

Norway

Since 2015, Norway nominated PFHxS its salts and PFHxS-related compounds to the Stockholm convention in May 2017, and these were found to fulfill the screening criteria (persistence, bioaccumulation, long-range transport and toxicity) in October 2017. In 2018, a risk profile for PFHxS has been developed, and accepted by the persistent organic pollutant (POP) review committee under the Stockholm convention. The next phase in the Stockholm convention is the development of a risk management evaluation which includes a proposal for possible measures and a recommendation for future regulation. This work will take place during 2018/2019 and should be finalized in the fall of 2019. Norway has also started the work on a restriction proposal of PFHxS and PFHxS-related compounds under the REACH regulation. The restriction proposal will be sent to the European Chemicals Agency (ECHA) in april 2019. Furthermore, PFHxS has been included in the national priority list. This listing means that the discharge of this substance shall be reduced as much as possible, and that industry shall monitor and report the use and discharge of this substance. In addition, an SVHC (substance of very high concern) dossier is under development for PFBS. The dossier will be sent to ECHA in 2019 and if accepted PFBS will then be listed on the candidate list, which means that it is a candidate for further regulation in the EU.

Fluorine-containing fire-fighting foam has been substituted with fluorine-free alternatives in Avinor, the owner of most civil airports in Norway, and fluorine-containing foam is no longer in use at fire-fighting training sites with the Norwegian military forces.

Fluorine-containing fire-fighting foam is gradually substituted with fluorine free-alternatives in the offshore sector, and the use volumes of fluorine-containing foam are decreasing.

Focus of future activities in relation to risk reduction: Norway will complete the work with the proposal for regulation of PFHxS at the EU and global level, and inclusion of PFBS on the EU candidate list, as a substance of very high concern. Norway will continue to have focus on PFASs and assess the need for further risk reducing measures.

Table 2: Risk reduction appraoches - Norway

Action(s)	Path Taken	BEPs Implemented ⁱ	Category of PFASs addressed	Articles covered?	Life cycle stage(s) addressed	Method of approach	Public-private partnership encouraged ?	Level of constraint
Monitoring and screening programs of PFASs in the environment: Environmental pollutants in large Norwegian lakes Riverine inputs and direct discharges to Norwegian coastal waters Monitoring of environmental contaminants in air and precipitation (see also EBAS.nilu.no) Contaminants in coastal waters of Norway (MILKYS) Environmental Contaminants in an Urban Fjord Environmental pollutants in the terrestrial and urban environment Screening programme Atmospheric deposition of organic contaminants in Norway (single report only)	Continuous monitoring	Not relevant	Varies from year to year	No relevant	Discharges from all life cycles are addressed	Analysis	No	None

Action(s)	Path Taken	BEPs Implemented ⁱ	Category of PFASs addressed	Articles covered?	Life cycle stage(s) addressed	Method of approach	Public-private partnership encouraged ?	Level of constraint
Discharge permits for waste treatment plants (WTP)	WTP must apply for permission to discharge selected PFASs	Under development	Primarily PFHxS, PFOS, PFOA, C9-C14 PFCA	Not relevant	End of life-stage	Regulatory	No	WTP must screen and report levels of PFASs in their discharges, and must apply for permission for discharges
Monitoring and clean-up of PFAS polluted soil at airport fire drill Link to Perfluorinated alkylated substances, brominated flame retardants and chlorinated paraffins in the Norwegian Environment - Screening 2013 Link to Screening of Polyfluorinated Organic Compounds at Four Fire Training Facilities in Norway	Airports must monitor levels of PFAS at their fire drill sites and propose measures to reduce pollution	Under development	PFOS and some other relevant PFASs from AFFF	No	End use	Regulatory	No	Airports must screen and report levels of selected PFASs in their soil, and must propose measures to reduce pollution
Follow-up of the PFOS regulation under the Stockholm Convention, with an aim to minimise exemptions	Continuous assessment of the necessity of exemptions from the PFOS ban in the Stockholm Convention	Guidelines implemented for acceptable purpose applications under the Stockholm Convention	PFOS and PFOS related substances	Yes	All	Regulatory	No	Fewer exemptions

Action(s)	Path Taken	BEPs Implemented ⁱ	Category of PFASs addressed	Articles covered?	Life cycle stage(s) addressed	Method of approach	Public-private partnership encouraged ?	Level of constraint
Nomination of PFHxS, its salts and PFHxS-related compounds to the Stockholm Convention in May 2017. PFHxS fulfilled the screening criteria in October 2017. The risk profile of PFHxS will be evaluated by the POP review committee under the Stockholm convention autumn 2018.	Possible global ban or restriction		PFHxS and PFHxS related substances	Yes	All	Regulatory	No	Ban/Restriction
Ban on manufacture, production, import and retail of consumer products containing PFOA (as of June 2014)	Ban	Not relevant	PFOA and some closely related substances	Yes	All, except waste	Regulatory	No	Ban
Analysis of PFAS in products Link to PFASs in fire fighting foam Link to Survey, screening and analyses of PFCs in consumer products Link to Monitoring of environmental contaminants in air and precipitation, annual report 2013	Compliance and monitoring	Minimisation of PFASs used	Compounds subject to national regulation and other PFAS	Yes	Use in products	Enforcement, monitoring	No	Enforcement
Listing of PFHxS, PFOS, PFOA and C ₉ -C ₁₄ perfluorinated carboxylic acids on the national priority list	Political target to reduce the use and emissions of compounds on the priority list	Minimisation of PFASs used	PFHxS, PFOS, PFOA and C ₉ -C ₁₄ per-fluorinated carboxylic acids	Yes	All, including waste	Policy	No	Political

ⁱ Guidance on best available techniques and best environmental practices for the use of perfluorooctane sulfonic acid (PFOS) and related chemicals listed under the Stockholm Convention on Persistent Organic Pollutants. Revised March 2014.