

PASMUN 2026



Committee: UNIDO (United Nations Industrial Development Organization)

Topic: Transitioning Away from the Use of PFAS While Sustaining Industrial and Economic Development

Dear Delegates,

It is with immense pride and excitement that I welcome you to this year's UNIDO committee at PAS-MUN. My name is Ariana Betancourt, and I will be your Chair, along with Irene Montes as a Co-chair. We are both in twelfth grade and truly delighted to be serving as your Chairs. We have been participating in MUN since 8th grade and 10th grade, and understand the difficulties of being a delegate. However, we are confident that each and every one of you will bring relevant information and participate in meaningful debate, in order to reach effective and multilayered solutions to our chosen issue.

Throughout the committee sessions, we will discuss the challenges surrounding the transition away from the use of PFAS while sustaining industrial and economic development. We will explore the environmental and health concerns associated with PFAS, as well as the difficulties industries and governments face when implementing safer alternatives. It is vital that research on the topic is conducted prior to our conference, in order to be prepared for all sorts of debates on the issue and contribute to an efficient conversation. We urge you to responsibly inform yourself about the environmental, social, economic, and industrial factors affecting the subject, as well as the role of governments, industries, and international organizations in promoting safer alternatives. Particular attention should also be given to the challenges faced by developing countries, including access to technology, research, and financial resources.

Your dedication to the conference will permit us to address the complex challenges surrounding PFAS and, without a doubt, will assist the development of the committee. Together, we will be able to engage in intelligent discussion and explore various solutions that encourage safer industrial practices while maintaining economic growth, industrial development, and international cooperation. Feel free to reach out to us if you have any questions, comments, or concerns. We are excitedly anticipating the date of our meeting and look forward to hearing your various perspectives!

Sincerely,

Chair

Ariana Betancourt

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Co-Chair

Irene Montes

History of the Committee

The United Nations Industrial Development Organization (UNIDO) was established in 1966 as an autonomous organization within the United Nations, with the goal of promoting and accelerating industrial development, particularly in developing countries. In 1985, UNIDO officially became a specialized agency of the United Nations. Over time, its focus has expanded from industrialization alone to inclusive and sustainable industrial development, recognizing the need to balance economic growth with environmental protection. UNIDO works to strengthen industries, encourage technological innovation, improve competitiveness, and support developing countries in building sustainable economies. Today, UNIDO continues to address the challenges created by changing technologies and environmental concerns while helping countries maintain industrial growth. As we hold this conference, let us explore how UNIDO's mission of sustainable industrial development can be applied to the transition away from PFAS while protecting economic development, industrial competitiveness, and access to technology for developing countries.

Introduction of the Topic

The focus of this committee lies on the intricacies of “Transitioning Away from the Use of PFAS While Sustaining Industrial and Economic Development.” Per- and polyfluoroalkyl substances (PFAS), commonly known as “forever chemicals,” are a large group of synthetic chemicals valued for their resistance to heat, water, oil, and chemical degradation. Because of these properties, PFAS have been used for decades in a wide variety of industries, including electronics, aerospace, automotive manufacturing, healthcare, and consumer products. However, their extreme persistence means that many PFAS can remain in the environment for long periods of time, while concerns have grown regarding the effects of prolonged exposure to certain PFAS on human health and ecosystems. As a result, governments and international organizations are increasingly considering restrictions, regulations, and alternatives to PFAS. Despite this, completely eliminating PFAS presents significant challenges, as alternatives may not yet exist for every industrial application and replacing established materials can increase production costs and disrupt supply chains. These challenges can be particularly significant for developing countries,

which may have less access to advanced technologies, research, and financial resources. Throughout our session, we will delve into the challenges surrounding the transition away from PFAS and explore how industries and governments can promote safer alternatives while maintaining economic growth, industrial development, and international cooperation.

History of the topic

The history of PFAS dates back to the early 20th century, when scientists began developing fluorinated chemicals with unusual resistance to heat, water, and chemical reactions. In 1938, polytetrafluoroethylene (PTFE), one of the best-known fluoropolymers, was accidentally discovered by a DuPont chemist. It was later commercialized under the name Teflon in 1946. During the 1940s and 1950s, companies began developing and producing additional PFAS compounds for industrial and consumer applications. Their unique properties made them increasingly valuable in products such as non-stick cookware, waterproof materials, stain-resistant fabrics, firefighting foams, and industrial equipment.

