THE POTENTIAL KEY ROLE OF **SAICM NATIONAL FOCAL POINTS IN REDUCING HARM FROM HIGHLY HAZARDOUS PESTICIDES (HHPs)**

Factsheet 2022

What **Strategic Approach to International Chemicals Management (SAICM)** National Focal Points need to know and do about highly hazardous pesticides.

saicm

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1. PURPOSE OF THE FACTSHEET

Pesticides are substances or mixtures used for the management of pests[1] to protect humans, plants, crops, animals or materials. **Highly hazardous pesticides (HHPs)** are a special group of pesticides that need to be handled differently than other pesticides because of their proven high toxicity or listing on an international convention. Risks from exposures to pesticides are usually managed with a series of risk reduction measures including policies, signage (e.g., in sprayed fields), labelling, product formulation and type of equipment, and the wearing of personal protective equipment. But HHPs are too dangerous for the usual risk reduction measures to work, especially in low- and middle-income countries (LMICs).

This factsheet **provides HHP-related information** for the National Focal Points of the Strategic Approach to International Chemicals Management (**SAICM**), as well as **advice and suggestions** on how to involve all relevant stakeholders (see section 5) **to move towards a phase-out**[2] of HHPs and to implement more sustainable alternatives. In 2015, SAICM's Fourth International Conference on Chemicals Management (ICCM4) adopted a resolution that recognizes HHPs as an **issue of concern** and called for concerted action to address HHPs[3]. **SAICM National Focal Points**, therefore, play a key role in ensuring that information about HHP's reaches all relevant stakeholders for effective and informed decision-making to reduce risks.

COVER PHOTO CREDITS

Main photo: Women spraying pesticide in Rwanda. Source: Placide Nshuti.

Top block photo: Integrated Pest Management Farmer Field School training. Source: Ivy Saunyama Malawi 2017.

2nd block photo: Farmer in North Central Province, Sri Lanka. Source: Sachindra Perera (2020-21).

3rd block photo: Child spraying pesticide with woman in the background. Source: Richard Haig, South Africa.

4th block photo: PAN Ethiopia staff demonstrating the preparation of a maize-based food spray on cotton crops to encourage beneficial insects to prey on pests. Source: Pesticide Action Network, United Kingdom.

[1] **Pest** means any species, strain or bio-type of plant, animal or pathogenic agent injurious to plants and plant products, materials or environments and includes vectors of parasites or pathogens of human and animal disease and animals causing public health nuisance (FAO/WHO International Code of Conduct on Pesticide Management).

[2] In 2006, the FAO council endorsed FAO participation in SAICM through the International Code of Conduct on Pesticide Management and suggested a progressive ban on HHPs to promote pesticides risk reduction. https://www.fao.org/tempref/docrep/fao/meeting/011/j8664e.pdf

[3] "Supports concerted action to address highly hazardous pesticides in the context of the Strategic Approach and welcomes with appreciation the strategy set out in part II of the proposal on highly hazardous pesticides."

KEY SUMMARY POINTS

SAICM National Focal Points play a key role in reducing the health and environmental risks associated with Highly Hazardous Pesticides (HHPs) by:

- Ensuring HHP information is disclosed to all relevant stakeholders for effective and informed decision-making to reduce risks.
- Informing policy makers which HHPs used nationally are banned in high income countries.
- Promoting national systems, such as poison centres, for conducting targeted surveys and establishing pesticide use registers, and to collect pesticide health and environmental data.
- Sharing information on the work of FAO, UNEP and WHO related to HHPs with national stakeholders.
- Assuming the role of promoting and supporting national stakeholder engagement on HHPs.
- Promoting the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) for HHP identification and sharing relevant information to support national implementation.

