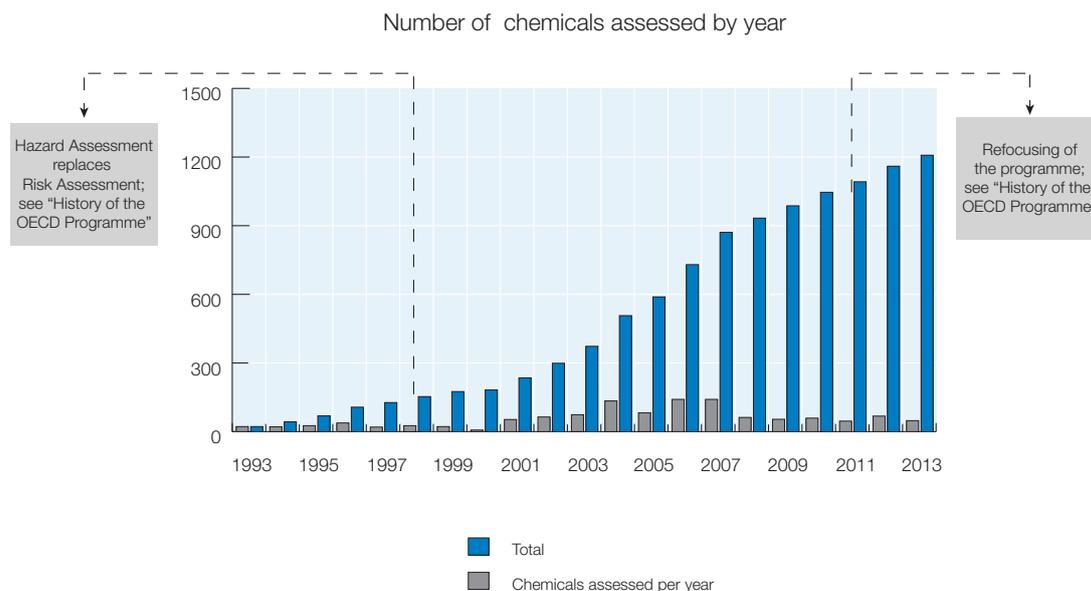


OECD has assessed the hazards of more than 1200 chemicals

OECD member countries sponsor the assessment of chemicals in the OECD Cooperative Chemicals Assessment Programme (CoCAP) in collaboration with the chemicals industry and non-governmental organisations (NGOs). OECD-wide conclusions on the human health and environmental hazards for these chemicals are made by consensus.



Agreed assessments are publicly available on the OECD Existing Chemicals Database website and are used by governments and industry for priority setting, risk assessment and other activities within national or regional chemical safety programmes.

www.oecd.org/env/hazard/data

The Programme:

- minimises duplication of work between member countries;
- increases the availability of internationally agreed assessments of chemicals;
- is a unique forum for member countries, industry and NGOs to exchange experiences in hazard assessment;
- provides a place to develop and apply novel methods for assessing the hazards of chemicals.

The International Council of Chemical Associations (ICCA) Initiative

In 1998, the global chemical industry, through the ICCA and in cooperation with OECD, launched the High Production Volume (HPV) Chemicals Initiative. Under this initiative, chemical companies producing HPV chemicals worked with OECD member countries to collect hazard information and prepare draft assessments for submission to the CoCAP. The ICCA initiative set a target of assessing 1000 HPV chemicals by 2013, an ambitious total that has almost been achieved with OECD assessments for about 921 chemicals finalised through this initiative. This bold initiative pre-empted the way chemicals legislation has changed in some OECD member countries, where responsibility for demonstrating chemical safety has shifted from regulatory authorities to the chemical industry.

The Screening Information Dataset (SIDS)

- The SIDS consists of endpoints on *chemical identity, quantity produced and use pattern, physico-chemical properties, environmental fate and behaviour, environmental toxicology, and mammalian toxicology*.
- Endpoints can be filled by new or existing test data, or alternative (non) testing approaches.
- The SIDS provided countries with a starting point to shape the data requirements of their future chemicals regulations. It struck a balance between a data package that is comprehensive enough for hazard assessment purposes on the one hand, but that is not too great a burden on resources for data generation on the other.

