

ELISA BIANCHI - MARCELLO CESA-BIANCHI -
FRANCESCO PAOLO COLUCCI - GIACOMO CORNA-PELLEGRINI -
FABRIZIO EVA

SOCIAL PERCEPTION OF ENVIRONMENTAL CHANGE: THE MEDITERRANEAN SCALE

Since the 1970s, the environmental problem has drawn the attention of scientists and ordinary people in many countries of the world. The idea of constant progress has given way to the conception of «sustainable growth», as was stated at the United Nations Conference on the Environment in Stockholm in 1972.

Sustainable growth implies awareness of the crisis of growth models generally adopted to date, especially in industrialized countries, as well as the consequences of their impact on the global environment of the earth's surface. Starting from this statement, we set the task to meet the needs of the world's present population without compromising the needs of future generations.

Environmental degradation at local and global level. – Such compromise is tied to environmental degradation that occurs at local and global level for many anthropic reasons: demographic, economic, technical and political.

The growth of the world's population, that started mostly from the industrial revolution and then continued with exponential tendency, implied an increase in the needs of human communities, which has been dealt with by stepping up production activities. So, bigger and bigger spaces have been allocated to agriculture. The consequential destruction of the original vegetable mantle, particularly arboreal, has allowed acceleration of the erosion process. We have also progressively used chemical agents like fertilizers, pesticides and herbicides that, on the one hand, have beneficial effects, but on the other, are responsible for extinction of animal and vegetable species useful for environmental equilibrium.

In many parts of the earth, ecological equilibriums created many centuries ago have been disrupted by expansion of industrialization processes through accelerated use of natural resources and dispersion of many residues of industrial processes in the environment.

Environmental deterioration is also the consequence of irrational distribution of human settlements, often left to spontaneous growth whose rule has been building speculation and an uncontrolled rise in the value of building lands. Technical and economic progresses, that could have improved the quality of life on the whole planet, have been concentrated in some zones, made much richer, but also more vulnerable to pollution, while most of humanity remained deprived of all modern developments and experienced the tragedies of a frightful backwardness.

Environmental risk perception. – This leads to the necessity to think about risks threatening at the local level and environmental changes at the global level. Nevertheless, while the first risks are easily perceived by ordinary people, because degradation phenomena are close at hand, the second risks may be learned about only through the testimony of scientific researchers and their divulgence through the mass media.

At the same time, it came out that the task to protect all of the earth's environment and conserve it for future generations can be achieved only through an alliance amongst many sciences, since «talking about the environment and development means talking about life as a whole» (as stressed by nongovernmental organizations at the United Nations Conference on the Environment and Growth held in Rio de Janeiro in 1992). The alliance between various social, political and environmental sciences was frequently hoped for also at political geography conventions and in publications on the same subject.

However, on the subject, it is hard to define valid principles for all people that can be stated once and for all. Moral values and cognitive creeds differ substantially depending on the societies they refer to. On that account, the concept of sustainable growth is also relative. This leads to the difficulty of enhancing and respecting the various cultures and, together, address within them the decisional processes relative to environmental protection.

Indeed, sustainable growth cannot be separated from the attitudes that societies, cultures and groups of individuals have developed and develop towards nature and future generations, and which are organized in more or less explicit codes of conduct and behaviour. This implies the need for continuous monitoring of these attitudes and inherent values, in the various environmental contexts and in the various moments of the history of peoples: both cause and effect of environmental changes at local and global level (Pawlik, 1991).

The HDGECP proceeds from the statement that use of resources depends on the specific culture. Therefore, in order to define any intervention strategy the priority should be given to the problem of the relativity of the «resources and their use» relationship. Particularly, the field of study known as «Perception and Assessment» (PAGEC) was required to study various peoples' and social groups' global environmental change-related perception and attitudes, influenced by factors like individual traits, cultural background, and social, economic, political and religious environment.

The Mediterranean area. – The Mediterranean area seems like a spatial framework characterized by a wide range of natural and social processes that are closely related to processes at the global scale. It has already been considered an important area for promoting sustainable growth programs: like in the case of proposals made by the International Geosphere and Biosphere Programme (IGBP), by the United Nations Environmental Programme (UNEP), as regards general projects, and by the United Nations University (UNU), as concerns the sustainable growth of mountain communities.

To lay the foundations for a research study of social attitudes towards environmental problems in the Mediterranean area, an international seminar was held in Milan in November 1993. It was organized by the Institute of Human Geography of the Faculty of Literature and Philosophy, and by the Institute of Psychology of the Faculty of Medicine of the University of Milan. The seminar tried to develop a thematic and methodological grid that can systematically deal with the problems mentioned before, by simultaneously holding a dialogue with other PAGEC groups at the international level.

