Information for sustainable development in a society under competitiveness rule: a socialist market economy attitude

Noble Akam
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The Earth Summit of 1992 put in evidence but not qualified it, the unsustainable character of our current model of development.

Based on a competition for the exploitation and transformation of the earth natural resources, this model causes considerable environmental and social damages which carry the germs of the destruction of the planet. The rational attitude would have been to change model or to give up with the development. But the Summit of Rio de Janeiro and those following did not propose extra model: they propose an arrangement with the current model that will be to privilege any more in development the speed, but the duration. The idea is to find out technical tricks and use available scientific knowledge to change a fast destruction mode of functioning into a low consumption one. Something like: we just need to adopt the “conscientious motorist attitude”, which invites us to buy a cleaner and safer car and slow down.

I – Solutions to an unsustainable situation

But we all know that “the conscientious motorist” needs, to remain for ever a good citizen, a certain number of instruments resembling to indicators and regulators: speedometer, tachometer to watch the engine speed, on-board


computer to calculate the fuel consumption, road-control-radar sensor to avoid involuntary malpractices, headlights signals from his fellows to slow down or attach the safety belt before the police check point ahead, etc.

As well as the conscientious motoring, the sustainable development steering also needs information.

Moreover, it’s one of the essential points of the United Nations’ programme Agenda 21.

1 – Agenda 21 and the means for the implementation of the world programme for sustainable development

Agenda 21 is the sustainable development promotion action plan for the 21st century. The statement contains 40 chapters divided into 4 sections:

– Section 1: social and economic dimensions,
– Section 2: conservation and management of the resources for development,
– Section 3: Strengthening of the role of the social groups
– Section 4: means of implementation
The means of implementation include:
– Financial and international relations mechanisms,
– Transfer of technology,
– Science and Education
– Intensification of the institutional capacities of developing countries,
– Information for the decision–making.

So the 40th and concluding chapter of the statement concerns information for the decision-making and participation.

The tools suggested for information for decision-making and participation are: data supply, indicators for sustainable development, reports and “mutualization” of useful and strategic information.

Among the propositions addressed to the United Nations Commission for Sustainable Development, those of the European Union mention four priorities in order to promote the international cooperation, in the respect of the interests of the developed countries and the defence of those of the developing countries.
2 – The European Union proposal: four priority areas… for the world community

In 2001, the European Union Presidency suggested for a sustainable development of the Union and face to the globalization, to define four priority areas.

First, « the collection and dissemination of information » about the state and the evolution of our environment and societies and about the potentials of economic and other human activities and their pressure upon environment, for many purposes:
- To improve co-ordination and harmonization of data collection and diffusion on both national and international levels;
- To encourage governments in providing information relevant for sustainable development decision making;
- To allocate the responsibility for the integration and harmonization of national data, including reporting to international organizations;
- To give support to developing countries to fulfil the conditions;
- To use Information and Communication Technologies to improve the actions.

The second European Union’s priority area concerns « indicators for sustainable development » as important tools, especially to reduce the complexity of information and to provide complex information on sustainable development. Members are encouraged to develop and use sets of indicators for sustainable development appropriate to their national conditions and priorities, in defining, implementing and reporting national goals and to assure active involvement of all the stakeholders in their conception and use. Fifty-eight indicators for sustainable development are suggested.

The third European Union’s priority area is in concern with « information access and the participation of the public ». It means the active participation of the civil society in general and especially major groups based on gender or profession.

The fourth European Union’s priority area concerns « the role of private companies » in information providing for sustainable development. It is stipulated that media should be considered as essential information providers and governments are invited to settle interactive information policy with them. The private sector is preserved in its information providing activities and especially in the trade-related aspects of intellectual property rights. However, because of the trend towards privatisation and commercialisation of any kind
of information including those of the human shared legacy, policy guidance is
needed to distinguish between what can be privatise and what must be freely
available to the public.

Measures are also to be promoted to allow developing countries to access
information for sustainable development originating or collected in their terri-
tories but detained or held by developed countries.

