Environmental knowledge management at societal level: A new proposal

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Abstract

Information and data concerning the status of the environment are generally missing or made available in a sporadic way, in almost all countries in the world. This condition applies to air quality, but also to sea and earth environmental conditions, creating a situation where the decisions concerning the environment that people take are not informed at all. As a consequence, the paper advocates for a new system of environmental knowledge management, where information concerning air quality, sea and earth conditions, is widely made available to people, in order to give the possibility to people to decide with an higher degree of responsibility. New technologies can be used in order to make the information and data as widely available as possible. The way that people will react to the information made available will be explored. The paper also explores the first experiments made in this direction, especially in China and Great Britain.

Keywords: Environment, knowledge management, technology, society, climate change.

Introduction

According to scientists, our era can be named Anthropocene[1], due to the high impact that the human being is having on the earth. The recent developments concerning climate change, the modification of chemical composition of water in oceans, the pollution of earth, with their impact also in terms of environmental and health emergencies are requiring a new approach in terms of environmental knowledge management at a society level.

We can actually talk about the creation of a new discipline, since it is arguable that, at present, there is no society environmental knowledge management. For example, information concerning the quality of the air is not made available at all in many countries or it is made available through a top-down approach, for example when the circulation of the cars is stopped because the level of pollution is deemed to be too high. The same is true for information concerning other environmental aspects, such as for example the contamination of the sea, that is sometimes made available by some environmental associations.

Still, this information is not made available in a systematic and constant way, but on a sporadic way, either when there is a situation of emergency or some deadline. This is an approach that does not allow any possibilities of prevention, but it is based either on a negative level that has been reached or on temporary basis (the pollution in the sea in particular geographic area is sometimes released before summertime).

[1] In particular, see "The age of sustainable development" by Jeffrey Sachs.

The proposal here is instead to make information available in a constant and democratic way, so that information concerning the environment is made available to everybody in a continuous way[2].

Although this information is produced by some governmental or civil society authority, for example an environmental department of the Ministry of the Environment or a Non Governmental Organization, the management of environmental data would be at society level and here comes the new approach of an environmental knowledge management at society level. It should be highlighted that, besides being a new way to manage data and information concerning the environment, it would be a completely new and different way to deal with environmental problems as well. In fact, it can be expected that people would be much more responsible when they see the impact that they are having on the environment and therefore the effect on their health.

Of course it is possible that people are not having a high impact on the environment and they are suffering from environmental pollution, but still it can be expected that the information would reach people that are having a high impact on the environment due to their environmental behavior. Moreover, environmental knowledge management at societal level can be considered as fair, since it is spreading data and information concerning situations affecting people's health.

We can imagine that environmental information can have a positive, neutral or negative effect on people behavior. When we say positive, we say that people will adopt a behavior that have positive consequences on the environment by reducing the level of pollution. When we say neutral we mean that the information has no impact on the people's behavior. When we say negative, we mean that environmental information is making people behave worse with negative consequences on the environment. Of course, it depends a lot also on the information provided, in terms of content, quality and quantity.

It would be interesting to see the impact of historical data concerning the environment, since in this way it would be possible to see the evolution of air quality over time and would definitely affect people's behavior even more.

It should be highlighted that here we are making reference to some environmental polluting behaviors such as, for example, those that have a high impact on climate change, such as taking the airplane, driving the car, eating meat and so on.

Of course, information should be made available in a way that is highly consumable and manageable from people. Here there are two main options available. On one hand, information can be made available in a scientific way, but some environmental education should be implemented in order to make the information and data readily available and manageable by people[3]. An appropriate level of environmental education, focusing especially on a quantitative approach, should be therefore implemented. Another possibility is to transform scientific information in a way that is more understandable by people, such as for example by saying that the level of

[2] An example of this new approach can be implemented through electronic structures that offer indications in the street concerning the level of pollution of the air.