The conceptual picture. – The introductory reports of Vladimir Kotlyakov, Berardo Cori, Marcello Cesa-Bianchi, Francesco Paolo Colucci, Giacomo Corna-Pellegrini and Elisa Bianchi, as well as a number of other interventions of seminar participants, were aimed at defining the conceptual picture within which the project moves. Indeed, there is the necessity to think about the most general aspects of the problem and how to deal with them [the papers in Bianchi E. (ed.), 1994].

Vladimir Kotlyakov outlined the general picture of ways and anthropic and physical causes of global environmental change [Bianchi E. (ed.), 1994, pp. 23-30].

In recent developments of environmental psychology (or subjective ecology), Cesa-Bianchi and Colucci (*ibid.*, pp. 35-44) proposed assuming the concepts of social representation and common sense as particularly suited for comparing individual subjectivity with cultural and ideological aspects of the groups we belong to. This also in order to overcome the most traditional concepts of opinion and attitude.

In the field of geo-political dynamics, especially within nations and in cases of separatism and independence, the significance of social representation seems important since voting, demonstrations in streets and all other forms of pressure are indicators of the desire for change, and there is a close relation between the population's political expectations and manifestations of real political change (Anderson, 1991).

Like for group identity, media action seems increasingly crucial for forming common sense. Particularly, this leads to the need to examine their influence even on global change perception (a direction that subtends the entire PAGEC project).

On the subject of global change representation, Corna-Pellegrini (*ibid.*,

pp. 51-56) referred to the relation between cartographic image and perception of the phenomenon, stressing the problems of effectively expressing the various aspects of global change with traditional cartographic instruments. Therefore, it's a matter of trying to find new ways to express global change, tied to new monitoring techniques, without disregarding habitual instruments of thematic cartography to represent change phenomena at the local level, which are more easily appreciated by common sensitivity.

This is connected to the influence new information technologies (Della Pergola, *ibid.*, pp. 67-72) have on social organization and, consequently, on environmental problems, since, first of all, they lie within the social sphere.

Risk perception and assessment (Poli, Schmidt di Friedberg and Leone, *ibid.*, pp. 79-98) seems to be a crucial problem for defining environmental policies, but also a problem that is not easily solved, because different social actors and different cultures have different representations of environmental risks inherent to global change and, therefore, protective measures to impede those risks.

All these interventions share reference to the ethical dimension, therefore to the necessity to define a moral code that may be shared at the general scale, with which to solve environmental problems, past and present attitudes towards nature, therefore even global change perception itself.

Studies into environment-related attitudes. – A certain number of studies presented at the Milan seminar was concerned with global change perception of Italians. It seemed that one of the instruments suited for this study was an analysis of media communications. Within a research program coordinated by the European Economic Community, Bonnes et al. have analyzed the room Italian television and newspapers allocate to environmental problems. The analysis shows that, in reality, they give little room to global risks like climatic changes. Instead, more room is allocated to building, territorial and landscape setting and air pollution at urban level, problems that affect urban life more.

The ecological sensitivity of Italians (Perussia, *ibid.*, pp. 115-120), seems quite high, just as it appears from a survey based on an environmental issues scale. We worry a great deal about the environment, especially about the local environment. At the same time, a specific «green philosophy» doesn't seem to exist, but the worry about environmental degradation is traced back to traditional values of collective well-being and is present, to a limited extent, in all the political inclinations of Italians.

A survey of Italian young people and their assessment of specific environmental problems (Lenti and Marangoni, *ibid.*, pp. 107-114) seems to show a lack of information on the subject at school level. However, this does not impede young people from being worried about environmental degradation, which was probably transmitted through the mass media.

From a survey on climatic change perception conducted in Switzerland (Ragaz, *ibid.*, pp. 121-126), it was clear from the sample examined that the-

re is good general knowledge about the main causes of global warming and a remarkable sensitivity to the threat posed by it. At the same time, it appears that there is insufficient correlation between level of knowledge of the phenomenon and political intervention hypotheses to deal with it.

At the level of our own common sense of identity, some political geographic studies have already pointed out that with the loss of importance of political boundaries and change in interstate relationships, some homogeneous border-crossing commuter groups tend to recreate tight-knitted communities regardless of the borders.

Similarly, cross-border management of environmental risks has often become a necessity and a reality, as measures undertaken within political borders seem to be wanting.

Demographic trend perception and assessment. – The growth of the world's population and the different demographic dynamics in developed and developing countries is perhaps the key problem to global change. Therefore, it becomes urgent to prepare proper demographic policies, to analyze perception of these phenomena in various social contexts and, specifically, attitudes towards fertility.

