

# JOIN NOW THE NEW COMMUNITY OF PRACTICE ON CHEMICALS AND THE SUSTAINABLE DEVELOPMENT GOALS

Organized by the SAICM Secretariat and the University of Cape Town



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## Discussion 1 Digest

### Topic of Discussion: Chemicals and Biodiversity

This discussion focussed on the relationships and opportunities between the chemicals and biodiversity agendas, from a substantive and policy perspective. Whether from plastic or nutrient pollution in the waterways and oceans, unsound use and disposal of pesticides, or the contamination by heavy metals or medical and veterinary chemicals in the environment, the unsafe use of chemicals is resulting in pollution from a range of sources that is now one of the most important drivers of the loss and degradation of biodiversity around the world. At the same time, functioning ecosystems with healthy biodiversity can play a role in detoxifying the human environment, whether from trees reducing air pollution in urban areas, wetlands cleaning water, or through the processes that decompose waste through bioremediation of biodegradable compounds. However, these substantive relationships are not reflected in the current siloed approaches to the policy landscape for chemicals and biodiversity. At the international level, “clusters” of multilateral mechanisms focused on biodiversity and chemicals work in relative isolation. Both clusters are currently considering priorities and strategies for the “post-2020” period, and this provides an opportunity for strengthening synergy between the biodiversity and chemicals communities. The objective of this discussion was to discuss and develop appreciation for the various opportunities for synergy between the chemicals and biodiversity substantive and policy agendas.

#### ABOUT THE PRESENTER



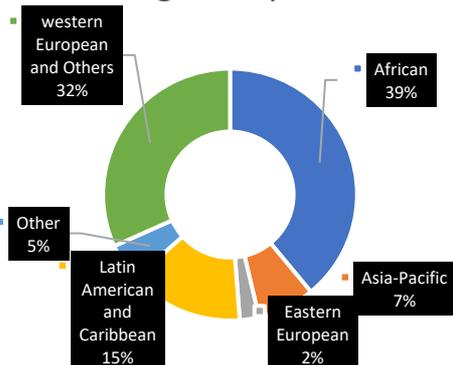
**Neville Ash** is Director of the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), the specialist biodiversity Centre of UNEP, based in Cambridge, UK. He has a strong engagement in the development of the “post-2020 global biodiversity framework”, and wider UN system work on biodiversity. Prior to this he spent 6 years in Kenya, as Deputy Director of UNEP’s Division of Environmental Policy Implementation, and leading UNEP’s work on biodiversity and ecosystem services, during which time Neville led the process to establish the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). Previously he was Head of IUCN’s Ecosystem Management Programme, promoting nature-based solutions to climate change and disaster risk reduction, and Head of Ecosystem Assessment at UNEP-WCMC, when he played a key role in the Millennium Ecosystem Assessment. He has worked with a range of regional and international assessment and policy processes.

