public participation and project implementation geared towards environmental sustainability. Embedded in a well-defined communication strategy, EnvCom makes efficient use of methods, instruments and techniques which are well established in development communication, adult education, social marketing, agricultural extension, public relations, non-formal training and other fields.

Management Tool

EnvCom is a management tool, like the chain on a bicycle. The bike won't move without it but the transmission cannot move on its own. Similarly,

Environmental Programs could be more effective, sustainable and significant if Environmental Communication was regularly employed

Said is not heard

Heard is not understood

Understood is not accepted

And accepted is not yet **Done**

EnvCom transforms the power generated by project managers and the people concerned into action. It provides the missing link between the subject matter of environmental issues and the related socio-political processes of policy making and public participation. EnvCom is intricately related to education and training activities, bridging 'hard' technical know-how and 'soft' action-oriented behavioral change.

Communication will play a crucial role throughout the policy and program life cycle of recognizing - gaining control over - solving - and maintaining control over an environmental problem. It is vital that policy-makers or planners realize that different actors are involved at each stage, and that each actor has different perceptions, interests and 'hidden agendas'. Understanding where the project is in its progression from identification, formulation, implementation and management is an essential basis for determining which communication instruments should be used.

Many planners tend to think that producing posters and video films or launching a mass media 'campaign' is a solution to problems rooted in environmentally unsustainable practices. However, isolated products of this type only have a chance of success if they are integrated into a comprehensive communication strategy which defines up-front for what purpose and for whom information is meant and how beneficiaries are supposed to translate it into communication and action. This can be achieved by means of the systematic '10 Steps towards an Effective Environmental Communication Strategy'.

Knowing '**what**' should be changed has to be combined with '**how**' change should be brought about.

A successful EnvCom strategy makes use of **Step-By-Step Planning**

Stage 1   Assessment

Stage 2   Planning

Stage 3   Production

Stage 4   Action &Reflection

Lessons Learned from the Field

Empirical evidence from many projects around the world indicate that environmental practitioners should

- define EnvCom as an *output* (supporting the goal of a project, e.g. "Information on EIA law disseminated") or an *activity* (supporting the output of a project, e.g. "Communication strategy on recycling developed with relevant actors"),
- plan the communication strategy ahead, taking research, continuous monitoring and evaluation, process documentation and an exit strategy seriously right from the beginning in project planning,
- start locally at a modest level, and link issues raised, problems addressed and solutions proposed to existing trends, services and potentials, if possible by 'piggy-backing' on existing communication channels (see p.35),
- make use of up-stream compatibility of media, e.g. from *theater* to *video* and from there to *TV*,
- diversify the operational levels, e.g. *local* theater, *city* newspaper, and *national* radion and TV (see p.31),
- use participatory approaches in media production, management, training etc. to increase local ownership and credibility and, hence, program effectiveness, significance and sustainability.

2 **What Environmental Communication is all about**

Environmental Communication
is the planned and strategic use of communication processes and media products to support effective policy-making, public participation and project implementation geared towards environmental sustainability.
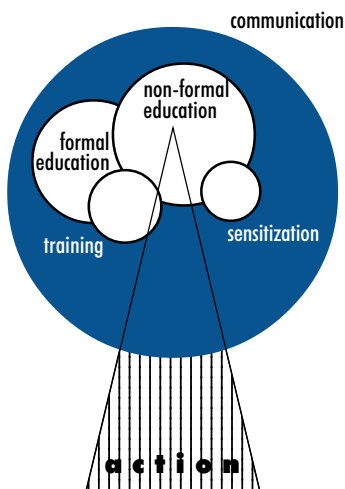
Environmental Action Tree

relating communication to formal + non-formal education, sensitization, vocational-training

Environmental Communication (EnvCom) is the planned and strategic use of communication processes and media products to support effective policy making, public participation and project implementation geared towards environmental sustainability. It is a two-way social interaction process enabling the people concerned to understand key environmental factors and their interdependencies and to repond to problems in a competent way. EnvCom aims not so much at information dissemination as at a shared vision of a sustainable future and at capacity building in social groups to solve or prevent environmental problems. Embedded in a well-defined communication strategy, EnvCom makes efficient use of methods, instruments and techniques which are well established in development communication, adult education, social marketing, agricultural extension, public relations, non-formal training, etc.

EnvCom is closely related to non-formal environmental education (NFEE), i.e. learning processes encompassing knowledge, values, socio-economic and technical skills related to procedures that facilitate the change of norms and practices towards sustainable development through problem-solving action. From a long-term perspective both, EnvCom and NFEE build on the factual knowledge of formal education regarding complex ecological systems and their interconnection with human interventions on the local, regional and global level. Pre-service and in-service vocational training on sustainable development fosters the improvement and consolidation of related curricula in all professions.

In the current debate on sustainable development, communication and education as the driving forces of environmental learning processes have an impact on at least two levels:

1 perceptions of the environment are to a large extent determined by cultural contexts, visions, lifestyles and value judgements which are acquired through communication

2 criteria and options for decisions regarding sustainable practices are a result of public discourse and transparently communicated alternatives

Ultimately, sustainable development cannot be based on behavioral manipulation alone but relies on a shared vision which will help civil society to develop adequate skills to manage its environment.

Why Environmental Communication is so special

- **Complexity of Environmental Issues**
  EnvCom deals with science, economics, law, business management, politics and human behavior, and their many tradeoffs and interactions in a holistic way.

- **Comprehension Gap**
  What the lay public knows and understands about the technical dimensions of the environment differs widely from the knowledge of experts.

- **Personal Impacts**
  As 'nature' is often associated with traditional beliefs and socio-cultural norms, EnvCom triggers reactions in non-rational (e.g. emotional and spiritual) dimensions of human behavior and practices.

- **Risk Element**
  Risks are a frequent factor in EnvCom, especially as distinctions between passive/uncontrollable or active/voluntary actions are concerned.

- **Large-scale Intervenions**
  Environmental interventions, e.g. in watershed management, often require coordinated action by large populations which, in communication terms, cannot be facilitated by individualistic or small-group approaches.

Liebig's Law on Plant Growth ... or what Environmental Communication is **not** about

Information alone, however, is not the 'missing link' between a problem and a solution. Here, Liebig's Law can be applied: the yield is related to the one indispensable nutrient (light, water, fertilizers etc.) which is most scarce. In other words – if your flower doesn't see the light, you may water it as much as you want, it won't grow. Applying this law to the growth of an environment or development program, even the most sophisticated communication strategy will not solve a problem if there is not a minimum level of economic resources, social organization and political bargaining power in place. This is why a project should define up front for what purpose and for whom information is meant and how beneficiaries are supposed to translate it into communication and action. Also, this is why EnvCom as a management tool should be combined with other - e.g. market-based, legal, financial - instruments for best effects (see Part 3).

3 Environmental Communication in Project Management

EnvCom is a **management tool**, like the chain on a bicycle. The bike won't move without it but the chain cannot move on its own. Similarly, EnvCom **transforms the power** generated by the people concerned into action.

EnvCom bridges the subject matter of environmental issues and the related sociopolitical processes of policy-making and public participation. It works best in combination with other instruments like economic incentives, laws and regulations or sectoral planning. Most of all, EnvCom is very intricately related to education and training activities. It bridges 'hard' technical know-how and 'soft' action-oriented behavioral change, i.e. scientific agreement and social agreement on any given environmental issue. Its high public participation potential is indispensable for the acceptance, credibility and sustainability of environmental programs.

In a project life cycle as outlined below, EnvCom plays a crucial role at all stages. Problem identification, agenda setting, policy formulation, implementation, evaluation, management and control, etc. cannot do without properly defined communication support. Concepts, technologies and skills related to environmental sustainability need to be communicated to policy-makers, opinion leaders, strategic groups or the public at large. Breaking down complex information into understandable elements and putting those on the agenda in a socio-culturally relevant and economically feasible way to different audiences is a prerequisite for consensus building and change.

Communication plays a crucial role throughout the project life cycle. It is imperative that project planners realize that different actors are involved at each stage, and that each actor has different perceptions and interests. The potential contributions of communication are related to the various stages of the project life cycle. During the recognition phase, the role of the policy-maker increases, reaching a peak when the problem at hand gets under control. Public awareness of the problem decreases when solutions are offered but still needs to be maintained. During all these stages, communication plays a continuous, yet different role - as indicated below.

Phases in the Project Life Cycle

Recognizing
A problem is identified and lobbied for by social groups, and a public discussion starts.

Gaining Control
Policies are formulated, research commissioned, and options for improvements are intensely deliberated.
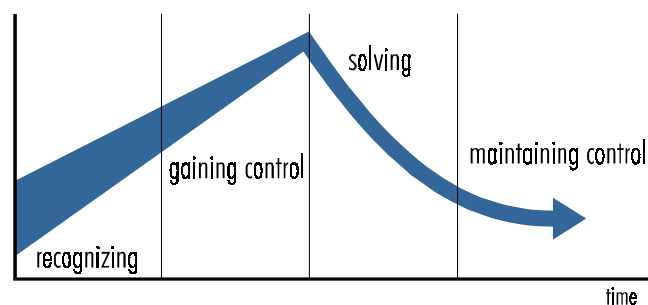
Solving
Policies, programs and projects are implemented. The debate slows down while the people affected remain informed.

Maintaining Control
The emphasis is on routine surveys. Decentralization and public-private partnerships may be considered for sustainability.

Relevance of a problem in public perception

solving

gaining control

maintaining control

recognizing

time

Understanding where the project is in its progression from identification, formulation, implementation and management is an essential basis for determining which communication instruments should be used.

