

**Batumi Initiative on Green Economy (BIG-E)
Actions by Switzerland**

Country: Switzerland, Swiss Federal Office for the Environment FOEN

Title:

Support of a national resource efficiency network for Small and Medium Enterprises to promote resource efficiency in their products and production processes

Focus area 5 and 1: Develop clean physical capital for sustainable production patterns; Improve the measurement and valuation of natural capital

Description of the action: Support of SMEs through a national resource efficiency network forged by the government, companies and the scientific community. Reffnet.ch provides analytical tools to assess resource efficiency – especially material efficiency - and to realize the recognized potentials with practical measures inducing a positive impact on the level of environment and resource protection in companies. Furthermore, it initiates innovation projects to increase resource efficiency.

Action's timeframe/milestones, as appropriate: The network Reffnet.ch was founded in 2014 and will be supported within a performance mandate for 5 years. The impact of the action and the cost-benefit ratio will be evaluated in 2018. Based on this evaluation the Federal Office for the Environment will decide about a future financial support.

Type of action: information, education-based, capacity building and voluntary instruments

Economic sectors: economy-wide / manufacturing

Reference instruments and sources, as appropriate: <http://www.reffnet.ch/de/home>
(available in German, French and Italian)

Expected co-benefits and impact of the outcome: improvement of companies' resource-efficiency, reduction of material use, energy and costs, social benefits with improvement of occupational safety and health

SDGs target(s) that the action may contribute to implement: 9.4, 12.1, 12.2

Implementation of Environmental Performance Review (EPR) Recommendations, as appropriate: no recommendations

Objectively verifiable indicators, as appropriate: Measurement of the environmental impact in eco-points (UBP: Umweltbelastungspunkte, see <http://www.bafu.admin.ch/publikationen/publikation/01750/index.html?lang=en>)

Partners: private companies, municipalities, consultant companies, universities

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**Batumi Initiative on Green Economy (BIG-E)
Actions by Switzerland**

Country: Switzerland, Swiss Federal Office for the Environment FOEN

Title:

Encourage companies' own engagement for sustainable use of raw materials through dialogue and voluntary agreements – reduction of peat use as a case study

Focus area 5 and 9: Develop clean physical capital for sustainable production patterns; Promote public participation and education for sustainable development

Description of the action: In a continuing dialogue with stakeholders the product sectors are defined in which a complete substitution of peat can be achieved on a voluntary basis. At the same time, a gradual reduction of peat is pursued in other relevant product sectors where a complete substitution of peat cannot yet be achieved. In an ongoing dialogue with the private actors (companies, inter-trade associations) reduction goals are defined on a voluntary basis. The progress will be reported on a regular basis

Action's timeframe/milestones, as appropriate: Still in discussion

Type of action: Voluntary Instruments, research

Economic sectors: Agriculture, Retail

Reference instruments and sources, as appropriate: Concept of the Federal Council for a reduction of peat use in Switzerland (available only in French and in German)

Expected co-benefits and impact of the outcome: The extraction of peat is connected to a degradation of areas of high environmental value and the use of peat contributes strongly to the release of greenhouse gases. By substituting peat with other materials, these negative effects can be reduced to a major extend.

SDGs target(s) that the action may contribute to implement: 12.2

Implementation of Environmental Performance Review (EPR) Recommendations, as appropriate: No recommendations

Objectively verifiable indicators, as appropriate: Reduction of peat quantity used in different sectors

Partners: Industry organisations, companies

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Batumi Initiative on Green Economy (BIG-E) Actions by Switzerland

Country: Switzerland, Swiss Federal Office for the Environment FOEN

Title:

Environmental technology promotion

Focus area 1, 3 and 5: Improve the measurement and valuation of natural capital; Enhance ecosystems and ecosystem services as part of ecological infrastructure; Develop clean physical capital for sustainable production patterns

Description of the action: Promotion of innovative, environmentally sound and resource-efficient technologies, processes and products (goods and services) by supporting pilot and demonstration projects as well as projects improving the resource-efficiency of the Swiss companies through a technology promotion fund (about 4.2 million Swiss francs per year). Public and private partners are eligible. Maximum rate support is 50% of the total costs of the project. The governmental contribution is subject to reimbursement within 10 years, based on effective commercial benefits.

Action's timeframe/milestones, as appropriate: Project applications are evaluated continuously. Every five years, the Swiss Federal Council writes a report, addressed to the Parliament which reports on the ecological and economic impact of the environmental technology promotion. Until now, three reports have been produced for the first 15 years of activity. They have shown very interesting results for all domains of environmental protection and impressive cost-benefit relations so that this promotion programme has always been reconducted since its creation in 1997.

Type of action: Economic instruments, incentives for innovation

Economic sectors: Economy-wide, including all the typical cleantech sectors like waste, water, biodiversity, air protection, etc., but also agriculture, forestry, fishing, energy, mining, manufacturing, transport, water, tourism and housing, buildings and construction.

Reference instruments and sources, as appropriate:

<http://www.bafu.admin.ch/innovation/06629/index.html?lang=de> (available in German, French and Italian)

Expected co-benefits and impact of the outcome: Ecological benefits: the developed technologies, processes, products and services allow to reduce the consumption of natural resources, to reduce the emission of pollutants affecting the environment and humans, reduce other disturbances like noise, non-ionizing radiation (NIR), etc., and to improve resource efficiency including energy.

Economic benefits: reduction of external environmental costs, savings for infrastructure and operational costs, increase of competitiveness, development of new markets-

Co-benefits are also expected on the general of sustainability, including social aspects: the supported projects are for instance evaluated under the aspects of health, risks and safety.