For several decades, the widespread use of PFAS was largely driven by their effectiveness and durability. However, scientific research gradually began revealing that certain PFAS could persist in the environment and accumulate in humans and animals. Evidence of human exposure appeared as early as the 1960s, while PFOA was identified in human blood during the 1970s. By the 1990s, companies and regulators had found evidence that fluorinated chemicals were widespread in human blood samples, increasing scientific and public concern about their long-term presence.

During the late 1990s and early 2000s, governments began taking more significant action. In 2000, 3M announced that it would phase out production of certain eight-carbon PFAS, including chemicals related to PFOS, while the United States Environmental Protection Agency began increasing its investigation into PFOA and related substances. In 2006, the EPA and major chemical manufacturers established the PFOA Stewardship Program, which aimed to significantly reduce emissions and product content involving PFOA and related chemicals. These actions marked an important shift from widespread use toward reducing dependence on some of the most concerning PFAS.

The issue then became increasingly international. In 2001, the Stockholm Convention on Persistent Organic Pollutants was adopted to address chemicals that can remain in the

environment for long periods and create risks across national borders. PFOS and related compounds were added to the Convention in 2009, with restrictions and specific exemptions for certain uses. In 2019, PFOA and related compounds were added to Annex A of the Convention, while several exemptions for PFOS were also reduced. PFHxS and related compounds were subsequently listed in 2022. More recently, in 2025, long-chain perfluorocarboxylic acids and related compounds were added to Annex A.

As restrictions on certain PFAS have increased, the central issue has shifted from simply identifying the risks of PFAS to determining how industries can transition toward alternatives. PFAS are used across a very large number of industrial sectors, meaning that replacing them is not equally simple for every application. Some industries have developed substitutes, while other applications may require further research and technological development. This has created an important economic and industrial challenge: governments must consider environmental and health concerns while industries must maintain production, competitiveness, and reliable supply chains.

The transition is particularly significant for developing countries, which may have less access to the technology, research infrastructure, and financial resources required to develop or adopt alternatives. As a result, the history of PFAS has evolved from the development of highly useful industrial chemicals into an international discussion about how to manage their risks while allowing industries and economies to continue developing. Throughout this committee, delegates will build upon this history by considering how countries can reduce dependence on PFAS while supporting technological innovation, industrial development, and equitable access to safer alternatives.

Current Situation

The issue of PFAS is currently becoming an increasingly international concern as governments attempt to reduce exposure while industries continue to depend on the chemicals for specific applications. PFAS are used across sectors including electronics, aerospace, transportation, energy, healthcare, textiles, and manufacturing because of their ability to withstand extreme temperatures, resist water and oil, and remain stable under harsh conditions. However, not every PFAS has the same properties or hazard profile, and the amount of scientific information available differs between individual substances. This has contributed to an ongoing

debate over whether regulations should target individual PFAS, specific uses, or the broader class of chemicals.

One of the most significant developments is the increasing use of international and national regulations to limit PFAS. Under the Stockholm Convention on Persistent Organic Pollutants, PFOS, PFOA, and PFHxS have been listed with restrictions or elimination requirements and specific exemptions. In 2025, long-chain perfluorocarboxylic acids and related compounds were also added to Annex A. These international measures demonstrate the growing effort to reduce the production and use of certain PFAS, although they do not constitute a worldwide ban on every PFAS.

At the same time, different regions are taking different approaches to PFAS regulation. The European Union is considering a broad restriction proposal covering thousands of PFAS across numerous industries, while countries including Canada, China, and the United Kingdom are also developing or implementing their own approaches to PFAS management. The OECD held an international discussion in 2026 specifically examining developments in Canada, China, the United Kingdom, and the European Union, demonstrating that PFAS regulation is currently developing differently across countries.

However, transitioning away from PFAS is not as simple as banning them. Many industries are currently searching for substitutes that can provide the same technical performance without creating similar environmental or health concerns. The OECD reported in 2025 that substitution in PFAS-containing hydraulic oils and lubricants has remained limited because of technical and economic difficulties. These materials are used in sectors such as transportation, defence, energy, electronics, oil and gas, iron and steel, and chemical production, where equipment may need to function under extreme conditions. Consequently, industries face the challenge of finding alternatives that are both safer and capable of meeting demanding technical requirements.

