

# Current Situation and Developing Trends of Environment

## Protection in the Chinese Printing Industry

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Respected Chairman, Ladies, Gentlemen and Friends,  
Good Afternoon!

The forum themed “Printing and Environment” sponsored by WPCF on the occasion of the launch of Drupa 2008 is of substantial significance for us to focus on the issue of environmental protection and to promote harmonious development of man and nature in our industry. Upon invitation of chairman Sykes, my colleagues and I are honored to attend this forum. Please allow me to extend our warm congratulations to the forum held as scheduled on behalf of China Printing Technology Association and Chinese printing industry, our sincere greetings to our friends from printing and other related industry across the world and our heartfelt thanks to Forum Guidance Committee and Secretariat for their great efforts on organizing the forum.

Now, I would like to entertain my opinions on the current situation and developing trends of environmental protection in Chinese printing industry.

### **1 Environmental legislation in China**

Environment is a global issue currently threatening extension of our living space and civilization. With continuous increase of population, growth of total economic volume, rise in consumption level, problems like shortage of resources, climate change, damage of the ozone layer, decrease of biological diversity, regression of land and deteriorating environmental pollution become increasingly noticeable. All countries are facing serious challenges of sustainable development.

China is a developing country with the largest population in the world. With the sustained and rapid development of China’s economy since the late 1970s, environmental problems which took place in stages in the process of developed countries’ century-long industrialization have emerged in China centrally and progressively evolve as a significant problem restraining development of China. Chinese government and people attach much importance to this issue and have formed environmental legal system with *Environmental Protection Law of the People's Republic of China* as its main body and the *Constitution of the People's Republic of China* as its basis. The Constitution of China expressly provides that “The state protects and improves the living environment and the ecological environment, and prevents and controls pollution and other public hazards.” The Criminal Law of China also has special provisions on the crime of destructing environment and resources. As of today, Chinese legislature has formulated 9 acts on environmental

protection, such as *Environmental Protection Law*, *Environment Impact Assessment Law*, *Water Pollution Prevention and Control Law*, *Law on the Prevention and Control of Environmental Pollution by Solid Wastes*, *Law for Promotion of Cleaner Production*, and *Law on the Prevention and Control of Atmospheric Pollution*, and 15 acts on protection of natural resources. China has also joined in or concluded 50-odd international conventions and treaties related to protection of environment and resources including *United Nations Framework Convention on Climate Change* and *Kyoto Protocol*, *Montreal Protocol on Substances That Deplete the Ozone Layer*, *Convention on Biological Diversity*, etc. and actively fulfill the obligations provided in these conventions and treaties. The State Council and its relevant departments as well as local committees of NPC and governments have also mapped out a large number of corresponding regulations and departmental provisions as well as local regulations and governmental rules on environmental protection. It is safe to say that China has preliminarily established a relatively complete environmental protection legal framework in respect of environmental protection and has in place laws and regulations to comply with. In addition, China has established national and local systems of environmental protection standards, including standards for environment quality, standards for emission (control) of pollutants, standard environmental samples, etc.; and completed and improved the responsibility and accountability system of law enforcement in respect of environmental protection. According to the environmental situations and goals in China currently and in a substantially long period in the future, the directions and tasks of Chinese environmental legislation have been basically oriented in guaranteeing people's health, promoting quality of people's life, maintaining state environmental security, developing recyclable economy, and establishing "resource-economic" and "environment-friendly" society. It shall be specially pointed out here that prevention and treatment of industrial pollution is the focus of environmental protection in China. As such, in addition to environmental legislation, China also attaches great importance to environmental protection in time of formulating industrial and economic policies, e.g. release of guidance list for adjusting industrial structure, formulation of qualifications for industrial admission, and provision of tax-reduction and tax-exemption preferential policies for enterprises' energy-saving and environmental protection projects. In June 2007, Chinese government specially established a leadership group headed by premier Wen Jiabao for coping with climate changes as well as energy-saving and emission-reduction, successively releasing *China's National Climate Change Program* and *Comprehensive Work Plan of Saving Energy and Diminishing Pollution* to resolutely redress the practice of simple pursuit of GDP growth with no regard of environmental protection. Chinese government is organizing and coordinating forces of various aspects to implement the requirements of scientific outlook on development and fulfill its international commitments to ensure sustainable development.