SDGs target(s) that the action may contribute to implement: 6.3, 9.4, 9.5, 11.6, 12.1, 12.2, 12.4, 12.5

Implementation of Environmental Performance Review (EPR) Recommendations, as appropriate: No recommendations

Objectively verifiable indicators, as appropriate: Examples of indicator calculations are shown in the last Report of the Federal Council to the Parliament concerning the impact of the Promotion of environmental technologies, issued 2013.

Partners: Private companies, in particular small and medium enterprises, research institutions

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**Batumi Initiative on Green Economy (BIG-E)
Actions by Switzerland**

Country: Switzerland, Swiss Federal Office for the Environment FOEN

Title:

Improvement in efficiency of waste treatment plants including recycling of rare industrial metals (rare earth metals, precious metals, non-ferrous metals)

Focus area 2: Promote the internalization of negative externalities and the sustainable use of natural capital

Description of the action: Enhancement of the energetic efficiency of municipal solid waste incinerators (MSWI) by prescription of a minimal energetic efficiency factor in the recently revised ordinance on waste. The thermal energy can be used directly for distant heating networks or for the production of electricity. Residues of the waste incineration as bottom ash or fly ash still contain a considerable amount of various metals. Whereas the recovery of scrap iron is realised in every incineration plant, the recovery of non-iron metals as aluminium, copper, brass and others requires new technologies which are now being implemented in Switzerland. The new ordinance of waste contains regulations on the extraction and recycling of metals from incineration residues. A current project of the FOEN, together with the EMPA (Swiss Federal Laboratories for Materials Science and Technology) and the automobile industry, focuses on an enhanced valorisation of electrical and electronic equipment in end of life vehicles (EOV). Both the removal of equipment parts before the shredding of the used car and the recovery of metals out of the shredder fraction are examined, in order to determine the feasibility as well as the ecological and economic balance.

Action's timeframe/milestones, as appropriate: Current to 2026 (implementation of the regulation on MSWI energetic efficiency).

Type of action: Legal, regulatory and policy instruments

Economic sectors: Waste treatment industry, automobile industry

Reference instruments and sources, as appropriate:

<https://www.admin.ch/opc/de/classified-compilation/20141858/index.html>

http://www.bafu.admin.ch/abfall/01472/01478/index.html?lang=de&download=NHzLpZeg7t.Inp6I0NTU042I2Z6ln1acy4Zn4Z2qZpnO2Yuq2Z6gpJCHdYB_e2ym162epYbg2c_JjKbNoKSn6A--

Expected co-benefits and impact of the outcome: Ecological benefits: the increasing of the energetic efficiency of MSWI allows the substitution of fossil fuels and contributes to the achievement of the CO₂-reduction goals. The better valorisation of metals in MSWI plants and EOVS reduces the use of primary metal resources.

Economic benefit: Better energy efficiency provides a higher financial income for the MSWI from the additional energy sold.

SDGs target(s) that the action may contribute to implement: 6.2, 7.1, 7.8

Implementation of Environmental Performance Review (EPR) Recommendations, as appropriate: No recommendations

Objectively verifiable indicators, as appropriate: Energy efficiency factor of MSWI, Quantity of recovered metals from WEEE (Waste Electrical and Electronic Equipment) from EOY

Partners: Swiss Waste Treatment Plant Operators Association, Swiss Federal Laboratories for Materials Science and Technology, private industry partners

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**Batumi Initiative on Green Economy (BIG-E)
Actions by Switzerland**

Country: Switzerland, Swiss Federal Office for the Environment FOEN

Title:

Phosphorous recovery and reuse from wastewater streams and separated organic fractions

Focus area 1, 3 and 5: Improve the measurement and valuation of natural capital; Enhance ecosystems and ecosystem services as part of ecological infrastructure; Develop clean physical capital for sustainable production patterns

Description of the action: Phosphorus is an essential element for the present and future food security worldwide, with no substitutes, and the handling of this element must change in enabling and driving sustainable practices. The urgency of action is determined by the remaining amount of high quality phosphate rock considered economically extractable and the need to increase the lifespan of this finite resource, while minimalizing the environmental impacts and ensuring food production in the long term. Guided by environmental and development policy considerations during the revision of the Technical Ordinance on Waste, the Swiss Federal Council introduced environmental standards to promote phosphorous recovery and reuse. Thus, Switzerland is the world's first country with compulsory phosphorus recovery and reuse from sewage sludge and separated organic fractions. The new regulation entered into force on 1.1.2016 with a transition period of 10 years for related technological development and adaptation of the existing infrastructure.

Action's timeframe/milestones, as appropriate: Current to 2026

Type of action: Legal, regulatory and policy instruments (e.g. increasing awareness of phosphorus issues, regulatory measures, economic tools etc.).

Economic sectors: Sectors within the phosphorus value chain, including water, waste, chemical, and food and energy industries; waste treatment industry.

Reference instruments and sources, as appropriate:

<https://www.admin.ch/opc/de/classified-compilation/20141858/index.html> (available only in German, French and Italian)

Expected co-benefits and impact of the outcome: Ensuring food production in the long term; Increase of the lifespan of phosphorous (finite natural resource); Minimization of the environmental impacts from phosphorous extraction and processing.

SDGs target(s) that the action may contribute to implement: 12.4, 12.5, 12.2

Implementation of Environmental Performance Review (EPR) Recommendations, as appropriate: No recommendations

Objectively verifiable indicators, as appropriate: Quantity of recovered phosphorous

Partners: Swiss Federal Office for Agriculture; Swiss Waste Treatment Plant Operators Association, Cemsuisse (Association of the Swiss Cement Industry), Swiss Water Association, private industry partners.

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