■ Recognizing
Regular opinion/attitude surveys • media content analysis • continuous networking with NGOs, e.g. consumer groups • regular meetings with interest groups

■ Gaining control
Knowledge-Attitude-Practice (KAP) surveys • integrating communication in the mix of policy instruments • design of communication strategy • communication with those involved

■ Solving
Communication as a complementary instrument • information on other instruments (laws, incentives, etc.) • Monitoring and Evaluation (M&E) through qualitative research

■ Maintaining control
Regular public information • reporting on changes in policy design and implementation • up-dated opinion/attitude surveys.

Communication Instruments in the Project Cycle

Knowing '**what**' should be changed has to be combined with '**how**' change should be brought about.

Case Study

The above can be illustrated by the role of various communication instruments in the different phases of Protected Area System Planning for a marine conservation program.

Phase in Park Management	Methods of Communication
1 - Preparation	• Personal visits to the park with stakeholders to qualitatively assess the extent of the problem for the people affected • Qualitative knowledge/attitude/practice ('KAP') surveys • Contact with non-governmental or community-based organizations which will implement the EnvCom strategy • Basic information material on the park environment and the necessity of conserving the area to be distributed to relevant groups • Regular briefings, interviews and meetings with interest groups in order to give updates on the conservation process
2 – Composition	• Quantitative KAP surveys • Integrating communication in the mix of policy instruments • Design of communication strategy • Extension to and communication with intended stakeholders and beneficiaries
3 - Implementation	• Communication to raise awareness of conservation issues among key groups of the local population • Inform groups on the use of other management instruments (new legislation, subsidies, alternative technology)
4 - Maintenance	• M&E through qualitative research • Continued public information • Regular opinion/attitude surveys

4 10 Steps towards an Effective Communication Strategy

Isolated ad-hoc initiatives that are not integrated into a comprehensive communication strategy may cause inflated expectations in rational appeals and the cognitive dimension of messages.

This is why a project should define up front for what purpose and for whom information is meant, and how beneficiaries are supposed to translate it into communication and action. This is best achieved in a systematic and comprehensive EnvCom strategy which is always an integral part of a larger project or program:

Stage 1 Assessment

01   Situation analysis and problem identification
02   Actors and Knowledge, Attitude, Practices (KAP) analyses
03   Communication objectives

Stage 2 Planning

04   Communication strategy development
05   Participation of strategic groups
06   Media selection and mix

Stage 3 Production

07   Message design
08   Media production and pre-testing

Stage 4 Action and Reflection

09   Media performances & field implementation
10   Process documentation and Monitoring and Evaluation (M&E)

■ **Lessons Learned**

■ plan the communication strategy ahead, taking research, continuous M&E, process documentation and an exit strategy seriously
■ start locally at a modest level, and link issues raised, problems addressed and solutions proposed to existing trends, services and potentials
■ make use of upstream compatibility of media, e.g. theater - video - TV
■ diversify the operational levels, e.g. *local* theater, *city* newspaper, and *national* TV or radio
■ use participatory approaches in media production, management, training, etc. to increase local ownership and credibility and, hence, program effectiveness, significance and sustainability.

■ The 10 Steps will be outlined below in greater detail. For illustration, case studies, examples of tools and instruments will be referred to. A case study from Thailand will serve as a 'red thread' throughout most of the steps. Its general objective was to promote the appropriate application of a pest surveillance and management system among rice farmers (12,000), school children (5,000) and teachers (400) in 116 villages.

Participatory Rapid Appraisal (PRA)
enables people to share, present and analyze facts that concern their life and development

PRA
- Is flexible and informal
- Is applied in the community by on-the-spot analysis
- Works by 'fuzzy logic'
- Avoids biases by being self-critical

There are many ways to conduct a situation analysis and problem identification - PRA is one of the most participatory methods. It can easily be combined with an analysis of Knowledge-Attitudes-Practices (KAP) of the actors or groups concerned (Step 2) and the formulation of situation-specific communication objectives (Step 3).

In order to enhance the degree of participation and validity of Participatory Rapid Appraisal (PRA), it is recommended that a 1 or 2 week training event be held in which the staff of the implementing agencies, intermediaries (e.g. NGOs, media) and the stakeholders or actors concerned jointly participate. Once a mode of cooperation is established between those groups, they will interact and share experiences in other stages of the communication strategy as well, e.g. in pretesting media and messages, in utilising traditional and community as well as modern mass media or in evaluating the success of activities.

■ PRA is structured by **'triangles'**

- **teams** - comprising men and women, old and young, multi-disciplinary orientations, insiders and outsiders,
- **sources of information** - events and processes, people, places,
- **tools and techniques** - observations, diagrams, interviews and discussions.

The overruling principle of these triangles is **participation**

- from co-option and co-operation
- via consultation and collaboration
- to co-learning and collective action.

■ **PRA** is processed in **stages** and by means of participatory **tools**

- rural protocol • transect walk • mapping of observations • seasonal calendar • problem ranking by individuals and groups • pairing of problems related to potential projects or interventions • data analysis • designing a development plan • tackling constraints
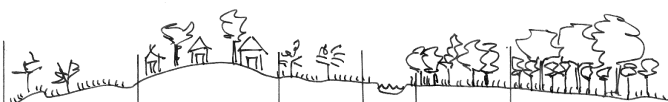
■ **PRA** has been adapted to environment-related and other **methods,** such as:

- Rapid Environmental Appraisal - REA • Participatory Urban Environmental Appraisal - PUEA • Community Self-survey - CSS • Social Impact Assessment - SIA

■ **PRA** tools answer the **What? - Who? - Where? - When? - Trends?** questions of a situation analysis.

Participatory Rapid Appraisal - Mapping a Transect Walk

Transect from Kiboum, Cameroon showing natural resources and land use pattern

**Transect Map
and other PRA tools**
(see for example Chambers 1992,
Schönhuth 1994, IIED 1995)

ZONE	WOODED SAVANNA	HABITATION	WOODED SAVANNA	RIVER	COPSE/ WOODS	CANOPIED FOREST
LAND USE	– Women's Fields – Fallow – Hunting – Pasture	– Houses – Buildings (School, Church) – Drying of Crops – Market	– " –	– Gardening – Macaboo – Bambo – Tomato – Peanuts	Sand used for Construction	– Corn Fields – Coffee Plantations – Cacao Plantations – Hunting – Banana Plant. – Collection of Condiments – Wood for Construction
TREES	Stunted Trees	– Banana – Teak – Mango – Avocado – Limon etc.	– " –			– Lrolio – Sapelier – Kola – Avocado – Coffe, Cacao
ANIMALS	– Monkey – Antelope – Buffalo – Tronchim.Cattle	– Goats – Sheep – Chickens – Ducks	– " –	– Fish – Lizards		– Monkey – Buffalo – Rat – Porcupine etc. – Deer
SOIL	– Stony – Lateritic – Black – Sandy			Sand	Sand	

Identified Problems of Pest Surveillance System

based on a farmers' KAP Survey in Chainat Province, Thailand (see FAO 1994)

IDENTIFIED PROBLEM	PROBLEM RELATED TO
1 - Little knowledge on pest identification and Economic Threshold Level	KNOWLEDGE
2 - Lack of sufficient knowledge on the importance and potential benefits of using pests' natural enemies	KNOWLEDGE
3 - Lack of sufficient knowledge on the importance and benefits of resistant rice varieties	KNOWLEDGE
4 - Lack of awareness of Surveillance and Early Warning System (SEWS) programme, and of ability in using Pest Surveillance form	KNOWLEDGE/ PRACTICE
5 - Farmers prefer broad-spectrum pesticides and blanket spraying	ATTITUDE
6 - Farmers do not believe in the effectiveness of natural enemies	ATTITUDE
7 - Farmers go to the edge of the field, but NOT into the field to check for pests according to the recommended procedure and frequency	ATTITUDE
8 - Farmers spray pesticides on sight of pests based on their "natural instinct"	ATTITUDE
9 - Farmers are aware of pesticide hazards, but DO NOT apply safety precautions in pesticide handling, application and disposal	PRACTICE

Awareness is not enough

The lessons learned from development communication and agricultural extension teach us that if you ask people to change their practices – e.g. by recycling household waste or saving water – instructive information and raising awareness is not enough. The diffusion of an innovation requires

• basic information about the new idea and how others use it,
• the innovation to be applied to personal values and life style,
• preliminary attempts to practise the innovation and evaluate its usefulness and impact,
• acceptance and commitment to the change in practice.

Said is not heard

Heard is not understood

Understood is not accepted

And accepted is not yet **Done**

Tool Box
(see for example FAO 1994, Adhikarya et al. 1987, IIED 1995)

Especially in environmental communication – where complex changes in attitudes and practices are at stake – this sequence is closely related to the potential barriers of communication which were mentioned earlier in the "Said – Done" paraphrase. That is to say – if communicators cannot motivate and mobilize their audiences to take action and commit themselves to the new, environmentally friendly practices, raising awareness or creating interest indeed will not be enough. This process from *awareness* to *adoption* works best if the social groups concerned are actively involved and supported in a partnership based on trust.

Awareness •
Interest •
Trial •
Adoption •

Within a project life cycle of an innovation from awareness to adoption, communicators distinguish:

early innovators (10%)
early majority (30%)
late majority (40%)
laggards (20%)

Therefore, it is crucial to identify and analyze carefully

• the **stakeholders** and other **actors**, i.e. individuals, groups or institutions who have an interest or assert power relevant to the environmental problem in question,

• especially those later addressed as **beneficiaries** (or **target groups**), i.e. those addressed by the communication strategy and from whom a change in practice is expected,
• and the **key intermediaries**, i.e. individuals, groups or institutions who can assist in reaching the target groups, often formal or opinion leaders, youth or women's organizations, NGOs which may lobby for public support, etc.