Beside these considerations and one world summit later with the exten-
sion of the priority areas to the wide world community, where can one find
information about and for sustainable development? How is it collected and
organized? And what are the real stakes or challenges of this information in a
society under competitiveness rule and which economy is entirely motored by
a mismatch called “asymmetry of information”? 

II – Where do we find information
for Sustainable Development?

Let us consider the information deposits for “sustainable development”.

The concept covers topics touching various scientific domains. Because
of the perimeter and the variety of the covered fields, the number of docu-
ments may be very important and documents deposits various. Where do we
find the scientific and technical information relative to the sustainable de-
velopment? Mainly in three kinds of deposits: the websites of involved organi-
zations, scientific information portals and scientific databases.

1 – The global information pool for Sustainable Development

Chapter 8 of Agenda 21 invited United Nations countries to adopt natio-
nal strategies for Sustainable Development (NSSD) that

should build upon and harmonize the various sectoral economic, social and envi-
ronmental policies and plans operating in the country.

In 2002, the World Summit for Sustainable Development (WSSD) urged
States to

take immediate steps to make progress in the formulation and elaboration of
national strategies and exhorted them to begin their implementation by 2005.
In addition, integrating the principles of sustainable development into country policies and programmes is one of the targets contained in the United Nations Millennium Declaration to reach the goal of the environmental sustainability.

Some national and state governments have advised that local authorities take steps to implement the plan locally, as recommended. Such programmes are often known as “Local Agenda 21”. People’s Republic of China is one of these states with its “Environmental Protection Laws” known as SEPA².

The map 1 represents a global picture of the NSSD Initiative: situation projection in December 2005.

The map 2 represents the situation in March 2008.

The National sustainable development strategies leaded to two types of information deposits:

– United Nations and Bretton Wood databanks³;

– Non-governmental organizations’ and Academics’ archives and databases.

In July 2007, the true situation of the Local Agenda 21 is the following: 63 countries have implemented a national development strategies programme and 132 were still waiting or were keeping quiet about their intention to do it. Out of the European Union, the virtuous countries were:

– In Africa: 8 (Egypt, Mali, Mauritius, Senegal, Seychelles, South Africa, Sudan, Uganda).

– In Asia and Pacific Ocean: 9 (Cambodia, China, Indonesia, Japan, Laos, Korea, Thailand, Fiji, Tonga).

– In Latin America: 4 (Bahamas, Ecuador, Suriname, Trinidad and Tobago).

– In North America: 1 (Canada)

The Global Information System for Sustainable Development as reported by the United Nations Commission for Sustainable Development mentions only 68 records for free information assets for decision-making and participation. In details there are :

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<table>
<thead>
<tr>
<th>Type of portal</th>
<th>Number</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Databases/lists</td>
<td>3</td>
<td>Central portal, Business, Commerce, Energy</td>
</tr>
<tr>
<td>Research-related</td>
<td>4</td>
<td>Universities</td>
</tr>
<tr>
<td>Governments</td>
<td>12</td>
<td>Brazil, Canada, China, Czech Rep., Finland, France, Germany, Ireland, South Africa, UK, USA</td>
</tr>
<tr>
<td>Major social groups</td>
<td>8</td>
<td>Public Policy Institutes, International Agencies and Initiatives</td>
</tr>
<tr>
<td>United Nations</td>
<td>8</td>
<td>World Bank</td>
</tr>
<tr>
<td>Bretton Woods Institutions</td>
<td>3</td>
<td>World Bank</td>
</tr>
<tr>
<td>CSD-registered partnerships</td>
<td>30</td>
<td>UN Commission’s partnerships: NGOs; Regional networks and Initiatives (Water, Energy...)</td>
</tr>
</tbody>
</table>

Table 1 – Number and types of portals

The conclusions suggested by this state of the information for the Sustainable Development worldwide programme are:

– Not enough information produced in and by developing countries;
– A lot of information produced by non-governmental organizations and focused on their own actions and programmes;
– The strategic information proposed by the inter-governmental institutions is must of the time market-oriented;
– The majority of the developing countries do not seem to be able to produce the information necessary for the coordination.

So the Chapters 2, 27, 37, and 40 of the Agenda 21 statements are to be put into application.