#### DISCUSSION 1 ATTENDANCE BREAKDOWN

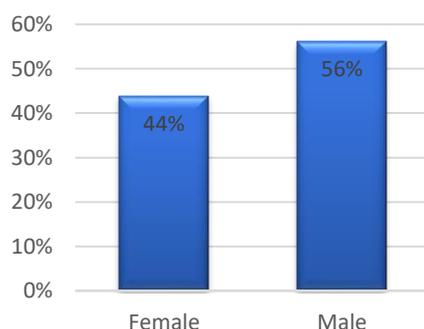
TOTAL ATTENDEES FOR DISCUSSION 1: 35

Key: IGO – Intergovernmental organisation; NGO – Non-governmental organisation

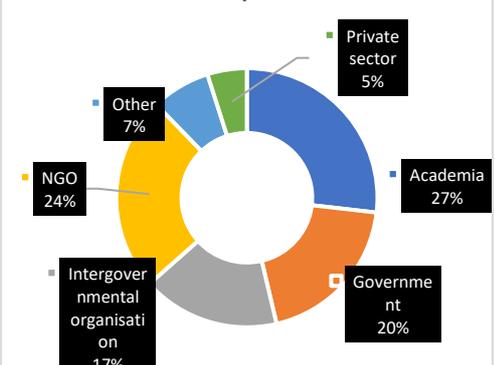
#### Region Representation



#### Gender Representation



#### Sector Representation



# Chemicals and SDGs Community of Practice Discussion 1

## Summary and looking ahead

1. **Pesticides were identified as an area where greater collaboration with the biodiversity community would be beneficial during the Beyond 2020 discussions.** It was highlighted that there is a **need to promote good practice and reducing the use of toxic chemicals**, especially those that have a risk to be released into the environment. Participants illustrated cases where chemicals are banned but still used globally, impacting on biodiversity.

Participants highlighted the **need to strengthen research collaboration and dialogue between the chemical and biodiversity communities**. Furthermore, **there was a call for national focal points to promote this engagement nationally**, National focal points for the Convention on Biological Diversity can be found at: <https://www.cbd.int/countries/nfp/>. National SAICM focal points can be accessed at: <http://www.saicm.org/implementation/FocalPoints/tabid/5461/Default.aspx>

2. It is anticipated that both the chemical and biodiversity **post-2020 strategies will include a series of global targets and indicators**. These will form the basis for any national reporting and for monitoring progress made at the global level. Additionally, it will help to strengthen the discussion and dialogue at the national level for the delivery and implementation of the global frameworks. Although these are global frameworks, they must be delivered on the national and local level. A starting point is to question to what extent are biodiversity-related discussions happening within national and other chemical planning processes, and chemical-related discussions happening within biodiversity processes as a part of the development of the post-2020 frameworks – and how might these be strengthened? Connecting biodiversity and SAICM focal points at the national level would be particularly beneficial.

Given the **biodiversity community is negotiating a target linked to pollution** (the current focus is plastics, nutrients, pesticides), this will become a part of the biodiversity focal points' responsibility to encompass these issues. However, what focal points can benefit from is support in the form of information and discussion with the chemical's community's focal point.

There are **many sources of information that can be shared to support the development of the post-2020 global biodiversity framework and the post-2020 chemicals agenda**. Sharing of information can raise awareness and improve literacy in the two communities. A lot of what is needed is mainstreaming the two communities in policy across different ministries to avoid them being addressed as silo communities.

3. **There is a depth of substantive knowledge and policy opportunities to strengthen the connection and dialogue of the chemical and biodiversity communities**, in all levels and disciplines. Proactive efforts from both communities will be required to ensure these connections are made. **Both communities need to understand the challenges and work across disciplines and sectors.**

## ANNEX

### DETAILED SUMMARY OF DISCUSSION 1

#### THE DISCUSSION WAS STRUCTURED AROUND THREE QUESTIONS AND THE KEY DISCUSSION INPUTS FROM PARTICIPANTS ARE PRESENTED UNDER EACH:

##### Q1. What do you think are the most important substantive relationships between chemicals and biodiversity that might benefit from greater collaboration between these sectors?

