

The Food Safety Benefit Counterparts Analysis in Ecological Safety Perspective

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Abstract: By revealing the inner relation between ecological safety and food safety, this paper discusses the influence of the ecological environment destruction on food safety and in all round ways and analyses the six benefit counterparts involved in the food safety problems: government departments, legislature and judicial organ, enterprises, media, experts and elites, consumers. This will provide theoretical foundation for constructing food safety controlling mechanism.

1 ECOLOGICAL SAFETY AND FOOD SAFETY

1.1 Definition of ecological security and food safety

The First International Symposium of Ecosystem Health and Medicine held in Canada in 1994, declared the establishment of the “International Symposium of Ecosystem Health” (ISEH) with the president David Rapport. From the perspective of ecosystem serving support for human beings, this symposium put forward that: the healthy ecosystem can not only provide foods, water, fresh air etc. it will also support the ecological service, like dietary fibers assimilation, waste recycling etc (Song et al., 2003).

The International Development and Research Center (IDRC) had expanded the field of ecosystem health for the first time to political, economic, cultural, and social fields. IDRC thinks that the ecosystem health is not only nature system health, but also includes the interaction among the complex of the foods and residential environment, society, economy, culture, and politics in cities. It was the first time to show the ecological health composite attribute and foods relation, and it expanded the application course scope and range. Meanwhile, food safety is regarded as the important part and core content of the ecosystem health (Lebel, 2008).

The food safety idea was firstly put forward in the World Foods Conference which was held by

United Nations Foods Agriculture Organization (FAO) in November, 1974. The World Food safety International Agreement made by FAO pointed that food safety refers to human beings’ basic right of living, and the assurance of “anybody could gain enough foods for living and health where they are” (Jin et al., 2008). The World Health Organization (WHO) stated in the World Food safety Strategic Draft that “Having the safe foods will improve the health, and this is at the same time the basic human right. Safe foods are benefit for health and prolificacy, and will provide an efficient platform for promoting social development and relief poverty” (WHO, 2002).

Generally speaking, food safety has three meanings: foods security, food safety and ecological security are all the meanings of “food safety”. Foods security refers to the national or social foods assurance, means whether foods are supplied enough. Food safety is the public sanitary problems of foods noxious and harmful substances’ influence on human body. For the consumers, the most important thing is safety, while nutrition is less important than safety. The foods which didn’t meet the quality standards and sanitary standards are not safe foods. This kind of foods could not promote human body health; while they will do harm to human body, even threaten life. Ecological security mainly refers to the social problems caused by scientific technology development. New technology application in foods production, for example, the transgene and radiation; and the new foods resources developments long term and unstable influence on

the human beings, animals and plants, ecological environment. Ecological security requires no harm to human beings, animals and plant, and the ecological environment.

Ecology and foods problems are involving social, political, economic, natural areas regional problems. In China, with the economic transformation from traditional industrial society to modern industrial country, ecology and foods problems also made the important transformation from "sanitation" to "health" (Mao & Bai, 2009).

1.2 Food safety characteristics

1) Food safety is a comprehensive concept, which includes foods sanitation, foods quality, foods nutrition and other related content and foods (diet) planting, breeding, processing, packing, storage, transportation, sales, consumption and other steps. Foods safeties, foods quality, foods nutrition all are part of the food safety, and there are many inner and outer intersections among them. Thus food safety could be supervised repeated.

2) Being different from hygiene, nutrition science, quality, and other subject, food safety is a social controlling concept. The food safety outstanding problems and controlling requirements are different from different countries, and different phases of a country. Currently, in the developed countries like the U.S., Japan, food safety concerns mainly about problems caused by scientific technology development, for example, the transgene foods influence on human health. However, in the developing countries, food safety focuses mainly on the fake commodities caused by the immature market economy, and on the illegal business of the noxious and harmful foods. Chinese food safety problems concerns all the contents mentioned above.

3) Food safety is a political concept. No matter in the developed countries, or the developing countries, food safety is the basic social responsibility and the promise that enterprises and government must make. Food safety is closely related with the existence right, and it is unique and forcible. It usually belongs to the government assurance or government forcing type. While goods quality and other aspects are usually related with the developing right, and it is of different levels, and choices. It usually belongs to the business choices or the government promoting type. In recent years, in international society food safety gradually taking the place of foods sanitation, and foods quality concepts, thus, it strengthened the food safety political responsibility.

