

OPCW ACADEMIC FORUM

The Hague, 18-19 September 2007

WORKSHOP: The non-proliferation of chemical weapons

Theme: Ways and means to promote the economic and technological development of States Parties through international cooperation in the field of peaceful uses of chemistry

Paper: Assessment of the OPCW international cooperation programs: perspective from a developing State Party.

Abstract: Article XI of the CWC lays down the foundations for international cooperation in the field of peaceful applications of chemistry, which is one of key elements of the convention. At its 10th Session the Conference of the States Parties adopted a decision on full implementation of article XI. The OPCW international cooperation programs, designed and conducted by the Technical Secretariat, constitute the core element of the Organization's policy in this matter. After a decade of implementation a reflection must be carried out on the programs on the basis of the initial objectives and the new developments. The aim of this paper is to review these programs in the light of the experience of a beneficiary State party and its institutions, namely Burkina Faso. In general these programs are directed toward developing State Parties or State Parties with economies in transition. These countries usually present some specific scientific, technological and administrative constraints. In order to optimize the efficiency of certain programs, these specific conditions must be taking into account. The objective of this paper is to highlight difficulties and challenges in carrying out these programs on the terrain, laying on the experience of Burkina Faso. After analysing the role of international cooperation in the CWC and the political, legal, economical and technical challenges to be met, the paper deals with the practical experience of Burkina Faso with various international cooperation programs. On the basis of the lessons learned, attempts are made to explore some "lines of thinking" for the future.

Assessment of the OPCW international cooperation programs: perspective from a developing State Party.

Prof Abdouraman BARY
Head, National Authority
Burkina Faso

Remark: This paper reflects only the personal points of view of the author.

INTRODUCTION

Despite the fact that only a few number of the States Parties to the Chemical Weapons Convention (CWC) are chemical weapons possessors, the convention attracted a wide adhesion and political support. During the last few years the membership of the Organisation for the Prohibition of Chemical Weapons showed an overwhelming and continuous increase. Ten years after entry into force, 182 Nations representing 98% of the humanity have joined the OPCW.

One of the reasons for the success story of the CWC is the wide room given to international cooperation in the Convention. Not only international cooperation has been recognised as an unvaluable means for achieving the object and goal of the Convention but also the Technical Secretariat has made tremendous efforts to translate this ideal into a tangible reality through the design and implementation of various international cooperation programs.

A great number of States Parties with economies either in development or in transition have benefited from these programs. The aim of this paper is to review certain of the international cooperation programs in the light of the experience of one of these States Parties, Burkina Faso. Attempts will be made to assess the programs in the angle of practical implementation considering the scientific, technical and administrative conditions prevailing in developing countries. When possible or needed, suggestions will be made for optimising the programs.

I. The role of international cooperation in the CWC

International cooperation is one of the pillars of the CWC. Already in the preamble the States Parties to the convention expressed their desire "to promote free trade in chemicals as well as international cooperation and exchange of scientific and technical information in the field of chemical activities for purposes not prohibited under this Convention in order to enhance the economic and technological development of all States Parties".

The foundations for international cooperation were laid down in article XI (Economic and technological development) which stipulate that the States Parties "Undertake to facilitate, and have the right to participate in, the fullest possible exchange of chemicals, equipment and scientific and technical information relating to the development and application of chemistry for purposes not prohibited under this Convention".

International cooperation plays an important role for universality of the CWC. During the process of ratification it is one of the convincing arguments to put before parliaments. Furthermore, by encouraging the development of peaceful uses of Chemistry for the benefit of mankind, international cooperation is important for non-proliferation of chemical weapons. As the Director General said at the 6th Conference of States Parties, "International cooperation is intrinsically linked to the security nature of the CWC".

At the 10th Session of the Conference of States Parties, this essential role played by international cooperation in the CWC led to the adoption of Decision C-10/Dec.14 on full implementation of article XI. This decision stressed that "economic and technological development through international cooperation in the field of chemical activities for purposes not prohibited under the Chemical Weapons Convention (hereinafter "the Convention"), in accordance with Article XI, is one of the core objectives of the OPCW" and underlined "its contribution to the promotion of the Convention and of its universality".

II. Challenges

Fostering international cooperation between States parties poses challenges of political, legal, economical and technical nature that have to be tackled.