<b>NGO</b>	<ul style="list-style-type: none"><li>➤ There is interesting and important work linking the effects of chemicals mixtures to ecosystems diversity, ecosystem function and ultimately ecosystem services.</li><li>➤ The most important thing is to prioritize biodiversity assessment and monitoring, thereafter, actions and decisions can be made.</li></ul>
<b>ACADEMIA</b>	<ul style="list-style-type: none"><li>➤ Life cycle vision of chemical and contribution to ecosystem services vision is both holistic vision and multi-actor.</li><li>➤ Key is to bring the biodiversity discussion (particularly ecosystem services) into the platforms where chemicals management are discussed.</li><li>➤ Prioritization should be given to the impact chemicals have on pollinators.</li><li>➤ In South Africa, there is a multi-stakeholder team on chemicals management.</li><li>➤ Awareness-raising is necessary but not sufficient. Lab-scale and field research on the link between chemicals and loss of biodiversity is necessary. Bioremediation is essential but chemicals could negatively impact biodiversity and further its efficiency.</li><li>➤ There are many mechanisms for the effects of toxic compounds on living organisms. Effects on the nervous system for most toxic compounds and unfortunately nervous systems are common between human being and e.g., insects. We studied the effects of toxic compounds including pesticides (as a general term for all) on detoxification enzymes of insects and mammals particularly on Cytochrome-P450s, etc.</li></ul>
<b>IGO</b>	<ul style="list-style-type: none"><li>➤ Raise awareness of environmentalists to the biodiversity area as they often do not have knowledge of chemicals.</li></ul>
<b>GOVERNMENT</b>	<ul style="list-style-type: none"><li>➤ Joint monitoring of chemicals by all relevant stakeholders is key. In Sierra Leone, there are many players in the chemicals trade with no central command. Therefore, strengthen the mandate of EPA by capacity building and communicate to other players through engagement will be crucial.</li></ul>
<b>PRESENTER</b>	<ul style="list-style-type: none"><li>➤ Anyone can search on the IUCN Red List to find out about species in your country/region that might be threatened by pollution - see the filtering options on the left-hand side here: <a href="https://www.iucnredlist.org/search">https://www.iucnredlist.org/search</a></li></ul>

*Throughout the discussion, informal polls were conducted to help encourage discussion among the participants. They do not provide any representative data.*

#### Poll 1 Results (N=17)

##### **What is the most important opportunity for collaboration between the biodiversity and chemicals communities in your country/region?**

1. Life cycle vision of chemical and contribution to eco-system services vision is both holistic vision and multi-actor.
2. Scientific research on the links between chemicals extinction of species.
3. Management of pesticides and their impact on land and water ecosystems.
4. Impact of chemicals, particularly pesticides on pollinators and further explore their importance for food security.
5. Reduction in hazardous effects of the chemicals.
6. The link between biodiversity and chemicals cannot be investigated without considering chemical mixtures, i.e., by only considering individual chemical pollutants.
7. Avoidance of pollution. Restriction of pesticides and herbicides. Endocrine disruptors and micro contaminants on water.
8. To highlight natural solutions and traditional and indigenous knowledge.
9. To enhance the dialogue among sectors that make use of biodiversity and the government agencies in charge of its conservation.
10. Dialogues between the two-sector communities. Aim a goal and work towards the goal.
11. Biodiversity is essential for bioremediation. Then, research on monitoring of biodiversity in the function of chemicals through a pilot project in lab and field could be investigated.

### Poll 2 Results (N=1)

#### What are the barriers to enhanced collaboration?

1. Too much specialization results in many groups working in their silos.
2. Lack of financial resources to support collaboration.
3. Different opinions on and uses of biodiversity resources.
4. Different national or community interest.

### Poll 3 Results (N=17)

#### What is the most important opportunity for collaboration between the biodiversity and chemicals communities in your country/region?

1. Reduction in the use of chemical pesticides and increase in agroecology and other gaps.
2. It is commonly seen as a separate agenda, both chemicals and biodiversity, and work is done without considering each other. Both agenda can work together in joint actions. One of the issues can be ecotoxicology and pollutants intake in biota.
3. Prevent pollution that causes unacceptable effects on the environment.
4. Strengthened scientific research providing evidence-based information to all relevant stakeholders (including governments, the private sector) on the links (and risks) between chemicals and biodiversity loss.
5. Studies are going in many academic systems here as well as in research institutes about these issues in Iran. I did myself for many years doing this using replicated bioassays and analysis by computer programs that we developed in Guelph, Ont.
6. Exchange knowledge and skills. Now those who deal with biodiversity lack knowledge on chemicals and those dealing with chemicals lack knowledge on biodiversity. There is a disconnect between the two groups.

## Q2. What are the opportunities to better align the post-2020 global biodiversity framework and the post-2020 chemicals agenda?