Another important part of the current situation is the unequal ability of countries to make this transition. Developing countries may face difficulties accessing advanced technologies, research, technical expertise, and financial resources needed to replace PFAS. At the same time, stricter environmental requirements can create additional costs for industries attempting to remain competitive in international markets. UNIDO's current work emphasizes sustainable

industrial development and helping developing countries adopt cleaner technologies, making technological transfer, financing, and capacity building particularly relevant to this discussion.

The transition is already taking place in certain sectors and countries. For example, UNIDO is currently supporting projects that help countries replace harmful substances and adopt cleaner industrial technologies. In 2025, UNIDO also began work connected to the phase-out of PFAS-containing firefighting foams in Saint Lucia, including plans for safe handling, disposal, pollution prevention, and capacity building during the transition to fluorine-free alternatives. This illustrates the type of transition that this committee must consider: reducing dependence on harmful substances while ensuring that industries have the technology, funding, and infrastructure necessary to continue operating.

Ultimately, the current PFAS situation is characterized by a balance between environmental protection, human health, technological feasibility, and economic development. Countries are increasingly moving toward restrictions and substitution, but the speed and method of this transition remain subjects of international discussion. Throughout this session, delegates will need to consider how PFAS can be reduced or replaced while avoiding unnecessary disruption to industries, supporting developing economies, and ensuring that safer technologies are accessible to countries with different levels of industrial and financial capacity.

Bloc positions

Bloc 1: Germany, France, Sweden, Netherlands, Denmark

- Supports strict restrictions on PFAS.
- Favors a broad phase-out of non-essential uses.
- Supports international standards and monitoring.
- Wants investment in safer alternatives.
- May support shorter transition periods where alternatives already exist.

Bloc 2: United States, Canada, United Kingdom, Australia

- Supports reducing PFAS use and environmental exposure.
- Favors phased restrictions rather than an immediate complete ban.
- Supports exemptions for essential industrial applications.
- Wants alternatives to be proven technically feasible before restrictions.

- Emphasizes protecting industrial competitiveness and supply chains.

Bloc 3: China, Japan, South Korea

- Supports regulating specific PFAS and reducing environmental risks.
- Wants to maintain industrial competitiveness.
- Favors scientific research into alternatives.
- May support longer transition periods for industries heavily dependent on PFAS.
- Supports international cooperation without unnecessarily restricting industrial development.

Bloc 4: Brazil, Mexico, India, Indonesia, Kenya, Argentina

- Supports reducing PFAS pollution but prioritizes economic development.
- Concerned about the cost of replacing PFAS-containing technologies.
- Wants **technology transfer** from developed countries.
- Supports financial assistance and capacity building.
- Favors longer implementation periods for developing economies.
- Wants regulations to avoid creating barriers to industrialization.

Bloc 5: Norway, New Zealand, Switzerland, Costa Rica

- Supports international cooperation through organizations such as UNIDO and the Stockholm Convention.
- Favors sharing research, technology, and information.
- Supports international funding for safer alternatives.
- Wants common standards while allowing countries flexibility in implementation.
- Focuses on making the transition accessible to both developed and developing economies.

Possible Solutions

As previously shown, transitioning away from PFAS is a multifaceted problem that requires cooperation between governments, industries, and international organizations. A

complete transition cannot happen immediately in every sector, but several actions can be taken to reduce PFAS use while maintaining industrial and economic development:

- Establish gradual phase-out timelines for PFAS, prioritizing non-essential uses and allowing additional time for industries where suitable alternatives do not yet exist.
- Invest in research and development of safer PFAS alternatives, particularly for industries such as aerospace, electronics, healthcare, and manufacturing.
- Provide financial assistance to developing countries to help them purchase new technologies, modify industrial processes, and transition away from PFAS without slowing economic development.
- Promote technology transfer between developed and developing countries by sharing research, technical knowledge, and safer industrial technologies.
- Create international standards for PFAS monitoring and reporting so countries can track production, use, emissions, and environmental contamination more effectively.
- Encourage cooperation between governments and industries to identify which PFAS uses are essential and develop realistic replacement plans.
- Establish exemptions for essential applications where alternatives are currently unavailable, while requiring industries to continue researching possible substitutes.
- Develop safe systems for managing existing PFAS waste and contamination, preventing previously produced PFAS from continuing to enter water, soil, and ecosystems.
- Support worker training and industrial education so employees and manufacturers can safely adopt new technologies and materials.
- Create international partnerships through UNIDO to help developing countries build sustainable industries while reducing their dependence on hazardous chemicals.