Bianchi (*ibid.*, pp. 147-154) has analyzed psychological aspects of attitude towards fertility in Italy, by comparing them to those of other countries in the Mediterranean area. The great meaning of personal fulfilment (especially affective) that is given to children seems quite evident in Italy. However, this becomes a restraint to fertility since the affective investment is concentrated on only one child. On the contrary, in countries on the eastern and southern banks of the Mediterranean, the value of children appears to be still strongly associated with economic value, which plays a part in causing a high fertility rate, which is certainly backed by other personal and social motivations.

In this regard, it was noticed (Vercesi, *ibid.*, pp. 169-172) that the press is giving more and more room to demographic problems by focussing on the declining birth and fertility rate and, therefore, on the ageing of the Italian population. It is also giving room to the effects of demographic trends on the social security sector, on the health and scholastic sector, and so forth. Although the Italian press insists on Italy's particularly low fertility rate, and on the negative effects of an ageing population, it does not seem particularly favourable to family assistance policies that could perhaps cause a recovery of the birth rate.

The fast change of the Italian population structure (more and more elderly) was correlated (Meneghel, *ibid.*, pp. 163-168) to the more general behaviour of Italians towards a society undergoing rapid transformation. Migratory dynamics and its perception was studied in relation to stereotypes intentionally created by the mass media, specifically referring to the intense flow of Albanians into Italy (Dell'Agnese, *ibid.*, pp. 155-162), as well as the many ethnic backgrounds of immigrants living in one Sicilian town (Barilaro, *ibid.*, pp. 141-146).

Environmental change perception in specific areas. – The experience of specific changes and environmental problems was studied with reference to the risk of a volcano eruption in Lipari (Caltabiano, *ibid.*, pp. 179-184), to urban spaces in Morocco (Cattedra and Ventriglia, *ibid.*, pp. 185-196), to the French Mediterranean area known as Midi (Charrier, *ibid.*, pp. 197-206) and to urban landscape of Mediterranean towns (Roditi, *ibid.*, pp. 225-228).

The problem of global change in the Mediterranean Alpine region, particularly critical due to the great anthropic burden on some areas, has been the subject of more and more geographic literature, starting from the 1970s (Laureti, *ibid.*, pp. 211-216). Others have analyzed the room given by the Italian press in 1990 to the complete melting of a small Apennine glacier (the southernmost glacier in Europe), by documenting the birth and death of one environmental stereotype of presumed ecological catastrophe, created in a sensationalist form, beyond any serious scientific consideration. This proves how hard it is for information on the subject of environmental problems to pass properly between the scientific world and the mass media.

Directions for future studies. – The deducible conclusions of the work just begun by the Italian PAGEC group within the HDGEC project on the Mediterranean, reflect both positive and problematic aspects. It is certainly positive that most of the contributions presented at the Milan seminar in 1993 fit into the «Recommendations» proposed by the PAGEC Report 1. (Pawlik, 1991) already cited (and whose interests can easily be extended to many political geography studies): «a) systematic, comparative study of available methodology for the comparative cross cultural study; b) representative analysis of relevant mass media communications contributing to the formation of environmental attitudes; c) processes of social and of societal learning for selected aspects of environment-related attitudes; d) the monographic study of environmental disasters designed to portray the social and behavioural reality among those affected by this disaster event; e) monographic or quasi-monographic studies ... on formation of environment-related perception and attitudes».

However, it is hard to envisage a solution to the problem of correlation between the various analysis scales (local, regional, global). It follows that even studies of considerable interest tend to remain isolated by a more ample explanatory grid. Except in some cases (Bonnes, *ibid.*, pp. 101-106), it is also hard to compare data of those who work on the same problems in different areas. An effort should certainly be made to create more unity to overcome these obstacles.

Environmental policies and information policies. – The studies reported above emphasize the many methodological problems still open to the study of global change perception, but they also bring forward problems that are even harder to be solved through policies to deal with the risks of global environmental change.

By limiting ourselves to information policy problems connected to environmental problems, first of all, it's necessary to recognize that it is exactly the rapid spread of the industrialized world's cultural models everywhere that causes a more incisive (and often destructive) relation between man and the natural environment surrounding him. New production methods and, more frequently, new ways of consumption spread much faster than their antidotes to protect nature. Developing countries are more vulnerable where this is concerned because environmental risks are perceived less by those who still have to solve mere survival problems.

Therefore, it seems that an effort must be made both to clarify environmental change problems better and better at local and global level, and to explain them properly to all protagonists who are often completely unaware of them.

The systematic study of environmental risk perception is obviously an absolutely necessary support to such informative and pedagogic measure. Everyone should know a bit more about the big «chess match» that is being played between humanity and the planet earth that hosts it, in order to assess at least upcoming evolutions, without expecting to understand the most remote and most unpredictable ones.

However, awareness of the complexity and uncertainty of the game of actions and reactions being played between the technical world and the nature world suggests great caution in challenging old equilibriums before learning enough about them. At the same time, it's vital to learn more about the evolution of man's needs and his perception of the environment he lives in. In this connection, humanistic disciplines are just as necessary as naturalistic ones.