## **2 current situation of and countermeasures to environmental protection in Chinese printing industry**

Benefit from the rapid growth of national economy, Chinese printing industry has

made remarkable progress in the 30 years since China's reform and opening up. The second revolution of printing technology completed at the end of last century phrased out lead typesetting and printing workmanship, realized phototypesetting offset printing, thus freeing printing workers from lead polluted working environment for good. Environmental issues like evaporation of organic solvent and discharge of waste water, however, still exist in some production linkages as a result of continued use of traditional printing workmanship by many printing enterprises. With a view to curbing low-level and repeated construction, preventing environmental pollution, stepping up restructuring of the industry and promoting upgrade of production workmanship, printing technology, equipment and products, Chinese printing industry has taken many active measures under the guidance of government and cooperation of relevant industrial sectors, including adjustment and optimization of industrial structure according to the macro-regulation industrial planning stipulated by governmental departments, strict implementation of evaluation of environmental protection on newly launched projects to enhance the threshold for access of new projects; phasing out of printing enterprises with outmoded production mode, serious environment pollution and high consumption of energy to advance printing technology, product quality and economic benefits; popularization and promotion of a batch of new products and technologies encouraged by the state by combining introduction, absorption and independent innovation to radically reduce the damages caused by traditional printing modes to environment. Not long ago, a Beijing-based packaging and printing enterprise became the first printing service provider in the century-long history of Olympic Games that provides green services to the Olympic Games 2008 by using advanced environment-friendly printing technology. Eco-friendly technical standards for printing ink and packaging are adopted in printing industry. Verification of clean production as well as accreditation of ISO14000 environmental management system are also carried out in printing enterprises for the purpose of enhancing environmental protection awareness of printing workers, facilitating production of green and environment-friendly products and strengthening market competitiveness of printing enterprises.

Thanks to the joint efforts of relevant governmental departments and printing enterprises, the environmental protection status has been improved substantially in Chinese printing industry in recent years, which is mainly expressed in elimination of an increasing number of small-sized printing enterprises that pollute environment resulting from outmoded technology and bad management; emergency of a batch of large-scale backbone enterprises capable of clean production, steady rise in industrial centralization, further enhancement of sustainable development capabilities, step-up of reconstruction of traditional printing industry through application of information technology, as well as promotion and application of new-type raw and auxiliary materials. The state has strengthened management on packaging materials and their recycling, to reduce and reuse wastes, and to make them harmless. As a result, over-packaging of merchandise is curbed to a certain extent. In the second half of 2007, the state intensified macro-regulation and successively released a series of policies on energy-saving, emission-reduction and abandonment of laggard

enterprises. Against such background, "green revolution" centering around reduction of costs, process, and energy-consumption, development of value-added service and environmental protection has been launched in Chinese printing industry.

At the stage of accelerated development of industrialization and urbanization, China is inevitably encountering the contradiction between economic growth and environmental protection. From macro perspective, the environmental problems that Chinese printing industry is faced with primarily include: firstly, much more attention has been paid to development and profits than to environmental protection and management, and harmonious printing industry has not been deep-rooted in people's mind; secondly, the facts of lacking R&D on eco-friendly technology and products tailored to printing enterprises of various scales and types, and short of integration and comprehensive application of eco-friendly technology with independent intellectual property rights, stand in the way of the industry's effective settlement of environmental problems; thirdly, overheated development of printing industry gives rise to fierce competition, resulting in insufficient profit-making capability of small and medium-sized printing enterprises (SME), which in turn leads to their inadequate input in environmental protection and governance. Environmental protection has ended up as a weak linkage affecting healthy development of SMEs.

The primary countermeasures for solving this problem are illustrated as follows:

- (i) Actively guide the industry to further change mindset to enhance printing employees' awareness of environmental protection and sustainable development according to the requirements for scientific outlook on development advanced by the Chinese government. Strictly enforce industrial policies and standards on environmental protection to weed out those backward productivity featuring high consumption, high emission but low benefits. Printing industry associations shall conduct survey and research, and learn experiences on printing and environmental legislation from other countries, cooperate with government to further perfect standards and norms of environmental protection to progressively establish accreditation system on environmental protection in the industry.
- (ii) Actively facilitate sci-tech innovation of environmental protection and focus on the R&D of key technology and equipment conducive to better environmental protection in printing industry. Apart from the prevention and treatment of pollution caused by existing production workmanship and efforts on energy conservation, attention shall be paid to the designing of production process and selection of various raw and auxiliary materials, so as to boost the application of environmental protection products, and to reduce and recycle wastes and conduct harmless treatment to them. Effective measures shall be taken to facilitate integrated treatment, and to actively promote the application of various pollution-free and energy-saving printing workmanships, technologies and materials, thus solving the pollution problem from the root.
- (iii) Strive to develop recycling economy and carry out clean production. Developing recycling economy is a fundamental measure for solving the contradiction between environment and development, and a permanent cure of