- |                   |   |
|-------------------|---|
| <b>NGO</b>        | <ul style="list-style-type: none"><li>➤ To better align the two communities, a similar structure of strategic objectives, targets and indicators would be helpful.</li><li>➤ There is an urgent need for the creation of a science-policy interface for chemicals under SAICM to be coordinated with IPCC and IPBES, prepare reports on the interfaces between chemicals, climate, and biodiversity issues.</li><li>➤ Make SAICM or the following agreement legally binding instead of only voluntary, and it should include chemical minimal standards.</li><li>➤ As the Substances of Concern are addressed under SAICM, similarly the biodiversity issues could also be addressed.</li><li>➤ Continue the discussion of this session in a formalized working group with people from both the chemicals and the biodiversity communities, to define common issues and positions that can then be reintroduced to the respective communities. I am not aware that such a transversal group for exchanges exists now.</li></ul>   |
| <b>ACADEMIA</b>   | <ul style="list-style-type: none"><li>➤ Scientist can play key actors in merging these two political agendas post-2020 - the science-policy interface will improve.</li><li>➤ For both communities to be part of the mainstream conversations, the first step would be to increase the information about the existing inter-relationships between them.</li><li>➤ It is difficult at the international level that the two institutions work together. However, to achieve the best results close collaboration of the focal point of two conventions will bring a solution to crucial negative impacts of chemical on biodiversity.</li><li>➤ Collaboration could start - between focal points - unless they are the same department/ministry or person.</li><li>➤ We are losing fast many species of insect due to unregulated use of pesticides (as a general term for all pest control agents) and related species like birds that feed on insects.</li><li>➤ It is difficult at the international level that the two institutions work together. However, to achieve the best results close collaboration of the focal point of two conventions will bring a solution to crucial negative impacts of chemical on biodiversity.</li><li>➤ As an academic teaching and convening programmes on chemicals and pesticide management, we need to bring in the biodiversity convention more when discussing chemical conventions and other instruments.</li><li>➤ Cooperation on aquatic toxicology issues like bioaccumulation, bioconcentration, biomagnification, etc. due to hundreds of toxic compounds now in water from microplastics is needed.</li></ul> |
| <b>GOVERNMENT</b> | <ul style="list-style-type: none"><li>➤ Nationally, public-private partnerships between government institutions and chemical companies will help the achievement of the post-2021 chemicals agenda.</li></ul>   |

**PRESENTER** ➤ Almost certainly there will be a **negotiating of quantifying of targets on a global level to reduce pollution.**

**Poll 4 Results (N=10)**

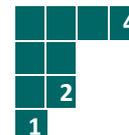
**Have you provided input to date into the development of these future strategies?**

**Both**

**The strategic approach for the sound management of chemicals and waste beyond 2020**

**Neither**

**Post-2020 global biodiversity framework**



**Poll 5 Results (N=6)**

**What are the barriers to enhanced collaboration?**

1. Make the respective issues part of the focal points responsibilities.
2. The opportunity is limited because the post-2020 framework did not recognize chemicals as a stand-alone issue of concern. Chemicals are mentioned as a cross-cutting issue here and there. I do not think the framework can deliver on these issues.
3. Commonly established environmental standards, pollution monitoring frameworks and collaborative action to manage pollution preventing unacceptable risks to the environment.
4. a great opportunity can be on the effects that chemical without management and waste are producing. However, synergies are not easy to create (Who will take lead? sharing responsibilities?) How can post 2020 agenda support it? (e.g., Canada example)
5. Maybe continue the discussion of this session in a formalized working group with people from both the chemicals and the biodiversity communities, to define common issues and positions that can then be reintroduced to the respective communities.
6. Indeed, we need more cooperation and coordination considering many conventions, etc. involved.