There are many other ways to approach this issue, and we look forward to seeing what solutions you come up with!

Aspects to consider

- What are the main industrial applications of PFAS, and which industries would be most affected by restrictions?
- What alternatives to PFAS currently exist, and in which industries is further research needed?

- How would a rapid phase-out affect developing countries and their industrial development?
- How can developed countries provide financial assistance and technology transfer to developing nations?
- Which PFAS applications should be considered essential uses and receive temporary exemptions?
- How can governments prevent companies from abusing these exemptions?
- What role should UNIDO play in helping industries transition to safer technologies?
- How can governments encourage companies to invest in alternatives while maintaining industrial competitiveness?
- Who should pay for PFAS cleanup and the costs of transitioning to alternatives: governments, industries, or both?
- How can countries prevent companies from moving PFAS-intensive production to countries with weaker regulations?
- What actions have organizations such as UNIDO, the OECD, and the Stockholm Convention already taken to address PFAS?
- How can international cooperation and shared research accelerate the development of safer alternatives?

Questions a Resolution Must Answer

1. What are immediate and long-term solutions for reducing PFAS use while maintaining industrial and economic development? How can countries efficiently work together to support the transition?
2. What programs can be implemented to help industries develop and adopt safer alternatives to PFAS? How can developing countries gain access to the technology and funding necessary for this transition?

3. How can industries that rely heavily on PFAS be supported while restrictions are introduced? What actions can governments and UNIDO take to prevent disruptions to production and supply chains?
4. What international incentives can be proposed to encourage countries to adopt stronger PFAS regulations and participate in international agreements addressing PFAS?
5. How can PFAS restrictions be implemented in developing countries without slowing industrialization or creating excessive economic burdens?
6. In what ways can technological advancements improve the detection, monitoring, and management of PFAS? How can countries be held accountable for properly implementing these systems?
7. What institutional regulations and reforms can be implemented to ensure industries are accountable for PFAS production, emissions, and contamination while encouraging the development of safer alternatives?

Suggestions for Further Research

[Our Current Understanding of the Human Health and Environmental Risks of PFAS | US EPA](#)

[Key EPA Actions to Address PFAS | US EPA](#)

[Regulating PFAS – Institute for Policy Integrity](#)

[The EU's Per- and Polyfluoroalkyl Substances \(PFAS\) Ban: A Case of Policy over Science - PMC](#)

[PFAS Ban by State 2026: How States Are Tackling Forever Chemicals | MultiState](#)

[PFAS regulations and economic impact: A review of U.S. pulp & paper and textiles industries - ScienceDirect](#)

[Daily Exposure to ‘Forever Chemicals’ Costs United States Billions in Health Costs | NYU Langone News](#)

[How forever chemicals are impacting international trade](#)

[The Cost of “Forever”: Economic Implications of Per- and Polyfluoroalkyl Substances \(PFAS\) Mitigation in Drinking Water and Their Impact on Water Affordability | ACS ES&T Water | ACS Publications](#)

Closing Remarks

“PFAS are a large group of chemicals that are extremely persistent in the environment and can be found in people and the environment around the world.” (OECD, 2021). This statement highlights the global scale of the PFAS issue and reminds us that addressing it requires international cooperation. At the same time, transitioning away from these substances must consider the industries, workers, and economies that currently depend on them, particularly in developing countries.

As we dive into these two days of the conference, we invite you to look for solutions that can reduce the use and impact of PFAS while sustaining industrial and economic development. We encourage all delegates to make informed, innovative, and realistic contributions, considering both environmental protection and the needs of developing economies. We look forward to sharing this time with all of you and hope to create a space full of meaningful engagement and constructive resolutions. Do not hesitate to contact us if you have any questions or concerns.

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