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Environmental Communication:
Communicating The Dilemma Of Development

By

M Alwi Dahlan
Introduction

After 25 years of debate, new problems and dilemmas continue to pose challenges to the search for the ultimate paradigm of development communication. At one time the source of the debate is the role of mass communications and the dilemma concern media and philosophical alternatives. Later the stress shifts to social communication, and the challenge comes from existing social structures and institutions. At other stages the debates focus on other problems such as information flow, innovation, communication control, or a host of other concepts which relate to economic development theories. Today the main source of attention is probably the communication revolution; the dilemmas pertain to technological options and opportunities, e.g., the potentials of technology to help developing countries take shortcuts in their way toward modernization.

While the debate in development communication is taking place, another series of continuing discussions also have been occurring in the field of economic development. In the beginning the accepted model uses the GNP approach, which focuses on economic growth but ignoring the dilemma concerning the beneficiary of development. Subsequent debates arrive at other paradigms, each bringing its own dilemma. The "trickle down" strategy gives priority to those who are already privileged and economically strong in order to insure success, but this may result in aggravating, rather than correcting, disparity. The basic needs strategy pays some attention to the underprivileged without really solving the social dilemma. The equity model attempts to remedy social imbalance first but at the cost of hampering further development. Then there is the quality of

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life paradigm which aims at redressing the gap between material and non
t material aspects of development, which also have its own problems.

After several decades of debate and implementation of changing theo­
r s, both the developing and industrialized countries of the world contin­
ue to face new problems and dilemmas in economic development. In fact to
meet current and future challenges, the United Nations have established a
special study group (the World Commission on Environment and Develop­
ment) to prepare a global development strategy for the third development
decade beginning 1990.

Clearly both debates have to be viewed together and complement each
other. Many of the dilemmas of development communication are related to
those of development in general. However, as reflected in the name of the
UN commission, there is a totally new set of dilemmas and problems in the
field of economic development which have not been touched to any signifi­
cant degree by the debate in communication. Hence the approach to the fu­
ture may be different, even on the same elements of development. For
example, while both considered technology as an important factor in the
coming development era, each viewed in a distinctive light.

The development people look at technology in the general sense—not
the specific technology of communication and information—and view it as
a crucial factor which determines the resources needed for development
and the type of development to come, by way of its impact on the environ­
ment. Technology has contributed to the degradation of environment and
could speed up further deterioration of natural resources. The same thing
could even be said about the impact of communication technology: it gen­
rates increasing demand and pressure on resources, or contributes to the
deterioration of social and cultural environment.

A good deal of the paradigm dialogues in both fields are theoretical,
but those in economic development are often said to be more directly
applicable for the conduct of development. The problems and dilemmas are
not merely academic. They pose hard choices for policymakers and the im­
plementors of economic development who have to deal with the problems
in real life.

Similar examination of actual communication dilemmas would also
contribute more to development. It would have more relevance to the over­
all policy of development aside from the conduct of development commu-
nication. Such studies, for example, may be able to answer whether the dilemmas and strategies of communication is subordinated to earlier development choices and an instrument of development strategies. Or, whether the discipline of communication can broaden the range of development options available to a government. Is communication determined by development, or can communication (as a field of study) play a role in determining the directions of development? Or, is the role limited to supporting the implementation and influential only in determining the rate of success of a given strategy? Unfortunately, such perspectives have not received sufficient attention from the students of communication.

This paper examines some of the dilemmas of development communication, using environmental communication in Indonesia as a case for analysis and illustration.¹

The environment is a new problem area of increasing urgency for policymakers in most countries. It is not only a source for dilemmas in the implementation of development programs, but for some it is indeed a dilemma by itself: a policy alternative which competes against the efforts of national development. Environmental communication, therefore, may play two distinctive roles. The first is internal or as a part of the total development communication efforts; the other is external vis-a-vis development communication. In a macro sense it may be a constraint that influences the direction of development. Yet from a micro perspective, it can contribute to the process of development.