History of the OECD Programme

The Beginning

Through an OECD Council Decision in 1991 member countries agreed to share the burden of assessing existing chemicals, focusing on HPV chemicals. This was the start of the OECD HPV Chemicals Programme.

Member countries agreed on a minimum set of information needed for assessing HPV chemicals, called the Screening Information Dataset (SIDS; see text box). Initially, risk assessments were conducted. These assessments were undertaken for screening purposes to identify the need for further work, based on both hazard and exposure. Experts from member countries, industry and NGOs met formally twice a year to discuss and agree the assessments.

<http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=59&InstrumentPID=56&Lang=en&Book=False>

Screening-Level Hazard Assessments and the OECD Manual for the Assessment of Chemicals

Coinciding with the launch of the ICCA Initiative in 1998, the HPV Chemicals Programme underwent a major change in focus. This aimed to increase transparency, efficiency and productivity. The need for extensive exposure information and its evaluation was removed, with assessments focusing on the hazards of HPV chemicals. The OECD produced its Manual for the Assessment of Chemicals, a guide for authorities and industry to produce an assessment and, more generally, a compendium for best practice in hazard assessment.

<http://oecd.org/chemicalsafety/risk-assessment/manualfortheassessmentofchemicals.htm>

Programme Expansion

In recent years, comprehensive regulatory chemical assessment programmes have been implemented in many OECD countries. The programme therefore needed to change again to continue to benefit member countries. The Programme was renamed the OECD Cooperative Chemicals Assessment Programme (CoCAP) in 2011, reflecting major changes that included the assessment of lower tonnage chemicals, the promotion of integrated approaches to testing and assessment, and the introduction of targeted assessments.

<http://www.oecd.org/chemicalsafety/risk-assessment/oecdcooperativechemicalsassessmentprogramme.htm>

Integration with National/Regional Chemicals Legislation

The OECD hazard assessments are designed to benefit member countries and industry. Over the years integration with regulatory frameworks, like the EU REACH Regulation, the US HPV Chemicals Challenge Programme, the Japanese HPV Challenge Programme and the Canadian Challenge under the Chemicals Management Plan (under CEPA 1999), has been established to ensure that OECD agreed hazard assessments form the basis for member countries' priority setting exercises and classification activities.

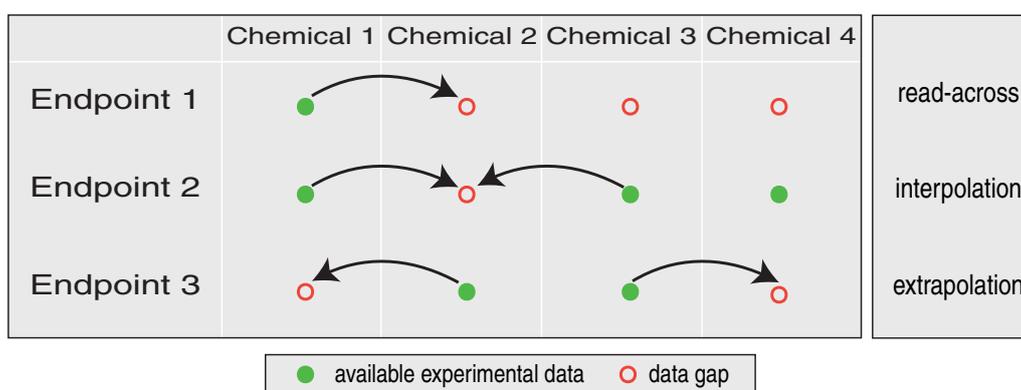
<http://www.oecd.org/chemicalsafety/risk-assessment/chapter1proceduresincludingtheuseofelectronicdiscussiongroupsandtheon-lineoecdexistingchemicalsdatabase.htm>

Highlights from the OECD Cooperative Chemicals Assessment Programme

Over the years the CoCAP has catalysed advances in assessment techniques and applications. OECD activities and products related to chemical safety that are indebted to the programme include techniques for predicting the hazards of chemicals, data storage and retrieval, and testing methods, amongst others.

