

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

**Country: Netherlands, Ministry of Infrastructure and the Environment**

***Title:***

**Dutch Value Chain Agreement on Closing the Phosphorus Loop (VCAP, 2011): partnership between Dutch farmers, water boards, fertilizer and food industry, knowledge institutes and the Dutch Ministries of Environment and Economic Affairs, focusing on creating a European market for recycled phosphorus**

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

***Description of the action:*** The VCAP was a starting point for close collaboration between industry, science and the government focused on getting sustainable innovations on the market by using a unique partnership of different parties involved and influencing national and European regulators in order to make room for these innovations. The VCAP is a voluntary agreement. The network was built with 20 parties on an equal basis, and is enlarged with other frontrunners in the value chain (34 parties in 2016).

Phosphorus is a critical material, is mostly used as a fertilizer, is essential for food security and –productivity and is only mined in a few countries in the world (70% reserves in Morocco). With the growing world population and changing diets the demand for phosphorus will grow significantly.

At the same time, phosphorus and other nutrients are wasted worldwide in such a way that it damages the environment (eutrophication of watersheds). Sustainable innovations in phosphorus recovery out of waste water, animal manure, household and industrial organic waste make it possible to close the phosphorus loop if those recovered materials are used again in agriculture and the chemical industry.

Close collaboration in The Netherlands led to concrete recovery systems in water treatment plants (struvite), to biorefinery plants in agriculture and the food industry and an active network that influenced the European Commission in setting phosphorus on the political agenda by means of a first European Sustainable Phosphorus Conference (2013).

The result of that conference was the launch of the European Sustainable Phosphorus Platform (ESPP), which has developed itself within two years as an authority on phosphorus for the different branches of the European Commission (DG ENVI, DG GROW, DG AGRI, DG R&I, etc.). There are 37 members from industry, science and governments actively involved. The European Commission is observer and attends a lot of meetings, including the 2nd European Sustainable Phosphorus Conference in Berlin, last year. Several meetings, also with Members of the European Parliament, led to the adoption of phosphate rock as a critical material in the Critical Materials Initiative and the adaptation of the EU Fertilizers Regulation in such a way that it makes it easier to create an internal EU market on recycled phosphorus (ashes, struvites, digestates).

The Dutch Ministry of Environment connects this European network to the Global Partnership on Nutrient Management (GPNM), a multi stakeholder dialogue on the global level with Chinese, Indian and US partners involved. The challenges to be efficient and effective in nutrient management in general and phosphorus management in particular are not

limited to European borders. The circular economy is a solution for environmental and food security problems alike all over the world.

**Action's time frame/milestones, for the action, as appropriate:** The VCAP was initiated in 2011, planned to end in 2013, but the network decided to extend the VCAP on a voluntary basis. New initiatives are taken, economic missions throughout Europe have been organised, international Green Deals are in preparation (initiated by companies). The Dutch government decided in 2013 to stop with their coordinating role within the network, but to stay involved as a network partner.

Type of actions which have been taken are:

Connecting companies in their value chain to work together on innovations, creating a market pull for those innovations;

Inventory of regulatory barriers, breaking them down as much as possible within the framework that it can't be worse for the environment;

Connecting innovative companies and ideas with the financial world;

Showing success in this partnership, also on the political level (parliament).

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

**Economic sectors:** The economic sectors of water, agriculture, chemistry and waste management are involved.

**Reference instruments and sources, as appropriate:** The actions involved are voluntary and not legally binding. Support from governments is in principal not financial and there are no other policy instruments a priori available. The main strength of the approach lies in the forging of new types of cooperation. It includes similar elements as the Dutch Green Deal approach: integral cooperation (multiple value chain partners, public-private, cross silo, policy makers, inspection and enforcement), where necessary adaptation of national and EU regulation and a practical case-by-case innovation approach.

**Expected co-benefits and impact of the outcome:** This approach is expected to have co-benefits for profit (facilitate frontrunners and innovation in the field of circular economy), people (green growth related employment creation) and planet (reduction of reliance on finite primary resources and reducing emissions to soil and water). The overall aim is to increase investments in starting or scaling up of business activities in the field of secondary phosphorus and the circular economy and thus to accelerate the transition towards sustainable, green growth.

**SDGs target(s) that the action may contribute to implement:** SDG targets 1, 2, 3, 6, 8, 9, 11, 12, 14 and 17.

**Implementation of Environmental Performance Review (EPR) recommendations, as appropriate:**

2015, Environmental performance Review of the Netherlands. Policy recommendations for Waste to Resource:

Encourage innovation through the Green Deals approach; develop policies that can support the emergence of new business models conducive to the circular economy, such as those based on services rather than the sale of goods; explore dynamic standard setting that can spur innovation; use green public procurement to support the circular economy.

***Objectively verifiable indicators, as appropriate:*** Installations (capacity) and amount of recycled phosphorus (in ktons P<sub>2</sub>O<sub>5</sub>) in The Netherlands, the amount of transborder shipments of recycled phosphorus (ktons) and the percentage of recycled content in fertilizers and other chemical products.

***Partners:*** Dutch Nutrient Platform, ([www.nutrientplatform.org](http://www.nutrientplatform.org)), ESPP ([www.phosphorusplatform.eu](http://www.phosphorusplatform.eu)), GPNM ([www.nutrientchallenge.org](http://www.nutrientchallenge.org)).

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