4) In the end, food safety is also a legal concept.

2 THE ECOLOGICAL ENVIRONMENT DESTRUCTION INFLUENCE ON FOOD SAFETY

2.1 The ecological environment destruction increase the risk of foods quantity supply

Foods quantity safety is the first level of food safety. To review the domestic situation, we are facing a series of problems, for example, the unbalanced districts development, water shortage, earth seriously polluted, and the increasing scale and frequency of natural disasters, the too fast grown population. These problems will directly increase the risk and threat of foods quantity supply breakdown, decrease the world foods producing countries, and restrict the foods exporting (Lu & Wang, 2010). To review the world situation, the problems of heavy population growth, soil and water heavy erosion degradation, extreme climate changes, foods replacing energy, and western countries controlling right of foods politics, formed the uncertain factors of social economic crisis and social turbulence risks, threats and disasters (Lu & Wang, 2010).

2.2 The ecological environment destruction threatens the food quality safety.

Superficially, modern chemistry industrial development destructed the air, soil, water resources, and had inconvertible effect on the whole ecological environment. While for the long term meaning, chemical substances superposition and combination causes the virus spread and variation, breaks through the shielding of the species, and influence the food quality safety.

The diseases caused by the chemical substances are called the human made food-borne disease (Jiang, 2006). The WHO statistics showed that there are billions of food-borne diseases accidents happen every year in the world. In 2000, there were 2.1 million people died of diarrhea caused by foods and drinking water pollution, and the most the dead were children. Even in the developed countries, there will be 40% people who will suffer for the food-borne disease for once every year.

2.3 The disease caused by the ecological environment pollutions brought huge financial losses.

The study shows that the financial losses of the diseases which were caused and triggered by the ecological environment pollution will reach to hundreds of billion RMB for China every year. In China the prevalence rate of digestive cancer is higher than any other country in the world. The Breast Cancer and Testicular Carcinoma prevalence rate will gradually increase by 50% in the future. Because of the environment pollution and foods pollution, the world's male's sperm quantity decreased by 50% compared with 20 years ago. Ecological environment pollution turned out with time going by, and with the deleterious substance accumulation. For example, the minamata disease occurred in 1950s in Japan, the high prevalence rate of digestive cancer caused by the chemical and medical things polluted the water environment in the U.S.

In September, 2006, the "Spinach" incident happened in 8 states of the U.S., caused 173 people infected, 27 people were with serious symptoms of hemolytic-uremic syndrome, 3 dead. What's more, vegetables peasants were suffering hundreds of millions financial losses during this incident (Wang et al., 2008).

The ecosystem health and safety influences on the world natural resources and human health are obvious; especially the food safety caused by the ecological health is directly related with the human life health. When we think about the ecological safety controlling from the perspective of food safety, it will respect to the inner logic of ecological

safety and food safety, and at the same time it will solve the ecological problems and foods problems.

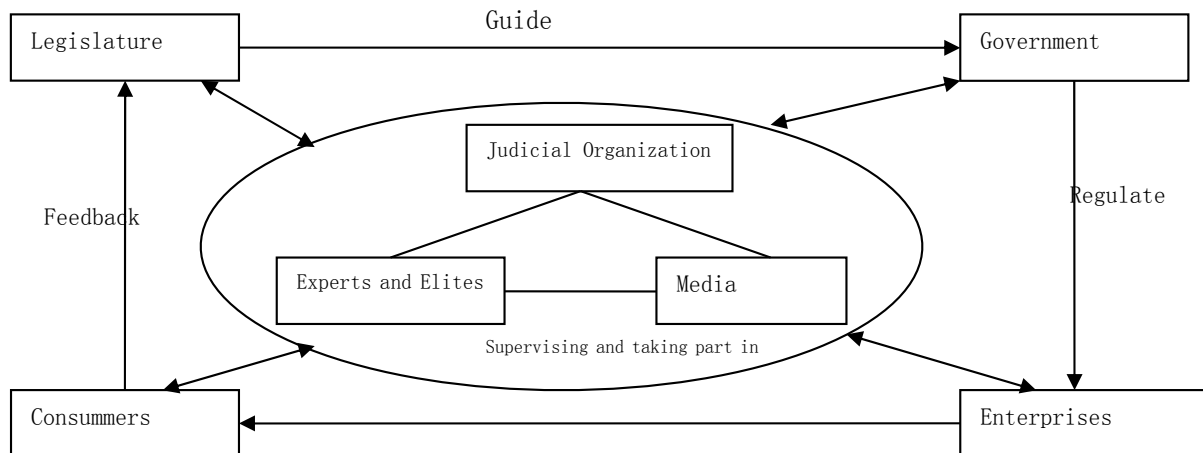
3 FOOD SAFETY BENEFIT COUNTERPARTS ANALYSIS