2. WHAT DO I NEED TO KNOW ABOUT HIGHLY HAZARDOUS PESTICIDES?

2.1 PROBLEM

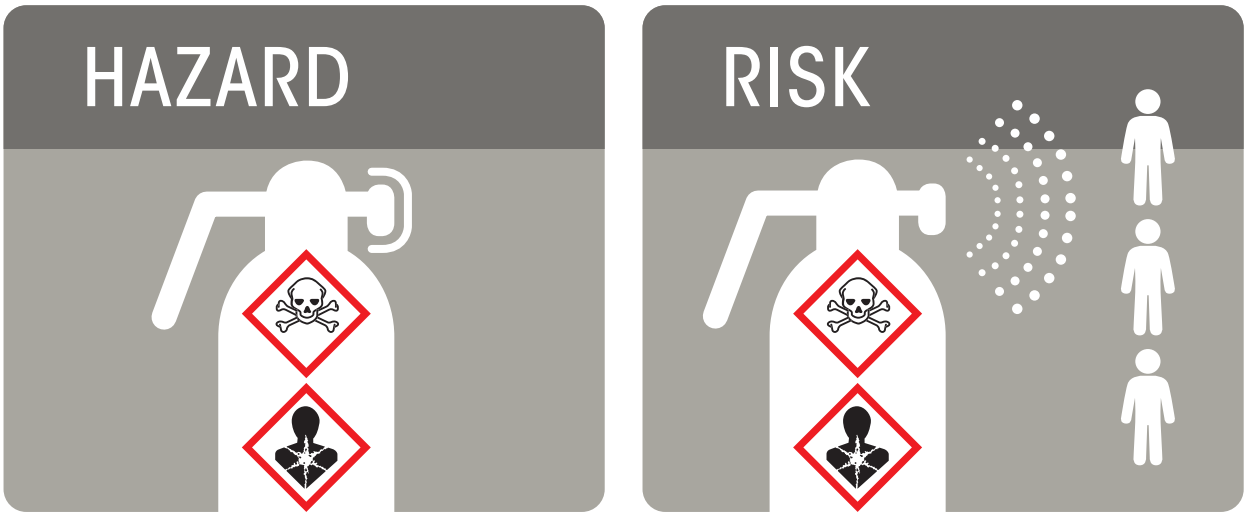
HHPs are dangerous for human health, animals and the environment[4] (see Box 1). They can be acutely toxic for humans and animals. HHPs can also lead to long-term and irreversible harm, including cancer, damage to fertility or the unborn child/animal, to the hormone system, to the ozone layer, to animal species, to water, soil and biodiversity. In many countries, HHP residues are found in food, putting the health of consumers at risk. HHPs can also harm non-target organisms such as humans, animals, plants, fungi, and microorganisms.

HHPs are especially dangerous for farmers and workers handling them. In most cases, farmers are not able to meet safety requirements for using HHPs to significantly reduce the risk of harmful exposures because of climatic conditions, lack of risk information, and no access to required safety equipment. Every year, around 400 million occupational pesticide poisonings occur in the agricultural sector, with at least 10,000 deaths, an unknown number of long-term effects and over 150,000 pesticide-related suicides[5]. **Over 95% of pesticide poisonings occur in LMICs, whereas most HHPs are not manufactured in LMICs[6].** Only a small group of pesticides, namely HHPs, are responsible for a high proportion of poisoning incidents.

When discussing HHPs, it is important to understand the difference between a *hazard*[7] and a *risk*[8]. The **hazard**[9] is the inherent toxicity of the pesticide. All pesticides are toxic in order to kill, destroy or repel pests, fungi, insects or weeds, as the case may be. What varies is the toxicity and mode of action.

Health **risks** arise if humans are **exposed** to pesticides. For example: dermal exposure from spraying without protection like masks or gloves, breathing in vapours, or ingesting pesticide residues with food. Pesticides are also intentionally ingested for self-harm[10]. Approximately 20% of all global suicides is from pesticide self-poisoning[11].

BOX 1: THE DIFFERENCE BETWEEN HAZARD AND RISK



2.2. WIDELY USED

HHPs are globally used for various reasons and applications. Examples of uses include the following depending on how countries have legislated and defined a pesticide (e.g., biocides or pesticides not used in the agricultural sector):

- Public health uses of HHPs (e.g., insecticides such as DDT, household pesticides, rodenticides, disinfectants such as formaldehyde)
- Agricultural uses - Plant Protection Products; uses in migratory pest control programmes (e.g., queala, locust and Fall Army Worm)
- Anti-foulants for boats
- Preservatives for materials (e.g., wood preservatives such as creosote, paint or construction material preservatives)
- Disinfectants (e.g., in drinking water, healthcare, agriculture, households).