As may be seen further in this paper, the area of environmental communication is perhaps a good that can represent the complexities of development communication in general.

Communication and the dilemmas of development

A review of the complex problems of national development will show a variety of dilemmas which, direct or indirectly, confronts development

¹Please note that term “dilemma” is purposely used in this paper. The intention is to put an emphasis on the conditions and constraints faced by national development everywhere, i.e., very limited resources and time to meet the enormous dimensions of the tasks at hand. Consequently every action involves difficult, sometimes unpleasant, decisionmaking to select between equally tough— albeit necessary—course of actions or similarly important options.
communication. Some are the dilemmas of development, others are difficult choices in strategy, or dilemmas in carrying out the programs. Additionally, there are dilemmas which are specific to communication; either in developing the communication system itself or in the technical execution of communication programs.

From the various problems facing national development, the most frequently discussed are the macro choices: the principles, concepts, the goals and the necessity for development. Choices concern such matters as the emphasis of development (economics or social?), market mechanisms, the nature of modernisation (whether Westernization or not), etc. For the communication field, they bring academic problems, for instance on the propriety of using communications to support certain selected choices.

Some of the dilemmas relating to development strategy have been mentioned earlier. Besides alternatives on the approach to be taken, further options concern priority setting. The questions that have to be answered in this instance include: the selection of the beneficiaries of development programs, sectors or segments to be given preferential treatment (e.g. experienced foreign investors or loyal but untested nationals?), or the regions that will receive the first allocations. In this connection, criteria have to be determined as well as the standards to measure the success of development. All of these may create prejudice and suspicion regarding conflict of interest, no matter which option is finally picked.

The strategy of development has a bearing on the development of the various components or subsystems of the national system. Therefore the strategy may create development dilemmas in the subsystems, including the communication component. The essential question here is, what kind of national communication systems must be developed, given the selected concept and strategy of national development? This entails the selection of options on such matters as technology, funding source and cost of the system, or priority setting between competing subsystems—each with its own ramifications. The selection of technology is perhaps the most complex to process but the others are not much less complicated. In setting the priority between competing subsystems, for instance, there is the question of criteria. How do you evaluate a traditional social communication network or its informal leadership system in comparison to a modern interpersonal network which is supported by sophisticated telecommunications?
Another sets of dilemmas in building the communication system concerns its structural properties. Knowing the cultural and social conditions and the goal to modernize, should the system be one way or two ways, open or closed, highly structured or flexible to provide for alternative flow of information? Whatever the choice, how to develop it? What about the problems of control and freedom of flow in the system? Would they be congruent to the existing system? Whatever the normative ideals, what would be the implications for the whole development system; would it hamper economic stability and speedy implementation of development?

Dilemmas of implementation

These and a host of other considerations must be taken into account before the development strategy could be carried out and development communication could contribute. To be sure, communication can be regarded purely as a tool for implementation once development choices have been made. It may be used as deemed fit by the managers of development. It may be assigned to create conditions and public participation, or even to function as one of the alternatives of development, substituting talk for real action. If the previous dilemmas are not solved, however, communication cannot functioned effectively, e.g. due to inconsistencies in the principles of the larger system with that of the communication component.

The problems and dilemmas of implementation at the micro level are perhaps more numerous. Regardless of the policy alternatives selected, the execution of development will have to be interpreted into operations in each step of the development process, starting from planning, to funding, actual implementation, supervision, until the final evaluation. Every stage will involve another set of alternatives, often as perplexing as the broader dilemma for the decisionmaker at that step. In the actual implementation, the program may have to be reinterpreted into increasingly technical, concrete and detailed action plans at a progressively lower level of decision—again providing some options requiring selection.