Different countries and institutions define food safety benefit counterparts differently. World Foods Agriculture Organization and World Health Organization's explanation of the food safety benefit counterparts as: food safety benefit counterparts are the subject body in the whole chain from foods planting (breeding) to consuming.

The Food safety Law being effective from June 1st, 2009, states clearly of the main benefits counterparts in the food industry. This law has made it clear that enterprise is the first person responsible for foods quality, and we should enhance the enterprises' effective supervising of foods quality. Each level of government should strengthen the food safety leading work, and make sure foods are safe everywhere. The related administrative departments should strictly enforce the law and dealing cases in accordance with law, in order to make implement of the food safety supervision and effective law enforcement. We should strengthen the social supervision of the food safety problems, including public opinion supervision. Based on this law, the paper holds the opinion that food safety benefit chain includes government, legislature and judicial organization, enterprises, media, consumer, and experts and elites, in total 6 counterparts.

Ecology and food safety recycling chain as Chart 1 shows below:

Chart 1: Ecology and food safety recycling chain



3.1 Government Department

Government department is the important benefit counterpart of food safety and is playing the controlling and overall planning role in the chain. China is a country with the main subject of administration. Whether in legislation and judicial aspect, the enforcement of administration prevention is beyond the law. It shows that the Chinese policy value and decision orientation of the great significance.

When the policy making and putting forward are mainly about ecological economy, the laws and rules, supervision law enforcement, and morality constructing will have regulating effect on the market. Enterprises' honesty self-discipline is the core of brand managing. Media, experts, and consumers increased the government legality and credibility. Therefore, the ecological environment and marketing order safety are insured.

3.2 Legislature and Judicial Organization

Legislature and Judicial Organization are playing the role of assurance in the food safety benefit chain. Legislature guarantees the related law systems perfection. Law enforcement organization will supervise and do it with accordance to the law. However, they are captured by the benefit groups, by not making and perfect the related laws, without accordance to laws, and even coordinating with enterprises to avoid laws and inspection. Thus, counterfeit and inferior commodities and the noxious and harmful substances overflow by avoiding laws.

Because the law system is not perfect, and lack of supervising, the cost of action violation is low. The law breakers look down upon the law supervising and have the lucky mind to continue to act violation. And publicity and society will decrease the credibility of the law rules makers, governing party, and the law enforcers. Therefore, the publicity will not be satisfied with the governing system. Even it will cause the social instability, the occurrence of the group incidents, and large scale of law suing cases. It is the foundation of maintaining the ecological health and food safety important guarantee.

3.3 Enterprises

Enterprises are the largest and the direct benefit counterpart. In the ecology and food safety related

benefit counterparts' chain, enterprises' self-discipline and heteronomy are the most important step of influencing the whole chain (Guan, 2013).

The enterprises' self-discipline and heteronomy directly influences the public health. With the changes of the international economic political situation and the fast development of the information technology, the ecological pollution and food safety incidents caused by enterprises are increasing year by year. It deepens the damage to the society and the publicity, and increases the possibility of triggering crisis and disasters.

However, if the enterprises morality self-discipline and industry self-discipline increase, it will not only make high reputation of the enterprise brand, but also bring a lot of benefits. Moreover, it will save supervising resources, avoid the enforcement department rent-seeking corrupt behaviors, and improve and purify the society, and make up the supervising resources shortage and the imperfect law rules policy.

