

THE SUM OF BILLIONS OF INDIVIDUAL DECISIONS CAN MEAN CHANGE

Albert Th. ten Houten

Member of the Dutch National Advisory Council
for Research on Nature and Environment
The Netherlands

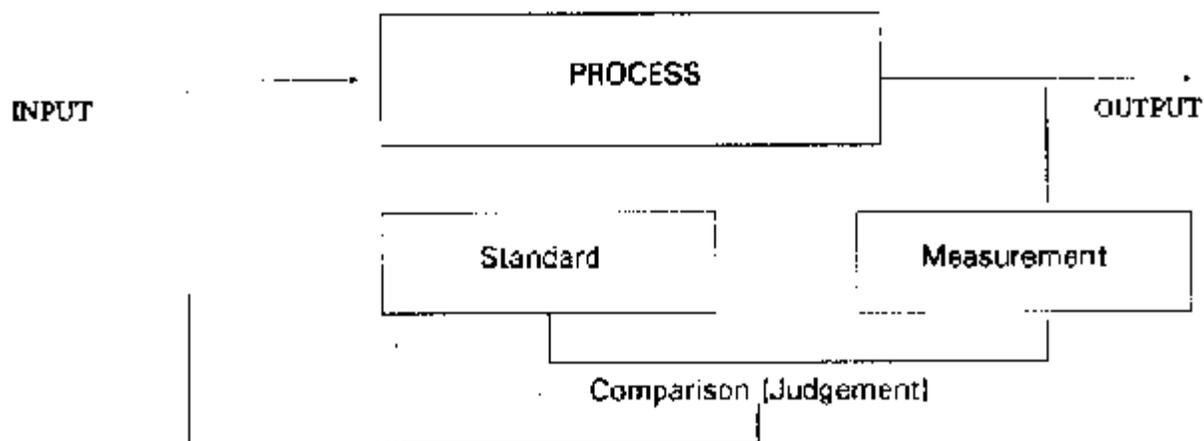
There are three issues I would like to address:

- The essence of decision-making;
- Individual choices;
- The sum of results of individuals decisions.

Decision-making in essence

The characteristics of the decision-making process comprise:

- Input: such as information, energy, raw materials;
- Process: often unknown, like a black box;
- Output: such as products, decisions, results, goal-achievement.



In essence, deciding equals choosing; choosing between right and wrong with respect to the comparison of the results-output-and the set goal, standard or norm. The setting of goals is another issue. From the said comparison the decision-maker must agree on the presented result(s), calling for "no action", or disagree with the output. In the latter case the "action" means adjusting the input, or adjusting the process. In case these options do not seem practical or desirable the norm can be adapted in order to get a more appropriate outcome of the judgment or comparison. That is as far as the "actor" is able to do so! These type of cycles do take place all the time and continuously. We all make many decisions each hour, each minute.

As far as the environment is concerned we cannot go on applying the norms we have been using for long periods of time. We have been taking the availability of nature, of the environment, for granted. We have found out that this basis is not a valid one anymore. For this reason legislation all over the world is being enacted and/or adapted to a more environmentally sound basis. However the changes are too slow and too few. We are touching upon the value-issues related to living on this planet which are often banned from the political agenda because they are considered taboo and are not to be spoken of.

The earth has been providing us with raw materials and resources and has been supporting humankind. But time has come to face the truth of our overdemanding earth's resources as well as its carrying capacity for our waste materials. There is not a technological fix or a market correction for every shortage or problem. We have to protect planet Earth in our own self-interest. This is not a new proposition, but it cannot be stated often enough as the overwhelming problem of our time.

In order to grasp the magnitude of our responsibility we must:

- understand the intricate workings of nature as an immensely complex dynamic web of life of which man is part. Man is not put over nature in order to steward it.
- face the question of the sheer number of human beings in the above-mentioned complex system of life-support on which we all depend for our ultimate survival together with all other life.

Having drawn these personal conclusions I do realise that there is fundamentally a religious component in these statements. The WED-commission (Brundtland-commission) studied the concept of sustainable development, a combination of economic advancement and ecological care, economic growth within ecological boundaries. Later generations have to be taken into account, and we must learn to look for the long-term consequences of our decisions. The basic urge to propagate ones' genes has to be balanced against the possibilities of the Earth's carrying capacity. Short term gains for individuals, groups or nations must be compensated by long term chances for generations not yet born. Our basically simple model of decision-making has to be seen in the proper perspective. The fact is that individuals make decisions that will determine our future, not organisations, industries or governments. Individual decisions andces are the key. The point is that our freedom of choice is much more limited than we want to admit.