**Q3. How can we further accelerate the sound management of chemicals and waste by strengthening linkages to other relevant frameworks?**

**ACADEMIA**

- Awareness in LMICs.
- Chemical and ecosystem services are improving our lives and human well-being. However, both have can also negative effects (i.e., pollution or de-services). Ecosystem Services assessment or the more recent approach on Nature's Contribution to people (NCP) can help to improve communications because it is very intuitive.
- NCP further highlights the diversity in the perception of nature and its contribution – similarly, it is happening in the chemical community.
- Strengthened communication can begin recognizing issues related to each area by policymakers and stakeholders.
- The effects of chemicals on biodiversity are going into depth to prevent basic life processes like speciation.
- Concerningly, speciation is stopping, which means no more new species and began since Precambrian Era and now interrupted.
- In aquatic toxicology, we need to consider the possibilities of synergistic effects now between thousands of chemicals and their metabolites.
- When we deal with the chemical mixture and cumulative/synergistic effect then we should expect big possible effects.

**NGO**

- Joint information material, social media campaigns and underlining in communication that pollution is the third pillar of global environmental problems (climate change, biodiversity, and pollution).
- The problem is that conservation activists often do not know much about chemicals issues and chemical specialists have limited knowledge on species conservation issues. Clarification on their respective viewpoints/focus and explaining them to each other would be the first step.
- It is necessary to involve all stakeholders. Natural leaders and traditional leaders are cardinal in customary change attitude. This the largest in communities as they cover the rural part of countries, especially in LMICs.
- The problem is not just toxic chemicals but, the huge material flows from the extraction of raw materials including biobased materials and the waste generated, as well as the ubiquitous dispersal of even nontoxic residues such as plastics which is one of the main threats to biodiversity.

- IGO** ➤ It is vital to carry the government along through policy brief to bridge the gap created by the political barrier.
- PRESENTER** ➤ <https://saicmknowledge.org/library/biodiversity-danger-poor-management-chemicals-and-waste>.

#### Poll 6 Results (N=9)

**When was the last time you read a headline about chemicals management in the mainstream media? What was it?**

1. I do not remember it happens rarely.
2. About pollutions
3. In our TV in Iran there were some good show but only about effects of those corporations on human and nothing yet for effects on wildlife, etc.
4. Headlines are usually pointing to the lack of chemicals management - children killed from lethal pest control or surgical masks strangling marine life.
5. Frequently we hear about chemicals to spread fear instead of instructing on safe and responsible use.
6. Nitrogen and CO2 emissions get headlines on a regular basis. Other chemicals limited, mostly on incidents.
7. Very rare, happens mostly after some scandal or contamination accident has happened. Even the mass death of salmon in North America due to 6PPD was only on the back pages of newspapers, if at all.
8. Recently on the management of HHPs
9. Not recently- very rare

#### Poll 7 Results (N=6)

**When was the last time you read a headline about biodiversity in the mainstream media? What was it?**

1. In the mainstream local media, it rarely happens and when it happens it is about a meeting or about an incident.
2. Very rare, only in cases of severe scandals and massive contaminations. But even the mass death of Pacific Salmon in USA due to 6PPD was only on the back pages, not front-page headlines.
3. Bee deaths; micro-plastics, etc
4. There are always good programs on wildlife on our TV in Iran fortunately!
5. Information on biodiversity is more often communicated than chemical. Often chemical is announced when there is major disaster accident.... (so, they are less....)
6. During the beginning of the pandemic last year, "nature is healing" was a big slogan and discussed controversially in the media.

#### Poll 8 Results (N=11)

**What is the headline on chemicals and biodiversity that you would write if you were offered the front page of a national paper?**

1. Our life is important because we are connected. we are the drivers to improve our health and nature by improving chemical used.
2. Now chemicals/ pesticides and recently biocides are found in every corner of this planet!
3. Planetary Health! What is your role when using chemicals on human health and the environment?
4. The poisoning of the biosphere endangers the very survival not only of insects, fish and rare animals and plants, but the very survival of our own species. Will only resistant pests and weeds survive us?
5. Resource extraction, increasingly faster material flows and growing mountains of waste and material residues widely dispersed are suffocating life on the planet.
6. Chemicals are essential but using chemicals without life cycle approach is destructive for future generations.
7. Resource extraction, increasingly faster material flows and growing mountains of waste and material residues widely dispersed are suffocating life on the planet.
8. Know what biodiversity you have and how chemicals can cause harm to them.
9. Nature and chemicals we need them both. To save them we need to use chemicals responsibly.
10. There is no healthy and chemical safe planet without gender equality.
11. Sound management of chemicals is one of the key factors that will ensure a biodiverse planet.

