

## Resolutions of Modern Environmental Issues: Public Participation in Environmental Affairs

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**Supported by** Social Science Fund Planning in Jilin Province: A Periodical Result of Theory and Practice of Internal Administrative Act of Law in Jilin.

Received 20 September 2013; accepted 13 December 2013

### Abstract

By analyzing the development of environmental issues, this paper finds that environmental issues in modern society are tightly linked with human activities, which is presented in such features as high-tech background and its risks, complicated conflict of interest, the unity of objective facts and subjective constructivism, etc. To solve modern environmental issues, we have no choice but to be assisted by democratic forces, which specifically depends on public participation in environmental issues.

**Key words:** Environmental issues; Uncertainty; Public participation

TANG Meng, WANG Yan (2013). Resolutions of Modern Environmental Issues: Public Participation in Environmental Affairs. *Canadian Social Science*, 9(6), 63-66. Available from: <http://www.cscanada.net/index.php/css/article/view/j.css.1923669720130906.3027>  
DOI: <http://dx.doi.org/10.3968/j.css.1923669720130906.3027>.

## 1. HISTORICAL STAGES OF ENVIRONMENTAL ISSUES

Environmental issues refer to the phenomena that, because of human activities or natural reasons, environmental conditions take unconducive changes, which would influence human production and life, and even bring disasters. Environmental scientists generally divide environmental issues into two categories: the first is

environmental destruction phenomena that are caused by natural reasons and humans can not foresee or avoid, also known as “native environmental issue” or “first environmental issue”; the second refers to phenomena of local or global environmental changes and environmental pollutions, which are caused by human activities and are also known as “secondary environmental issue” or “second environmental issues.” Environmental issues refer to herein above “second environmental issue” relating to human activities. We can say that human activities are always accompanied with the relationship between man and nature. Owing to various characteristics of the relationship between man and nature in different historical stages, environmental changes caused by human activities present various features and could be roughly divided into the following four periods in human history.

### 1.1 Primitive Period of Human Society

We could say that human beings have been leaving their footprints on earth since they came into being. Nature is an objective existence which is out of human world, free from the intervention of human beings and is determined by its own rules rather than human beings. Initially, human beings were affiliated to nature. In the arms of nature, human beings followed the rules of nature and thus developed their patterns of life. During this period, human beings’ adaption to the environment reflected the relationship between the two parties,

The main labor work of human beings was pristine collection and hunting. Their production capacity was extremely limited, and their intervention and impact on environment were also quite weak. During this period of time, there was no existence of what we call ‘environmental problems’ nowadays, but they already began to emerge, such as the excessive hunting of wild plants and animals around the human inhabitation. Generally speaking, human beings’ impact on environment during this period did not overstep the self-regulation ability of natural environment, nor did they impose harm to the environment. (Lü, 2000, pp.16-18)

## 1.2 Period of Agriculture and Animal Husbandry

After entering the period of agriculture and animal husbandry and before the Industrial Revolution, human beings' cognition towards nature has been highly improved. Particularly, the application of ironware endowed human beings with considerable ability of intervening in the function of nature, which improved their living environment. Human beings' understanding of natural environment has achieved great progress. With the development of the economy of agriculture and animal husbandry, the increase of population, the formation and development of cities, environmental problems also began to show up: First, in order to acquire abundant food, human beings largely reclaimed farmland around their inhabitation, causing great damage to natural vegetation, among which forest were severely influenced. Those activities also led to grassland degeneration and serious water loss and soil erosion, morphing the land into desert or wasteland with very low soil fertility in the end. The natural environment of some area was thus severely damaged, and some remain unrecovered till now. Second, at this time, cities came in to being while the problem of environmental pollution also began to emerge, some of the problems even developed to a certain degree. As a special ecosystem, a city has an unreasonable functional structure; the self-purification ability of its environment is also rather limited. In some early formed cities, the crowdedness of people and the piling up of domestic waste worsened the living environment of the city and a certain problems of environmental pollution arose, mainly including water pollution, solid waste pollution and noise pollution. Generally speaking, during this period of time, human beings were no longer merely affiliated to nature as in the pristine times, but started to intervene in the function of nature and transform nature consciously. They no longer purely followed the rules of nature, but formed their own law of life. The emerging of city was a vivid example. "Though pollution appeared, but not in a large scale yet. At that time, the amount of population and cities were limited. People could solve the pollution problems by migration, so the problems did not arouse their attention."