Audience Segmentation

For the communication strategy as a whole, audience segmentation is very important. Relevant actors, beneficiaries and intermediaries are clustered into groups according to socioeconomic and other characteristics they have in common. In later stages, communication objectives, message appeals or participation options are analyzed and designed for each *group*. In audience segmentation, gender and age awareness play a crucial role.

Instruments and techniques useful for identifying actors and relating them to each other include,

• **direct observation**
• **interviews with individuals**
• **focus group discussions or interviews**
• **sociograms**
• **resource users analysis.**

Actors and Interests

When actors have been identified and segmented in relation with the environmental problem at hand, it is necessary to understand their interests because this will help to communicate with them more successfully.

If a simple matrix of actors and their subgroups is not differentiated enough, the SWOT (Strengths, Weaknesses, Opportunities and Threats) window is a useful technique to go into details as is illustrated in the example below about strategic groups involved in a recycling program. The following chart – from the context of an Indonesian Recycling Project outlined in this section – shows how the 'Opportunities' and 'Threats' are fed into the communication strategy as benefits and costs of an intended change which determine the selected entry points of greatest impact. First, the SWOT of the new practice, namely recycling, are analyzed per strategic group. An opportunity (or benefit) for households, for example, may be additional income from recovered goods while a threat (or price) to them may be the extra costs and efforts put into separating waste. The selected entry point of greatest impact may, therefore, be to start with separating the more profitable and easy-to-handle goods such as paper, bottles or plastic and to link this separation of waste to the (informal) recycling sector.

Tool Box
SWOT Window (see for example GFA 1994)

SWOT = **S**trengths + **W**eaknesses (present)
Opportunities + **T**hreats (future)

Strategic Groups	SWOT	Environmental Communication Strategy

for example

· Households
· Waste Pickers
· Industry
· Markets
· Hotels
· Real Estates
· Shopping C.
· Office Bld.
· Local Auth.

in recycling

OPPORTUNITIES = **BENEFITS**

intended change

THREATS = **COSTS**

Entry Points of Greatest Impact
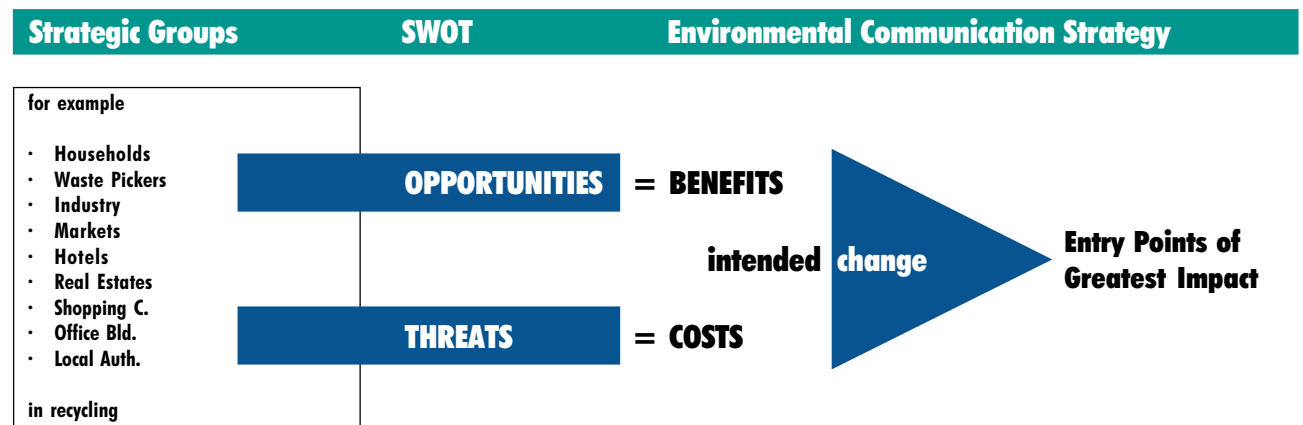
Critical Behavior and Key Factors of Influence

In order to narrow down the field of practices potentially relevant to an observed environmental problem, communities in cooperation with communication specialists should consider

- the impact or importance of a particular form of behavior to the problem,
- the feasibility of changing or maintaining the behavior,
- whether the ideal behavior, or similar forms, already exist in the community concerned.

- The practices which meet these criteria can be called **critical behavior**. In order to screen behavior that influences natural resources and environmental concerns it is useful

- to focus on specific types of behaviors rather than general categories,
- to emphasize the positive in existing practices,
- to classify behavior based on impacts it has on sustainability,
- to understand the feasibility of influencing relevant behavior,
- to understand behavioral flexibility.

Tool Box

(see for example Chambers 1992, IIED 1995, IUCN 1997)

Tools to screen critical behavior are

- **historical (trend) matrices of (specific) resources and land use,**
- **ranking and prioritization techniques, of behavioral threats to sustainability,**
- **resource management decision charts,**
- **matrices comparing the frequency of a specific behavior in various subgroups within a community, etc.**

Key Factors

Understanding the key factors, motivational forces and influences related to critical behavior is the next step. In most cases, these include social, cultural, economic and ecological determinants: Potentially crucial factors are

Social factors
- Knowledge
- values
- social norms
- cultural or religious values
- skills
- economics
- laws
- policies
- gender, etc.

Ecological factors
- Vegetative productivity
- diversity
- variability of physical environment (e.g. climate, seasons, daily periodicity)
- history of disturbances
- competition, etc.

Benefits
What is motivating, desirable, convenient or pleasant about a practiced behavior or what the actors think they gain when changing their behavior

Costs
What is difficult, unpleasant or undesirable about adopting a different practice.

KAP Surveys

Beneficiaries need to be consulted in the process of identifying problems and/or needs regarding their requirements or acceptability of a given innovation, i.e. a change in practice. A suggested procedure for conducting a participatory assessment of problems and needs is through a baseline survey on beneficiaries' Knowledge, Attitude, and Practice (KAP) with respect to specific and critical forms of behaviors and key factors. KAP surveys are problem-solving oriented and operate at a micro-level, with a focus on determining at least three conceptual categories :

- Knowledge, attitude and practice (KAP) levels of audiences vis-à-vis the critical elements of a given recommended or intended innovation.
- The KAP survey seeks qualitative information from respondents, e.g. through focus group interviews, such as on the reasons for causes of their negative attitudes and non-adoption or inappropriate practice with regard to the environmental problem.
- Information provided by KAP surveys is useful for campaign objectives or goals formulation and strategy development

KAP survey results can also be utilized for audience analysis and segmentation purposes, to determine who needs which types of information/messages through what combination of multi-media materials and channels. In addition relevant findings from surveys on media consumption patterns and habits, media availability and reach, and other socio-psychological and anthropological research studies are useful inputs.

A tool for participatory strategic planning and evaluation (see for example Adhikarya et al. 1987, FAO 1994)

Tool Box

(see e.g. IIED 1995, IUCN 1997, vol 2, denkmodell n.d.)

KAP - Pest Management (FAO) Evaluation Results (see FAO 1994)

Farmers' ATTITUDE

Towards Broad-Spectrum Pesticides:
"Use of broad-spectrum pesticides is the most effective method to control pests"

Campaign

BEFORE   AGREE   not sure   DISAGREE

TARGET

AFTER

                                          50%   100%

Towards Spraying Pesticides:
"Spray immediately when pests are observed in the field"

Campaign

BEFORE   AGREE   not sure   DISAGREE

TARGET

AFTER

                                          50%   100%
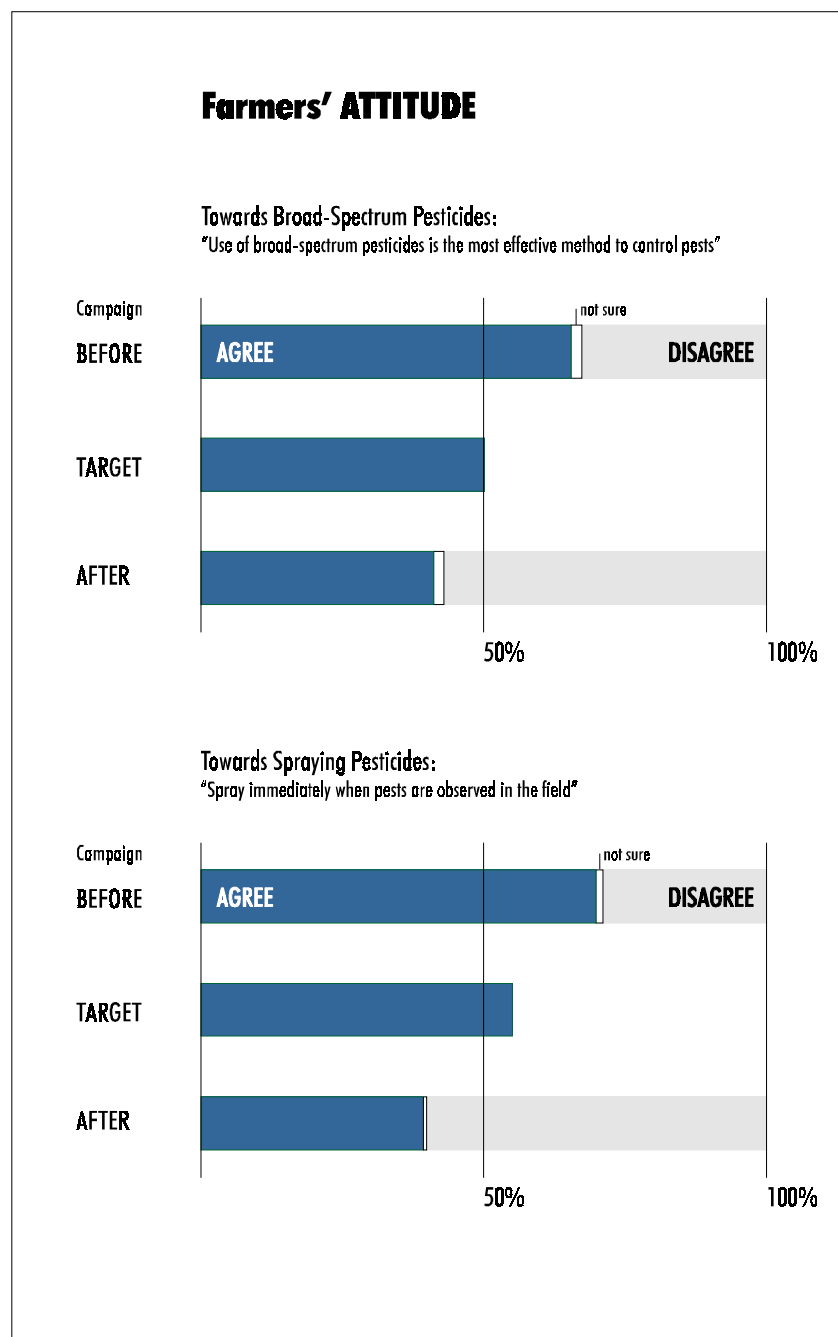
Tool Box
(see for example FAO 1994)