[3] An indication concerning the level of CO2 in the air is not in fact readily understandable and manageable by most people.

environmental pollution in the air is equivalent to smoking 5 cigarettes per day. It has to be highlighted that this method is not easily implementable in any circumstance, such as for example when we are talking about environmental pollution in the sea. It is in fact not easy to translate the environmental level of pollution in the water in other sort of environmental pollution that can be made easily understandable to the human being, but still some categorization can be implemented. An alternative is simply saying that the air quality is either good or bad, but of course that leaves open the possibility to reach different classifications depending on the source and on the experts involved.

How does this information and data can be instead made available? Through which particular instruments and supports can information and data be transmitted to the population? In my opinion, a mix of high tech and easy availability is the best cocktail to reach everybody. For example, information can reach people through applications on their mobile phones. A data concerning the level of quality of the air can be made available when people start their car or there are taking a plane. It is a way to contribute to influencing people and make them more responsible when they have to take a decision that affect the environment, such as for example taking a plane or driving a car. Of course, people should not be forced to receive the information and data, but should be let free to receive it or not.

Another way to reach people instead in an easy way is to prepare for example electronic counters to be made available in the street. This information would be made available and reach everybody if placed in proper places. Information possibly could be printed as well, so that people might preserve and keep it as a reference point.

In my opinion, a crucial point of this new environmental knowledge management at society level is that information should be made available, given that we cannot afford the ignorance that characterized us until now. We were taking decisions such as taking the plane or the car without having any idea of the impact we were having on the environment and especially about what is the actual situation of the environment. If governments and private sector can play a role in providing us with better environmentally friendly ways of transportation, for example by creating a plane at solar energy through research and experimentation, we can still play an important role today by having a clear idea on the impact that we are having on the environment and on keeping under control the environment conditions.

Still, it has to be highlighted that what we consider the optimal level of the environment can be different from person to person. The point is that if, for example, the level of pollution in the air is equivalent to 5 cigarettes per day, and we are of course in a position where 5 cigarettes can be considered low or high impact depending on the people[4]. Still, the optimal level of the environment in air pollution is a very relative concept, where we are in a position where a situation that I consider acceptable is not considered acceptable by another person or vice versa. Therefore different behaviors could be implemented by people even in a situation where the information offered is the same. The same information could therefore have a different impact on different

[4] It can also be not considered at all, if the information is instead disregarded.

people, depending on the approach that they have about the environment and also the advantages that they have when polluting the environment, such as for example travelling by plane from one place to another place.

It has to be highlighted that, in my opinion, for a lot of people the environment is a sort of weak secondary value, that is easily disregarded when compared to other values, such as for example the need for transportation. It is a sort of weak value, and that is also due to the ignorance that we have about the impact that we are having on the environment, the advantages that we have from polluting, as well as a sort of "why me" effect (why should be me that I have to do something about the environment).

Does an environmental knowledge management approach have been implemented in reality? In England, the approach has been tested by putting data concerning the quality of air online. It is an interesting first step, although it should be highlighted that the presence of scientific information is not so readily manageable by common people. In China, data concerning air quality has been provided by the Government and several embassies. These helped estimated the impact on health that pollution is having, with a staggering 1.7 million people dead due to bad air quality each year. These are promising activities that should be extended with a global approach, given that the environment is a global problem, no country excluded.

References

Brown L. (2009). Plan B 4.0 Mobilizing to save civilization. New York: W.W.Norton & Company.

Klein N. (2014). This changes everything: Capitalism vs. the Climate. New York: Simon&Schuster Paperbacks.

Sachs J. (2015). The age of sustainable development. New York: Columbia University Press.

Thiele L. (2013). Sustainability. Cambridge (USA): Polity Press.

UNDP (1999). Human Development Report: Globalization with a human face. New York: UNDP.

Worldwatch Institute (2012). State of the world 2013: is Sustainability still possible?. Washington: Island Press.

Worldwatch Institute (2013). Governing for Sustainability. Washington: Island Press.