Nevertheless, the Web and Internet portals are far to be the main scientific information resources for decision-making, particularly about the essential topics of sustainable development.

2 – Scientific information deposits: the info-poor situation of the rich countries

Scientific and technical information resources on sustainable development are many. Since Gro Brundtland’s report on Environment and Development in

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1987, the most important online information service, DIALOG, had decided the creation of a special index on Environment and Sustainable Development devoted to strategic information and decision-making.

This index includes resources from five large-scale databases:
- Environmental Bibliography,
- NTIS, the US National Technical Information Service,
- Compendex Engineering Information
- JICST, the Japanese Science and Technology Information system,
- Pascal, the European main database for Science and Technology.

One of the observations I propose to share in this paper concern the distribution of the scientific literature between the economic areas in the world determined by the concept of development. They were made upon resources from the main scientific information server, DIALOG from 1987 to 2007.

The topics taken into account are: Air pollution (50,039 documents), Water pollution (75,626 documents) and Sustainable development (22,832 documents).

The economic areas concerned by the observed scientific production are European Union, North America (Canada and USA), Asia (Japan and China) the rest of the World (Africa, Latin America, Pacific Ocean)

<table>
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<tr>
<th>Areas</th>
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</thead>
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<tr>
<td></td>
<td>Air Pollution</td>
<td>Water Pollution</td>
</tr>
<tr>
<td></td>
<td>Num</td>
<td>%</td>
</tr>
<tr>
<td>European Union</td>
<td>3,451</td>
<td>6,9</td>
</tr>
<tr>
<td>Canada</td>
<td>706</td>
<td>1,4</td>
</tr>
<tr>
<td>USA</td>
<td>296</td>
<td>0,6</td>
</tr>
<tr>
<td>Japan</td>
<td>657</td>
<td>1,3</td>
</tr>
<tr>
<td>China</td>
<td>882</td>
<td>1,8</td>
</tr>
<tr>
<td>Other countries</td>
<td>44,047</td>
<td>88,0</td>
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<tr>
<td>TOTALS</td>
<td>50,039</td>
<td>100,0</td>
</tr>
</tbody>
</table>

Table 2 – Distribution table of scientific literature about the Sustainable Development (From: Dialog Information Server, 2007)

Areas 1987-2001 2002 2003 2004 2005 2006 TOTAL
EUROPE 2 441 326 148 210 136 190 3 451
CANADA 545 35 25 31 37 33 706
USA 167 36 10 10 22 51 296
JAPAN 407 44 44 43 54 65 657
CHINA 421 43 67 81 92 178 882
OTHER 28 934 3 540 2 761 2 195 2 885 3 732 44 047
TOTALS 32 915 4 024 3 055 2 570 3 226 4 249 50 039

Table 3 – Distribution table of scientific literature on Air Pollution: annual production 2001-2006 (From: Dialog Information Server, 2007)

Areas 1987-2001 2002 2003 2004 2005 2006 TOTAL
EUROPE 1 658 181 174 101 134 174 2 422
CANADA 661 29 38 50 12 34 824
USA 1 122 76 48 38 50 83 1 417
JAPAN 384 29 38 25 15 33 524
CHINA 222 36 38 65 60 118 539
OTHER 55 510 4 061 2 830 2 363 2 275 2 861 69 900
TOTALS 59 557 4 412 3 166 4 181 3 843 5 310 75 626

Table 4 – Distribution table of scientific literature on Water Pollution: annual production 2001-2006 (From: Dialog Information Server, 2007)

Areas 1987-2001 2002 2003 2004 2005 2006 TOTAL
EUROPE 170 34 49 95 90 106 544
CANADA 94 9 12 15 26 25 181
USA 17 4 10 24 16 57 128
JAPAN 24 2 10 21 16 25 98
CHINE 68 44 53 79 101 164 509
OTHER 5 578 1 253 2 067 3 947 3 594 4 933 21 372
TOTALS 5 951 1 346 2 201 4 181 3 843 5 310 22 832

Table 5 – Distribution table of scientific literature on Sustainable Development: annual production 2001-2006 (From: Dialog Information Server, 2007)

According to our observation of Dialog Information Server content relating to Environment and Sustainable Development, very few can be known about the rich countries real practices and attitudes towards environment protection issues. Only 7% of the consolidated research results on Air Pollution relate to Europe and 2% to North America. And together, both areas furnish 6% of the relevant information for science-based decision-making about Water resources management.