This process occurs in all sectors of development. The general decision to opt for equity as a strategic goal of development, for example, would mean wide distribution of opportunities in all aspects of national development, e.g., in terms of population segments and geography. In the sector of communication for instance, this might be translated to equal access to information; further meaning a network of television broadcast
stations covering the whole nation and public television sets in every vil-
lage. Related to the other sectors, equity here would also mean: oppor-
tunities for domestic industries (for TV receivers, ground stations, ser-
vices) as well as opportunities for local software production. In the actual
implementation all these would pose dilemmas in the selection of hard-
ware (well proven and cheaper import vs. expensive local made vs. domes-
tic assembled product of foreign brands), broadcasting systems, software
producers, and a host of others.

The problems of implementation are multitudinous due to a variety of
factors and constraints faced by virtually all developing countries. The
following list illustrate only some of the most common sources:

☐ Time constraint. National development is racing against time in the
attempt to prevent the widening gap, if not to minimize the gap or
catch up, with the advanced countries.

☐ Complexity of development. The objective is to build the whole na-
tional system, complete with all the subsystems and components at
various levels, every one interrelated to the other. The task has to
be done despite the lack of information and knowledge of every part
of the national system.

☐ Limitation of resources. Developing countries have limited resour-
ces: natural as well as financial, especially in view of the dimen-
sions of development. Many have resources so meager that made it
difficult even to maintain a subsistence level. Those who have re-
latively abundant resources have not been able to develop it in full.

☐ Rapid global change, including in technology and markets.

☐ Social and cultural factors, which create the dilemma between
innovations and new values versus cherished, traditional values
and attitudes.

☐ Population. Relatively large size of population and high growth
rate, raising the dilemma between the demand for labor intensive
employment creation versus the needs for efficient enterprise.

☐ The impact of communication which raise aspirations which may
be incompatible with national development efforts.
This paper is not meant to be an inventory of all the possible problems of development. Most of the sources are outside the domain of communication and the resulting problems are beyond the ability of communications to solve. The choices and decisions are in the hands of other disciplines. Nevertheless, they do have important implications to communication in several respects.

Firstly, communications play a role in the process of choice formation and decisionmaking. A great deal of the problems and dilemmas faced in national development is originated by and developed through the communication channels. The impact of international communications through the mass media gives impetus to new ideas and demands, raises aspirations about the quality of life and increases expectations, and thereby create new alternatives and dilemmas. The general increase in public awareness about the range of potential options—including the new options which are available for the conditions in developed countries—is much faster than actual economic progress and the increase (if any) of the national capacity to provide for the options. In addition, communications also heighten the growing gap between the early beneficiaries of development and the rest of the society, therefore putting the pressure for change in development strategy.

Secondly, as an instrument of the national system, communication has the task of explaining the dilemmas of development at all stages of the process, from the phase of concept formation to the stage of evaluation. This is important because at every step in the process decisions have to be made to select a particular course of action, which means the rejection of many other alternatives. As the selection of any alternative (especially in the economic sector) usually favors, benefits or gives preferential treatment to a particular segment over the rest of the population, this means that every decision may disfavor or work against the interest of some other groups. Moreover, national development strategy frequently requires unpopular but necessary policy decisions, which may impose hardship and sacrifice on the whole nation, e.g. devaluation. Communication on the dilemmas and their processes are needed to prevent undue misunderstanding, gain fuller participation and commitment by the public, and motivate discourse in the search of better solutions.

So far, this task has not been performed admirably. Communication efforts have been dealing mostly with the dissemination of development
"information" in the propagandistic sense of the term. Problems are usually treated in the context of development failures and mismanagement.

Development or environment

The last decade witnesses the appearance of yet another source of development dilemma, this time more formidable to policymakers everywhere, namely, the problem of the environment. Although environmental difficulties are not totally new to the world, they are brought into sharper focus in the 1980s by various crises around the globe such as the ecology-based food emergency in Ethiopia, the nuclear plant accident at Chernobyl, the impact of acid rain in Canada and Europe, or the vanishing ozone layer.