Results from KAP surveys, here from a pest management project in Thailand, convincingly show that communication can have an impact on peoples' attitudes and practice and changes their behavior in an environmentally friendly way.

A B C - Model

Six Steps to Applied Behavioral Change

In a nutshell, the various steps in situation, actor and KAP analyses can also be summarized in an Applied Behavioral Change model which is often used in the context of social marketing approaches integrated in the environmental communication strategy. The most crucial steps are outlined below.

1 - Observe Behavior

Identify what people like and don't like about a certain behavior that is to be changed. Don't just ask questions. Look, count, record behavior. Arrange for a few people to do what you would like the whole community to do. Watch their problems.

2 - Listen to People

Ask what matters to them, talk about how your target behavior fits into their daily life. Look for what they get out of behavior as 'gain' or benefit and who matters to them.

3 - Decide What Matters

Compare people who show the desired behavior with people who don't. What are they like, where do they live, how do they act out the behavior you care about? Segmentize your audiences because they will have to be communicated with differently.

4 - Generalize Facts

Summarize critical environmental practices, key factors influencing behavior and other points such as benefits people care about, messages preferred, opinion leaders people trust. Test your assumptions with a representative survey.

5 - Deliver Benefits

Deliver benefits people want, not just information. Solve barriers the people face, don't just 'educate' them. This means that service delivery and communication inputs have to be synchronized.

6 - Monitor Effects

Find and fix mistakes. Selectively monitor crucial program elements by means of simple and manageable indicators for the behavior you wish to change.

10 Steps ...

Actors and Knowledge-Attitude-Practice (KAP) - Analyses

Social Marketing

The 10 Steps of an Environmental Communication Strategy or the six steps of the ABC Model are often combined with the key elements of social marketing approaches which have proven effective in family planning, health care and other fields where, just as with environmental issues, sensitive and complex behavioral changes are at stake (see for example IUCN 1997).

The 4Ps of Social Marketing

Product	Behavior or service promoted
Place	Access to service system
Price	Costs, often barriers to change
Promotion	Public relations and communication
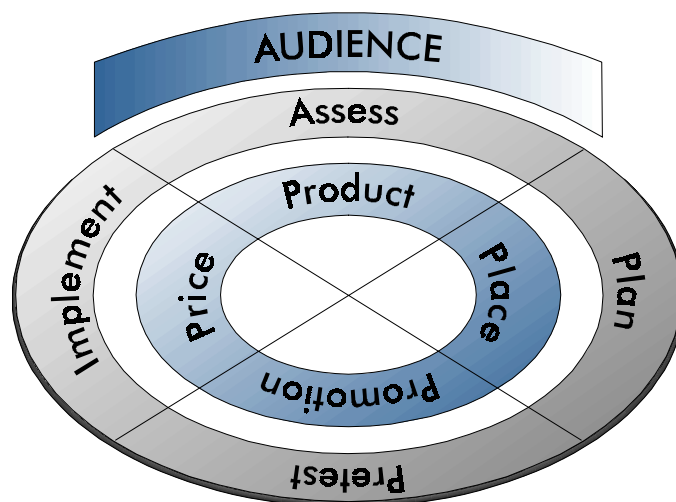
In a Waste Picker-related Poverty Alleviation and Recycling Program in Indonesia, an integrated communication strategy was used. The pickers' social and legal status is low despite their contributions to the environment and their self-employment in the informal sector. An NGO trained them in street theater which they performed in their neighborhoods in order to rally for recognition and support. Their research for the plays made them discover their own microcosm in a more analytical way. Breaking the 'culture of silence' through theater, they organized better, and articulated their needs and aspirations with greater self-confidence. Performances were recorded on video by the same NGO, and later broadcast on TV for environmental education. Exposure workshops for journalists, local authorities and the private sector and a recycling education component for schools were also part of the integrated strategy. As a result of the program and the use of media, the public image of the pickers was improved. City planners now consider their integration into solid waste management schemes at the municipal level (see Oepen 1992).

Integrated Communication Strategy for Waste Pickers and Recycling in Indonesia

Communication Objectives

Once the problems have been identified and the stakeholders analyzed, the communication objectives should be defined. It should be pointed out, however, that communication objectives are usually **not** the same as the project or program goals which are expected to be the ultimate results of the whole communication strategy **plus** other supporting outputs. The achievement of the communication objectives is a necessary, but not a sufficient condition for achieving the project or program goals. Hence, communication objectives should

- reflect the environmental policy, project or program goals,
- respond to the needs of the program and its target audience
- and help solve the problems encountered in achieving such goals.

Communication objectives should specify some important elements or characteristics of the policy, project or program activities which could help to provide a clear operational direction, and facilitate a meaningful evaluation. Some of those elements are:

- the target beneficiaries and their location,
- the outcome or behavior to be observed or measured,
- the type and amount/percentage of change from a given baseline figure expected from the beneficiaries,
- the time-frame.

Any policy, project or program goal should be explicit in specifying what is to be accomplished, not just the general or operational elements to be achieved.

The descriptions of both, project and communication objectives should be made more comprehensive and specific and reflect the actual scope of the program.

In the case of an irrigation program, examples of communication objectives which would support the achievement of general extension program goals could be:

- to inform at least 65 percent of the small farmers in X, Y and Z districts about the procedures and benefits of an irrigation system using ring and tube wells within one year,
- to reduce the proportion of small farmers in districts X, Y and Z who have misunderstandings and misconceptions about the cost and technical requirements of drilling and building ring or tube wells, from the present 54 to 20 percent in one year,
- to increase the proportion of small farmers in districts X, Y and Z who have positive attitudes towards the practical and simple use of the irrigation system to water their farmland, from the present 32 to 50 percent within two years,
- to persuade small farmers in districts X, Y and Z to use water from the wells to irrigate their farmland, and to increase this practice from the present 20 to 35 percent in two years.

KAP - Pest Management Objectives

Specific and Measurable Campaign Objectives

Based on the Problems Identified by the KAP Survey for the

Strategic Extension Campaign (SEC) on Pest Surveillance System in Chainat Province, Thailand

	IDENTIFIED PROBLEMS	EXTENSION CAMPAIGN OBJECTIVES
1	Low knowledge on pest identification and necessary action for pest control	To increase the percentage of farmers who have knowledge regarding: a. Pest identification from 41% to 65% and, b. Necessary action for pest control from 15.1% to 40%
2	Lack of sufficient knowledge on the importance and benefits of natural enemies	To increase the percentage of farmers who know the identity of natural enemies (good bugs) from 11.4% to 35%
3	Lack of sufficient knowledge on the importance and benefits of resistant rice varieties	To increase the percentage of farmers who have knowledge regarding the recognition and importance of resistant rice varieties from 35.8% to 50%
4	Lack of awareness on Surveillance and Early Warning System (SEWS) programme and Pest Surveillance (PS) form	To create awareness by increasing the percentage of farmers having knowledge on SEWS from 13.2% to 50% and to increase the percentage of farmers skilled in the use of Pest Surveillance (PS) form from 10.1% to 30%
5	Farmers prefer broad-spectrum pesticides and blanket spraying	To reduce the percentage of farmers using broad-spectrum pesticides by: a. Increasing the percentage of farmers who know how to choose right chemicals from 5% to 16% b. Decreasing the percentage of farmers who prefer broad-spectrum pesticides from 65% to 50%
6	Farmers do not believe in the effectiveness of natural enemies	To reduce the percentage of farmers who do not believe that conservation of natural enemies can suppress pest population from 36.5% to 25%
7	Farmers go to the edge of the field, but NOT into the field to check for pests according to the recommended precedure and frequency	To increase the percentage of farmers who check their fields according to the recommended procedure from 17% to 35%
8	Farmers spray pesticides on sight of pests based on their "natural instinct"	To reduce the percentage of farmers who believe in the need for spraying pesticides as soon as pests are observed in the field, without checking the field properly, from 69.8% to 55%
9	Farmers are aware of pesticide hazards, but DO NOT apply safety precautions in pesticide handling, application and disposal	To increase the number of farmers observing adequate safety measures in using pesticides by increasing the percentage of farmers practising correct disposal of left-over pesticide from 10.7% to 25%

Defining clear-cut campaign objectives for a 'Pest Management' project in Thailand links the previous KAP survey to later stages of the campaign strategy, e.g. message design.

