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Strategic Approach to International Chemicals Management

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Implementation of the Strategic Approach to International Chemicals Management: New and emerging policy issues

Submission for a nominated new emerging policy issue for proposed actions on endocrine disrupting chemicals

Note by the secretariat

The secretariat has the honour to circulate, for the information of participants, the submission of the nominated new emerging policy issue on international cooperation to build awareness and understanding and promote actions on endocrine disrupting chemicals, included in Annex 1 to this note. This submission has been reproduced as received and has not been formally edited.

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Annex 1

Questionnaire for Governments and organizations to nominate possible emerging policy issues for consideration by the International Conference on Chemicals Management at its third session	Strategic Approach to International Chemicals Management **SAICM – ICCM3 emerging Issues – UNEP Nomination EDP – November 2010, Rev Aug 2011** SAICM secretariat 11–13 chemin des Anémones CH-1219 Châtelaine, Geneva Switzerland Tel: 41 22 917 86 31 Fax: 41 22 797 34 60 E-mail: saicm@unep.org
Issue International cooperation to build awareness and understanding and promote actions on endocrine disrupting chemicals	**Submitter** DTIE / Chemicals United Nations Environment Programme International Environment House 11-13 Ch. des Anémones CH-1219 Châtelaine (GE) Switzerland Contact Person: Timothy Kasten, Head UNEP/DTIE Chemicals (Submission developed in cooperation with the World Health Organization**)**

State the problem

Chemical interferences with hormonal systems started to be more intensely discussed 15 years ago. At that time, however, there were several examples of how endocrine effects impacted wildlife and humans, but still the effects were rarely presented as hormonal effects. During the latter part of the 1990's numerous national reports and assessments were presented regarding endocrine effects and endocrine disrupting chemicals. A global assessment of the state-of-the-science was published in 2002 by IPCS. At that point it was clear that endocrine effects occurred in wildlife while effects in humans at low-level (population) exposure levels were much more uncertain and the mechanisms not well understood.

Endocrine effects are caused by a variety of chemicals with very different chemical structures and lead to a variety of effects and endocrine endpoints. These effects may be manifested at relatively low doses. The situation is further complicated by multi-chemical exposures with synergistic potential. The time of exposure may be critical, especially in developing foetuses - whether wildlife or humans.

Problems are accentuated by the fact that production and use of chemicals are increasing in developing countries where the risk management capacity is often limited. Furthermore, many products containing these chemicals can constitute a significant source of exposure and may also pose serious risks during recycling and disposal operations, in particular in countries that lack adequate risk management capacity. Only a small portion of all the anthropogenic chemicals and their metabolites currently in use have been adequately studied for their endocrine disruption potential.

The Global Plan of Action of SAICM also proposes to stakeholders some work areas and activities to address EDC related issues, including the development of action plans to address priority concerns in relation to groups with specific vulnerabilities; prioritization of assessment and related studies of groups of chemicals that pose an unreasonable risk for human health and the environment which might include chemicals adversely affecting the endocrine system; filling gaps in scientific knowledge such as gaps in understanding of endocrine disruptors and; harmonizing principles and methods for risk assessment (e.g.

for vulnerable groups) and specific toxicological endpoints (such as endocrine disruption and ecotoxicology) and for new tools.
Hence, there is a need to continue to improve how EDC characteristics are addressed in risk assessments and to support management decision making and prioritization with better scientific understanding. For this, the different EDC endpoints are being defined and improved risk assessment methodologies developed The problem is global although the issues can be different in different regions of the world. In developed countries the EDC issue is not well understood for all endpoints and although legislation has been or is being developed, more work is being done on risk assessment methodologies in order to support such legislative mechanisms. In developing countries and countries with economies in transition the EDC problems are much less studied and rarely addressed. An initiative at international level is therefore needed to help address these different issues regarding EDCs ensuring involvement and support to developing countries and countries with economies in transition.