The apparent causes for the crises are irresponsible practices in the use of natural resources and technology. Further studies conducted by various international institutions, however, point to economic development as the real culprit. Motivated by the need to achieve continuously increasing growth and better living, the advanced countries put a rising demand on nonrenewable resources of the world (including LDCs) and thus increase the pressure on the natural environment. Presently these countries consume an estimated four-fifths of the world's mineral and fossil fuels. They also consume more animal products which put more pressure on land than staple grain production.

According to one report, "the root of the problem lies in the lifestyles promoted and serves by the processes of economic growth." Rising living standards require products that are resource-intensive and lead to rapid resource depletion and generate a substantial pollution load.

While this occurs mainly in the industrialized nations, environment is also the problem of the Third World. Deterioration of natural resources are heaviest in the developing countries. The annual rate of deforestation in Africa is six million hectares. The destruction of tropical forest in Asia and Latin America is 11 million hectares a year.

Population growth is one source of environmental stress of the Third World. Nevertheless, the problems is also rooted in the demands of development. The high degree of dependence on agriculture and earnings from exports of primary commodities to pay for economic development, or the
use of technology and methods which are technologically inappropriate in order to boost growth, are among the obvious causes. Over exploitation of the environment is brought about by substantial economic activity which is tied to demand growth in the developed countries. In addition, the interpretation of economic development and modernization in terms of imitative lifestyles in the pattern of the rich countries, have created in the developing countries consumption demands which use disproportionately high amount of natural resources.

Development strategy and priorities also have a bearing on environmental degradation. Many countries choose to follow the tried paths of industrialisation, starting with the type of industries that turn out to be those with the biggest potential for pollution. Others purposely invite investments from industries which can no longer operate in their own countries on account of environmental dangers. In order to economize, "dirty" technology and processes are allowed to be imported, while procedures are shortcut. Early warnings about potential disasters are set aside because immediate action would require additional cost.

In the context of development, according Emil Salim, environment is often treated as an afterthought. It is seen apart, in isolation from development. Each sector has to perform in terms of production criteria and not according to its contribution to the overall quality of life, or the extent to which it takes environmental considerations into account. As a result the perception is that environment is 'anti-development'.

Environment, then, is considered as an obstacle or competing alternative to development. The view is that countries face a dilemma and must choose either environment or economic development. The dilemma is also presented as the choice between remaining poor (with conservation) versus better income opportunities. Welfare versus austerity. Cheaper prices (produced through cheapest methods) or higher price of goods (because of environmental cost). Being able to live—due to the support of available resources—or dead.

The problem is, of course, not that simple. Today's life and welfare is certainly important but not at the cost of the future. One characteristic of the environment is interdependence in various aspects. It is intergenerational: not only interdependence among today's living things, but also between today's and the future's living things or, yesterday's deaths. It is
also global, comprehensive and complex—thus creating complex dilemmas. The ecology of one nation is linked and interdependent to other nations. Hence destruction in one place may affect, and even negate the efforts, in other places. In order to keep the coasts of Singapore clean, oil should not be spilled in the seas of Malaysia or Indonesia. To protect endangered species in Africa or Indonesia, the trade of tusks or rare birds in other nations should be abolished. As the climate in the North is influenced by the existence of tropical forest, there is a pressure for conservation of the forest from the North. Yet it is the lifestyle of the same advanced nations that put the demand on the products of the tropical forest and stimulate its continuing exploitation.

With the environment being that complex, its problems would also be as complex, if not more so. The negligence in preventing a small environmental problem in development effort today would cause a much bigger and costlier problem later. (Examples: the billion dollar cleaning fund in the US which turns out to be far from sufficient in repairing the damage done by decades of industrial toxic waste; the Love Canal case.) With the passage of time and the chain of problems passed in the interaction within the network of interdependent ecosystems around the world, the problems will become increasingly worse. The downward spiral of degradation may come to the bottom and the dilemma will no longer pose any alternative.