## 1.3 Industrial Revolution Times

The period of Industrial Revolution started from the 1760s when the steam engine was invented to the 1960s. Since the Enlightenment, the rationality of human beings was greatly manifested, and people's attitude towards nature also changed. The Enlightenment rationality separated the subject and object, regarding the relationship between human beings and nature as a purely instrumental one. Nature was no longer the inviolable god that received the worship of human beings, but a treasure-house where human beings could exploit arbitrarily. If the change of human beings' attitude towards nature was gradual in times of the Enlightenment, the idea of changed attitude

was quickly strengthened with Industrial Revolution and the springing up of capitalism and modern science. The idea held that the more knowledge of nature human beings acquired, the more effectively they can control them. Any resource from nature could be the resource of human beings. Human beings' dependency on nature, which was established since the ancient times, no longer existed. Regarding nature as instruments largely destroyed the ecosystem of nature. At this time, science and technology developed greatly, and the level of productivity was rapidly raised since machine labour replaced hand labour. Industry appeared and developed into more departments, and people's exploitation of nature was unprecedented. During this period, natural resources in a certain area were severely damaged because of people's predatory exploitation of natural resources, the massive reclamation of land, mining and forest harvesting; Meanwhile, people regarded nature as a natural garbage dump and discharged waste to nature without scruple, causing serious environmental pollution in cities and industrial parks. The speed of environmental pollution exceeded that of the destruction of natural environment. Chemical industry, especially the organic synthetic chemical industry, produced a large amount of chemicals. The variety of man-made chemicals increased day by day, some of which were toxic, detrimental or hardly biodegradable. These chemicals entered into the environment, spread, migrated, accumulated and transformed, creating terrible threat to people's health. The environmental pollution was already very serious at this time.

## 1.4 Modern Times

Since the 1960s, the development of science since Industrial Revolution has promised a more certain and secure environment for human beings to live in. However, with the development of science and technology, on the one hand, we witnessed that people could be free from the threat of natural disasters like diseases and plagues. On the other hand, science and technology even managed to change human body itself, such as the development of genetic engineering, hereditary engineering and clone technology. Neither nature which is out of human beings nor human beings themselves are no longer natural. "Nowadays, among all the terminations people talk about, we can say that nature really comes to its end" (Giddens, 2001, p.98).

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## 2. MAJOR FEATURES OF ENVIRONMENTAL ISSUES IN MODERN SOCIETY

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The end of nature suggests that nothing in nature is free from the intervention of human beings in modern times. The world we are living in has thoroughly become a man-made one. However, in a man-made world like this,

environmental pollution and ecological destruction are not effectively regulated, but enlarge the problem from a local level to a global one. Severe examples include nuclear leak and nuclear waste radiation in Chernobyl nuclear power plant of former Soviet Union, chemical contamination of oceans, greenhouse effect of the atmosphere and mass destruction of tropical rain forest. All of the newly arisen environmental problems share one common feature—uncertainty. No one knows when ecological damage will happen; it may have already took place without the attention of human beings. Compared with the risk which was caused because of being unable to fully control nature during the previous periods, the reason of the emerging of new environmental issues lies in the fact that the risk human beings are faced with is created by science itself on condition that nature comes to its end and is socialized in modern times. The previous examples can be used to explain that. Therefore, the environmental problem in this period is highly complicated, mainly showing the following three features:<sup>1</sup>

### 2.1 High-Technology Background and Its Risk

The most significant feature of environmental issues in modern times lies in the fact that it is equipped with high-technology. The threatening behaviour in environment and product share a science and technology background. As Carson pointed out in *Silent Spring*, it had been long time before people found out the danger of using the farm chemical DDT. Also, the mass destruction of Freon to the ozone sphere was found only when it was used excessively. In addition, it is very difficult to identify the causality of environmental problems, and modern science and technology cannot offer a certain answer. Meanwhile,

The criteria of ideal setting of environmental quality and environmental influence also need to be measured by science and technology. Since the technological background is in such a high level, it makes environmental decision-making undertake more risks, and the decision may turn out to be wrong in the future. Although the technology that the decision is in accordance with remains uncertain, the decision has to be made through the unsettled technology. (Ye, 2003, p.23)

There is no doubt that the risk produces following an environmental decision like that. What the reactions of the public will be if they know similar situation?

### 2.2 Sophisticated Conflicts of Interests

Environmental issues are created by human activities, and take place in the process of utilizing resources. The so-called “man-and-nature” relationship is essentially the relationship between man and man. Environment and resources only act as the intermediary. Since the resources available for human beings to utilize are limited, conflicts of interest are inevitable during the process of

environment and resource exploitation. The conflicts are generally embodied in the following aspects: First, the conflicts of interest caused by environmental problems can be international. There are some environmental problems that need to be dealt with together among each country, such as global warming, ozone destruction and chemical contamination in oceans. Unavoidable conflicts of interest will occur when it comes to concrete measures. Second, the conflicts can be regional. Different countries in a certain region possess unequal economic status because of different social and economic system, and conflicts will emerge when it comes to resource exploitation. Meanwhile, the amount of waste poured by different region is various, so there will be conflicts in undertaking environmental protection responsibility. Third, the conflicts can emerge from groups of different interests. Taking groups of various economic statuses as examples, the pressure they create to environment are different, but their responsibilities of environmental protection are not coordinated. The conflicts are thus created. In addition, conflicts will also arise because of the pollution caused by industrial enterprises to citizens around.