Tool Box

(see for example FAO 1994)

10 Steps ...

Communication Strategy Development

Planning is defined as a process of identifying or defining problems, formulating objectives or goals, thinking of ways to accomplish goals and measuring progress towards goal achievements

There are three kinds of management activities for which regularly updated information is needed to make effective decisions: **personnel, finance and logistics**.

Media and Material
Posters and films are materials, i.e. "the carriers of your message" while walls and TV are the media, "the vehicle that brings the material with the message to the target audience".

Planning has to include **strategy planning** i.e. what to do and **management planning** i.e. how to make it happen

At this point, enough baseline data on problems, needs, actors, project and communication objectives is available to put all information in a context. The effectiveness of an environmental communication strategy depends very much on its planning which should be specific and systematic. Strategic planning reflects the beneficiaries' identified problems and needs and the way information, education, training and communication will be used in solving such problems or meeting the needs. Such a plan must outline the management actions to be taken in implementing the strategy. Strategic planning can be operationally defined simply as the best possible use of available and/or limited resources, i.e., time, funds, and staff, to achieve the greatest returns or pay-off, i.e., outcome, results, or impact.

The process of developing a strategic extension plan can be divided into two major parts. The first part is the process of *strategy development planning* which comprises the first eight steps of the communication strategy as outlined above, i.e. up to and including message design, media production and pretesting. The second part is the process of *management planning*. When a plan for a strategy is completed, it must be translated into action. At that stage, the task of a communication planner shifts from strategy development to management planning. Even though these steps will not be *implemented* until later, they need to be *planned* at this stage.

To transform strategies into activities, management objectives must be identified clearly to include at least the following elements:

- what the action is,
- who is to carry out the action,
- how the action is to be carried out,
- what resources will be needed and how to obtain such resources,
- when the action is to be accomplished,
- how to set standards for measuring progress and impact of implementation.

In addition to media performance and field implementation (step 9), and process documentation alongside Monitoring and Evaluation (step 10), other management tasks are

- to develop an exit strategy for the time after the program or project, to which the communication strategy is related, has been concluded,
- to identify and meet needs of both field personnel and beneficiaries in terms of training and skills.

The chart overleaf provides an orientation guideline on how to determine the general communication strategy direction and priority on the basis of KAP survey findings. This general strategy needs to be made more specific in steps 4, 5 and 6 of the planning process. The guidelines should not be used as a recipe but as a tool to conceptualize and systematize communication strategy planning and development.

KAP Results for Planning and Developing a Communication Strategy

Situation	Position of people involved concerning			Priorities of an Environmental Education and Communication Strategy			Fields of action and communication channels for environmental education and communication		
If:				**Then:**					
	K knowledge	A attitude	P practice	Main Approach	Main Objective	Didactical Emphasis	Mass Media Sensitiz.	Group Media NGO	Interpers. Commun. Consult.
1	low to medium	low	low	informative	awareness creation, increase of operational knowledge, identify needs and advantages	What + Why	**high**	low	low
2	medium	medium	low	informative motivatingd	identify needs and advantages, Inform about and demonstrate alternatives	Why	**high**	medium	low
3	medium	medium	medium	motivating action oriented	alternative problem view, discuss solution approaches, explore roots and consequences of negative activities, try out feasibility of solution proposals participatorily	Why + How	medium	**high**	medium
4	**high**	medium	medium	motivating action oriented	explore negative roots of atitudes, skills training through „learning by doing" for behavior change, correct counter-productive practices	Why + How	low	medium	**high**
5	**high**	**high**	low medium	action oriented	skills training through „learning by doing" for behavior change, logistical assistance and consulting, explore dissident attitudes and tackle roots	How	low	**high**	**high**

Examples of communication strategy development related to a 'Pest Management' and a 'Rat Control' campaign are presented in 'Strategic Extension Campaigns' by FAO and other publications

Tool Box

(see FAO 1994, Adhikarya et al. 1987)

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10 Steps ...

Participation of Strategic Groups

Participation
is a process of motivating and mobilizing people to use their human and material resources in order to shape their lives and their hopes themselves

The participation of strategic groups is a crucial element in the EnvCom strategy because people will not change their environmentally relevant practices if they do not have a say in planning, implementing and evaluating the action for change. That is why it should be considered as an individual step in the mainstream of the entire process. But, like planning or evaluation, participation should be a continuous, not a one-shot effort. The keyword here is ownership. It should be taken literally in terms of media products and communication processes not *for* or *about* people but *with* and *by* the people themselves. This procedure safeguards project or program sustainability and achieves the media mix that is best suited to the socio-cultural circumstances. It is difficult to 'own' TV, video, or radio because of the financial, technical and skills levels involved. It is much easier to 'own' a people's theater production or other community media that are managed and produced by local means and geared towards local ends. This does not imply, however, that participation should be constrained to the 'community media'. Instead, strategic alliances with the 'mass media' should be built that strengthen the 'upward compatibility' of the communication processes – e.g. a local theater performance on people's action related to an environmental problem that is recorded on video, edited professionally and broadcast on TV as a feature film or news cast.

Participation incorporates all project levels: assessment • planning • implementation • M&E

- Who sets the agenda on the general problems to be studied?
- Who says which needs should be met?
- Who is consulted in planning for appropriate solutions?
- Who determines which media will be used?
- Who carries out the action?
- Who produces the media and designs the messages?
- Who sets the standards for measuring progress and impact?

■ **Case Study**

Traditional Media for Resource Management in Indonesia

Appropriate Communication for the Development of Communities (ACDC) is an Indonesian approach of using traditional media for rural development and resource management. In particular theater forms were used by farmers in the Sunda highlands to motivate neighboring villages to join a scheme which envisaged the terracing of land and irrigation in an attempt to stop soil erosion and land deterioration in the watershed. The media formats were designed as 'infotainment' of high credibility and impact. In addition to traditional media the farmers also used self-produced photo-stories to address decision-makers in the provincial capital for support and recognition (see Oepen 1988).

GTZ - Burkina Faso

Four Fields of Decision-Making

A   Project identification
B   Determining the
    terms of reference
C   Decisions on local activities
D   Organization of crucial tasks

Three Aspects

1   Influence of the target group on
    decisions in general
2   their representation
    in consultations
3   and in decision-making.

Six-grade Scale

'no participation' (0) to
'autonomous decision' (5)

Participation Profile

This makes comparisons on different levels easier - it shows, for example, that project planner have a different perspective from the people concerned regarding participation in determining the terms of reference (see Wolff 1997).

ACT - Indonesia

The key indicator of participation is who really determines the agenda and the impacts for changes in attitude and practice. According to a set of criteria the influence of various actors at several project levels is measured in terms of degree of participation and self-determination in consultations and decision-making (see chart).

Initiatives, activities and changes in practice are evaluated in terms of the degree of influence by various actors from 'no involvement' (0) to 'autonomous decision' (10). The related chart provides a quick overview over who has a say in what matters. In the case above, the initiative was originally (level 1-2) an external one but was gradually taken over by local groups at level 3-5 (see Oepen 1988).

Tool Box
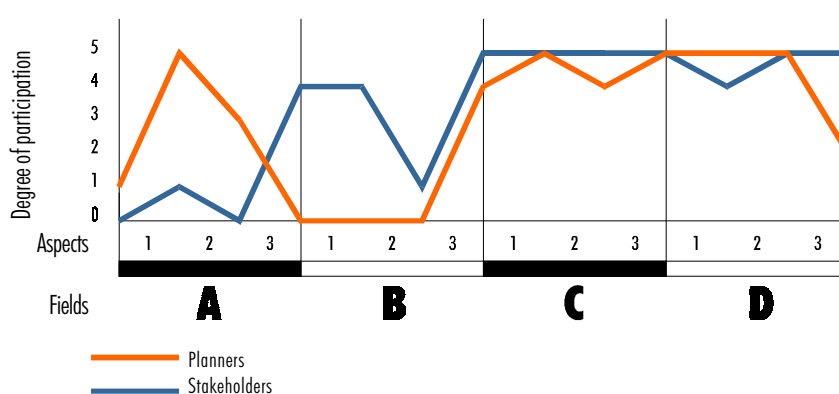
Levels	Influence by				
	Outsiders	Local Elite	Local Motivators	Individual concerned	Group concerned
1 Planning	7	7	3	–	–
2 Media and content selection	6	6	6	4	8
3 Communication processes and media production	2	4	8	8	8
4 Evaluation	7	3	7	2	7
5 Follow-up in media and community development	–	–	7	7	9

Multi-media Mix

Experience and research show that using a combination of mass, group and interpersonal communication is most cost-effective

Case Study

Community media complement mass media in GTZ Projects

Based on the previous results of audience and KAP analyses and the preliminary considerations regarding the participation of strategic groups an appropriate multi-media mix should be developed. The media selected should be appropriate to the audiences'

• information-seeking habits,
• preferred information sources,
• media access,
• media consumption patterns,
• communication networks,
• and group communication behavior.

The rationale is that a coherent, coordinated and reinforcing system of communication should be able to address specific but varied information, attitude and behavior problems and needs of intended beneficiaries.

• No medium is effective for all purposes or target beneficiaries.
• A communication strategy usually has various information, educational and communication objectives.
• Different media and communication channels complement and reinforce each other
• Strategic planning means to select which medium or combination of media should be used for what purpose by whom in order to deliver which specific messages to whom.

