

RAGN-SELLS TACKLES WORLD PROBLEM WITH NEW INNOVATION

Phosphorus recycling provides safer food production and cleaner oceans

Phosphorus is indispensable for all life on earth. More than 80 percent of all phosphorus is today used to produce fertilizers, which we are totally dependent on to feed the world's growing population. Without phosphorus, half of the world's food production would disappear and the world suffer from a starvation disaster.

Our need for phosphorus is further increased by our transformation into more sustainable societies, for example for the production of biofuels and electric cars. Before the year 2050, the demand will have doubled, while the supply of the finite resource phosphorus will be very limited. Research shows that the world can run out of phosphorus in our lifetime if we do not start using it in a sustainable way.

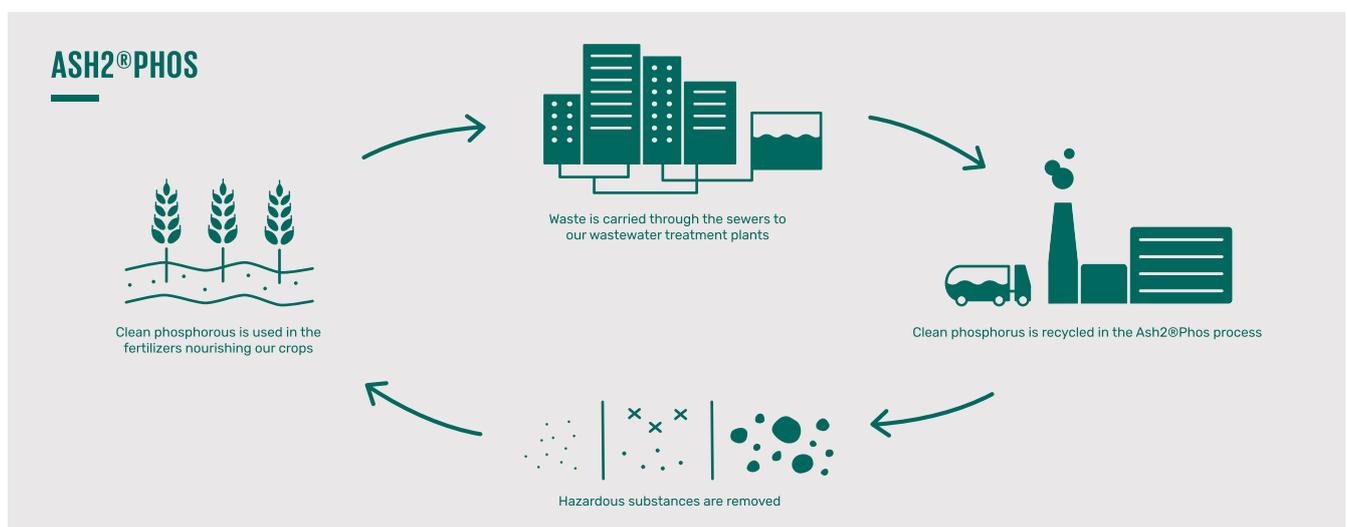
Phosphorus – a global problem today

But our unsustainable handling of phosphorus is having a negative effect on our planet already. The known remaining phosphorus deposits are mined in very few places in the world, and the most important ones are located in disputed land in Western Sahara. Moreover, the phosphorus mined today is becoming of worse and worse quality. The ore contains lower levels of phosphorus and is full of heavy metals and radioactive substances. These substances risk ending up in the fertilizer that is laid on our fields and finally in the food we eat.

After the phosphorus has followed our waste to the wastewater treatment plants, it is often deposited on landfills where the resources are not taken care of. In other cases, the sludge is dumped into the oceans where it both contributes to eutrophication and causes severe damage as it is full of microplastics and heavy metals.

Swedish innovation enables recycling of phosphorus from sewage sludge

The EU has listed phosphorus as a critical resource that we cannot live without. At the same time, there are already large amounts of phosphorus in the sewage sludge we are currently throwing away. The solution to the problem is therefore to reuse the phosphorus already in circulation. The solution is therefore simple: We need to reuse the phosphorus already in circulation.



Swedish environmental company Ragn-Sells has, through its subsidiary EasyMining, developed a globally patented way of recycling the phosphorus contained in our sewage sludge. This is done by burning the sludge and then extracting more than 90 percent of the phosphorus from the ashes, while removing heavy metals and other pollutants in the process. The recycled phosphorus is therefore of better quality and safer as fertilizer than the phosphorus mined today.

The innovation is called Ash2@Phos and is not only an environmentally friendly, long-term and cost-effective solution to the phosphorus deficiency. It also contributes to cleaner oceans, more fertile soils and a healthier, more sustainable food production.

THROUGH ASH2@PHOS WE CONTRIBUTE TO ACHIEVING SEVERAL OF THE GLOBAL GOALS FOR SUSTAINABLE DEVELOPMENT



The technology behind Ash2@Phos can also be used for extraction of so-called rare earth metals from mining waste. These metals are crucial for manufacturing computers and phones, but also solar panels and other environmentally friendly technologies necessary for creating a sustainable society.

Real recycling necessary for transitioning to a circular economy

The Global Goals for Sustainable Development describe what challenges we together need to address to create a sustainable world. Ragn-Sells sees business opportunities in the challenges and has gone from being a pioneer in cleaning and recycling to become the leading environmental company in the Nordic region. By collecting, treating and recycling the valuable resources contained in our waste, Ragn-Sells contributes to the transition from a linear to a circular economy. At the same time, the company is living proof that caring for the world and good business go hand in hand. This transition is absolutely necessary for us to succeed in achieving the Global Goals for Sustainable Development.

World leaders must pave the way

For this transition to succeed, world leaders must begin to consider waste as a valuable resource. We must make it more beneficial to reuse the resources we already have than to mine new from the soil. Germany has taken this seriously and already come a long way. Recently, the country implemented a law that requires major wastewater treatment plants to extract 80% of the phosphorus contained in the sewage sludge. This will make the country virtually self-sufficient for phosphorus. Other countries now need to follow the German example and introduce legislation that requires a more sustainable management of phosphorus in sewage sludge. The lack of phosphorus is an urgent global problem. If we do not solve it, we cannot meet the Global Goals for Sustainable Development.