Because of accessibility, HHPs are often used as suicide agents[10]. Sri Lanka issued a policy on suicide prevention with HHPs and in 2021 received the Future Policy Award[12] for this inspiring example.

2.3 UNEQUAL STANDARDS IN INTERNATIONAL TRADE

It is important to know that many pesticides that are classified as HHPs have been banned for sale in high income countries (HICs) because of health and environmental effects. However, companies based in HICs can legally produce and export these HHPs to LMICs. One such example is paraquat, banned in the EU but produced by companies based in the EU for

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[4] The WHO issued a policy brief on public health concerns related to HHPs (2019). https://www.who.int/publications/i/item/WHO-CED-PHE-EPE-19.4.6

[5] Boedeker W, Watts M, Clausing P, Marquez E. The global distribution of acute unintentional pesticide poisoning: estimations based on a systematic review. BMC Public Health. 2020 Dec 7;20(1):1875. doi: 10.1186/s12889-020-09939-0.

[6] FAO Toolkit. Introduction to HHPs. https://www.fao.org/pesticide-registration-toolkit/special-topics/highly-hazardous-pesticides-hhp/introduction/en/ WHO/FAO. 2019.

[7] **Hazard** *means the inherent property of a substance, agent or situation having the potential to cause undesirable consequences (e.g., properties that can cause adverse effects or damage to health, the environment or property) (Code).*

[8] **Risk** *is the probability and severity of an adverse health or environmental effect occurring as a function of a hazard and the likelihood and the extent of exposure to a pesticide (Code).*

[9] To find general and hazard information about a pesticide/chemical, go to: https://echa.europa.eu/substance-information

[10] WHO Preventing Suicide - A resource for pesticide registrars and regulators. https://apps.who.int/iris/rest/bitstreams/1244790/retrieve

[11] Mew EJ, Padmanathan P, Konradsen F, Eddleston M, Chang SS, Phillips MR, Gunnell D. The global burden of fatal self-poisoning with pesticides 2006-15: Systematic review. J Affect Disord. 2017 Sep;219:93-104. doi: 10.1016/j.jad.2017.05.002.

[12] https://www.worldfuturecouncil.org/p/2021-protection-from-hazardous-chemicals/

export to LMICs[13]. **SAICM National Focal Points** can play a key role in highlighting to policy makers which HHPs are banned elsewhere[14] and lobby for them not to be authorized nor used nationally. In 2021, the EU made a commitment to ensure chemicals such as HHPs banned in the EU are not produced for export[13].

2.4 ALTERNATIVES TO HHPs

Having alternatives to HHPs is key for their phasing out. Alternatives can include chemical substitutes as well as biopesticides, preventive measures (e.g., insect screens) or non-chemical alternatives (e.g., traps) and specific practices such as agro-ecology, integrated pest management, integrated vector management. The best suitable alternatives will depend on the pest to be controlled and the setting where the control measure needs to take place.

SAICM National Focal Points should promote the registration and access to suitable alternatives in their countries. It is equally important to raise awareness of the risks of HHPs and promote the development of low-toxic alternatives, including agro-ecological approaches, that reduce reliance on pesticides. This means collecting and sharing of information about viable alternatives to HHPs, including cultural and environmental management measures, non-chemical or biological controls, biopesticides or less hazardous pesticides. Several organizations are available to support SAICM National Focal Points in promoting alternatives and raising awareness. These include FAO, UNEP and the Pesticide Action Network (see section 6).

If chemical substitutes are used, countries need to ensure that these do not exhibit properties that could have negative impacts and result in so-called ***regrettable substitution.***

[13] The European Commission's 2020 "Chemicals Strategy for Sustainability – Towards a Toxic-Free Environment" is advocating for the prevention of EU banned pesticides being produced for export. https://ec.europa.eu/environment/strategy/chemicals-strategy_en

[13] Information on pesticides banned globally can be found at: https://pan-international.org/pan-international-consolidated-list-of-banned-pesticides/ or in the EU at: https://ec.europa.eu/food/plants/pesticides/eu-pesticides-database_en and for biocides, go to: https://echa.europa.eu/information-on-chemicals/biocidal-active-substances

3. HOW ARE HHPs CLASSIFIED AND IDENTIFIED?

Key is the identification of HHPs in a country since they are a special group of pesticides that are too hazardous for use and exposure cannot be prevented through use of personal protective equipment or other mitigation measures.

