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COMMUNICATION: THE MISSING LINK IN CONSERVATION

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ABSTRACT

Following global trends, modern conservation in Sri Lanka is veering away from policing and preservation, and is encouraging sustainable use and emphasizing public awareness and participation. Nonetheless, on-the-ground progress in conservation has not been adequate. This slow progress can be attributed to many factors including financial constraints and lack of motivation within and lack of coordination between agencies. It is proposed that one of the most fundamental reasons for the dragging pace of conservation is the lack of communication between biologists (the producers of information) on the one hand and the users of biological resources and decision makers (the receivers of the information) on the other. The core of the problem is that as scientists we are trained to stimulate the intellect and to formulate testable hypotheses, use statistical analyses and objectively report our results. Scientists are not trained to evoke emotion, to dramatize, to surprise or to entice the public with their results. Above all, they are not trained to provoke a response in the form of action.

The goal of this paper is to open the eyes and minds of conservation biologists to effective communication and to emphasize that scientists need, in effect, to advertise and market messages to elicit a response from the public. Communication is defined in terms of marketing and advertising as a process by which a producer sends a message to a receiver who responds to that message, i.e. there is feedback to the producer. It is a process of exchange.

There are six main steps in an effective communication strategy: 1) Identification of the main problem and formulation of the goal; 2) Definition of measurable objectives; 3) Research on facts; 4) Identification of target groups (market segmentation) 5) Development of a communication strategy (formulation of marketing and advertising plans); and 6) Evaluation of the goal(s).

In this paper, the basic concepts and tools of a communication strategy are merely introduced. It is re-iterated that effective conservation can only be achieved through effective communication. Once this link is made and enriched, conservation biology will be a truly multidisciplinary science.

INTRODUCTION

During the last decade, the economic growth in Sri Lanka increased some fourfold (Department of Census and Statistics, 1993). Active promotion of locally manufactured products, small and large industries, the creation of a competitive environment, and encouragement of local and foreign investment have resulted in a free market economy (Central Bank, 1994). However, this economic development has been attained at severe costs to the natural environment. Natural resources such as timber and fuelwood, coral, mineral and coastal deposits have been exploited far in excess of sustainable levels; natural habitats such as forests have been degraded and industrial and domestic wastes are poisoning the air and waters (Ministry of Transport, Environment and Women's Affairs and IUCN - The World Conservation Union (hereafter M/TEWA and IUCN), 1994; NARESA, 1991).

Successive governments have recognized these attendant problems of development, and have tried, and are still trying, to develop and implement strategies to mitigate these effects (Central Environment Authority (CEA), 1988; Ministry of Environment and Parliamentary Affairs, 1993; M/TEWA and IUCN, 1994). For the past two decades, governments have been committed to the conservation of the island's natural resources. These efforts have been supported strongly with international aid to all relevant government agencies, and to non-governmental organizations (M/TEWA and IUCN, 1994). The conservation and sustainable use of the natural resources of Sri Lanka has now been recognized as a national and international necessity (M/TEWA and IUCN, 1994).

Following global trends, modern conservation in Sri Lanka is veering away from the traditional approach of policing and preservation, which imposes great financial strains and hence, burdens of local communities (M/TEWA and IUCN, 1994). The current definition of conservation, which includes and encourages sustainable use, emphasizes public awareness and participation, so that conservation is no longer a burden but becomes a benefit to local communities.

Nonetheless, in reality, on-the-ground progress in conservation has not been adequate. Plans and strategies have been formulated quickly, but implementation has been extremely slow. Participatory programmes have been developed but few have been completely successful. This slow progress can be attributed to many factors, including financial constraints, lack of motivation within and lack of coordination between agencies (M/TEWA and IUCN, 1994). However, it is proposed here that the most basic reason for the dragging pace of conservation is the lack of communication between biologists (the producers of information) on the one hand and the users of biological resources and decision makers (the receivers of the information) on the other. Lack of communication leaves the biologist, the public and the decision maker disconnected and isolated. This is well stated in Schaeffer (1987): "..... biologists acquire many specialized skills... But all this knowledge is

useless if our public do not understand our rationale or accept our recommendations. . ."