Individual choices

Let us again take a look at the basic scheme I presented. The scheme applies to important, far-reaching decisions in the political arena but also to very simple, yet manifold, everyday life decisions for us all. We take information into account and "project" the outcome of the process of our undertaking, balancing this "projection" with our desired results, our goals that serve us as our norms.

In environmental decision-making; this systematic principle underlies the demand for Environmental Impact Assessment (E.I.A.) in many countries. The fundamental problem is the complexity of forecasting environmentally damaging impacts accompanying results of an economic nature. It is like the sorcerer's apprentice, who could not stop the broomsticks anymore. In pursuit of satisfaction of our "normal" demands we neglect to seriously take environmental factors into consideration. We must integrate ecology into our decisions.

This brings us back to the adaptation of the norms by which we have to judge our results. In my opinion it is a sheer must that we integrate Ecology not only into our decisions but also into our elementary school programmes. In this manner we must introduce a basic framework for our children and grandchildren to use as a norm for individual decisions in their lives. I have no illusion that it is possible or desirable to transfer a complete understanding of the laws of nature to the young. But a sense of relationship is essential. In Holland this would mean a fundamental change in the present curriculum for elementary education. In my eyes the understanding of the bio-environment is as important as our mother tongue or arithmetic. In higher education ecological values must also be stressed and/or introduced in order to feed the human mind with fundamental relationships for survival. Modesty is vital.

In the past years, efforts have been made to introduce a basic understanding of environmental relationships into in-plant training programs. Particularly the waste-prevention approach as a more realistic way of industrial production systems is being propagated. We are just scratching the surface. Experiments have been set up in close cooperation between industries and scientific researchers in order to prove that the barriers can be reduced or removed entirely. The publication of the results has also the goal to stimulate others to follow this preventive attitude and to save environmental costs as in many cases monetary costs as well. In industry as well as in government or other organisational settings it is again individual decisions that will determine the success of the efforts to act in a manner which is more sound environmentally. We must redesign products, processes, procedures, and organisations; in other words we must redefine our standards or norms in a more environmentally sound way. We must also redress our societal values in this respect and cannot afford to be lazy.

The sum of individual choices

The key to success in the above-mentioned, necessary action is massive education. This applies to the mature as well as to young people, but we must teach our young generations the most effectively. This means (re)introduction of environmentally compatible standards like the Indians had in North America. To quote a Red Crow saying:

"We Indians have thousand-year-old teachings which tell us that all living things, from the insects to the eagles in the sky are connected like the strands of a spider's web. Touch one strand and the tremor is felt across the entire web. Man must learn to see and understand these connections if he is to avoid the destruction of this planet".

The use of these "teachings" as a basis for individual decisions by the large number of individuals comprising mankind at this point seems a remote but necessary goal. If we succeed in (re)educating large numbers of individual decision-makers in a relatively short time, we can curb the destruction of bios. The World Wildlife Fund recently published a list of almost 20,000 species of plants and animals disappearing forever each year. Diversity is dwindling quickly at this rate. However the combined result of many-could it be billions?-of individual choices can

mean the desired change.

Conclusion

- The basic principle of decision-making must be transferred to large numbers of individuals, particularly the young ones.
- The same applies to the fundamental processes in nature.
- Man is only part of nature, not supreme to it.
- Using the understanding of nature as a standard or norm for individual decisions, small or large alike, is required to curb the destruction of our unique planet.
- The sum of the results of all these billions of daily decisions will lead to the needed change, I hope, in time.

Albert Th. Ten Houten, an M.Sc. graduate in Chemical Engineering, is the owner and general manager of ATHMO, a Dutch firm specialising in the management of environmental projects, impact assessments and decision-making processes. Since 1993, he has been Chairman of the Board of de Straat Environmental Consultancy, and Vice Chairman of the Verifying Committee, Dutch Environmental Education. He has also been a partner of CEC-International, Environmental Consultants, Edinburgh, Scotland since 1992. Other activities have included involvement with the PRISMA project in Holland, working for the Indian Ministry of the Environment (GEOPLAN-team) in India, and assistance with information for industrial start-ups in Berenschot, White Plains, New York. His publications include co-authorship of the book *What is Environment* and he is editor-in-chief of the handbook *Recycling of Industrial Wastes* (1991).