A general approach to multi-media selection

Select and use a medium:

• for a single or specific rather than for different goals,
• that has a unique characteristic or particular advantage which is useful to accomplish a specific purpose,
• which the target audience is already familiar with and has access to,
• which can easily accommodate 'localized' messages,
• that can be locally developed, produced and operationally supported,
• that complements and reinforces others used in the same strategy while offering distinct functional strengths and emphases.

GTZ aims to bridge intercultural barriers between farmers and consultants in Bolivia and Nepal by means of comics and photo stories with a high degree of identification and mobilization potential. Projects in the forestry sector use street theater for awareness raising on environmental issues in Honduras and rural radio in local languages in various countries. In Malawi, GTZ realized that modern mass media are not always appropriate to matters of environmental health and, therefore, opted for traditional media.

Audience segmentation, media selection and message design
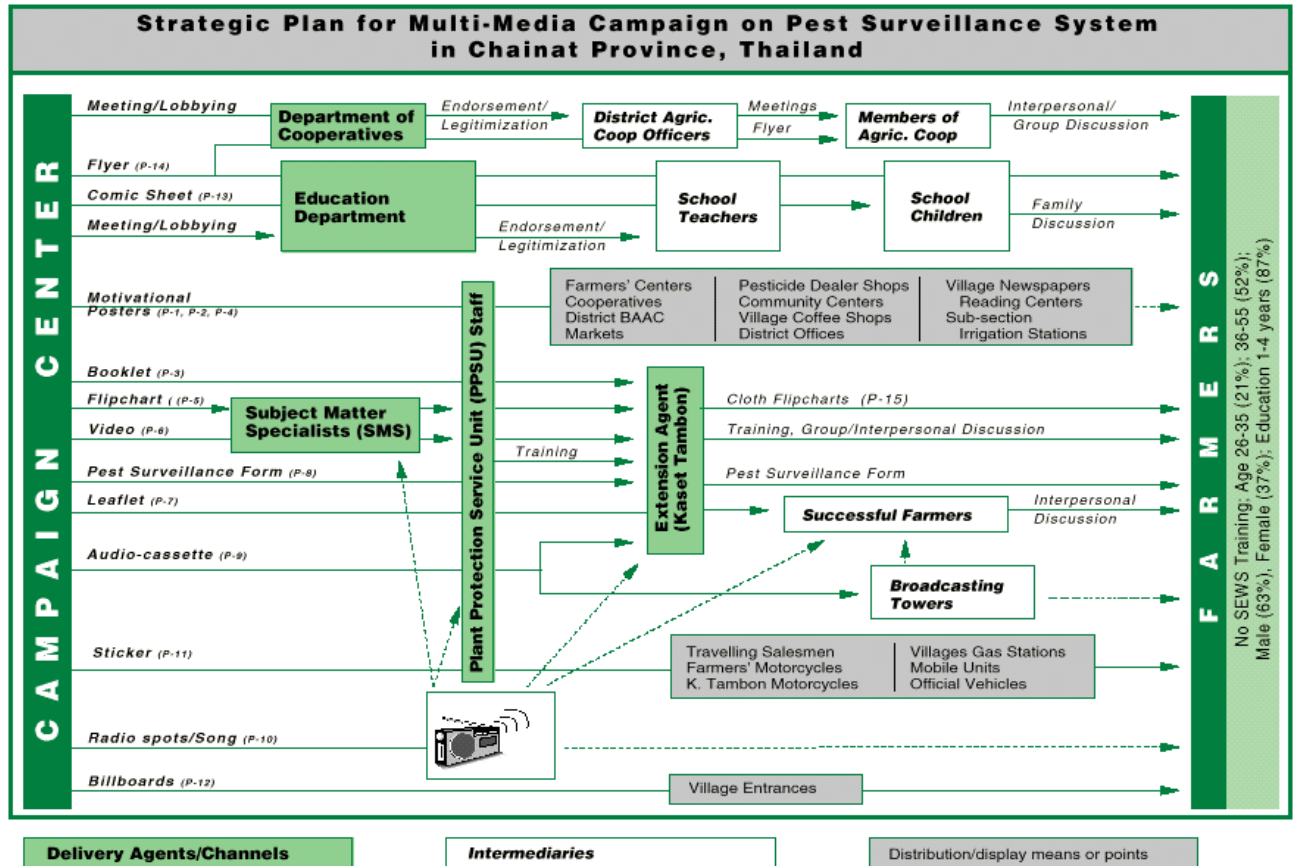
Strategic Plan for Multi-Media Campaign on Pest Surveillance System in Chainat Province, Thailand

Delivery Agents/Channels   *Intermediaries*   Distribution/display means or points

Tool Box

(see FAO 1994, Adhikarya et al. 1987)

10 Steps ...

Message Design

$$M.e. = R : E$$

Message effectiveness (M.e.) is a function of the reward (R) the message offers and the efforts (E) required to interpret and understand it

The effectiveness of a communication strategy largely depends on the ability of its messages to catch the attention of and be understood by the target audience. Therefore, messages must be designed to suit the specific characteristics, educational and intellectual horizon and the aspirations of each group of intended beneficiaries. Also, they should fit the media selected. This is why they should not be formulated early on in the strategy development. Otherwise, **one** project's message might contradict **another** one's, e.g. 'establish a fish pond' by a nutrition campaign might be counteracted by 'get rid of non-running water' propagated by a health campaign. As especially urban populations are burdened with an 'information overload', messages need to be strategically 'positioned' so that they 'stand out' from the others. They might otherwise not be noticed even though they are relevant and useful to the target audience.

Message Content

For the message to be successful, the information should be

- accessible
- verifiable
- timely
- accurate
- complete
- relevant

Positioning a message

The positioning of a messages should

- ensure validity and relevance,

- outline the general strategy approach: informational, motivational or action-oriented

- identify a message focus or theme according to the strategy's issue or objective,

- make the theme attractive and persuasive by 'packaging' the message utilizing psychological or social appeals such as

  ▸ incentive/reward
  ▸ fear-arousal
  ▸ role-model
  ▸ civic duty
  ▸ common-man etc.

- give the theme special treatment in line with the strategy's objectives

  ▸ humorous
  ▸ popular/informal
  ▸ fact-giving
  ▸ conclusion-drawing etc.

- take advantage of the specific strengths and potential of the various media selected, e.g. visual media for fear-arousal and emotions or print media for fact-giving and conclusion-drawing,

- pre-test messages carefully per media and per group of target beneficiaries, especially visual information and (semi-)illiterate beneficiaries, to save time and costs.

Media - Message - Audience Checklist

MEDIA TYPE	MAIN MESSAGE	TO SOLVE PROBLEM	FOR WHOM
Motivational poster A	1. Spiders kill planthoppers 2. Excessive use of pesticides will destroy spiders	1, 2, 6, 7	Farmers
Motivational poster B	1. Check your field planthoppers: spray only if you find 40 hoppers in 4 plants or hills, and no spiders	4, 7, 8	Farmers
Booklet	1. Identifying pest 2. Simplified technology on pest surveillance 3. Use of resistant varieties 4. Safe use of pesticides	1 - 9	Extension Agents
Motiv. poster C	1. Safe use of pesticides	1 - 9	Farmers
Flipchart	1. Use of resistant varieties, identification of pest and natural enemies, steps in pest surveillance, safe-use of pesticides	1 - 9	Extension Agents
Video	1. Identification of natural enemies 2. Surveillance and Early Warning System 3. Safe use of pesticides	1 - 9	Extension Agents
Leaflet	1. Steps in pest surveillance 2. Use of resistant varieties	1 - 9	Farmers
Pest Surveillance (PS) form	1. Use of simplified PS form 2. Importance of checking fields properly 3. Use correct Economic Threshold Level (ETL) 4. Use right chemicals	1, 5, 7, 8	Extension Agents, Farmers
Audio-cass. tape	1. Motivational radio spots and songs	1 - 9	Ex.Agents, Farm.
Radio spots and songs	1. What is pest surveillance? 2. Proper disposal of pesticide containers 3. Spray only at correct ETL 4. What natural enemies can do 5. Use of resistant varieties 6. Going into the field is easy, will not destroy plants	1 - 9	Farmers, Extension Agents
Sticker	1. Motivation to go into the fields to check	4, 7	Farmers
Billboard	1. Motivation to go into the fields to check	4, 7	Farmers
Comic sheet	1. Result of farmer checking field from dike only	7	School children
Flyer	1. Identifying natural enemies 2. Use of resistant varieties	2, 3, 5, 6	Farmers
Cloth flipchart	1. Steps in a simplified technology in pest surveillance	1 - 9	Farmers

This checklist from a 'Pest Management' project in Thailand clearly indicates how message design and media selection are closely related to the earlier stages of the communication strategy, e.g. problem identification or KAP analysis. Making maximum use of cost-effective ways of communication may start from a detailed assessment of the most appropriate media in relation to the preferences of carefully segmented audiences. Whether or not all media are employed later on, largely depends on the financial and human resources available to the respective project.

Tool Box

(see for example FAO 1994, Mody 1991)

Media Effectiveness

The media or material selected should not be mass produced too early in the elaboration of the Env-Com strategy. The implementation of a multi-media communication strategy has a greater chance of being successful if:

- the media materials are produced as planned and on time,
- various media are mobilized and coordinated as suggested,
- all actors involved in this process have been trained accordingly, if necessary,
- the impact and effects of the strategy's implementation are assessed by means of a built-in formative (continuous) and summative (ex-post) evaluation.

In general, the following steps should be taken:

- Brief all media designers and producers clearly on communication materials regarding

  ▶ content
  ▶ design
  ▶ persuasion
  ▶ memorability

- Make a precise plan for each material

- Inform all staff on involvement and timing

- Select external communication experts for specialized tasks

- Pretest before producing larger quantities of material

- Pre-test on location and with representative sample social groups

- Define precisely what should be tested, e.g.