The core of the problem is that as scientists we are trained to solve a problem logically and to stimulate the intellect. Scientists are trained to formulate testable hypotheses, use statistical analyses and objectively report results - but not to evoke emotion, to dramatize, to surprise or to entice the public with their results. Above all, we are not trained to provoke a response in the form of action. Thus, biologists, who have been pivotal in leading conservation to its current status, may, by their pragmatism and rationality, hinder rather than help public involvement in conservation.

It has been argued persuasively that human actions tend to be based more on emotion than on logical conviction (Soule, 1988). Trained communicators such as advertising agencies and media personnel exploit this tendency. For example, a certain advertisement for a brand of baby powder telecast on state and private television stations, uses cute toddlers in their presentation, and is designed to elicit a smile and bring out a nurturing response from the public. Another advertisement for a man's cologne is set in plush, luxurious surroundings, and sends a subliminal message of wealth and comfort associated with the use of this cologne. Then there is television news, which shocks and stuns with its coverage of dismembered limbs and charred bodies. Exploiters of biological resources hire the professional services of such advertising agencies who are trained to elicit such responses from the public to harness support for their products and they succeed.

In contrast, conservation biologists resort to drawn out catalogues of species (often listed in Latin), technical jargon such as "Chiroptera" and "kurtosis", or acronyms such as BOD, DCA and PCA which are unintelligible to the general public. In our efforts to communicate to the general public, scientists fail.

The goal in this paper is to open the eyes and minds of conservation biologists to effective communication and to emphasize that we need, in effect, to advertise and market our conservation messages in the same manner that exploiters market their products, in order to elicit a response from the public.

Communication is defined here in terms of marketing and advertising as a process by which a producer sends a message to a receiver who responds to that message, i.e. there is feedback to the producer. Therefore, it is a process of exchange. This definition will be used, and in the following section some basics of marketing and advertising will be incorporated. An outline of the main steps needed for the design of a general communication strategy for conservation is given. It is suggested that a change of philosophy towards successful communication is imperative and essential.

MAIN STEPS OF AN EFFECTIVE COMMUNICATION STRATEGY

The main steps of an effective communication strategy are:

1. Identification of the main problem and formulation of the **goal**.
2. Definition of proximate and ultimate **objectives**.
3. **Research** on facts: biological, social, political and economic.
4. Identification of **target groups**.
5. Development of a **communication strategy**.
6. **Evaluation** of goal(s).

Taking each of these steps in turn:

1. Goal

The goal is a broad concern, such as a species in danger of extinction or a habitat under threat of destruction. For example, the goal can be to conserve a certain patch of forest (Forest A) from destruction through over-exploitation.

It should be noted that although valid, large concerns such as global loss of biological diversity are too unwieldy to be covered adequately by one strategy.

2. Objective

An objective is the result or end towards which the communication strategy is directed, and should, essentially, have a time limit attached to it. Therefore, unlike goals, objectives should be a) specific and definable; b) realistic; c) measurable and d) set within defined time periods. In Sri Lanka, objectives are often stated without these components and, most often, used interchangeably as a synonym for the term 'goal'.

Both proximate and ultimate objectives should also be described. For example, a proximate objective may be prevention of collection of a threatened species af medicinal plant (species X) from Forest A. But the ultimate objective may be to promote sustainable use of Species X through home garden cultivation. The specific objectives could, therefore, be stated as:

a) By June 1997, there should be at least a 50 percent reduction in collection of Species X from Forest A
b) By June 1998, the conservation organization should have provided propagative material of Species X to at least 50 percent of the villagers living in the surrounds of Forest A;
c) By the year 2000, all collection from the wild of Species X should have ceased because ex-situ cultivation is completely successful."

3. Research on biological, social, political and economic facts

Because this paper is directed at biologists, it is unnecessary to discuss biological research methods. While keeping a cost-benefit balance, the researcher should first explore the available social, political and economic data from existing sources such as provincial, district and national government, private sector and Non Governmental organization (NGO) records. This information may not be always reliable, complete

or even available. Therefore, specific research methods should be employed to obtain this information. The methodology for gathering information is a vast area, mostly developed by the social sciences (Solomon, 1981). One of the basic research tools is a **Survey** (Converse and Presser, 1986; Fowler, 1984). The purpose of a survey is to produce numerical descriptions - i.e., statistics, on selected aspects of the concern (or problem) and the study population. Interview techniques need to be devised to collect quantifiable data that are also opinion-oriented - i.e., information that will indicate feelings or ideas (Kahn and Cannel, 1957; Converse and Presser, 1986; Gorden, 1975). A survey should provide precise and unbiased information (Kish, 1965) and should be taken in a standard way to provide consistent and comparable information so that distribution patterns can be analyzed measurably and repeatedly (Webb *et al.*, 1966).