#### **Helpful resources:**

- Section 2.1.15 of the IPBES Global Assessment, on pollution as a driver of biodiversity loss. See pp 112-118 available at [https://ipbes.net/sites/default/files/ipbes\\_global\\_assessment\\_chapter\\_2\\_1\\_drivers\\_unedited\\_31may.pdf](https://ipbes.net/sites/default/files/ipbes_global_assessment_chapter_2_1_drivers_unedited_31may.pdf)
- Section 7.1 and 7.2 of the Global Chemicals Outlook. See pp145-150 available at [www.unep.org/explore-topics/chemicals-waste/what-we-do/policy-and-governance/global-chemicals-outlook](http://www.unep.org/explore-topics/chemicals-waste/what-we-do/policy-and-governance/global-chemicals-outlook)
- Planting Healthy Air [www.nature.org/content/dam/tnc/nature/en/documents/20160825\\_PHA\\_Report\\_Final.pdf](http://www.nature.org/content/dam/tnc/nature/en/documents/20160825_PHA_Report_Final.pdf)
- Bioremediation – an overview [www.icontrolpollution.com/articles/bioremediation-an-overview-161-168.pdf](http://www.icontrolpollution.com/articles/bioremediation-an-overview-161-168.pdf) CBD zero draft of the post-2020 global biodiversity framework <https://www.cbd.int/article/zero-draft-update-august-2020>
- SAICM Compilation of recommendations for the Strategic Approach and sound management of chemicals and waste beyond 2020 [http://www.saicm.org/Portals/12/documents/meetings/IP4/Docs/SAICM\\_IP4\\_2\\_compilation-recommendations-SAICM-consideration-ICCM5.pdf](http://www.saicm.org/Portals/12/documents/meetings/IP4/Docs/SAICM_IP4_2_compilation-recommendations-SAICM-consideration-ICCM5.pdf)
- [Mobilizing the chemicals conventions to protected biodiversity issues brief www.iodri.org/en/publications-and-events/issue-brief/mobilising-chemical-conventions-protect-biodiversity](http://www.iodri.org/en/publications-and-events/issue-brief/mobilising-chemical-conventions-protect-biodiversity) Understanding the challenges of communicating about biodiversity [https://issuu.com/inbo/docs/communicating\\_biodiversity](https://issuu.com/inbo/docs/communicating_biodiversity)
- Section 2.1 “Chemicals in our daily lives”. See pp12-18 of UN Environment Management Group report available at [https://sustainabledevelopment.un.org/content/documents/2334chemical\\_report.pdf](https://sustainabledevelopment.un.org/content/documents/2334chemical_report.pdf)

**CSDGs CoP:** The Secretariat of the Strategic Approach to International Chemicals Management (SAICM) and the Environmental Health Division at the University of Cape Town (UCT) created this Community of Practice (CoP) to foster online discussions and address key issues on Chemicals and SDGs (CSDGs) among stakeholders from governments, international organizations, industry, academia and civil society.

This CoP is contributing to the SAICM/GEF project on Emerging Chemicals Policy Issues Knowledge Management Component. This activity is supported by the Global Environment Facility (GEF) project ID: 9771 on *Global Best Practices on Emerging Chemical Policy Issues of Concern under the Strategic Approach to International Chemicals Management (SAICM)*.

If you have any question or require clarification on this initiative, please contact the SAICM Secretariat at [saicm.chemicals@un.org](mailto:saicm.chemicals@un.org) or UCT at [uctcops@outlook.com](mailto:uctcops@outlook.com).

Join the CSDGs CoP at: <https://saicmknowledge.org/community>

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