As proposed by the experts in environment the solution to the problem lies in a new strategy of development, i.e., sustainable development. This means that development could continue but it must be carried out in such a way that it would not destroy the very resource base that is required to support life. The objective of development, therefore, should no longer be growth for the sake of growth. Instead, efforts should also aim at the development of the environment itself and reverse the downward spiral of degradation.

This problem confronts development communication with dilemmas of its own. For one, it raises a moral and ethical issue. By selling development only from a favorable light, essentially communication has been selling the negative environmental impacts that go together with it as well. Of course it could keep selling the image of the prosperous and consumptive society, where everybody is living comfortably in a modern world. But this would disregard communication’s responsibility to strive for a well informed society or its function to warn people of the dangers lurking in their environment.
To be relevant and continue to function, communication has to take into consideration the changing facts of life. Development communication should also strive to support sustainable development, starting first with efforts to sell the idea within the development community. Furthermore, the scope of development communication should be expanded to include environmental communication. Otherwise, the efforts of development communication will come to a clash with the efforts of environmental communication. This is already happening today at the technical level: the activities of communications, especially those supporting sectoral and development programs are beginning to be contradicted by environmental information—in many countries spearheaded by NGOs.
Although most LDCs have little industrial base and a population not highly resource-consumptive, it does not follow that their environmental problems are any lesser than the advanced countries. The situation may not be as dramatic as Ethiopia yet the scope of problems may be as large and as complex.

To give a picture of the complexity of environmental problems in developing countries, the Indonesian case may be representative. Indonesia perhaps could illustrate the various environmental problems in other LDCs because of the variety and dimension of its problems, among others:

a) Geographic conditions and topography: 13,000 big and small islands, large land and sea areas, with various situations. Different ecosystems: partially Asian, partially Australian. All sorts of topography: upland and lowland, volcanoes and rivers; dryland, savannah, swamps, great variety of soil and its fertility (including peat etc).
b) Natural resources related to the economy of industrial countries, minerals, oil, gases etc. Also renewable resources such as forests, seas and agriculture of export commodities which invite pressure from the needs of foreign markets.

c) Tropical forest, with untouched genetic resources, rare species of flora and fauna.

d) Large size of population (165 million), relatively high growth rate, some in high density, others in very low density areas.

The characteristics of the population, its size and distribution, have several implications on environment and development.

a) Increasing demand for food in the face of decreasing quality of the environment bring the need for continually newer technology inputs (chemical fertilizers, pesticides/insecticides). The result: vulnerability to chemical pollution, explosion of resistant insects.
b) Growing needs for additional employment opportunities put pressure for opening new areas and cities, thus pushing rapid changes in the environment.

c) Increasing pressure to increase production and decreasing size of land ownership in dense areas, thus over-exploitation of soil which results in the chain of erosion, critical lands, degradation of watershed areas water crisis, water born diseases, decreasing carrying capacity of land.

d) Increasing needs for infrastructures and other facilities for life, e.g. habitat, market place, schools, etc.

e) Need for increasing development and sources to pay for the above.

Consequently, national development is needed to improve conditions in all aspects of life at all levels. Yet every development activity brings negative impacts on the environment. Consider the following developments:

a) In natural environment, floods and other natural disasters occur in previously stable regions, insect explosion and decreasing ambient quality (air, water, soil, sea, coastal zone).
b) In man-made environment: environmental health problems, heavier burden on environmental management (garbage, toxic waste, spatial arrangement).

Clearly the problems of environment impact is related to and cannot be less complex than the problems of development. In Indonesia, there is also an additional dimension. The Basic Law on Environment (1982) legally defines environment to cover also the social environment, thus also the non-physical qualitative aspects.