3.4 Media

Media is playing the important role in the ecology and food safety public interest, and it is the watcher and supervisor in the public area. Media is the key power in leading and solving crisis. Media has the authoritative public credibility that other institutions don't have. The SARS in 2003, the benzene exploded incident of Jilin petrochemical branch company of PetroChina in 2004 had caused people to buy and store water; and the huge tsunami caused by the earthquake in Japan in March 2011 had led to the nuclear leakage accident which caused people to buy and store salt. Media was playing the important role of well explaining the situation and stabilizing the publicity moods in these ecology and food safety crisis incidents. It is playing the role of social stabilizer.

In China, the Weekly Quality Report and other public opinion supervising reports, which are revealing counterfeit and muckrakes, guarantees the public benefit and are praised by the public. On the other hand, these reports also touch the groups who want to get benefit relying on foods. These groups are called "Foods benefit groups". These groups usually have legal background and the relevant political resources. Therefore, they will face the heavy politic, legal, administrative, economic risks when they are public opinion supervised by the media.

3.5 Experts and Elites

In the ecology and food safety benefit counterparts chain, knowledge elites is an easily ignored group. Knowledge elites are the law rules maker, and they are with the power of affecting government and leading the public. They are also the tools of the benefit groups' bothering legislature and affecting law enforcement, and pushing the policies deviations and directing the public opinions.

If media is the "society inspector", the knowledge elites and media together will be the "society stabilizer". They have the higher industry position, strong speech rights and influence. It is possibly risky and threatening when experts are directed by intentionality in legislature and regulations. For example, government makes the foods enterprise exemption system with the participation of experts, and it caused a lot of food safety incidents. On the other hand, experts and technical elites are taking the responsibility of social public justice and safety. As a doctor from Lanzhou revealed that Chinese dairy products are with melamine. Many CPPCC National Committee members are calling for abolition of the exemption system.

3.6 Consumers

Consumers are the ring close to the end of food safety chain. In the past, they are the victims of food safety. But in recent years, with the citizens consciousness realization and micro-blog, wechat and we media development, consumers are beginning to speak something and organize protests (especially the group incidents) to express their own voice, influence the public opinion, supervise the judicial and forcing the perfection of legislature.

With the ecological recycling interaction, analysis ecological and food safety benefit counterparts' interaction; we have avoided the shortage of the sole subject. It is very practical. By analyzing thoroughly the food safety benefit counterparts, it is helpful for government to put forward policies with full consideration, to learn to solve the public contradictions by using media, to remove people's worries by using talented elites, to make sure the whole chain from the beginning of policy making, legislature, governing supervision, judicial, to the end consumers is smooth, so as to guarantee Chinese ecology health and food safety.

REFERENCES

- Guan, K., 2013. Transgenic Foods Social Comments Viewed from Benefit Counterparts Perspective. In *Journal of Wuhan University of Technology*. Editorial Department of Wuhan University of Technology.
- Jiang, P., 2006. *Food-borne Disease and Health*, Chemical Industry Press. Beijing.
- Jin, Z., Peng, C., 2008. *Food Safety*, Zhejiang University Press. Hangzhou.
- Lebel, J., 2008. *An Ecosystem Way of Concerning Human Health*, China Environmental Press. Beijing.
- Lu, L., Wang, J., 2010. *Food Safety*, Zhejiang University Press. Hangzhou.
- Mao, L., Bai, L., 2009. From Food Sanitation to Foods Safety Showing Legislature Thinking Refreshed. In *People's Daily*.
- Song, X., Du, L., Li, S., Hou, G., 2003. *Ecosystem Health Concepts, Influencing Factors and its Comments Research Development*. Henan Agricultural University. Zhengzhou.
- Wang, Z., Huang, Q., Chen, Y., 2008. The U.S Spinach Incidents Details and the Inspiration of Chinese Food Safety. In *World Agriculture*. China Agriculture Press.
- WHO, 2002. *Global Strategy for Food Safety : Safer food for better health*. <http://www.who.int/fst>