### 2.3 Unity of the Objective Fact and Subjective Constructivism in Environmental Problems

Before the modern times, environmental problems caused by human activities were due to the witness of ecological damage. The fact that people’s health was harmed because of industrial pollution, particularly proved the existence of environmental problems. When talking about the prevention and control of environmental problems in the past days, people regarded the problems as an objective fact. Therefore, they thought environmental problems could be solved through the development of technology. However, environmental problems in modern times gradually reveal a hidden feature that they have ever held, that is, they also have subjective constructivism. Environmental problems’ showing up in front of people is initially due to the existence of ecological damage. The objective fact of damage to human health exists, and it attracts people’s notice and gets spreaded by people; the environmental problems thus come into being. Considering the forming process of environmental issues, we will not blindly believe that the problems would be solved by simply resorting to the development of technology, because people’s cognition has already been involved. In modern times, people have found out that high-technology failed to provide a more certain and more reliable society. It is because, first, many environmental destructions have already occurred without the identification of modern technology; second, high-technology engineering and products may lead to environmental problems in an uncertain time in the future. A small amount of professionals are aware of the potential environmental crisis, and they spread it to the society through various approaches to arouse the

<sup>1</sup> Of the three features, the first two refers to “Environmental Policy and Law” by Ye Junrong; the last refers to Hong Da’s comment in “Social Change and Environmental Issues”.

attention of public, trigger public discussions and create public opinions. In this sense, we say that environmental problems reveal their subjective constructivism gradually. Therefore, environmental problems cannot be solved merely through the development of technology in modern times. The intervention of the subjective factors of human beings also needs attention. To solve the problems, the understanding and support of the public is a must.

### 3. APPROACHES TO DEALING WITH MODERN ENVIRONMENTAL ISSUES

Along with the environmental issues, comes people's growing awareness that environmental factors have limitations on people's life and development and that environmental issues would bring people adverse effects. In the late 1960s, people from Western capitalistic countries took to the streets and through parade, demonstration and protest, asked the government to take powerful measures against environmental pollution and to provide a living environment free from pollution. States have recognized the social, legal or even political crises caused by environmental pollution and have introduced laws on environmental protection in order to stabilize the social order. Because of the complexity of environmental issues in modern era, public participation is rather necessary in dealing with the issues.

First is the high-tech nature of environmental issues. The government needs to undergo the examination of technology when setting the standards of ideal environmental quality and the evaluation of environmental impacts. Meanwhile, the high-level background of technology increases the risk of environmental decision-making, which is likely to be proved wrong in the future. However, the government has to make a decision that is risky. When responding to this kind of risk, the government adopts the strategy of democratize environmental decision-making, that is, to urge the public participation in making decisions in a timely manner so as to enhance the legitimacy of the decision-making process.

Second is the complexity of the conflict of interest involved in environmental issues. In order to save administrative costs and to improve efficiency of environmental protection, the government would take into consideration the way of checks and balances within the society to deal with conflicts of interest caused by environmental problems. For example, in cases which are evidently presented as environmental virulence incidents, the beneficiaries and victims of environmental rights are clear. If public participation is encouraged, which means the victims directly join in, it would be efficient for coping with the conflict of interest in environmental issues.

Third is the objective fact and subjective constructivism of environmental issues in modern times. It demonstrates the role of the public in the formation of environmental issues. As for solutions to environmental problems, our attention should not be limited to technical methods; instead, the more important thing is to win the public's understanding and trust. And in order to do this, a more effective approach is to allow the public to participate in decision-making, evaluating and executing process of environmental matters, evaluation.

Last but not least, is that public participation can compensate for the defects exposed when the government deals with environmental issues in modern times. In the period before the government has been showing an all-powerful government's image, but these results in all aspects of the social burden over-reliant on the government. Thus, to the 1980s, "Western countries have all made adjustments over the original 'welfare state' policy, demonstrating in social administration a trend of diversity, decentralization and privatization trends" (Li, 2006, p.231). Correspondingly, the government increasingly recognizes its own shortcomings and defects, during the process of coping with environmental issues and conducting environmental protection work. According to LI's (2006) research, the government is ineffective in performing its environmental protection function from the following aspects: one is the government's limited resources; the second is the government's undiversified solutions; the third is the government's restrained rationality. Therefore, under the government's inadequate response to environmental problems of modern times, it is an inevitable choice for implementing a diversified management and join hands with the market, social intermediary organizations and other social organizations to participate in the management of environmental issues.

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