1. Political challenges

The most serious challenge is the lack of consensus in the interpretation of article XI. This article stipulates that the States parties shall "not maintain among themselves any restrictions, including those in any international agreements, incompatible with the obligations undertaken under this Convention, which would restrict or impede trade and the development and promotion of scientific and technological knowledge in the field of chemistry for industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes". Furthermore States Parties shall ") Undertake to review their existing national regulations in the field of trade in chemicals in order to render them consistent with the object and purpose of this Convention". Before entry into force of the CWC some States or groups of States had set up export control legislations or mechanisms with restrictions on trade with certain others States. It is that some of these States are all become parties to the CWC, leading to a conflict between requirements of article XI and some existing trade restriction regimes. This issue is still pending within the

OPCW and need to be resolved for the full implementation of article XI.

2. Legal challenges

Some States Parties to the CWC are members of regional cooperation organisations which comprise also States that are non members of the OPCW. An example is the Southern African Development Community (SADC). The Member States are Angola, Botswana, the Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe. Angola is currently not Party to the CWC. One of the objectives of the SADC is to achieve regional integration. That means that no restrictions should exist in economical exchanges within the community. In terms of trade of chemicals, and regarding the requirements of the CWC, this situation could result in legal difficulties arising from possibly conflicting norms, until Angola becomes member of the OPCW.

3. Economical challenges

In the preamble to the CWC international cooperation is considered as a mean "to enhance the economic and technological development of all States Parties". This is a very ambitious goal, regarding the immense needs in developing States Parties or States Parties with economies in transition. However the financial resources that the States Parties place at the disposal of the Technical Secretariat are cruelly disproportionate compared to this noble ambition. As the Director General stated at the sixth Conference of States Parties "a 6% share for international cooperation and assistance programmes in the OPCW budget is singularly inadequate". In order to achieve the important objectives of article XI, the States Parties need to consider the possibility of a serious enhance of the budget for international cooperation programmes.

4. Technical challenges

One of the objectives of international cooperation is the exchange of chemicals, equipment and scientific and technical information. To be fully profitable a minimum of scientific and technical infrastructures are needed. Sometimes these requirements are not fulfilled and then specific actions should be taken to overcome the difficulties. For example when transferring equipment the problems related to maintenance and spare parts should be first addressed.

III. Implementing the OPCW international cooperation programs: Experience of Burkina Faso

Burkina Faso has benefited from many “current” international cooperation programs: Equipment transfer program, Associate program, Conference support, support for research projects, Laboratory assistance, Analytical skills development course. The beneficiaries of these programs have been:

- 1 Research laboratories
- 2 University departments
- 3 Individuals (professionals, experts, students, etc)

In addition Burkina Faso has benefited from other “special projects”. The beneficiary institutions have been the National Authority and other governmental agencies involved in the national implementation of the CWC.

III.1 General international cooperation programs

5. Equipment transfer program

4 Description

Under the Programme, the OPCW Technical Secretariat supports the voluntary transfer of laboratory equipment, which must be in good working condition, from institutions in developed countries to institutions in other countries.

5 National experience

In 2003 a research laboratory from the University of Ouagadougou (Burkina Faso) was granted an important amount of analytical instruments by the University of Karlsruhe (Germany). All equipment was in quite good working condition. However there was a difficulty to support the financial cost of the transfer of the donated equipment. These costs have been supported by the OPCW Technical Secretariat under the Equipment transfer program.

The availability of the equipment at the University of Ouagadougou had a great impact on research and also training. For example, every year 2 or 3 graduate students are using this equipment for preparing their “Diplome d’Etudes Approfondies” diploma.

6 Lessons learned

Despite the fact this program seems to be not very popular it can yield very appreciable results under certain conditions. The most important one is that the equipment should be still functioning, in good condition and correspond to a concrete needs and research or training activities running in the receiving institution. It seems that the most effective scenario for this program is that it is triggered by individual contacts between scientists from laboratories in developed and developing countries respectively. This program could be "embedded" in a more extensive cooperation programs. For example one can imagine a joint-research program between a laboratory from a developed country and a laboratory from developing country with a provision that some equipment would be transferred to the developing country at the end of the project.