Information that can be used to assess the nominated issue

(i) Magnitude of the problem and its impact on human health or the environment, taking into account vulnerable subpopulations and any toxicological and exposure data gaps; The issue is clearly global, there are already numerous chemicals identified as potential EDCs. These include chemicals widely used in consumer products such as flame-retardants, plasticizers, human care products, pesticides, pharmaceutical (human and veterinary) etcetera. Studies on EDC related effects are mainly available from OECD countries but some studies from developing regions have observed EDC effects in both humans and wildlife. Exposure to EDCs is hence of global concern, but some vulnerable sub-populations are at higher risks such as Northern Inuits due to their consumption of food with high fat content; others are those subjected to pesticide spraying and use while those in rapidly growing economies with increased production and use of pesticides, pharmaceuticals and of industrial chemicals are at risk as well. However, the most vulnerable group is children, and in particular the developing foetus that can be exposed via their mothers. Close to 300 body-foreign chemicals (i.e. substances that are not natural to the human body) have been demonstrated in the umbilical blood of new-borns in developed countries. Children are also more exposed than adults via food, food containers, toys and other products that they can put into their mouths.

(ii) Extent to which the issue is being addressed by other bodies, particularly at the international level, and how it is related to, complements or does not duplicate such work: WHO and UNEP are presently developing an update of the 2002 IPCS state of the science document with internationally recognized experts. The ongoing chemical assessment programmes of WHO include assessment of endocrine-active chemicals as well as development of risk assessment methodologies relevant to such chemicals. Activities are on-going in OECD countries and in particular the EU is analysing assessment and other needs for EDCs in relation to regulatory requirements. The US EPA is also undertaking a screening program on EDCs. The OECD test guidelines programme has and is developing test protocols for specific EDC endpoints and is also developing a guidance document on hazard identification. As approaches for addressing the EDC issue are still under development by different organizations and countries, an international initiative should help in raising the awareness about them and thereby facilitate understanding and harmonization between these and any new initiatives.

(iii)Existing knowledge and perceived gaps in understanding about the issue: Even though many endocrine active chemicals have been assessed, the majority of these compounds still need to be studied to understand their actions and confirm the need for control actions. A large number of chemicals are not yet at all tested or assessed for their endocrine disruptive activity.

(iv) Extent to which the issue is of a cross-cutting nature: This is a truly cross-cutting issue with the great variety of chemicals with potential ED action means that all sectors of chemical use are potentially affected. Furthermore, ED active chemicals may be included and present in all types of products from food packaging, cosmetics, and textiles to computers and construction materials. The issue of EDC is interdisciplinary requiring expertise from a variety of scientific disciplines including, but not limited to, environmental epidemiology, chemistry, medicine, biochemistry, eco-toxicology and statistics.

(v) Information on the anticipated deliverables from action on the issue.:

Greater visibility and policy engagement, in particular in non-OECD countries.
Greater coordination, consistency and synergies between different initiatives around the globe engaging actors from different sectors.
Improved capacity for assessing and managing risks from EDCs, in particular in developing countries.
Particular outputs would include: Expert guidance for risk identification and assessment; priority setting for research and for risk management / control actions; information exchange and networking from which scientists and policy makers in developing countries and countries with economies in transition could especially benefit, resulting in greater understanding of the EDC issues and of needs for priority actions.

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Describe the proposed cooperative action

With the objective of improving understanding among policy makers and other stakeholders of risks posed by EDCs to human health and the environment and promoting actions to reduce these risks, it is proposed that an international project on EDC be established to undertake the following by building on existing activities, in particular of OECD, UNEP and WHO including the update of the 2002 IPCS Global Assessment of the State-of-the-Science of EDCs:

i) provide up-to-date information and scientific expert advice to policy decision makers and others responsible for chemicals risk management, for the purpose of identifying or recommending potential measures that can contribute to reductions in exposures and / or effects from EDCs, *inter alia* through timely updates to the new IPCS document with the involvement of relevant expertise.

ii) raise awareness and facilitate information exchange and networking, *inter alia* through regional and sub-regional workshops / discussion forums and a dedicated website that links to relevant information sources.

iii) provide international support activities to build capacities in countries, in particular developing countries and countries with economies in transition, for assessing EDC issues in order to support decision making including prioritization of actions, e.g. through guidance and training tools / activities involving relevant expertise. .

iv) create an international network of scientists, risk managers and others that are particularly concerned with EDC issues to facilitate information exchange, discussion forums and mutual support in research and advice on translation of research results into control action.