To cope with the whole constellation of problems, the basic policy guidelines of national development now contains the following principles:

a) All development activities should be environmentally sound. Feasibility studies should include environmental impact assessment (including social impacts). All sectoral budgets theoretically at least, could not be disbursed without fulfillment of these requirements.

b) National development includes environmental development, e.g., programmes to raise environmental standards, rehabilitation of watershed areas, reforestation, etc.
These policies are based on the concept called "Pembangunan berwawasan lingkungan" - development with an environmental wisdom or orientation. Instead of confronting development versus environment, the objective is to have development together with environment. This concept is not adopted only to meet the future requirements of development, i.e. - sustainable development, but is also derived from the basic Indonesian philosophy: Man should always strive for harmony in all his relationships - to God, fellow human being and the nature.

To be sure, philosophy alone, basic policy, or even a Law is not sufficient to turn the concept into reality. After all, development programmes have been purely sectoral for almost ten years. Sectoral goals have to be achieved in order to maintain economic stability and fulfill the needs of the population.

There are a number of pre-requisites before sustainable development could be carried out, among others:

a) Integrated approach. Environment should no longer be isolated from development sectors. The principles of environment should be made inherent in all components of the national system.
b) Knowledge and attitudes. The environmental orientation backed up by adequate knowledge should become the personal outlook of everybody, including the personnel of development (planners as well as implementors).

c) Information. The availability of complete and up-to-date information on the environmental conditions.

d) Consistency of policies and actions across the system. An environmentally supportive policy in one subsystem would fail if a related subsystem is making contradictory steps.

e) Conditions conducive to environmental development, including political, frail economic.

In other words, much groundworks must be prepared first before environmentally wise development should work. This includes building adequate information and communication, educating the apparatus and the population at large, and preparing for a conducive climate.
Clearly, to achieve the ambitious goals, environmental communication efforts must be done at two levels:

1) The systemic level. To redevelop the relevant components or subsystems (sectors) of the national (development) system to be compatible with the planned environment. In other words, making the development system environmentally-oriented. In terms of communication, this is the development communication level.

2) The micro or technical support level. In order to be able to modify the existing system, efforts must be made to disseminate information and persuade people to accept the idea of environmental development. Thus, development support communication activities clearly must start first.

The Micro level. Therefore, when the minister for environment affairs was first appointed in 1978 - at that time the Minister of State for Development, Supervision and Environment (PPLH) and since 1983 Minister of State for Population and Environment (KIH) - one of the top priorities is to raise public concern on the increasingly endangered state of
the environment and to create the motivation for concrete action. Consequently, among the first undertakings of the ministry was a nationwide public awareness campaign.

In a manner of speaking, it can be said that the campaign follows "the (communication) books" quite closely. KLH tries all that can be learnt from the field of communication from the very beginning. In order to learn from the practical communication experience from previous campaigns, the planning process uses considerable input from national seminars held in 1978 and 1979, and attended by environmentalists, researchers, as well as communicators. The seminar helps set alternative goals and priorities, identify problems and issues, examine channels and target audiences, discuss appropriate approaches and make a host of other suggestions. Realising the vastness of the country's environment and diversity of its problems, the strategy is to involve every communication potential in the nation in order to get the utmost result. As coined by PPLH Minister (later KLH Minister), Emil Salim, the slogan is "to have the flag of environment fly at every pole".

The strategy, therefore, calls for the use of practically all available channels of communication. They include the usual complement of mass media, government information and extension networks in various fields - agricultural, fishery, forestry, health, trade, small industry and what not - the
networks of religious leaders and organisations and other networks of social and interpersonal communication. This means the necessity to make various campaigns within the campaign; firstly to build up consensus and elicit commitment from the communicators in the various channels. Then, followed by the wider campaigns in which all of them would be involved. The diversity of the target audience also requires such an approach. Language, cultural outlook, concepts on the environment differ from one place to another, and perhaps also, between various groups. In addition to the necessity to use the various local dialects to describe the environment and its workings, there is also the need to use the "languages" of the various religions, cultural traditions and local beliefs.