  ▶ relevance
  ▶ textual / visual understanding.
  ▶ motivation / action potential
  ▶ acceptance / credibility

- Produce material as close as possible to where they will be used

- Determine precisely a production time table

■ **Case Study**

Community Media Revitalize
Indigenous Food Plants in Kenya
(WIF, 1991-93)

■ **In its Indigenous Food Plants Program in Kenya the Worldview International Foundation uses a mix of community media from traditional theater to video, to counteract decreasing biodiversity and food problems with the rural poor. Often, schools are used as an entry point with teachers as motivators and students as media, who carry information home and instigate interest in vegetable gardens. As seed capital, training and extension are made available, the new skills are immediately put into practice (see WORLDVIEW 1991).**

Management Information System

This is the point in the strategy process where *management planning* takes over from strategy development as the main task of a communication specialist. One of the worst problems in communication strategy implementation is the untimely delivery or even unavailability of inputs or services required for the adoption of the recommended practice changes or actions by the target beneficiaries who have been motivated and persuaded before-hand. This may lead to frustration among members of this group and ultimately undermine the credibility of the strategy.

The implementation of a multi-media communication strategy requires a good management information system that provides the organizers with rapid feedback on important strategy activities and thus helps to readjust or change the strategy if necessary.

This information system should also cover the proper coordination of various activities which often need to be carried out simultaneously.

Action Recommended

Proper implementation of activities within the estimated time period is also essential. A delay in one of the inter-related multi-media activities will often trigger chain-reaction effects. Time estimates should therefore be considered carefully to ensure that they are realistic.

- Determine a time table per media and social group

- Consider the most appropriate events, occasions, times and places

  ▸ if possible, coordinate with mass media inputs
  ▸ if possible, reinforce your strategy with side effects, incentives, non-economic benefits

- 'Cross-fertilize' various media and communication channels (e.g. the emotional appeal of radio with the factual impact of print media)

- Plan for multiplier effects among the various media used (e.g. a radio show about a people's theater performance),

- Create events that 'stage' media inputs (e.g. festivals, VIP visits, etc.)

- 'Piggy-back', i.e. get a free-ride on existing communication channels, extension services or other institutional outlets

Be ready when the people are

Evaluation
should be a
continuous effort

Evaluation should be made a continuous effort of communication planners at all stages of the strategy. Its major focus should be on:

- the efficiency of program implementation,
- the effectiveness and relevance of an activity or overall program,
- the impact and effects of an activity or overall program.

Types of Evaluation

Ex-ante (appraisal) as part of planning to estimate what effects should be expected

On-going (monitoring) during implementation to assess whether the program is on course (also called formative evaluation).

Ex-post (impact assessment) soon after implementation to ascertain the effects (also called summative evaluation)

Terminal (impact assessment) some time after implementation to rate the sustainability of effects.

1 Problem and Research

- Whose problem is being discussed?
- How relevant is it to the audience?
- Is the topic well understood: causes, dynamics, etc.?
- What is the overall context of the problem?
- Do research results reflect reality?
- Does the problem generate emotion: interest, anger, etc.?

2 Choice of Media

- How appropriate is the media choice regarding the audio-visual literacy of the audience?
- Is there an information overload or shortage?
- Does the media choice help to strengthen the message?

3 Effects

- Is the message oriented towards people, not projects?
- Does the media choice respect the culture and sensitivity of the audience?
- Does the message boost self-confidence and self-help?
- Is the message and its delivery non-patronizing and non-propagandistic?
- Are the messages heard, understood and accepted, and, most importantly, do they motivate and mobilize the people to modify their behavior and take action?

Process Documentation of Lessons Learned

Based on a chronological description and analysis of successful and less successful decisions made during planning, implementation and management certain generalizations can be proposed for future replications of similar activities. This type of process documentation of the critical issues and decision-making requirements should be started from the very beginning.

36

Rice Field Damages due to Rats

Percentage of farmers reporting that the damage is due to rats
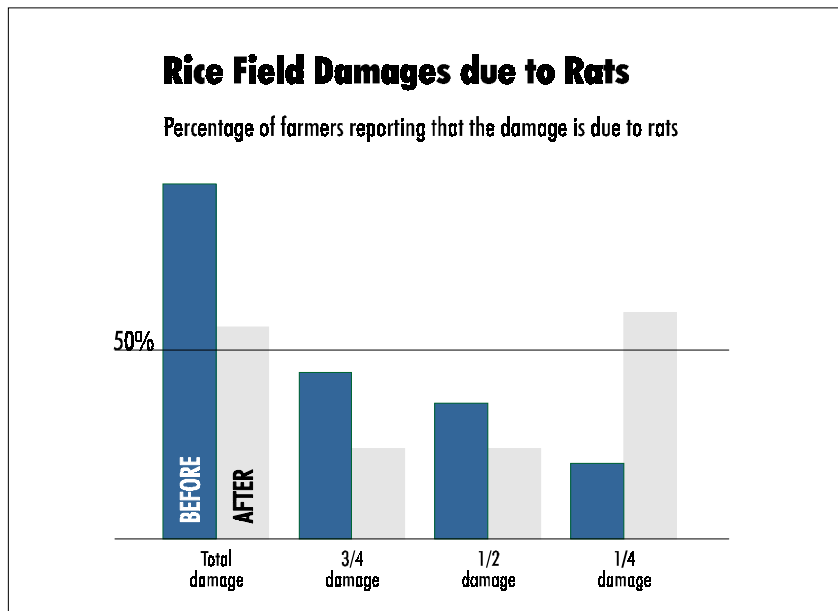
The evaluation results from a 'Rat Control' Campaign show the changes in terms of the KAP levels of rice farmers in Penang vis-à-vis rat control campaign recommendations and messages. As a result of the campaign, the number of farmers who reported that all the rice plant damages were due to rats dropped from 47 % before the campaign to 28 % after the campaign. The rice field damages due to rats in 1984 (before the campaign) was about 700 ha, compared to only 223 ha in 1988 (see FAO 1994).

Case Study

Rat Control Campaign in Malaysia
FAO (1994)

5 Checklist for Environmental Communication in Projects

Fields in which EnvCom is particularly useful

▶ support and capacity development of environment centers, institutions and administrations,
▶ urban-industrial environmental protection,
▶ development and implementation of national, regional or local environmental action plans or sector strategies,
▶ environmental management in rural regional development planning, social forestry or park management,
▶ solid waste management, energy and water management,

Pre-conditions for Effective EnvCom

▶ generate technical know-how,
▶ integrate EnvCom up front in project planning,
▶ provide advanced training options,
▶ allocate appropriate staff and funds,
▶ define EnvCom as an *output* (supporting the goal of a project, e.g. 'Information on EIA Law disseminated') or an *activity* (supporting the output of a project, e.g. 'Communication strategy on recycling developed with relevant actors')

Role of spezialized Experts

▶ advanced training in specific EnvCom strategies,
▶ training in selected EnvCom methods, instruments and media,
▶ development of a local pool of experts,
▶ process coaching during EnvCom implementation,
▶ exchange of experience at the international, national, regional and local level,
▶ capacity and institutional development,
▶ strategic alliances (partnerships, twinning, etc.)

EnvCom Consultant Profile

▶ needs-oriented and participatory,
▶ more process- than goal-oriented,
▶ incorporation of local know-how and partners,
▶ communication or social science,
▶ participatory methods of EnvCom,
▶ media design,
▶ conflict management and mediation,
▶ interdisciplinary cooperation,
▶ strategic and systemic thinking,
▶ moderation and visualization skills,
▶ process coaching in an inter-cultural context,
▶ capacity and institutional development.

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Based on Agenda 21, many international organization have declared environmental sustainability one of their strategic goals. 'Promoting Education, Public Awareness and Training', laid down in Chapter 36 of Agenda 21, has become the major approach to support this goal. Environmental Communication is the heart of the matter in changing people's impact on the environment to make development more sustainable. As an integrated component of policies and projects it will enhance capacity development in environment.

This page serves networking activities and information exchange in the relatively new field of Environmental Communication. The primary concern of this site is to provide relevant information resources about Environmental Communication on the Internet and links to related government agencies, consulting companies, research institutions, NGOs, and other interested parties.