Grouping Chemicals into Categories

Changes in chemical safety legislation in OECD countries in recent years have increased the need to assess more chemicals faster and more efficiently. For reasons of resource and animal welfare, more and more OECD stakeholders look for approaches that limit the number of animal tests that need to be conducted. One approach to address both these needs is to assess chemicals whose properties are likely to be similar or follow a regular pattern as a group rather than on an individual basis. Data for one or more chemicals can be “read across” to fill data gaps for other chemicals in the group (or category).



In this way, all chemicals in the category can be assessed even though data are not available for all category members. In 2007, the OECD published guidance on the grouping of chemicals into categories for assessment. The guidance is being updated and is expected to be published in 2013.

Of all the chemicals assessed in the CoCAP, over half are members of category assessments.

<http://oecd.org/env/ehs/risk-assessment/groupingofchemicalschemicalcategoriesandread-across.htm>

Computational Predictive Techniques – the OECD QSAR Toolbox

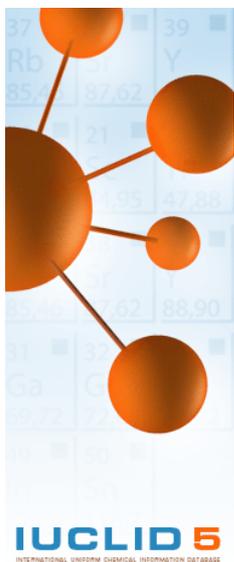
The use of (Quantitative) Structure-Activity Relationships [(Q)SAR; mathematically-based techniques to predict chemical properties from molecular structure] to fill data gaps or support measured data in assessments dramatically increased over the years in the CoCAP. In 2006 the OECD QSAR Toolbox project was launched. Seven years and three versions later, the Toolbox has been a runaway success and is seen by many as the computational tool of choice for forming chemical categories and filling data gaps as part of an intelligent, iterative process.

<http://www.oecd.org/chemicalsafety/testing/oecdquantitativestructure-activityrelationshipsprojectqsars.htm>

QSAR TOOLBOX

The OECD QSAR Toolbox
for Grouping Chemicals
into Categories

OECD SIDS, IUCLID and Harmonised Templates - A Common System for Collating and Storing Data



The Programme pioneered the use of a common format to collect and store chemical data in a systematic way. This included the concept of Robust Study Summaries (RSS), designed to document test results for assessment purposes, and led to the creation of OECD harmonised templates as an electronic format for RSS. The International Uniform Chemicals Information Database (IUCLID), a system for collating and storing chemical information that is now owned by the European Chemicals Agency (ECHA), was the recommended tool for the HPV Chemicals Programme and now implements the OECD harmonised templates. The IUCLID software has been dramatically developed over the years, with improvements to its user interface and capabilities keeping pace with IT innovation and the needs of countries, thanks to ECHA. In its latest form, in many member countries IUCLID is the regulatory chemical data storage and exchange format of choice.

<http://www.oecd.org/env/ehs/risk-assessment/electronictoolsfordatasubmissionevaluationandexchangeintheoecdcooperativechemicalsassessmentprogramme.htm>

The Future of the Cooperative Chemicals Assessment Programme

Against the background of recently developed national and regional comprehensive regulatory chemical assessment programmes and diminishing resources in many member countries, the preparation and agreement of OECD-wide agreed assessments has become less relevant for countries. This means that the CoCAP again needs to change.

The focus of the programme will move from assessing the hazards of sponsored chemicals to more specialised activities in the area of chemical hazard assessment. Discussions are ongoing on these activities and how they will be instigated, but they are likely to include increased activities on the in-depth assessment of priority chemicals, case studies on classification and labelling, the application of novel in vitro test methods and novel non-testing approaches, and the assessment of chemicals used in emerging technologies that are important for member countries.

www.oecd.org/env/hazard

All OECD outputs concerning chemical safety and related topics (Test Guidelines, Guidance Documents, Reports, Databases, Software etc.) are available for downloading free of charge on the OECD website.

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