In matter of Sustainable Development, 97% of the scientific literatures are devoted to developing countries. That means only 2% of this information
for the whole European Union and 1% for North America, participate to the knowledge sharing for a better understanding and decision-making. By the same way, their experiences and knowledge in matter of air and water pollution and treatment or in matter of Environment preservation are quite out of the reach for the rest of the community.

III – Why do states refuse to contribute to the common knowledge construction?

1 – The real stakes of information for decision-making

Less than 4% of the most relevant documents about Sustainable Development problems (including air and water pollution) are about developed countries. The topic seems here to be mainly invented for all countries except the developed ones. In opposite, the developing countries are very well covered by the research and furnish sufficient information about their social and physical environments.

What are the consequences of this situation?

For their effectiveness, the development projects owe to be real observation posts of the environment. That means they should become monitoring tools for the governments in social and economic issues. In developing areas such as Sub-Saharan Africa, most of the important development projects had so far preferred, for the processing of the collected data, evacuation towards information systems in Europe or North America.

Simple concern of efficiency?

May be, except that for these poor countries and for their sustaining rich partners, the thing in concern is Information, the generative raw material of knowledge, the strongest added value product of the Knowledge Society. The processing and codification of information and knowledge about the environment of states, allow appropriation, transfer, storage and of course, commercial exploitation.

When a multinational company or an organization detain more information than a State, their forecast capacity of the country’s future risks and situations often exceeds the abilities of this one. And when this firm widens its communication
networks over the surface of the planet, States have reasons for wondering about their sovereignty.6

Aware of that fact, explained by Philippe Baumard (1991) about the competitive environment, can states refuse to contribute to the common knowledge construction? The risk would be the one of forbidding any possibility of international and scientific partnership and maybe co-development. Nevertheless, the collecting and organization of this kind of information respond to a well-defined target, which is “innovation production leading to technology acquisition and transfer”.

Knowing about one’s environment, lead to the elaboration of original strategies that will require for their application, technical tools and probably, service activities or manufactured goods development and production.

2 – The interests of mastering or sharing information

The relations between the rich countries and the developing ones, in regard of the mastery of knowledge about the environment, are characterized by a situation of information asymmetry. In the market economy, “the information asymmetry” is the foundation of the competitive advantage.

Are the developing countries ready to continue to feed this asymmetry?

It seems that they have not enough confidence in the developed countries’ intelligence for an equitable management of a “common knowledge-based legacy”.

In the other hand, the rich countries, especially in Europe and North America, are attached to the idea that they are to decide (in G7 or G8 meetings) of the combinatorial logic of the development production for the main part.

And as far as some countries and their people will remain convinced that they are the universal holders of “the information about what to do and how to make it”, the developing countries will probably try to find out their own ways. Just because the thing they need to achieve what they are supposed to, get developed, is “intelligence”. And it is obvious that to preserve their own

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interests, the rich countries cannot share their knowledge management tools and intelligence.

IV – The Chinese national information system for Sustainable Development

Despite the political risks of sharing information and development strategies, about one-third of governments in the world and local authorities have implemented the Agenda 21 in 2007. One of the most important national programme of the Agenda 21 is the People’s Republic of China’s “Environmental Protection Laws”.

1 – The Chinese environmental protection management system

To achieve the transformation of its centrally planned economy into a “socialist market economy with Chinese characteristics” the Chinese government introduced numerous reforms which began in 1978. The spectacular economical growth produced, lifted probably millions of people out of poverty. But this economic expansion, added to the population increase, has also created an important breakdown on the environment preservation: between 1959 and 1990, China lost about one-quarter of its arable and farm lands.

China’s Environmental Action Plan for 1991-2000 highlights environmental issues that national officials consider particularly significant. The Plan, which was prepared jointly by the National Environmental Protection Agency and State Planning Commission, focuses on seven priority problems. Three of them concern pollution: water and air pollution and hazardous waste. Three are linked to natural resources: water shortage, soil erosion and lost of forests and grasslands. The final priority problem is loss of species and habitat, and is in concern with the integrity of China’s ecosystems.

