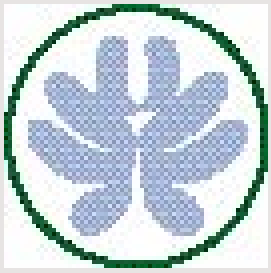
THE PRECAUTIONARY PRINCIPLE

IMPLICATIONS FOR RESEARCH AND PREVENTION IN ENVIRONMENTAL AND OCCUPATIONAL HEALTH



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Preface

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By his effort over the millenia, man has surely been the motor driving what is called "development", by which we mean productive growth, technological progress, innovation, welfare and availability of goods.

Human effort on this planet of ours has been the chief factor determining the quality of the environment in which man has lived. In its turn, the quality of the environment has conditioned the gamut of pathologies that have progressively set in and, as a result, the state of human health.

But whereas man in the past ages had to defend himself from nature's aggressions in order to survive on the planet, nowadays, if he is to go on living, and above all give future generations a chance of doing so, he must take steps to protect nature from himself.

Such positive action will only be possible if one bears in mind certain inescapable starting assumptions: 1) our planet is in all likelihood unique as a biological scenario; 2) it is finite and so are its raw material and environmental resources; 3) there is a legitimate escalation in human demands.

But if such assumptions cannot be gainsaid, we must ask ourselves: is the current development model compatible with finite resources and legitimate growing human demands? And if the current development model is not compatible, what other form might it take and, above all, how might this be achieved?

To answer these questions we must rise above the ambiguities and irresponsibilities upon which our present development model is based, namely:

– first, that of taking it for granted that the answers to the main problems are essentially technological, economic and political in nature;
– second, that of assuming this development model to be unique, or at least a lesser evil, and that only its internal mechanisms may be adjusted, while the overall design of it cannot be changed, not to mention replaced by alternative models;
– lastly, the failure to recognize that what we hail as progress and creative expression by modern man has brought with it an artificial expansion of production and consumerism, aptly summed up in the fad for "disposable" wares.

Under the social, economic and political impact of the problem of reconciling development, environment and health, dare we claim nowadays to possess the right cognitive tools to guide our decisions towards so-called compatible development? The answer may be yes. We do today possess a lot of scientific tools which can be used to predict (rather than observing later) the effects of development strategies which are mainly (though not entirely) geared to maximizing profits and petty group interests.

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One classic case is the long-term carcinogenicity trials on experimental animals to identify carcinogens. When properly planned and conducted, above all when closely reproducing human exposure scenarios, such trials can give precise indications as to agent carcinogenicity and environmental risks conditions, the time-scale being relatively short (2-3 years). The results of such studies can be extrapolated to man, in both qualitative and quantitative terms, and thus form the most effective instrument for predicting the carcinogenic hazard of such agents.

Safeguarding the environment, public health and the quality of life is a planet-wide issue, an integral part of any strategy to achieve a more physiological development model, harbouring resources whilst more fairly satisfying the legitimate claims of the whole world population.

It is quite true that many mistakes have been made, many disasters caused: our society today is justly disoriented. But all is lost? Certainly not. If man takes the situation in hand, without leaving the initiative to egoism or letting things slide, there is clearly hope.

Science can make an important contribution, bringing about a change of course.

But science must be free to identify the problems, set priorities, decide its own programmes, assess the results as they come in; above all it must establish relations with society, and society must make use of its contribution. These relations, however, must not undermine its independence: in other words, the relationship is one of interaction and interdependence, not dependency.

Is all feasible? Maybe it is, probably the time is ripe. At all events, we must strive to think the answer is yes.

In this context, the Precautionary Principle approach to governing the regaining of a just equilibrium between development, environment and health represents an adequate approach augured by many.

The Collegium Ramazzini is grateful to Professor Philippe Grandjean for promoting and organizing the Workshop on the “Precautionary Principle: implications for research and prevention in environmental and occupational health”. This has reviewed what scientific basis we possess today for properly applying the Precautionary Principle to safeguarding the environment and public health.

The Collegium Ramazzini is also grateful to the Emilia-Romagna Region, the European Environmental Agency, the Ramazzini Foundation, the World Health Organization, the National Institute of Environmental Health Sciences, the National Institute of Occupational Safety and Prevention, the Regional Agency for Health Prevention and Environmental Protection in the Emilia-Romagna Region, the Province of Bologna and the Municipality of Bentivoglio, as well as to industry. Our thanks to all of them for their generous support.