This means also the need for a flexible plan since each sector may have their own requirements, e.g., in terms of communication style, approach, techniques, constraints, etc. The campaigns can not be planned in detail. Environmental problems vary according to locations, the target audiences are so diverse, and each of the participating channels may have its own characteristics, strength or limitations. The KLH ministry can only prepare the main plan, which then becomes the basic framework for the detailed plans of the smaller campaigns to be made by the various participants according to their respective capabilities and interests. As a small ministry of state charged mainly with cross sectoral coordination, KLH is not a
line ministry which is equipped with technical implementation apparatus at every level down to the subdistricts. Therefore it acts mainly as a catalyst which helps create for the necessary conditions at strategic points.

The systemic level. While the micro level campaign is going ahead, the need to prepare for the systemic level is increasingly felt. Resistance toward the cause of environment gradually appeared, from private groups as well as some segments in sectoral development. Overlapping steps with double objectives, awareness as well as systemic are then introduced.

In order to encourage open discourse which is so important for heightened awareness and commitment and obtaining information for the fields (previously unreported), various steps are devised to stimulate two way communications in the truest sense possible. For example, by inviting criticism against environmental management, continuous efforts to strive for more freedom of coverage in the environment field, and creating the climate and facilities to stimulate the growth of non-governmental organisation (NGOs) on environment.
Meanwhile, the concept of development with environmental wisdom needs to be popularised to the political elite. In addition to the exercise at the macro level, a campaign for the general population and relevant audiences was conducted on this theme.

The concept was also adopted for the communication system and other sectors. In the educational field, the process to develop an education system with built-in environmental orientation has been going on for years. In the mass communication field, effort is made to develop the concept of "coverage with environmental method", e.g., by organising workshops for newspaper editors and TV news managers.

Another effort at the systemic level is to develop participation in monitoring and reporting environmental degradation, and public action at the local level. This is done by stimulating new ideas, and other activities aimed at giving recognition and attention to the efforts of the popularity at grassroot level, no matter how small.
Kalpataru*. Despite the lack of a detailed plan and the infrastructure to carry it out - or perhaps because of this - the design works fairly well. This is shown for example by the part of the campaign surrounding the President's environment prize called Kalpataru, which literally means "the trees of life", awarded annually on the occasion of the World Environment Day on June 5. The immediate objective to this exercise is to recognise and bring to the national attention outstanding accomplishments in the field of environment by individuals and groups who work unselfishly on their own, without expectation for personal gain. The recognition is given particularly to the works of common people at the grassroot level. The only civil servants who may receive the award are the lowest ranking field worker who have performed way beyond the call of duty.

*Kalpataru is a tree which symbolises the concept of environment in the Javanese mythology. As depicted in reliefs found in many temples, it encompasses the main elements of the ecosystem, i.e., land, water, air, fauna, flora and man. The award, in fact, consists of a gold plated trophy stylised, following the kalpataru at the Borobudur temple, in addition to a monetary prize in the sum of Rp. 2.5 million (approx. US$2,500) for each individual winner and Rp. 5 million (US$5,000) for each group winner. The award is handed out personally by President Soeharto in a special ceremony at the Negara Palace in Jakarta. The kalpataru is also used as the logo of KIH and adapted by many others in the environmental movement as their symbol.
To give a better feel about the scheme, a sample of the winners is worth mentioning. Among those who have received kalpataru is Rupidara, an old former sailor who single handedly planted trees in the whole island of Kisar in such a way that for the first time in history abundant water springs from its wells during the dry seasons. Now Kisar is the source of seedlings used for community trees planting efforts in dozens of other islands in Southeast Maluku which imitate its example. Then there is Sinanu, an illiterate fisherman who tried for several years and succeeded to replant mangrove forest along the coast of Ambon; this brings the shrimp population back and brings sinanu the position as a "consultant" on mangrove planting at the local university. Other examples include a group which revive and enforce the old tradition of sasi to preserve the population of fish, animals and sago trees and another group which solves the problem of clean water in an isolated village. Also a winner is an uneducated informal leader who persuaded his tribe to change from nomadic living, open a permanent settlement, stop roving and abandon the practice of slash-and-burn cultivation. And then there is the vocational high school drop-out who modifies old water-driven rice mills (kincir air) to become a community electricity plant, and a host of other winners with inspiring works.
There is a more strategic objective to this award campaign. By showing that anybody could do something really worthwhile, and that environmental degradation could be stopped, the ultimate aim of the kalpataru scheme is to create a strong motivation for self-help in solving local environment problems and needs. Another objective is to generate a lot of activities and involvement by various groups and strata in the society. Local and regional governments organised their own environmental prizes, organisations of various sorts held various contests to give recognition to specific accomplishments of efforts, e.g., best plans, essay writing and other competitions. All these are done at their own initiatives, without any particular detailed planning by KLH.

