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Future Inter-Relationship Between Environment And Technology:
A Development Perspective

By

Manogaran Maniam
Any consideration of the future cannot avoid the fact that choices are always available. The act of choosing one choice over other possible choices is a decision-making process which depends, like anyone knows, on the analysis of pertinent information which can be understood, interpreted and used wisely. Ingredients required include commonsense, altruism. The reason and need for decision making stem from survival, growth and attaining a quality of life based on shared values. These values, embodied in human culture but varying from place to place and time are generally universal and can be simply stated as raising the level of living of the masses of people. It implies meeting basic needs as continuous employment or secure livelihoods, more and better schooling, better medical facilities, safe water, cheap transport and energy and a relatively higher income level.

This, in short, is Development: the development of human beings so that they can satisfy their basic material and non-material needs. It is an inescapable process all mankind is linked to. And any consideration of the future is but a consideration of what kind of choice a society has and will exercise in its continuing development efforts.

Developmental choices are a fact because there are different systems or strategies available - political, ideological, social. Choice also is present in developmental objectives, agriculture versus industry, capital intensive versus labour intensive techniques, employment versus output, growth versus equality, etc.

Choice is also implicit in the way things are done differently in the Third World, or the South as opposed to the way the other two worlds that is the North, would do. We shall focus more on this set of choices for the future development of third world countries like Malaysia.

In the much talked about North-South axis of world development, we have reached a stage where it is evident that the South has since the Industrial Revolution been a vast mine for physical and human resource exploitation and dumping or testing grounds of the technological products of the North. The enslavement process included wholesale importation of not only the Technology developed in the North, but also cognitive modes and intricacies of the culture that spawned, nourished and continues to sustain that Technology. In the process it has all but expunged and subverted the traditions and values of indigenous, traditional values which ante-dated that Technological invasion.

The positive effects of development cannot be denied, not even reversed. The negative effects are only now being measured.
Northern technology has a strong economic motive which demands the generation of profit irrespective of the social consequences - it replaces anguish of the body with anguish of the soul. It has developed cultural patterns of consumerism and weaponry. And the North has sold the South and Technology and has made us helpless recipient bargaining without sufficient knowledge or government support. Most of the technologies are deployed either to produce goods and services for the rich local elite or for export. And what about the environment? A wholistic appraisal would necessarily imply that society is intertwined amongst the multiple interactions among the political, economic, cultural, technological and physical environmental dimensions. The physical environment is the base upon which all the other dimensions exert, exploit, use or abuse.

Technology has, in its quest to promote development, (as we defined earlier) and to modify the environment to suit man's most urgent and necessary needs ended up as a tool for material wealth acquisition rather than the development of the total human being.

The higher and more sophisticated the transfer of this imported technology, the greater has been the exclusion of most of mankind from its very process resulting in the increase of both total member as well as relative proportion of the world's poor, the costs of ecological degradation and resource waste, high level of political dependency on technology, cultural dislocation and dehumanising of labour.

Kuala Juru's case of how industry forced the fishermen to move inland and abandon an age-long traditional culture.

Technology unlike science is not amoral. It is not a pursuit and acquisition of knowledge. It has all the potential of a Prometheus stealing the fire from the sun. Autonomous technology, that is, technology freed from the respect of the environment and man's will is the instrument of destruction. Nuclear weapons is a case in point.

However, it was only in the 70's that the principles of technology's autonomy and primacy have been challenged by the energy crisis, and more significantly by a more organised environmentalism. The 1972 Stockholm Conference and the decade which followed, especially in Malaysia's own environmental consciousness are landmarks in this trend towards a healthier symbiosis between Technology and the Environment. The future choices again: only today that a creative film-maker like Jean Luc Godard can think of a cinematic climax in which the world ends neither with a bang nor a whimper, but with a traffic jam.

The civilisational and futuristic scenarios posed by this phase of galloping technological growth are yet to work themselves fully despite the Proton Saga's and Hicom, despite sloganeering for "Sains dan Teknologi". But the consequences to development's universal goals are pretty obvious.

