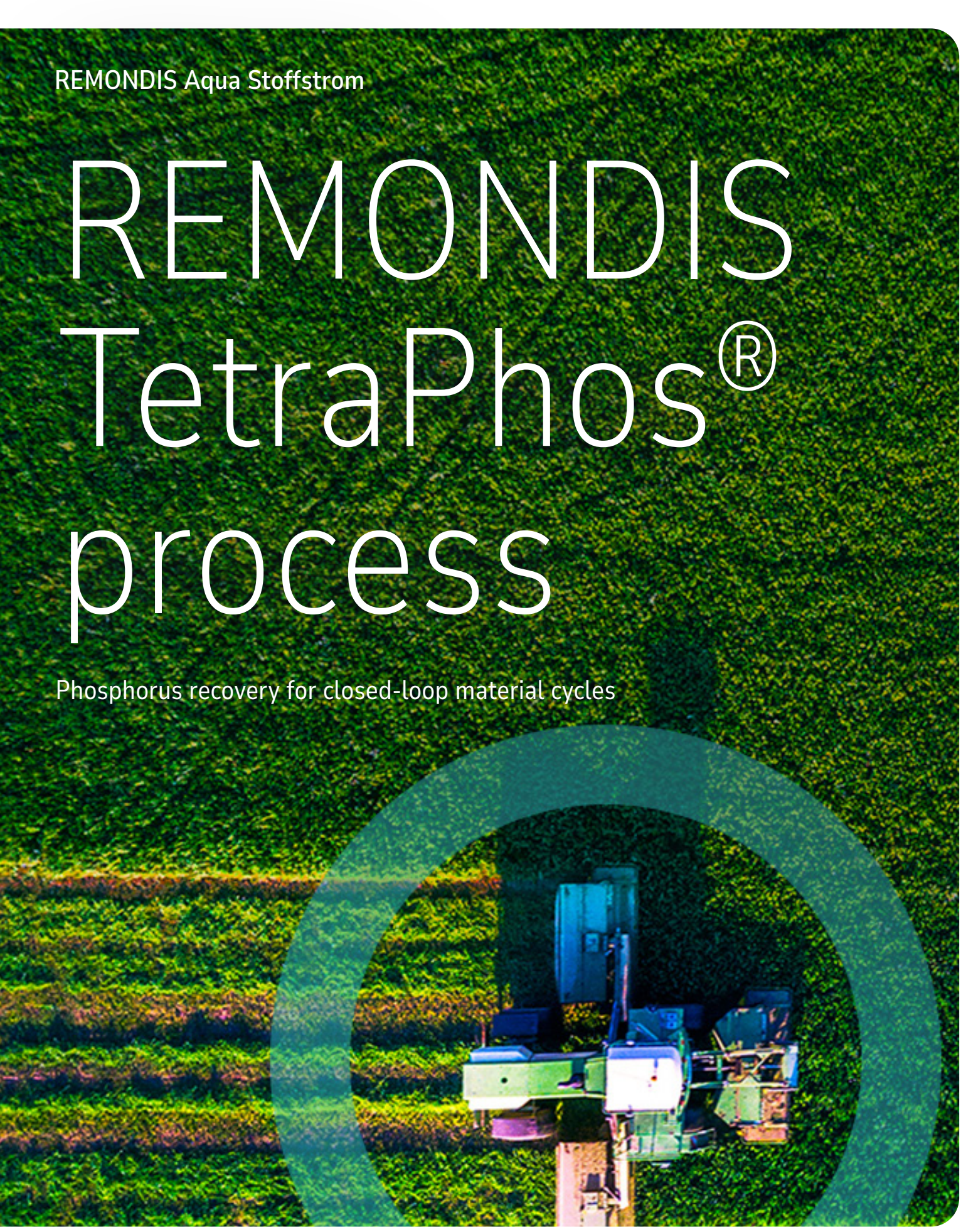
REMONDIS Aqua Stoffstrom

REMONDIS TetraPhos® process

Phosphorus recovery for closed-loop material cycles



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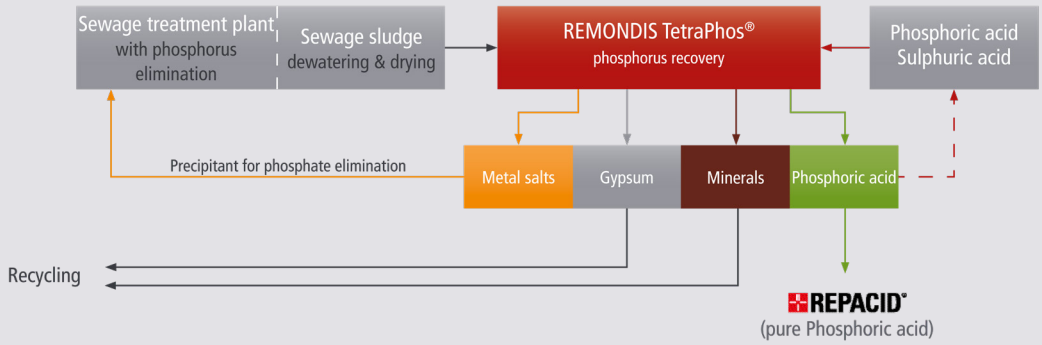
WORKING FOR THE FUTURE

Recovering phosphorus and other raw materials from sewage sludge ash

Phosphorus is a nutrient that is vital for all living organisms on earth. Practically all of Europe's phosphorus has to be imported and it is becoming more and more difficult to supply our agricultural and industrial sectors with this valuable substance as natural reserves are gradually becoming depleted and the quality of the raw material is deteriorating. The REMONDIS TetraPhos® process makes it possible to recover phosphorus and reduce the demand for primary raw materials.



Municipal sewage treatment plants as a source of raw materials – REMONDIS' TetraPhos® process

Our philosophy: In addition to treating wastewater, wastewater treatment plants can also contribute to the recovery of energy and raw materials. Using REMONDIS' processes and services, wastewater is treated, sewage sludge is recycled and valuable salts are recovered – for example, using the TetraPhos® process developed by REMONDIS Aqua.

Recovering valuable materials from sewage sludge

From 2029, phosphorus must be recycled from municipal sewage sludge in Germany. The TetraPhos® process for phosphorus recycling enables the recovery of several marketable secondary raw materials at once: phosphorus as a vital resource, as well as iron and aluminium salts, which in turn can be used for phosphate removal in the sewage treatment plant. In addition, gypsum and mineral materials are produced for the building materials industry.

Main advantages

Legal certainty

Phosphorus is removed from the sewage sludge in accordance with the adopted amendment to the Sewage Sludge Ordinance (AbfKlärV), thereby ensuring the facilities are future-proof.

Resource conservation

Several material streams are recovered and repurposed as secondary raw materials. The production of REPACID® phosphoric acid can reduce the use of imported primary raw materials and transportation costs.

Reliable separation of nutrients and pollutants

Phosphoric acid is a fully marketable and widely used secondary raw material.

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