

International Register of Potentially Toxic Chemicals data bank: an information system for managing chemicals

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Summary. - Policy issues related to data and information are dealt with. The International Register of Potentially Toxic Chemicals (IRPTC) data bank activities with data collection, processing, use and data dissemination is illustrated. The IRPTC's mandate from agenda 21, chapter 19, programme area C: "Information exchange on toxic chemicals and chemical risks" in three areas is discussed: a) development of international institutions and networks responsible for information exchange on toxic chemicals; b) improvement of database and information systems on toxic chemicals through the provision of training in the use of those systems as well as software, hardware, and other facilities and c) assistance to developing countries in the creation of national chemical information centers.

Key words: databases, toxicology.

Riassunto (*La banca dati dell'International Register of Potentially Toxic Chemicals: un sistema di informazioni per la gestione delle sostanze chimiche*). - Sono prese in esame le linee di condotta concernenti il trattamento dei dati e dell'informazione per le sostanze chimiche. Vengono introdotte le attività della banca dati dell'International Register of Potentially Toxic Chemicals (IRPTC), il loro utilizzo e la diffusione dei dati. Viene discusso il mandato dell'IRPTC secondo l'agenda 21, capitolo 19, area di programma C: "Scambio delle informazioni sulle sostanze chimiche e sul rischio chimico" in tre aree: a) rafforzamento delle istituzioni internazionali e delle connessioni deputate all'informazione e agli scambi dell'informazione sulle sostanze tossiche; b) miglioramento della base di dati e del sistema informativo sulle sostanze tossiche attraverso l'addestramento all'uso di questi sistemi come, parimenti, alla fornitura di software, di hardware e altre facilitazioni; c) assistenza ai paesi in via di sviluppo nella creazione di centri di informazione nazionali sulle sostanze chimiche.

Parole chiave: banche dati, tossicologia.

Chemical information: from Stockholm to Rio de Janeiro

The International Register of Potentially Toxic Chemicals (IRPTC) was created in 1972 as a result of the UN Conference on Human Settlement by recommendations that stated the need for: a) increasing the capability of the United Nations system to provide awareness and advance warning of deleterious effects to human health and well-being from man-made pollutants; b) providing this information in a form which is useful to policy-makers at the national level; c) developing plans for an international register of data on chemicals in the environment.

It is a long way from this Conference to agenda 21, the document that resulted from the UN Conference of Environment and Development (UNCED) in June 1992. While the Stockholm Conference spoke of "pollutants", agenda 21 now speaks of "chemicals". This is more than semantics. It is policy and indicates that governments have now established a chemicals policy. For data and information this policy is laid down in chapter 19, programme area C "Information exchange on toxic chemicals and chemical risks" which reads as follows:

"Governments and relevant international organizations with the cooperation of industry should: a) strengthen national institutions responsible for information exchange on toxic chemicals and promote the creation of national centers where these centers do not exist; b) strengthen international institutions and networks, such as IRPTC, responsible for information exchange on toxic chemicals."

"Governments and relevant international organizations with the cooperation of industry should: a) assist in the creation of national chemical information systems in developing countries and improve access to existing international systems; b) improve databases and information systems on toxic chemicals, such as emission inventory programmes, through provision of training in the use of those systems as well as software, hardware and other facilities".

The role of IRPTC after the UN Conference of Environment and Development

There is an increasing demand for factual and validated data on chemicals for decision making. This demand was and is the guiding principle of IRPTC: quality data, not quantity.

Agenda 21 gave IRPTC a strong mandate to assist developing countries in building information centers and in assisting them to use data in decision making on chemicals. In this role IRPTC feels to be the mediator between data producing and data using countries and is currently undertaking the following activities to achieve this mandate:

a) *Strengthening of international institutions and networks responsible for information exchange on toxic chemicals.* - Data collection and validation is a very expensive activity that surmounts the capacities of any single institution or country. At the same time the resources available worldwide are limited. Aware of these constraints and willing to meet the challenge set by UNCED, the international community is striving for more coordination to get the best profit from their activities.

As an example of this effort, OECD and IRPTC are working together to include the Screening information data sets (SIDS) into the IRPTC data bank. The OECD Council decision/recommendation on the cooperative investigation and risk reduction of existing chemicals C(90) 163(final) of January 1991 has set the scene for this cooperation:

"The Council decides that member countries shall make information obtained from the cooperative investigation of existing chemicals publicly available via the UN Environment Programme's International Register of Potentially Toxic Chemicals (UNEP/IRPTC) respecting legitimate claims for protection of confidential data."

IRPTC is interested to achieve a similar agreement with the Commission of the European Communities on the exchange of data resulting from the existing chemicals regulation 793/93.

Presently IRPTC is also working on the incorporation of four data sets from countries and international organizations:

- photodegradation data on 544 chemicals collected and validated in Germany;
- biodegradation (834 chemicals) and bioaccumulation (523 chemicals) data originating from testing performed under the supervision of the Japanese Ministry of International Trade and Industry;
- IPCS project on poison information (INTOX) will be incorporated in file 15;
- the European Inventory of Existing Commercial Substances (EINECS) of the EEC will be incorporated into the IRPTC chemical-identity file.

b) *Improvement of database and information systems on toxic chemicals through the provision of training in the use of those systems as well as software, hardware and other facilities.* - IRPTC has recently finalized the Clipper software which presents its data bank on a personal computer. This event marks a new era by bringing the data directly to the end user. It is IRPTC's policy to provide this data bank to governments and associated institutions for the price of a few hundred dollars covering copying and mailing expenses. About hundred selected government institutions will receive a

copy free of charge. We began to train developing countries in the technical use of the data in decision making.

c) *Assistance to developing countries in the creation of national chemical information systems.* - IRPTC is presently re-orienting its training programme to incorporate the objectives set by UNCED. The IRPTC training programme was initiated in 1982 with training courses conducted and financed through the government of the former Soviet Union. In 1990, the UNEP/UNITAR (United Nations Institute for Training and Research) was established. This programme was directed towards the implementation of the prior informed consent on potentially toxic chemicals.

The prior informed consent is a joint programme of UNEP and FAO, as detailed in another paper in this issue.

Issues of information policy on chemicals. The commercial value of information and data in modern society

Information is a "production factor" such as other factors like:

- raw material
- manpower
- machinery
- capital
- energy.

In our modern society, having the right information at the right time has become a determining factor in decision-making process. Therefore, having an information policy and more specifically a chemicals information policy is a must for any government and tremendous effort is being devoted to this field. At the level of the Commission of the European Union and at OECD, chemicals data policies are emerging and being implemented. Such data are now submitted by the chemical industry to governments under the new and existing chemicals programmes and regulations.

Outlook

After some fifteen years of international negotiation on the control of existing chemicals, the chemicals-producing countries have come to an agreement that data generation is the basis for classification and hazard assessment. A further important agreement has been also reached: data need to be produced in electronically readable form so that they can be exchanged and better shared. Both international agreements contribute to the overall goal set up by agenda 21 which is "information exchange on toxic chemicals and chemical risks". This will finally result in sharing the burden of work.

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