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URL: http://www-unix.oit.umass.edu/~acco16/envcom/

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Resources   Selected Case Studies

Formal Education	Madagaskar	WWF: Environmental Education as national programme through teaching material and teacher´s training for primary and secondary schools, not much broad effect (von Loebenstein 1993)	Kenya	Kengo (Kenya Energy and Environment Organisation): umbrella organization of 200 environmental NGOs with own publication, seminars, lobbying, training, community development; (OECD 1993: 48)
literature references are listed on p. 40	Sahel	EG+CINAM: Training and Information Programmes on the Environment for teachers / pupils/parents in nine west-african countries through curricula, teacher´s training, learning material, community action; not much broad effect (Filho 1993)	Kenya	Wildlife Clubs of Kenya: environment clubs at 1.500 (or 77% of all) secondary and primary schools with magazine, newsletter, publications, teacher´s training, similar to Chongololo/Zambia, Mila Hai Clubs/Tanzania, Wildlife Clubs/ Uganda; (OECD 1993: 57)
	World	UNESCO: International Environmental Education Programme, offers regional specific training material, curricula and teacher´s training to interested member countries (Oepen 1993)	Malaysia	CAP (Consumers Association Penang): indirect environmental education through seminars, courses, media, lobbying, legal assistance, consumer´s education and consulting, consumer´s clubs, teacher´s training, exposure for pupils, students, NGO, public authorities, enterprises etc. (Oepen 1993; Keiper 1985; CAP 1989)
Non-formal Education	Burkina Faso	Patecore: positive example of the role of NGO and participation for the improvement of village land use (Funke 1992)	Nepal	GTZ: Media Support for Waste Management via campaigns, horizontal communication with citizens´s participation; (Waste 1992)
	Ecuador	Fundacion Natura: Longterm lobby and sensitization measures in several steps for industrial and political decision makers in environmental and consumer´s protection; curricula development, teacher´s training, 150 radio programmes, visual media, community development (OECD 1993: 215)	Nepal	KMTNC: Formal und Informal Environmental Communication via home visits, seminars, visual media, adult education, curricula 6th-8th grade in Annapurna Conservation Area Project; (von Loebenstein 1993)
	Ghana	EPC+IEED: Environmental Education Strategy for Ghana, concluding formal and informal education, community development, NGO, media, advisory services, religious institutions and a catalogue of aims and acitivities. Governmental, little participation (Education o.J.)	Peru	several NGO: Environmental Education and Awarenessbuilding via in-service teacher´s training and network (APECO). 'School, Ecology and the Peasant Community' with radio-campaigns for teachers, pupils, daily 1 hour rural radio, Andean Rural School for peasant leaders, cadres; action oriented; (OECD 1993: 233)
	India	Centre for Environment Education: formal and non-formal environmental education e.g. 'News and Feature-Service' for 1.000 periodica and a journalist network, curricula, teacher´s training, (OECD 1993: 53)		

Sahel	IUCN: Environmental Education and Communication, through Walia-Magazine (5.000 issues) from/for pupils/teachers (5.000/400) in order to make pupils nature protectors and reach adults via them. Redaction meeting twice per year with 25 schools and action oriented nature clubs; similar IUCN-approaches in Niger, Burkina Faso, Senegal; (OECD 1993:159)	Bolivien	SEMTA+GTZ: Comics and Picture Stories with high identification value and mobilization to bridge the intercultural gap between peasants and consultants; (gate 2/93, S. 12+ 22)
Senegal	ENDA: Micro-project Approach to Environmental Education, rural youth organizations and 12 primary schools with workshops resulting in mini-projects on hygiene, health, agro-forestry, stock-farming and on social aspects; (OECD 1993: 137)	Cote d'Ivoire	WWF: In vain PR for Tai National Park in Buffer Zone and for tourists with slide-voice-show, video, film and T-shirts, to protect the park from environment destructing use; (WWF Environmental Education Dossier 1992)
Thailand	PDA: Environmental Education and youth work via seminars, visual media, video at schools and in the project center of Rural Development for Conservation Project; (von Loebenstein)	Ecuador	Fundacion Natura: Longterm lobby and sensitization measures in several steps for industrial and political decision makers in environmental and consumer´s protection; curricula development, teacher´s training, 150 radio programmes, visual media, community development (OECD 1993: 215)
Thailand/Nepal	GTZ: Manual for Urban Environmental Management Nepal includes in the action plan training for administrative bodies, NGO, teachers, researchers, electronic and traditional media, NGO-networks; (Manual 1993)	India	Dasholi Gram Swarajya Mandal: Eco-development camps 3-4 times p.a. for 250-300 concerned people, planers, govenment, fieldworker, NGO, academics, teachers in damaged mountain regions for mutual experience exchange and new action orientation; (OECD 1993: 59)
World	NGO-co-operation with School Sector and Journalists as e.g. Fundacion Natura/Ecuador, Living Earth/Cameroon for formal education, CAP/Malaysia, YIH/Indonesia for non-formal education, Panos, Worldview International Foundation, Centre for Environment Education/India for media reporting; (OECD 1993: 45; Worldview 1992)	Indonesien	YHI: Environment Sensitization at Environmental Centre Seloliman through sensual experience, seminars and training for different social groups; (WWF Environmental Education Dossier 1992)
World	School Magazine: Action/ Southern Africa, Chongololo/ WCSZ-Zambia, Piedcrow/CARE-Kenya, Walia/IUCN-Mali, Tortoise/Ghana etc; (OECD 1993)	Togo	CFSME: Environment Analysis via picture stories with high identification value and mobilization potential; identical with GRAPP-method in Westafrica; (Thioune 1993: 67, Hoffmann 1991; Albrecht 1987: 2. Bd)
Zimbabwe	Zimtrust: Campfire. Role of participation, NGO and legal title for resource management by rural population and district administration; (von Loebenstein 1993)	Zimbabwe	IUCN: Zimbabwe Environmental Awareness Support Programme supports NGO in conceptualizing and implementing of 'Environmental Awareness Camps' for teachers/pupil groups; additionally a pupil´s magazine with 100.000 issues; (unpub.)

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Resources   Selected Case Studies

Communication					
	Bolivien	SEMTA+GTZ: Comics and Picture Stories with high identification value and mobilization to bridge over intercultural barriers between peasants and consultants; (gate 2/93, S. 12+22)	India	Chipko Movement with theater, traditional Media. Marshes in Ghandi-Trad. (violent-free opposition) with 170 NGO over 400km with meetings, theatre, singing on resource protection in mountain region, followed up by concrete lokal community development- and environmental care-measures;(Baskaran 1990)
	Brasil	WWF: Communication for Conservation. In vain trial to protect a park from destructive use by using slide-voice-shows, movies and T-shirts (Dietz 1992)	Indien	Link Society (NGO) with street theatre 1989 on a 1.000km-marsh through 300 villages and 8 cities on resource protection themes followed up by concrete local community development- and environmental care-measures; (OECD 1993: 61)
	China	'China Environment News': national daily newspaper 3x/ week with 1/2 Mio no. of copies since 1984 and 400 associated journalists; (OECD 1993: 49)	Indien	SAC-DECU: 2000 traditional theatre programme for markets to environment problems through urbanization; (Baskaran 1990)
	Costa Rica	Broadcasting and Education Ministry: Environment Education via Adult Education on Broadcast; (Thioune 1993: 52)	Indonesien	GTZ: Integrated Media Strategy towards waste disposal/recycling via theatre, video, TV under participation of affected people; (Oepen 1992)
	Dominican Republic	Broadcast: Environment Education via 'Interactive Radio' for schools and audition clubs; (Thioune 1993: 53)	Indonesien	PPLH: ACDC - Traditional theatre for proliferation of adopted land use methods for peasants within a participatory Area Development Programm; (Oepen 1986)
	Gambia	WIF: Sensitization of rural population for Environment Protection via traditional media, video, horizontal communication; teacher/pupil as motivators; (Worldview 1992)	Kenya	WIF: 'Social Marketing for 'Indigenous Food Plant Programme' and biodiversity through traditional media, video, bulletins, schools und community development; (Worldview 1992)
	India	Centre for Environment Education: Formal and non-formal Environment Education, e.g. 'News and Feature-Service' for 1.000 periodica und a journalist network, curricula, teacher´s training; (OECD 1993: 53)	Malawi	GTZ: Traditional Theatre instead of Video for Health Education; (Hollenbach 1993)
	India	Kerala Sastra Sahitya Parishad/KSSP: Environmental Sensibilization and Lobby Work through street theatre (250 times per month), village study circle, media campaigns, traditional scrolls etc. followed up by concrete local community development- und environmental care-measures, representation of interest around 'Silent Valley'; (OECD 1993: 49; Baskaran 1990)	Malaysia	WWF: Mobile Unit Conservation Programme. in vain trial related to the National Park in Saba, to convince 50 villages within three years to adapt environmental sound landuse via slide-voice-shows, discussions and films; (OECD 1993: 60)
			Nigeria	National Conservation Foundation und TV Authority: Environmental Education via TV-doll theatre, although as british import; (Doran 1994)

Pakistan	IUCN: Journalist Resource Centre for the Environment with 'News and Feature-Service' for journalist network, seminars, training, media campaign, prize competition, quiz, etc. (OECD 1993: 53)	World	Journalist Associations: Environmentally engaged Journalist Networks, normally mass media on national (e.g. Nepal/Zimbabwe/Zambia Association of Environmental Journalists), regional (Asia-Pacific Forum) and international level; (Oepen 1993)
Ruanda	GRAPP: Picture Stories with high identification value and mobilization potential also for participative environment analysis at and from rural population groups; similar to CFSME/Togo and Westafrica; (Hoffmann 1991; Gabathuler 1991)	World	Panos Institute, London: With 'Down to Earth', 'Panoscope', 'Panos Feature Service' a world-wide net on production, distribution und publication of environmental informations (unpublished Mission-Report of BMZ)
Sri Lanka	WIF: Environmental Education via TV Quiz, school calendar and books, NGO-media training (Worldview 1992)	Zambia	Wildlife Conservation Society Zambia: Environment Magazine and Broadcast plus auditor´s clubs for pupils/teachers partly with follow-up via local media (unpublished. Mission-Report of BMZ)
Southern Africa	Action Magazine: Environment Magazine for pupils/teacher, 80.000 number of copies, comics, quiz etc, partly with follow-up via local media (WWF Environmental Education Dossier 1992)		
Southern Africa	IUCN: 'Communicating the Environment' via Mass Media, Databank, NGO network for decision makers, multiplikators (unpublished mission-report of 1994)		
Thailand	Thai Environment and Community Development Association: 'Magic Eyes'-Multimedia Campagne 1987 about urban environment pollution and waste reduction, later in rural areas about forest destruction; similar to Bangladesh Government on World Environment Day 1989 about tree plantings, environment protection; (OECD 1993: 61)		
Thailand	WIF: Broad- and narrowcasting for Highland Development. Environment protection through auditor´s clubs in Dialects, 2-way-communication between villages and administrative bodies, video, NGO-mediatraining (Worldview 1992)		

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