In their study of the environmental regulation in China, Ma Xiaoying and L. Ortolano mentioned that

7. After the reforms of Deng Xiaoping, “The socialist market economy with Chinese Characteristics” is the official denomination used to refer to the economic system of the People’s Republic of China. It qualifies the marriage of the socialist planning with a market economy.
serious attempts to abate pollution in China began in the late 1970’s, with the promulgating in 1979 of the China’s basic environmental law, the PRC Environmental Protection Law.9

The environmental protection programme started in fact in 1978 when the State Council Leading Group Office for Environmental Protection was established under the division of the National Construction Committee of China. The office was reorganised in 1982 into an Environment Protection Bureau and located under the new Ministry of Urban and Rural Construction and Environmental Protection. The bureau became the National Environment Protection Agency (NEPA) in 1984. And in 1988, NEPA was promoted to an independent agency at deputy ministerial level, directly under the State Council10.

From 1996, the central government had established more than one hundred environmental laws and regulations and created eight major pollution control programmes. To implement these programmes, China has established thousand of local environmental protection bureaus (EPB).

Presented as part of a major restructuring of the central government in 1998, NEPA was transformed into the State Environmental Protection Administration (SEPA), a government department with full ministerial rank. The restructuring involved dismantling the Ministry of Forestry and the state Council’s Environmental Protection Commission and enlargement of the mission and competences of the state agency. In 2007, the deputy minister in charge of SEPA, Zhou Jian, in response to the OECD recommendations, announced that the very next future of the Agency is a Ministry of Environmental Protection11.

SEPA which is also the National Nuclear Safety Administration, has mandate to develop, draw up and implement national policies, laws and regulations for environmental protection, to supervise, guide and coordinate activities that impact ecological environment and problems in local, cross-region and trans-river basin areas, to formulate national environmental quality standards and punish offenders especially in case of pollution. It organizes environmental Science & Technology development programmes, scientific

research and technical demonstration projects and administrates the international cooperation and exchanges on environmental protection.

For the international scientific community and economic actors abroad, SEPA is mainly the China’s information provider on environmental protection. It is indeed in charge of compilation of the national reports on the state of the environment in China and publicizing of this information. In return, it has the responsibility of the diffusion and the application of the adopted or negotiated fundamental rules in connection with environmental protection. But it is also suspected to keep for its nationals, the best of the scientific and technical information and management tools relating to its environment.

2 – The Chinese national information system for sustainable development

a – A labelling programme

The National Environmental Protection Agency of China issued since March 1993 a labelling programme. The figure of the environmental label is composed in the centre by water dominated by mountains and sun, expressing an environment where humans exist. The composition is circled by a ten ring belt expressing the involvement of the state and the public administration. The ring belt also implies the people of China is united to protect the symbols of our human environment.

Despite this eco-label and official declarations of intent, foreign observers like the director of Asia studies at the Council on Foreign Relations in USA, Elizabeth Economy, was sceptic when she wrote in 2004 about China’s environmental challenge “The River Runs Black”\(^\text{12}\).

At the same time, the China’s Ministry of Science and Technology (MOST) was defining programmes in support of both fundamental and applied research and development.\(^\text{12}\). \(\text{12. The River Runs Black: The Environmental Challenge to China’s Future. Ithaca: Cornell University Press, 2004.}\)
scientific researches including biodiversity, agriculture science and issues related to environment protection strategies. Some of these programmes were established in cooperation with partners such as France in the domains of high technologies and nuclear energy.

b – SEPA’s information service

The evolution of China’s implication in environment protection lies within the framework of a global development of the Chinese society, with contradictions and convergences which may rub shoulders in this global development process. It is harshly confronted with the industrial development barriers which it seems to fight severely too, but it has also the opportunity to lean on other aspects of the global development such as the social enhancement policy, the scientific research and information and communication technologies (ICT).