Up to this point the above steps have gathered information for the producers. In marketing parlance, this is **Market Research** (Bouvee and Arens, 1986). Next, the producer needs to process this information and formulate the message.

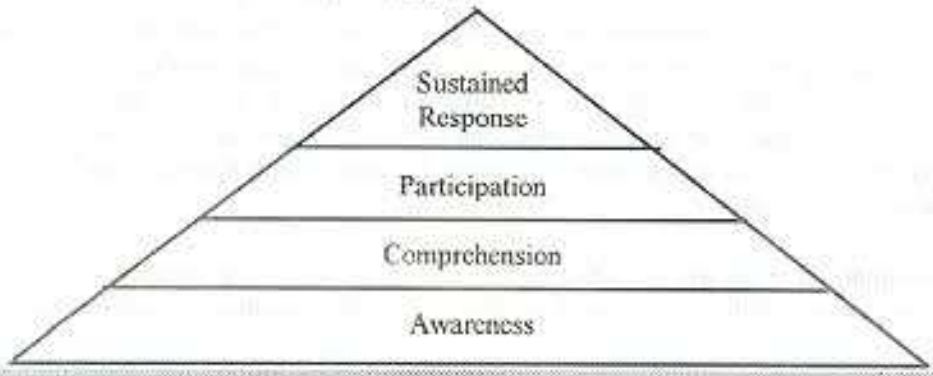
4. Identification of target groups:

At the end of a survey, it will be possible to categorize the public into several groups. At this point, it is essential to identify **Target Groups**. These target groups can be defined based on their economic or political needs or social status, or any combination of the above. For example, a group of people using Forest A as a source of collection for Species X is a separate target group from one using it as a source of protein. Political and economic status, such as support from a province or personal benefits from economic development, should never be overlooked. Identification of target groups is the equivalent of **Market Segmentation** (Bouvee and Arens, 1986).

5. Development of a communication strategy;

The communication strategy for each target group should be based on its economic and/or political needs, or social status. This is the formulation of **Marketing and Advertising Plans** (Bouvee and Arens, 1986). Using the definition declared above, this is the all-important message.

A series of progressive steps, similar to a pyramid as used in advertising, should be used to formulate a conservation message :



Awareness does not need to be specific to a target public, and can be general. This is the beginning, or "overture" of the message. This is advertising in the strictest, narrowest sense of the word - a way of grabbing people's attention. The information in this segment must state explicitly the benefit to all target groups. In other words, a sensory incentive must be provided. Thus, simply broadcasting "Save Forest A " will not be effective. Rather, the message should convey that saving Forest A would yield a benefit of B. The incentive part of the message is essential for the next steps.

Comprehension, participation and sustained response depend on the development of effective communication strategies. Depending on the target groups and their specific needs, attention must be given to whether the message must cause: habit breaking (such as the prevention of collection of Species X); habit acquisition (such as learning to propagate Species X in homegardens); or habit modification (such as selling propagated plants instead of plants collected from the wild). Incentives must also be offered to every group and should have a tangible benefit for all groups. For example, the communication strategy should include a component whereby the target group is informed explicitly that plants or plant parts of Species X propagated in their gardens will be marketable.

In designing a strategy, conservation biologists should be aware that there are five basic concepts in communication : (i) Promotion; (ii) Advertising; (iii) Publicity; (iv) Personal contact; (v) Public relations.

Promotion is a general concept that includes deliberate attempts by the producer to communicate selected information, i.e. the benefit of a product, to buyers in the target groups in order to induce specific (desired) responses. In this example, the biologist is the producer, communicating a conservation message to target groups. Promotion comprises advertising, publicity and personal contact and it is a type of persuasive communication to move target groups from awareness to action (Fazio, 1986).

Advertising is associated generally with the use of mass media (radio, television and newspapers), and is a paid form of presentation and promotion of ideas, goods and services by an identified sponsor (Fazio, 1986).

Publicity is also associated with mass media, but it differs from advertising because there is no payment. Publicity involves the favourable or unfavourable presentation of conservation efforts in the form of print, broadcast or telecast media (Fazio, 1986). To this end, it is important that conservation biologists are willing to express freely their views and be quoted by journalists to ensure that a balanced story can be presented to the public.