Countries are encouraged to identify and assess their registered pesticides against eight criteria set in 2008 by the FAO/WHO Joint Meeting on Pesticide Management (JMPM). ***A pesticide that meets at least one criterion is considered an HHP.*** **Box 1** lists these eight **criteria** of which SAICM **National Focal Points** should be aware of as a basis to take action.

Criteria 1-7 are based on the inherent hazard (toxicity) of the active ingredient as well as the formulated product, whereas Criterion 8 focuses specifically on the risks associated with a pesticide. Assessment as to whether an active ingredient or formulation would fall under **Criterion 8** is more complex as this depends on the actual situation in individual countries. Since surveillance and monitoring is key, SAICM National Focal Points play a key role in promoting national systems, such as poison centres and pesticide use registers, to collect data and to conduct targeted surveys.

BOX 1: FAO/WHO JMPM CRITERIA FOR IDENTIFYING AN HHP

CRITERION 1:
Pesticide formulations that meet **WHO Recommended Classification of Pesticides** by Hazard classes Ia and Ib.

OR

CRITERION 2:
Active ingredients and formulations meet **carcinogenicity** Categories 1A and 1B of the **Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**.

OR

CRITERION 3:
Active ingredients and formulations meet **mutagenicity** Categories 1A and 1B of the **Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**.

OR

CRITERION 4:
Active ingredients and formulations meet **reproductive toxicity** Categories 1A and 1B of the **Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**.

OR

CRITERION 5:
Active ingredients listed in ***Stockholm Convention*** Annexes A and B, and paragraph 1 of Annex D.

OR

CRITERION 6:
Active ingredients and formulations listed in the ***Rotterdam Convention*** Annex III.

OR

CRITERION 7:
Pesticides listed under the ***Montreal Protocol.***

OR

CRITERION 8:
Active ingredients and formulations that have shown a **high incidence of severe or irreversible adverse effects** on human health of the environment.

Source: FAO/WHO 2016 Guidelines on Highly Hazardous Pesticides

4. WHAT IS THE UN DOING ABOUT HHPs?

Action on HHPs has become a priority issue within inter-governmental organizations and agencies, such as FAO, UNEP, and WHO. Addressing HHPs was identified by ICCM4 as an Emerging Policy Issue. **SAICM National Focal Points** should be aware of the HHP work **FAO, UNEP and WHO** are undertaking and share this information with national stakeholders (see section 6 for materials produced by each).

5. WHAT ACTION SHOULD ALL NATIONAL STAKEHOLDERS TAKE ON HHPs?

Due to the status of HHPs as a SAICM issue of concern, **SAICM National Focal Points** can assume a particular role in promoting stakeholder engagement on HHPs. Each National Focal Point is encouraged to identify specific national players to take on different action. Stakeholders and their potential actions for addressing HHPs are listed in Table 1. Based on the **SAICM National Focal Point** role concept **(Box 2)**, and tailored to country- and region-specific circumstances, National Focal Points are encouraged to facilitate activities and networks to support and promote stakeholder groups to take action on minimizing the harm caused by HHPs through phasing out their use.

BOX 2: ROLE OF THE SAICM NATIONAL FOCAL POINT

The **SAICM Overarching Policy Strategy,** in paragraph 23, provides that:

"To sustain an integrated approach to managing chemicals, each Government should establish arrangements for implementing the Strategic Approach on an inter-ministerial or inter-institutional basis, so that all concerned national departmental and stakeholder interests are represented and all relevant substantive areas are addressed. **To facilitate communication, nationally and internationally,** each Government should designate a Strategic Approach national focal point to act as an effective conduit for communication on Strategic Approach matters, including invitations to participate in meetings and information dissemination. The Strategic Approach national focal point should be a representative of the country's inter-ministerial or inter-institutional arrangements, where such arrangements exist."