environmental problems in the process of development. Centering on the enhancement of energy-using efficiency and environmental protection, pilot work in this aspect shall be conducted under the principle of “reduce, reuse and recycle”. Targeted measures shall also be taken to properly solve the environment problems which SMEs are confronted with. In this regard, some foreign-funded large-scale printing enterprises have taken the lead, the majority of which have achieved recycling of organic waste gases and “zero emission” of industrial waste water. Encouragement shall be given to establish or to upgrade the existing printing enterprises to those in which digital technology is extensively applied. Energy-saving (including water, land and materials) and integrated and recycling use of resources shall be promoted in printing industry to boost clean production.

### **3 The road to sustainable development of Chinese printing industry**

Following the development path featuring green, originality and harmony, Chinese printing industry shall not only meet the needs of socio-economic development but also the energy-conserving and eco-friendly requirements in its further development. Green printing is going to be the mainstream of future development of the industry. Today, with the enhancement of people’s awareness on environmental protection, self safety and health, combination of printing products with environmental protection attracts universal concern. Reduction, reuse and recycling of packaging, degrading of packaging wastes without permanent landfill, and application of packaging materials free from toxic elements (such as halogens, heavy metals and VOC, etc.) or containing those elements below relevant standards shall be the prerequisites for the development of packaging industry, including paper packaging and printing industry. In this sense, it is necessary for printing workers as well as intermediary and end consumers of printing products to establish advanced and scientific concept of green printing and packaging. As such, relevant governmental departments, industrial associations of printing and related industries and consumer societies among others, shall do more job on instruction, education and service provision in this respect.

Original printing is a significant strategic choice for future development of printing industry. As an inalienable part of cultural industry, printing industry shall better integrate provision of quality printing service with development of cultural originality industry; and encourage printing enterprises to extend production chain to both ends - originality design and market service, by developing new products, providing new services, incessantly expanding printing market, and promoting industrial competitiveness. Close combination of improving independent innovation capabilities for industrial upgrade and developing cultural originality industry is an important strategic choice for future development of printing industry. For instance, a traditional printing enterprise based in Shenzhen, China, attempted to integrate Chinese traditional printing with modern IT technology and culture and art several years ago and blazed a new trail of transforming traditional printing industry into cultural industry with digital assets of artwork as its core, hence achieving rapid development. At present, the industrial projects with Chinese artworks database as its core, such as artistic printing, artistic website, management of artists' personal digital assets,

artworks photography, planning and publishing of artistic books, binding, layout and design of artistic books, artistic video and audio products, artistic exhibition planning and development and operation of derivative artistic products, among others, have come into full swing in this enterprise. Now, the enterprise has set a good example of applying original printing to create products with high added value.

Harmonious printing, characterized by people-first, resource conservation, eco-friendliness, optimized structure and harmonious development, is the ultimate goal for achieving our sustainable development. The ultimate goal of environmental protection is to put people first and meet the masses' demands for survival and development. The reason why environmental protection is called the cause of "benefiting human being and our descendant" or a "lofty cause" is that it sets a lofty goal, namely, realization of harmony between man and nature. Loads of facts show that the relationship between man and natural environment unfailingly affects the relationship between man and man as well as between man and society. If ecological environment is seriously damaged and people's living environment deteriorates, if resources and energy are in short supply and contradiction between economic development and resources deepens, harmony between man and man as well as between man and society can hardly be realized. Given that each enterprise as an integral part of global economic chain against the background of globalization, it becomes not only a provider of products and services but a user of resources. Therefore, it is their duty to be the protector of resources and environment. Only by developing the printing industry in a human-oriented and sustainable manner can harmony and consistency between environment and society be maintained and the harmonious society be promoted.

Ladies and gentlemen:

Despite the substantial differences among printing industries of various countries in terms of development level, we are all faced with the common mission to reinforce industrial environmental protection and improve our capabilities for sustainable development. Therefore, we should strengthen communication and cooperation on the basis of mutual benefits and push forward the environmental protection undertaking of printing industry together. I hope we can take full advantage of the platform of "printing and environment" forum to discuss and exchange ideas, and put forward your recommendations on sustainable development of printing industry worldwide.

Wish this forum a great success!