6. Associate program

- Description

The Associate Program has been designed with the aim of contributing to the development of chemistry and chemical engineering, with emphasis on chemical safety, in Member States. Targeting scientists and engineers from developing countries and countries with economies in transition, it provides a valuable opportunity to be exposed to advanced industrial practices. The Programme specifically includes a training course at a University in an industrialized country and a three-week attachment with modern chemical industry in these countries.

- National experience

So far two senior scientists from Burkina Faso participated in the Associate program, respectively in 2003 and 2005. The first one is an academic and the other is a chemist working in a national institution dealing with geological activities.

- Lessons learned

This program actually produces valuable results. It is a good way of disseminating awareness of the convention and its ethic values within the scientific community in benefiting countries. In Burkina Faso the trainee collaborates with the National Authority; the objective of enhancing the capacities of National Authorities in terms of trained manpower has been reached. The program gives also to Chemists from academic or other background the opportunity to better know the world of chemical industry.

7. Conference support program

- Description

This Programme is aimed at providing financial support for organising conferences, workshops and seminars on special topics relevant to the Chemical Weapons Convention. Support is provided to institutions or recognised scientific organisations of the Member States. The objectives of the program are to enable scientists and engineers and other technical personnel who are citizens of Member States whose economies are developing to participate as resource persons or otherwise in international conferences, seminars or workshops in fields related to the peaceful application of chemistry, and to enable similar scientific personnel from other Member States to attend, as resource persons, in such conferences, seminars or workshops.

- National experience

Many experts from Burkina Faso have been sponsored under this program to participate in various international meetings relevant for the object of the CWC and the peaceful application of Chemistry.

In addition the program co-sponsored the venue in Ouagadougou of an international workshop in 2005. The workshop was also financially supported by other international institutions: the Inter-Islamic Network on Water Resources Development and Management (INWRDAM), the Organization of Islamic Conference Committee on Scientific and Technological Cooperation (COMSTECH), the International Science Programme of the University of Uppsala (ISP).

The workshop was organised by a research institute of the University of Ouagadougou in collaboration with the International Foundation for Science (IFS). The scope of the workshop was: Pesticides and other organic pollutants in Africa: Monitoring and Mitigation. Approximately 70 experts coming from 9 countries in Africa and Europe participated in the workshop. One of the important outcomes of the workshop was the creation of the West African Network for the Chemical Analysis of Pesticides (WANCAP).

Under this program was also co-sponsored the venue in Ouagadougou the Third Biennial Food Science and Nutrition Network for Africa (FOSNNA) Conference in April 2007. The aims of this Conference were to identify means to make use of the available Food and Nutrition information as well as resources for the Economic Development of Africa, to disseminate knowledge on food and nutrition problems in Africa, to promote the safe use of chemical food preservatives in the food industry, to identify research capabilities and activities of member institutions and organizations in Africa and to promote nutritional and related health sciences research in Africa. The conference

specially addressed the issue of "Application of Chemistry in Food Science and Nutrition for improved food and nutrition in Africa".

- Lessons learned

One of the problems for scientists in developing countries is to keep their knowledge updated. This means that they should avoid being isolated from the rest of the international scientific community. The Conference Support program helps avoiding this isolation. It is a very useful component of the international Cooperation programs; it needs to be extended more.

8. Support for research projects

- Description

The OPCW Technical Secretariat supports small-scale research in Member States with developing economies for the development and promotion of scientific and technical knowledge in the field of chemistry for industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes which are relevant to the CWC.

- National experience

A researcher has been financially supported for a project on "variation in the biochemical composition of 50 indigenous sorghum varieties from Burkina Faso: relevance in food applications".

- Lessons learned

This project had good results. It led to the identification of sorghum varieties rich in bio-active compounds (antioxidants, biocatalyst, food additives, etc.). 8 publications were made in international scientific reviews such as Journal of agricultural and Food Chemistry, Analytical Biochemistry, Journal of the Science of Food and Agriculture and others.

This project contributed to the academic and professional promotion of the beneficiary.

9. Laboratory assistance Program

- Description

The aim of this program is to improve the technical competence of laboratories in developing countries and countries with economies in transition. The program targets analytical laboratories which have already

adequate infrastructure but which could benefit from an increased level of technical competence to promote economic and technological development, and laboratories which may wish to seek OPCW designation for off-site analysis of authentic samples.