And that is why we need to choose, and to choose wisely.
The future inter-relationship between mother - the earth, and son - technology must be symbiotic, each needing the other without destroying the other or even depleting the other. Man's track record reveals the potential victory for technology over the environment, but the choice is with man.

He can, as has already happened in other more progressive third world countries, develop alternative technologies. Spurred by the Energy crisis which prostituted the energy-poor undeveloped countries, newer technologies and small-scale enterprises have increasingly been sought and developed. The Ghandian philosophy has helped India trial-blaze in this context.

People are beginning to overturn long-held myths like there is a built-in elasticity in nature which restores the natural system after man has intervened in it - thank god that logic failed in Endau-Rompin; like as if the environment is not only man's antagonist and that technology a power against it; like the myth that technology must at all costs extend its frontiers and whatever could be done should be done; that it is self-justifying, transcendent and end in itself. The choice is not simply between traditional and modern technologies, it lies in choosing between traditions of technology, some dominant and some exogenous.

By now it is obvious that development choices are more a question of technological choices rather than choices of the environment. There is no choice on the environment, obviously. We live here as here presents itself. We only have the choice to deteriorate it.

But with technology it is all based on humanising it, to search for traditional technology based on alternative frameworks-of values. It is an attempt to capture the "magic" or "legitimacy" that allows one to choose, reject or reconsider technologies in terms of environmental and therefore life sustaining criteria.

Each technosystem is but an integrated product of a total life-style in harmony with the goals of development. For that we require a new culture of techno-ethics which seems to elude us in the South.

Our five-year development plans are full of economic growth indices but scant on the ethical values critical to making sense of such indices. There is the alarm that we have become willing victims of the modern disease of conspicuous consumption, of a society which has placed too much emphasis on material gains. The current recession and the evolution of a whole new made-in-Malaysia generation may provide fresh thoughts to how we wish to shape our destiny - and this seminar is timely therefore to pose those choices of how we want to meet our future with the help of both technology and the environment.
THE LINGGI STORY

(30 min. video on Environmental Management
Produced by MIM, 1986)

This film studies the effect of development in the Linggi River basin and on various communities that depend on the river which originates in the central main range of Peninsular Malaysia near Seremban and Malacca before entering the Straits of Malacca.

The river is of great importance to several communities.

1. All the villages along its course depend on it for drinking water. It also provides the villages with food in the form of fish, prawns and crabs. The Linggi rivermouth, a traditional fishing ground, supports large communities of fishermen.

2. Farmers, industries and plantations depend on it for water. This is a vital source of drinking and industrial water for many towns and villages in the Linggi catchment area.

3. The mangrove forests along the tidal reaches of this river are sustained by nutrients washed downstream by the river. The mangroves, in turn, support several wildlife forms unique to this environment. It is also important nursery area and spawning ground for many of our commercially valuable marine fish and prawn species.

Development exerts pressure by:

- The felling of primary forests for industrial and urban development. Large quantities of silt are washed down into the river. Such siltation has raised the level of the river bed and made it shallower, this being one, though not the only, reason for frequent floods.

- Towns and settlements along its course use the river as the sewer. Refuse from pig and poultry farms, human excrement, household and industrial waste products are all dumped into the river. Farms and plantations along its banks further pollute the river with agrochemical run-offs.

From the point of view of:

1. Villagers at Kampong Nelayan and Tanjung Agas
2. The manager of a water purification plant
3. The manager of a plantation
4. The manager of an oil palm refinery
5. A Town Planning and Development Officer
6. A conservationist and naturalist

What exactly is the problem facing the Linggi River and who is responsible for it? What steps need to be taken to remedy matters?

EXERCISE: Develop a preliminary Environmental Impact Statement (EIS) on the river basin.

Step 1. Recommend to the government what development is required over next years.
2. Identify significant environmental impacts of these proposed development activities.
3. Justify whether a detailed EIA is needed.