This way, contributions of scientific thoughts may help to improve the spread of environmental risk information and better acceptance of policies intended to curb them both at local and global level. Every progress in explaining reality, made clearer for those who investigate it and those who *experience it, is a battle won for protection of the earth's environment* where all men can live better today and tomorrow.

REFERENCES

- ANDERSON B., *Imagined Communities*, Verso, London, 1991.
- BIANCHI E. (ed.), *Global Change Perception*, Proceedings of the International Seminar «Global Environmental Change: Geographical Reflections on its Perception and Evaluation» held in Milan 11-12 November 1993, Guerini, Milan, 1994:
- CORI B. and KOTLYAKOV V., *Introductions*.
- ARNOLDI M.R. and COLAZZO L., *Using Hypermedia as Tools for Investigating Cognitive Maps*.
- BARILARO C., *An Outline of Perceptions on Immigration: two Sides of the same*

Problem.

- BIANCHI E., *Psychological Aspects of Attitudes towards Fertility in Italy compared with other Mediterranean Countries.*
- BONNES M., SESALES G., BONAIUTO M. and AIELLO A., *Environmental Change and Environmental Discourse: some Results from Media Communication.*
- BRANCATO ALBANESE M., *Transition towards a Change and Environmental Perception: the Gioia Tauro Plain.*
- CALTABIANO A., *The Perception of Volcanic Risk in the Aeolian Isles: the Isle of Vulcano.*
- CATTEDRA R. and VENTRIGLIA S., *International Strategies and Territorial Practices: Gambling on the Urban Image in Contemporary Morocco.*
- CESA-BIANCHI M. and COLUCCI F.P., *Psychological Research on Real Life Environments and Human Dimensions of Global Environmental Change.*
- CHARRIER J.B., *Mutations du Midi Méditerranéen Français.*
- COLUCCI F.P., *Common Sense as a New Paradigm for Research on «Human Dimension of Global Environmental Change».*
- CORNA-PELLEGRINI G., *Cartography, Geography and the Image of Environmental Decay.*
- DASCALOPOULOS S. and VERNICOS N., *Islands Societies and Insular Networks in the Global Perspective.*
- DELL'AGNESE E., *Mental Representations, Local Stereotypes and Mass Media as pull Factors in the Dynamics of Migration: the First Exodus by Albanians to Italy in March 1991.*
- DELLA PERGOLA G., *New Information Technologies, Urban Explosion, Environmental Policies.*
- GAMBINO J., *The Bridge on the Strait of Messina.*
- HUBA M., *Geography of the World Environmental Problems on the Basis of their Perception by the Heads of the States at the Earth Summit 1992.*
- LAURETI L., *Recent Environmental Changes in the Alpine Region as Perceived by Geographical Literature.*
- LENTI BOERO D. and MARANGONI S., *The Representation of Environmental Change: Some Preliminary Data from a Research.*
- LEONE U., *Prediction and Prevention of Damages Caused by Natural Phenomena. The Protection of the Population.*
- LICINI P., *Perceptive Divergences in Europe: the Adriatic Sea as Interface between the Slav World and the West.*
- MENEGHEL BELLENCIN G., *Population Ageing as a Factor in Global Change.*
- MOR I., *Deformer la Réalité pour mieux percevoir les structures.*
- PERUSSIA F., *The Assessment of People's Perception of Environmental Issues: a Preliminary Survey for the Construction of an Environmental Issues Scale.*
- POLI C., *Tolerance towards Diversity: Ways of Life and Risk Perception.*
- RAGAZ C., *Aspects of the Perception of Global Climate Change. A Case Study in Switzerland.*

- RODITI G., *Similarities and Differences in the Urban Landscape Perception of Mediterranean Cities.*
 - SCHMIDT DI FRIEDBERG P., *A Recipe for the Apocalypse: how to Make your own Eco-catastrophe.*
 - SCHMIDT DI FRIEDBERG M., *Conservation and Natural Parks in the Mediterranean Area.*
 - SMIRAGLIA C., *«The Agony and Death of a Glacier» or Reflection on the Perception and Diffusion of an Eco-catastrophe.*
 - VERCESI M., *The Perception of Changing Behaviours towards Fertility (1984-1993) as Viewed in Il Corriere della Sera.*
 - ZIU T., *Negative Reflections of Man's Action on Albanian Nature.*
- PAWLIK K., *Perception and Assessment of Global Environmental Conditions and Change (PAGEC): Report 1, Human Dimensions of Global Environmental Change Programme of the International Social Science Council, Barcelona, 1991.*

Institute of Human Geography, University of Milan (E. Bianchi, G. Corna-Pellegrini, F. Eva);

Institute of Psychology, University of Milan (M. Cesa-Bianchi, F.-P. Colucci).