ICT applications make the circulating of information easier and more efficient. In China too, the government played a significant role in developing ICT use, by financial investment and stimulating of demand and supply. E-Government in China has developed in three stages:

– before 1993 with incorporating ICT applications into internal government processes, mainly through Office Automation,
– from 1993 to 2004 by using the applications to improve administrative and management capacity through the implementation of advanced information proceeding systems,
– from 2004 by introducing e-government applications to deliver public services.

One of the main services improved by this ICT development is the SEPA’s information service.

The centralization of its environmental protection policy likely makes it possible for China to offer an information service presenting both scientific and technical characteristics for the decision-making and general and sensitizing aspects, which is structured and coherent. The portal of the Ministry

13. Aspects of this cooperation are mentioned in the report of the French Embassy related to China’s scientific research organization, situation and trends at the beginning of the Eleventh Five Year Plan (2006-2010).


15. China’s Information Revolution, Chapter 6 “Advancing E-Government”.

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of Environment Protection indeed covers all the information relating to the mission and the attribution of SEPA.

Information available for non-Chinese-speaking people is distributed between two main services:

– an information and documentation centre of specialized information for the economic and social activities and knowledge, gathering factual data (statistics, state reports, inventories, directories and catalogues) and analyses;

– a scientific information collecting and control service of specialized information, supplied with the work of the Academy of Environmental Science and under its control, and in direct connection with the Scientific Research patrimony and the industry sector’s needs.

Scientific and technical information for economic and social activities related to Sustainable Development.

The on-line gate of SEPA's information and documentation centre is an open service which offers, upon the model of an Internet static web site, a mix of current information topics and permanent technical information. As in any national system of scientific and technical information and documentation, the links are almost exclusively internal or used to connect the different services, but a few number of them also send to other national programmes of NSSD16.

The dynamic part of the site offers three types of services to the user and a tool for information gathering:

– a service of daily posting of measures on the air quality in the Chinese cities,

– a press release of the national and international topicality of the environmental protection with a calendar of major events and recalls on some administrative regulations and decisions;

– a service for interviews and appointments management;

– a permanent on-line survey questioning the users of the site about their actions in favour of the environmental protection.

The proper scientific and technical information is distributed in seven headings.

The heading “Plans & Programmes” gives a survey of the political and social tendencies by a reminder of the last two national five-year plans.

The heading “Policies and Regulations” contains most of the Chinese Environmental Protection Laws, decisions and circular decrees of the State

16. From 1996 to 1998: Norwegian, Canadian, Australian, French, German NSSD.
Council, interpretations on measures of the administration, contingency plans, manoeuvres of emergency responses concerning the control of water, air, environmental noise, solid waste, grasslands and forests.

The heading “Standards and Reports” contains a catalogue of the standards putting into effect the laws and regulations and the measuring methods of pollution. It is also the reservoir of environmental statistics, and three annual reports: on the state of environment, for nuclear safety and on the progress of the Three Gorges Project.

The heading “International Cooperation” states the situation and progress in international environmental conventions, bilateral and regional cooperation and indicates the positions of the People’s Republic of China in International Organizations.

The headings “Special Coverage” and “Inventory” contain documentation resources on Environment: the changing climate poster series produced by the United Nations Environment Programme Division, the national catalogue for newly-released regulations and standards, the Chinese chemicals management and the indoor catalogue of toxic chemicals, the inventory of national model cities for environmental protection and environment-friendly enterprises. They include download services of images, documentation and forms.

The heading “Environmental Communication”, devoted to sensitising and accompanying actions, relates performances of Chinese people in environmental issues and awards distributed by SEPA and its partners. It also redistributes for children, selected games from abroad on environmental protection and natural resources saving.

A focus on the SOE (State of Environment) in China

With the implementation of advanced information proceeding and management systems, the State Environment Protection Administration has established in 2002, in cooperation with the Norwegian Agency for Development Cooperation (NORAD), the databank called “SOE” (State of Environment)\(^\text{17}\). The information presented in the annual reports of this databank recollects

from 1996 and the exact and detailed statistics and figures about environment issues are available for a period covering 1998 to 2008. The data are collected from the local, regional and national bureaus and agencies of five ministries except in the special administrative zones\(^{18}\), and are in accordance with the Agenda 21 recommendations.