In 2005 a Project on Laboratory Assistance was carried out in the framework of the implementation of the European Union Strategy against Proliferation of Weapons of Mass Destruction. The aim was to provide both essential analytical equipment and also related technical assistance, if required, to publicly-funded laboratories engaged in the area of application of chemistry for purposes not prohibited by the Convention.

- *National experience*

Under this project an academic laboratory in Burkina Faso was granted quite important analytical equipment including a basic bench-top gas chromatograph-mass spectrometer (GC-MS) equipped with a liquid injection system, chemical and electron impact ionisation, a data processing computer and software, and a standard mass spectra library. This powerful and up-to-date equipment will considerably enhance national technological capacities and capabilities in analytical chemistry. That will have positive effects on various aspects relevant for economic development, for example quality control for medicines, food, drinking water, pesticides, etc.

However, when implementing the project, some technical and administrative difficulties aroused. After the selection process, the beneficiary laboratory was due to set up all the technical requirements for the installation of the equipment by the provider. This installation was scheduled to be followed by training of the equipment operators. One of the requirements was the availability of helium, used in the equipment as carrier gas. Helium is difficult to find in Burkina Faso and needs a couple of months to be purchased. These difficulties resulted in a slight delay in the process of implementing the project. However the National Authority in cooperation with the OPCW Technical Secretariat took the necessary redressing measures to tackle the problem and finally the project was successfully concluded.

- *Lessons learned*

This experience illustrates the need to closely associate National Authorities in implementing international cooperation programs in the overall process. Crucial steps are the selection of the beneficiaries and ensuring that they meet all the requirements for a proper run of the project. National Authorities are on the terrain and could, in cooperation with The Technical secretariat, advise the beneficiaries.

Another crucial issue is the problem of spare parts. The technical environment in developing countries could make it difficult to find spare parts for sophisticated instruments. In order to make the projects sustainable it is

necessary that such deliveries of high-tech instruments be accompanied by a special provision on spare parts to be discussed with the instrument's provider.

10. Analytical skills development courses

- Description

The Technical Secretariat conducts analytical skills development courses, each for duration of two weeks, in specialised institutions every year. The course aims to facilitate analysis of chemicals related to the national implementation the Convention, enhance national capacities in the Member States by offering training in analytical chemistry to personnel from the industry, academic institutions, and government laboratories, facilitate the adoption of good laboratory practices and broaden the pool of manpower from which National Authorities and the Secretariat can draw in the future.

- National experience

So far two young professionals were trained under this project. One of them is working at the National Public Health Laboratory. This scientist was trained at a very skilled analytical laboratory, the Finnish Institute for Verification of the Chemical Weapons Convention (VERIFIN).

- Lessons learned

The training had appreciable impact on how the trainees are performing their duties. Improvements have been noticed.

The disadvantage of this program is that relatively small number of candidates per State Party can be trained. Therefore it would be interesting to consider trainings in the analytical chemistry field within the States Parties when possible.

III.2 “Special” projects

1. Project on equipment for National Authorities

- Description

In relation to a European Union joint action on supporting the OPCW's activities in the framework of implementing the European Union Strategy against Proliferation of Weapons of Mass Destruction, and to the Plan of action regarding the implementation of Article VII obligations, a project on equipment support to National Authorities has been implemented in 2005 by the OPCW Technical Secretariat. The objective of the project was to provide upon request to National Authorities with economies either developing or in transition office equipments.

- National experience

The National Authority of Burkina Faso received one new desk-top personal computer of standard configuration with accessories, including a printer and software. This equipment has been very useful and really helped the National Authority in his daily work.

- Lessons learned

The success of the CWC depends on the capacity of National Authorities to implement the convention. Therefore it is important to extend this project. One of the key tasks of the National Authority is to train all administrative bodies involved in the implementation of the CWC. In addition to the equipment already provided it would be desirable to launch a new project aiming to enhance the technical capacities of National Authorities to conduct training courses by providing them with basic audiovisual equipment including laptops and data show projectors.

2. Financial assistance under the EU joint action

- Description

As part of the Plan of action for the implementation of Article VII obligations and the decision adopted by the Conference of State Parties in November 2005 on follow-up of this Plan, the Council of the EU adopted a Joint Action on support for OPCW activities. This project included a pilot program to provide financial support to National Authorities for national-implementation activities.