SAICM National Focal Points should establish formal programmes and partnerships with national stakeholders to address HHPs. Through these programmes, and stakeholder engagements, **SAICM National Focal Points** will be able to share information on HHPs, establish collective targets and milestones for removing exposures to HHPs, as well as establish monitoring systems (for current and future HHPs). Actions that should be specifically targeted for the different national stakeholder groups, and which **SAICM National Focal Points** can promote, are listed in **Table 1.**

TABLE 1: STAKEHOLDERS AND POTENTIAL ACTIONS FOR ADDRESSING HHPs

STAKEHOLDER	SUGGESTED ACTIONS
GOVERNMENTS	**Authorize** eligible authority/ies to identify HHPs and develop a national strategy for addressing these; implement the **Globally Harmonized System of the Classification and Labelling of Chemicals (GHS)** for pesticides. **Communicate** to all end-users to provide information on HHPs (e.g., farmers, workers, consumers). **Network** with regional organizations for the development and implementation of regional HHP strategies. **Implement** international instruments such as the Rotterdam Convention, the Stockholm Convention, the Montreal Convention, the **GHS**, the FAO/WHO International Code of Conduct on Pesticide Management and others.
INDUSTRY	**Produce chemical and non-chemical alternatives;** develop and merchandise business models providing the required pest control, without HHPs and with tailored integrated management approaches, minimizing pesticide use and tailored to local circumstances and communities; withdraw manufacturing HHPs. **Communicate** specific health and environmental risks identified for each HHP sold in a country to retailers selling these and to all end-users purchasing these. **Support** GHS implementation.
RETAILERS	**Prevent** the sale of HHPs in formal and informal outlets, **request** economic viable alternatives to sell from industry, **communicate** risks of HHPs to customers and **provide advice** on HHP alternatives.
ACADEMIA	**Provide data** on HHPs health and environmental impacts (especially for country specific exposures and environmental impacts); **conduct research** on chemical and non-chemical alternatives; provide **education** and training on pest management including preventive and alternative measures; and **engage** in global discussions to highlight issues of concern and opportunities. **Support** GHS implementation.
NGOs	**Draw attention** to vulnerable populations and environmental exposures to HHPs; **support** target audience-oriented **risk communication** including farmers, workers and consumers. **Keep engaged** in global discussions of all stakeholders and continue to **raise awareness. Support** GHS implementation.
IGOs (UN)	**Promote** global and concerted action on HHPs, including ways to reduce exposures and risks, as well as phasing out of HHPs and use of low toxic alternatives. **Regional UN organizations and agencies** to support national HHP activities and actions as requested by their members. **Support** GHS implementation.
PROFESSIONAL USERS (e.g., commercial farmers, pest control operators, small-scale farmers; family farmers; farm workers)	**Request** information from retailers, industry and government on the hazards associated with pesticides they are using and if those pesticides qualify as HHPs; **execute** the right to not use HHPs; **request** information on less toxic alternatives. In addition to the above, **request** labour conditions where HHPs are not used and **engage** with trade and farmer unions.
TRADE AND FARMER UNIONS	**Request** labour conditions where HHPs are not used; **inform** constituents of risks associated with HHP use.
CONSUMERS	**Demand** products with no HHP residues from retailers; request **access to information** on which products are HHPs or contain HHPs; and **support** the removal of HHPs through the mass and social media. Execute consumer power by buying pesticide-free products.

6. WHERE CAN I GET MORE INFORMATION ABOUT HHPs?

STRATEGIC APPROACH TO INTERNATIONAL CHEMICALS MANAGEMENT (SAICM)

Knowledge Platform of SAICM

- https://saicmknowledge.org/program/highly-hazardous-pesticides

Join the SAICM/UCT Community of Practice on HHPs

- https://saicmknowledge.org/topic/community-practice

A Short Guidance Doc to Highly Hazardous Pesticides Alternatives (2017)

- https://saicmknowledge.org/sites/default/files/meterial/A%20short%20guide%20to%20alternatives%20to%20HHPs.pdf

SAICM Highly Hazardous Pesticides Video

- https://saicmknowledge.org/library/saicm-highly-hazardous-pesticides-video

SAICM Focal Points

- http://saicm.org/Implementation/FocalPoints/tabid/5461/language/en-US/Default.aspx

UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)

Assessment Report on Issues of Concern: Chemicals and Waste Issues Posing Risks to Human Health and the Environment - September 2020

- https://wedocs.unep.org/20.500.11822/33807

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)

Addressing Highly Hazardous Pesticides

- https://www.fao.org/pest-and-pesticide-management/pesticide-risk-reduction/addressing-highly-hazardous-pesticides-hhps/en/

Agroecology Knowledge Hub

- http://www.fao.org/agroecology/home/en/

FAO and WHO. 2019. Detoxifying agriculture and health from highly hazardous pesticides - A call for action. Rome.

