

## DIOXIN AND FURAN INVENTORIES

### National and Regional Emissions of PCDD/PCDF

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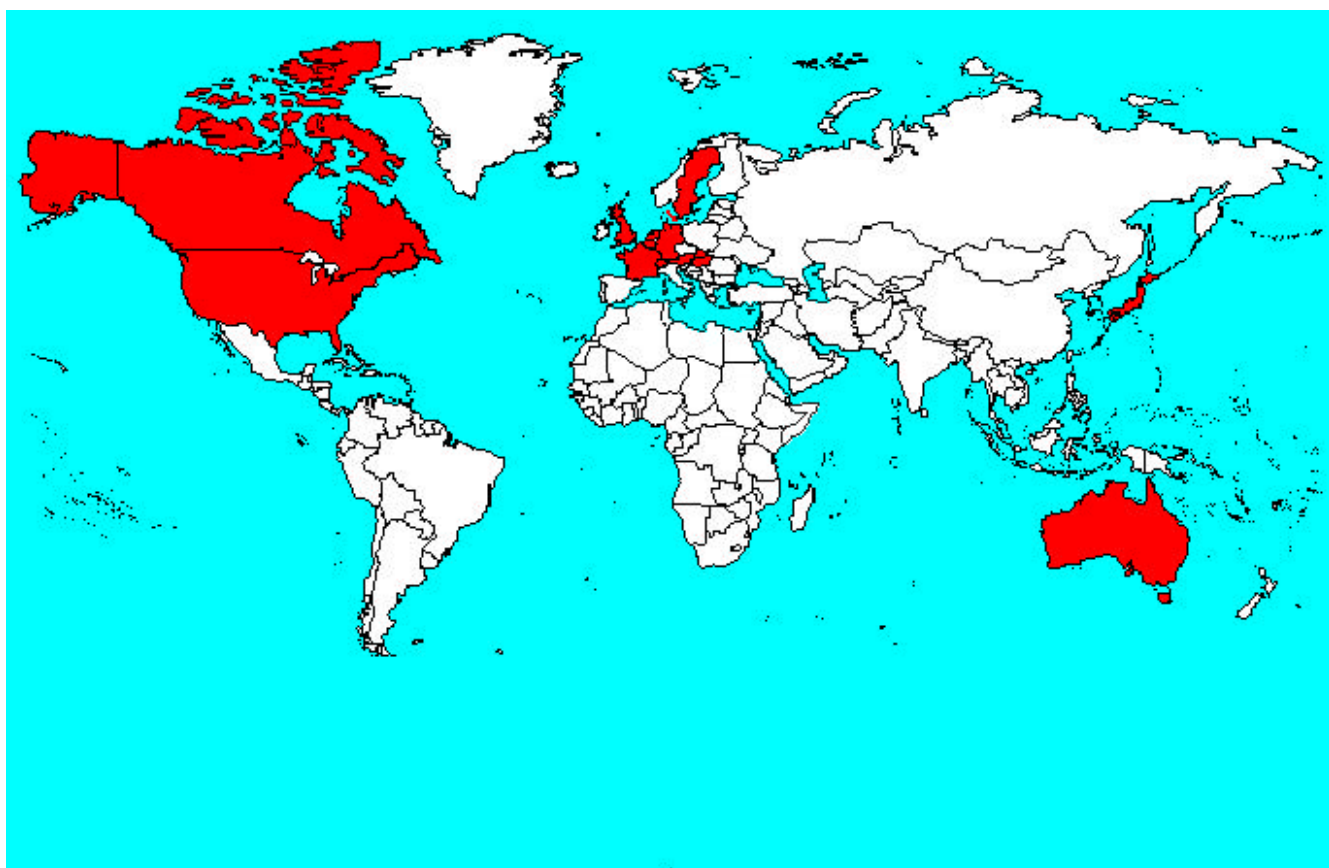


**UNITED NATIONS  
ENVIRONMENT PROGRAMME**



# **DIOXIN AND FURAN INVENTORIES**

National and Regional Emissions of PCDD/PCDF



**May 1999**

**Prepared by UNEP Chemicals  
Geneva, Switzerland**

**IOMC**

**INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS**  
A cooperative agreement among UNEP, ILO, FAO, WHO, UNIDO, UNITAR and OECD

The publication is intended to serve as the first guide on available dioxin and furan inventories established for countries or regions. The information contained in this report was taken from the published scientific literature, from government reports as well as from the Internet and through personal communication. While the information provided is believed to be accurate, UNEP disclaims any responsibility for possible inaccuracies or omissions and consequences which may flow from them. Neither UNEP nor any individual involved in the preparation of this report shall be liable for any injury, loss, damage or prejudice of any kind that may be caused by any persons who have acted based on their understanding of the information contained in this publication.

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*On the cover: The countries in red have established dioxin and furan inventories.*

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**UNEP CHEMICALS**

May 1999



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## Preface

In its decision 19/13 C of February 7, 1997 on Persistent Organic Pollutants (POPs), the Governing Council of UNEP requested the Executive Director of UNEP to convene an Intergovernmental Negotiating Committee with a mandate:

1. to prepare an international legally binding instrument for implementing international action on twelve specified POPs; and
2. to establish an expert group for the development of science-based criteria and a procedure for identifying additional POPs as candidates for future international action.

With this mandate to facilitate a convention on reduction and elimination of releases of POPs, UNEP Chemicals initiated several activities to help the countries to prepare for the negotiations of the convention. As one of these immediate actions, UNEP Chemicals will "...assist countries in the identification of national sources of dioxin and furan releases by promoting access to the information on available sources of these compounds...".

Polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans (PCDD/PCDF) are environmental contaminants detectable in almost all compartments of the global ecosystem in trace amounts. PCDD/PCDF have never been produced intentionally and have never served any useful purpose unlike other POPs, e.g. polychlorinated biphenyls (PCB) or DDT. PCDD/PCDF are formed as unwanted by-products in many industrial and combustion processes. Consequently, it is impossible eliminate dioxins and furans by prohibition of production and use. Indirect measures have to be taken to reduce the emissions of PCDD/PCDF into the environment and to minimize human exposure. Such work can be done successfully only if the sources of PCDD and PCDF are identified and quantified. Only then can technologies and measures be put in place to minimize or eliminate these sources.

Conducting inventories is an essential step in implementing an international instrument on POPs. Besides the fact that there is little information available regarding POPs produced as byproducts, technical assistance is needed for many developing countries to establish dioxin inventories. At the second session of the Intergovernmental Negotiating Committee for an International Legally Binding Instrument on POPs it was requested that the Secretariat gather and synthesize national inventory information.

Present knowledge about sources of PCDD and PCDF is based on experiences from a few industrialized countries of the Northern Hemisphere. This report is a first step towards filling the knowledge gap on existing dioxin and furan inventories. The report summarizes the information on releases of PCDD/PCDF from known sources available for far from the published scientific literature, from government reports, and based on personal communication.

UNEP is fully aware that further intensified efforts are needed to better identify and quantify sources of dioxin and furan emissions before a global dioxin inventory will be available. The information compiled here should help countries to establish their own dioxin inventories as asked in the decisions adopted by UNEP's Governing Council.

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United Nations Environment  
Program

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