Public involvement even starts many months prior to the environment day, that is, the search for the most appropriate candidates. The general public is invited to help in the search and propose the candidates who meet the award requirements. By design, kalpataru is not a contest; it awards accomplishments which have been proven for several years to be able to motivate people in their surroundings. The process of the search stimulates discussions on the various aspects of environment, thus increasing the depth of environmental awareness.
RESEARCH AND EVALUATION

The campaign seems to be quite successful if judged purely from the viewpoint of the communication process: the message gets across, environmental awareness spreads rapidly in a relatively short time. This is so especially considering the fact that environmental management - indeed, the concept of environment itself - is relatively new to the general public and even to a wide segment of the bureaucracy in Indonesia. (The situation is probably similar in other countries in the region. After all, worldwide attention in this field started only at around the time of the Stockholm conference in 1972 and most governments did not have a unit or agency dealing in environment previously.)

The word for environment in the Indonesian language "lingkungan hidup" was newly coined and was not much in use before 1978, the initial stage; the campaign did not start in earnest before 1979 and the first Kalpataru was awarded only in 1981. Yet, as shown by the results of KLH-EWC study in an isolated district in West Java, the term is already known in the villages. The apparent success can also be seen from such indicators as the exposure in mass media, the volume of regional and local community activities around the nation, or the attention to environmental issues in the popular culture.
Nevertheless, the campaign may not be as successful as it may seem. While communication is intensive and awareness seems to be high, environmental destruction also seem to continue - if not on the increase, as claimed by some. It is true that people are talking now about the importance of wise environmental management, but they also continue to bring harm to the environment. Environmental programmes continue to face the same obstacles, e.g., swidden or slash-and-burn cultivation, deterioration of coral reefs and mangroves due to exploitation, deforestation in watershed areas, unwise agricultural practices leading to soil erosion, pollution, environmentally unsound use of land, trade in endangered species, bad sanitation practices, and so on. Why is this so?

Many factors could be accountable for the results of this campaign, but in general the problem could be traced to the special nature of environmental communication - particularly the specific character of environmental information. For one thing, as noted earlier in this paper, the concept of environment is quite new. Furthermore, it is not fully understood. While the term is gaining popularity, it is generally used to refer to specific problems, issues or phenomena which can be observed in the public's immediate surrounding, detached from the whole setup of the environment. Thus for instance, people will talk about erosion, flood, and critical water supply without making the connection between all three.
The environment is viewed mostly in terms of its parts, although it is a holistic concept. This is so because the concept is not as obvious as it may appear, but an abstract framework.

A more difficult problem is that the environment has a high cost and the return is not clear and immediate. People are not going to act if the conditions are not conducive or if they have to make sacrifices they consider for an ideal that may not be congruent to their basic values and orientation.

To find the answers, KLI is doing research on the social-cultural context of people's environmental behaviour in collaboration with East-West Environmental Policy Institute and Communication and Culture Institute. Yet much more has to be done in the coming years to achieve what is started today with environmental communication.