- http://www.fao.org/publications/card/en/c/CA6847EN/

FAO Toolkit for identifying HHPs

- https://www.fao.org/pesticide-registration-toolkit/special-topics/highly-hazardous-pesticides-hhp/introduction/en/
- http://www.fao.org/pesticide-registration-toolkit/special-topics/highly-hazardous-pesticides-hhp/identification-of-hhps/en/
- Alternatives Module in the FAO Toolkit (under development)

Family Farming Knowledge Platform

- http://www.fao.org/family-farming/detail/en/c/1190746/

Highly Hazardous Pesticides: a global call for action (short version)

- https://www.youtube.com/watch?v=og6GB_hn9QU

Highly Hazardous Pesticides: a global call for action

- https://www.youtube.com/watch?v=JRRkoeOQy2Q

ROTTERDAM CONVENTION

The Prior Informed Consent (PIC) Procedure

- http://www.pic.int/Procedures/PICProcedure/tabid/1364/language/en-US/Default.aspx

Pesticides

- http://www.pic.int/Implementation/Pesticides/tabid/1359/language/en-US/Default.aspx

Information on alternatives to hazardous pesticides

- http://www.pic.int/Implementation/Pesticides/Alternativestohazardouspesticides/tabid/8078/language/en-US/Default.aspx

WORLD HEALTH ORGANIZATION (WHO)

Chemical Safety – Highly Hazardous Pesticides

- https://www.who.int/teams/environment-climate-change-and-health/chemical-safety-and-health/health-impacts/chemicals/pesticides

It's time to regulate Highly Hazardous Pesticides

- https://cdn.who.int/media/docs/default-source/infographics-pdf/chemical-safety/highly-hazardous-pesticides-english-scroll.pdf?sfvrsn=468ef146_2

The WHO issued a policy brief on public health concerns related to HHPs (2019).

- https://www.who.int/publications/i/item/WHO-CED-PHE-EPE-19.4.6

HHP infographics

- — *Its time to regulate highly hazardous pesticides*
- — *Regulating Highly Hazardous Pesticides Can Have a Big Impact*
- — *Regulators Can Protect People*

  https://cdn.who.int/media/docs/default-source/infographics-pdf/chemical-safety/highly-hazardous-pesticides-english-scroll.pdf?sfvrsn=468ef146_2

PESTICIDE ACTION NETWORK (PAN)

Highly Hazardous Pesticides and Alternatives

- https://www.pan-uk.org/highly-hazardous-pesticides/

List of globally banned pesticides

- https://pan-international.org/pan-international-consolidated-list-of-banned-pesticides/

FAO AND WHO

The FAO/WHO International Code of Conduct on Pesticide Management (2014)

FAO/WHO Guidelines on Highly Hazardous Pesticides

- https://www.fao.org/3/i5566e/i5566e.pdf or https://www.iomctoolbox.org/fao-who-guidelines-highly-hazardous-pesticides-2016

WHO/FAO: Preventing suicide: A resource for pesticide registrars and regulators (2019)

- https://apps.who.int/iris/bitstream/handle/10665/326947/9789241516389-eng.pdf?sequence=1&isAllowed=y
- https://www.iomctoolbox.org/whofao-preventing-suicide-resource-pesticide-registrars-and-regulators-2019

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For more information on the SAICM/UCT Highly Hazardous Pesticides Community of Practice (SAICM/UCT HHP CoP) visit: **https://saicmknowledge.org/community**

If you have any question or require any clarification on the SAICM/UCT HHP CoP, please contact the SAICM Secretariat at **knowledgehub.saicm@un.org**

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