Also important is the use of public figures to convey favourable messages. Just as advertisers use public figures such as film stars and sportsmen to endorse market

products which range from soaps to sausages, conservation biologists must also kindle and encourage in such public figures interest in conservation related issues, and use this interest for the benefit of conservation.

Enmeshed in all this is the choice of the medium, i.e., the vehicle one uses to send the message. This is **Media Planning and Selection** and is dependent on i) Reach (number of people to which the message must be sent) and ii) Frequency (how often the message should be sent), (Wasserman, 1988). Reach and frequency are, of course, entirely dependent on feasibility - a communication strategy that is dependent heavily on broadcasting or telecasting should not be planned where there is no electricity. In Sri Lanka, where access to state radio and television is widespread as a consequence of listening or watching in groups (sometimes four or five families to one radio or television set), these mass media become powerful tools for advertisement. With an adult literacy rate of 87.2% - one of the highest in the Asian region (Department of Census and Statistics, 1994) - newspapers also are important vehicles of communication.

Personal contact is the direct, person-to-person contact between the biologist and target group(s) for the promotion of goals and movement of individuals from awareness to action. This is most effective with small groups and obviously is not practical when the target group is too large (Payne, 1951; Lazarus, 1975).

Public relations is perhaps the most important long-term conservation strategy. It can be defined as the totality of the behaviour of the conservation group in the socio-political environment in which it operates. Careful monitoring should be devoted to the relationships between the group and the target audiences, from high political spheres to school children.

While using these concepts to develop a suitable strategy, one has to make sure that each message to each public has the correct overtone for that public. This re-introduces the concept of tailoring the message to suit the needs of the public. For example, if the public - say a group of villagers - is using a resource for economic gain (such as harvesting Species X from Forest A for sale in the open market), then the message must have an incentive for a viable economic alternative (such as the sale of propagated Species X). In contrast, if the public is a member of parliament, then the message should explain the magnitude of the problem, how this problem affects his/her position and how he/she would look much better in his/her public position if the problem is solved satisfactorily, i.e., the message should have a social status overtone.

Once a strategy is formulated based on all of the above factors, then the message is sent to the receivers. The final step is to gauge the **Response**, i.e. **Evaluate the** strategy.

6. Evaluation

Most communication campaigns stop prior to evaluation and are doomed inevitably to failure. This step is essential and must be carried out regularly. As in the case of formulating objectives, questions on evaluation should yield quantitative, and hence measurable responses. They should also be developed to give a continuous feedback of the communication programme. Different evaluation strategies can be used to measure the degree of success at different levels of the project and, as always, should be based on a cost/benefit analysis. Measurement can include interviews, surveys and participant observation.

Goal Setting has already been discussed. Evaluation would match the response to previously set goals. For example, if the original goal was to reduce collection of Species X by 50% during the first year, evaluation at the end of that year would reveal whether the specified reduction had been attained.

Direct response measurement of target individuals is a largely qualitative measurement to find out how well the point is being made.

Counting (which is obviously a very simple evaluation), indicates the number of participants in programmes, to determine whether the message has reached the target audiences.

Media tracking tells the evaluator where and how the media messages (radio and television programmes, for example) are shown.

Programmes/ materials evaluation will allow for change if the message is dynamic. For example, a sample of the programme can be shown to sample individuals from target groups, and followed up by periodic re-evaluation to find out if the programme continues to prove effective on the target group.

Periodic tracking study measures quantitatively attitude changes and attainment of goals as well as censuses of species in question, market price of the species etc. by means of a major questionnaire.

These evaluations should be designed in such a manner that statistical analyses, minimizing subjectivity, are possible. Non-parametric statistical methods (which do not assume random sampling) are used extensively in the fields of social science and psychology (Webb, 1966), and should be used in evaluation of programmes.

CONCLUSIONS

It is not possible to detail a complete "state-of-the-art" communication strategy because each conservation problem is constrained by at least its location, its people and its economy, and hence, is unique. In this paper, the basic concepts and tools of a communication strategy have merely been introduced. We reiterate, there must be

a connection between conservation biologists and decision makers and/or users of biological resources. This can be achieved only through efficient communication. One of the least explored avenues is that of using marketing and advertising strategies to communicate effectively. Once this link is made and enriched, conservation biology will be a truly multidisciplinary science.

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