Every report contains an overview of the state, statistical records, and comparative tables and analyses concerning twelve priority areas: the discharge of major pollutants, fresh water, marine, atmospheric, acoustic, radiation and land and rural environments, solid waste, grassland, climate and natural disaster. And the last point is devoted to a recall of the measures and actions in environmental management.

The international English version of the SOE reports is available at the following web address: http://english.mep.gov.cn/standards_reports/soe/

*The information confirming and retrieval service of CRC-SEPA*

The Chemical Registration Centre (CRC-SEPA) is a technical support institute of the environmental protection administration and ministry attached to the Chinese Research Academy of Environmental Science. It is to improve the methods and technology of the management of chemicals, to prepare the regulations on the import and export of toxic chemicals and to implement the provisions on the environmental protection administration.

Since 1999, it has provided the researchers and industrialists with a Chinese/English bilingual website on scientific inventory lists of chemical substances and instructions covering the domains of the environmental protection, pollution control and chemicals. The web locations are www.crc-mep.org.cn for the Chinese version and www.crc-mep.org.cn/english.asp for the international version.

In 2007, the gate in English lost its inventory list of chemicals. The information service is replaced by a Chinese search engine requiring no registration. But the Inventory of Existing Chemical Substances in China is still available by an English search engine on the Chinese new page: http://www.crc-mep.org.cn/iecsweb/*. Query can be submitted simply with a full CAS registry number or the chemical name, but the response is very simple too: the user is informed whether the substance is registered or not.

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\(^{18}\) For Hong Kong, see The Government of Hong Kong, Special Administration Region: Environment Protection Department, http://www.epd.gov.hk/epd/eindex.html
In other respects, the dossiers concerning the environmental management of chemical substances, toxic or not, related news and announcements, laws and hot point still exist but the useful content is no more in English, except the henceforth essential and very well informed page of Contact. SEPA probably became concerned with the control and the exchange value of the country’s environmental management information.

3 – To complete information on China’s NSDS

China’s national strategy for sustainable development is one the main national programme of the Agenda 21. In other hands, the country is considered by the other members, international organizations and partners as the first or second, and by all means, a major threat on the earth preservation. So it’s observed with attention by the international institutions as well as non-governmental organizations. In spite of that surveillance, the effects of the implementation of the Chinese strategy for sustainable development are hardly recognizable or underrated. And it seems that China wants to keep the control on information on its strategy for the environmental protection.

The many information providers on China’s engagement in environment protection are probably relevant, including those emanating from organizations located in countries not engaged by the Agenda 21. But to supplement or to balance the information on the policy and progress of a State ruled by the Socialist market economy and particularly with Chinese characteristics, we can also refer to local and indigenous resources.

Three Chinese non-governmental organizations which have the confidence of the international defenders of the environment seem to represent the main figures of the involvement of the lay society in the Chinese socialist sustainable development policy. They are Friends of Nature, contributing to the information system for sustainable development by a website, Global Village Environmental Culture Institute, acting through the mass media and Beijing Environment and Development Institute by scientific publications and consultancies.

*Friends of Nature (FON)*, founded in 1993 in the circle of Academy of Culture was registered as a Chinese environmental NGO in 1994 with the aim of promoting citizens’ environmental awareness and creating platforms for public participation in environmental decision-making. It counts more than 3000 active individuals and 30 organizations all over China. FON commits to
help its members to undertake actions as green proactive citizens and has so far collected in the past sixteen years, more than twenty awards at home and abroad. The NGO specializes in education and sensitizing publications but its *Green Book of Environment: Crisis and Breakthrough of China’s Environment* published in 2005 and 2006 in English by China Social Sciences Press was to reflect the views and observations of people working on the front line of environment protection in China. This project and the publication of book series on the earth protection are sustained by the an electronic bilingual Newsletter published with the support of Delta Environmental and Educational Foundation in Shanghai, available on the website of the organization.