- National experience

In 2007 The National Authority of Burkina Faso received funds to support its

activities, mainly training of all stakeholders involved in the implementation of the CWC.

- *Lessons learned*

In March 2007 The National Authority conducted a training course for its personnel with the contribution of a trainer from the National Authority of Algeria. Since the personnel are constantly changing, it is important to have these trainings regularly in order to keep the efficiency of the national Authority in performing its duties.

The program is still ongoing and others stakeholders will be trained.

IV. Summary

The current international cooperation programs meet to some extent the objectives put forth by the decision on article XI implementation taken at the tenth Conference of the States Parties.

This decision requests the Technical Secretariat to facilitate the provision of assistance with national capacity building in the field of chemical activities for peaceful purposes. Many programs such as Associate program and analytical skills development courses are responding to this requirement.

The second important point of the decision regards the attendance of by experts or trainees from States Parties at courses and workshops, and the organisation of international seminars in fields relevant to the convention; this point is also covered, for example by the Conference support program.

Another point of the decision is the need to foster cooperation between the OPCW and the chemical industry. One channel of such cooperation is the Associate program. However this point needs to be enhanced by developing a new programs aiming at establishing bridges between the academics in the State Parties and the industry world. This program could offer the possibility for academics to work for a period of time in industrial environment, and inversely for chemical engineers from the industry to acquire further skills at the Universities. Such interpenetration would have a good influence on the implementation of the CWC.

A new important dimension was introduced at the tenth Session of the Conference of States parties by the decision C-10/DEC.14. The international cooperation programs should "contribute to the development of the States Parties' capacities to implement the Convention ". This is an essential point because the force of a chain is that of its weakest link. Therefore it is crucial to help all States Parties to develop National authorities able to fully implement the Convention. This point is currently addressed by specific projects. It would be important that these projects "crystallize" into a sustainable international cooperation program.

V. Looking into the future

It is necessary that the Technical Secretariat put in place mechanisms to ensure that its international cooperation programs correspond to the actual needs of the receiving countries. Interactions with receiving institutions before, during and after implementation of programs are necessary to define precisely their specific needs and technical environments, to take additional corrective measures if necessary and to assess the results. This should be done in close cooperation with the National Authorities.

The different programs should not be carried out separately but should rather “bridge” between the programs, which would enhance the overall efficiency of the system. Depending on the specific situation flexible “packages” could be offered.

It is desirable to develop synergies with other international Organisations active in the field of chemistry, both at international and national levels. At international level the Technical Secretariat could cooperate with Organisations implementing Multilateral Environmental Agreements and other international mechanisms for global management of chemicals such as Strategic Approach to International Chemicals Management (SAICEM) or with other United Nations bodies specialized in capacity building, for example the United Nations Institute for Training and Research (UNITAR). At national level National Authorities to the CWC could cooperate with the focal points of such organisations. Even an integration of these structures within a National Authority for chemicals management would be a better solution.

CONCLUSION

An efficient international cooperation is a pre-requisite for the success of the CWC and for its universality. The current international cooperation programs implemented by the Technical secretariat constitute an important step on the way of achieving this goal. It is necessary to improve these programs by introducing a more flexible system capable to adapt to the specific local conditions.

References :

1. The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction.
2. Decision at the tenth Session of the Conference of States Parties: Decision C-10/DEC.14, 11 November 2005.
3. Note by the Technical Secretariat: S/172/2000, 13 March 2000.

4. Note by the Technical Secretariat: S/228/2000, 5 December 2000.
5. Note by the Technical Secretariat: S/289/2002, 14 January 2002.
6. Note by the Technical Secretariat: S/307/2002, 17 May 2002.
7. Note by the Technical Secretariat: S/328/2002, 19 December 2002.
8. Note by the Technical Secretariat: S/428/2005, 19 January 2005.
9. Note by the Technical Secretariat: S/459/2005, 21 January 2005.
10. Note by the Technical Secretariat: S/541/2006, 25 January 2006.
11. Note by the Technical Secretariat: S/601/2006, 14 November 2006.
12. Note by the Technical Secretariat: S/616/2007, 15 February 2007.