**Global Village Environmental Culture Institute of Beijing (GECIB)** registered as an independent NGO in 1996. It aims to enhance public awareness and to promote public involvement in environment protection by means of the mass media and social activities. It has been at the forefront in using television for environmental communication. In 1996, it created two successful television series, called *Green Civilization and People’s Republic of China is aired*, on China Educational Television-CETV. A second series of weekly programmes called *Time for Environment*, runs on China Central Television, the national television network. This programme presents mainly the latest international and domestic environmental events. GECIB has the ambition to symbolize the commitment of the environmental movement in People’s Republic of China.

**Beijing Environment and Development Institute (BEDI)** was established in 1995 with the support of the Beijing People’s University’s Institute of Environmental Economics. Its objective is to contribute to China’s sustainable development through research: its seeks to introduce the use of new approaches to development planning and environmental decision-making among China’s environmental protection agencies.

BEDI’s activities consist in conducting academic researches, publishing reports and books and magazines, organizing seminars and workshops, facilitating discussion and exchanges among academicians, entrepreneurs, and government officials, and providing policy recommendations to government.

It was the main actor in the project to develop strategies for implementing China’s total emissions control policy and is still in the forefront of innovative initiatives in the country. In 2006, BEDI had more than 150 members from academia, enterprises or government, contributing to the applied research and the sustainable development issues, but had no specific website.

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From environment protection to intelligent development

The mobilization for the preservation of the planet made the rest of the inhabitants aware that the whole world could be a “Global village” as Marshall McLuhan and the information and the communication’s specialists had already discovered it. But the atmosphere in the international summits for sustainable development showed that “the village” is not necessary a Kibbutz: everyone agrees to have an effective rubbish collection department and to make an effort to reduce its waste, but not to carry out the same style of life.

The village is often a Northern district opposed to a Southern district, a place where all are known, where the ones can more easily supervise the others and at least, be blacklisted. The feeling of promiscuity that it insufflates can exacerbate parochial quarrels: one realizes that the neighbour does not have the same habits and universal behaviours as oneself and especially that it will not be easy to make him evolve in the correct single direction.

In The global village we are moving in, the possession of information about others is still a competitive advantage on several ways, specially at commercial and cultural levels. The situation of information asymmetry even becomes an instrument of economy structuring, that the capitalist decision-maker uses to organize on hierarchical basis the human society to his advantage, and the socialist decision-maker uses to produce the social adjustment recommended by the development plan.

Inspired by a new conception of their relation with the environment and their ability to innovate, will the countries be able to invert the process of the information asymmetry situation that rules their relations?

I’m afraid the task proved to be beyond their capabilities: the ones are convinced that there is no doubt that they are alone to possess the information

and to know what to do. And others that there is also no doubt that they know better than anyone what is the best for them.

The important thing is perhaps that knowledge helps to behave with intelligence. In the socialist market economy attitude, knowing about oneself and one’s environment may be a first path toward that intelligence. To collect, produce and use appropriate knowledge for a better understanding of one’s environment is probably a fair and constructive project.

Bibliography


**Abstract**

Beside earth summits and resolutions, where can one find information about and for sustainable development? How is it collected and organized? Who wants to share information and knowledge for decision-making and sovereignty for a better preservation of the environment? What are the real stakes or challenges of this information in a society under competitiveness rule and which economy is entirely motored by a mismatch called « information asymmetry»?

**Key-words:** Information systems, information asymmetry, development, decision-making, Agenda 21, China, Sustainable Development.

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**Résumé**

L’information pour le développement durable : quelle posture dans un monde régi par la compétitivité ? L’exemple de la République Populaire de Chine

En dehors des sommets mondiaux et de leurs résolutions, où peut-on trouver de l’information utile pour et sur le Développement Durable ? Comment est collectée cette information et comment est-elle gérée ? Qui a envie ou peut accepter de partager une information et des connaissances qui peuvent se révéler stratégiques pour la prise de décision et la souveraineté nationale au nom de la préservation de l’environnement ? Quels sont les enjeux de ce type d’information dans une société régie par la loi de la compétitivité et dont l’économie repose presque entièrement sur un déséquilibre nommé « asymétrie de l’information » ?

**Mots-clés :** systèmes d’information, asymétrie d’information, développement, information stratégique, Agenda 21, Chine, Développement durable.
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