Outcomes of the 2011 Sustainable Phosphorus Summit

Presented by:
Jessica Corman & Karl Wyant

Sustainable P strategies & global governance

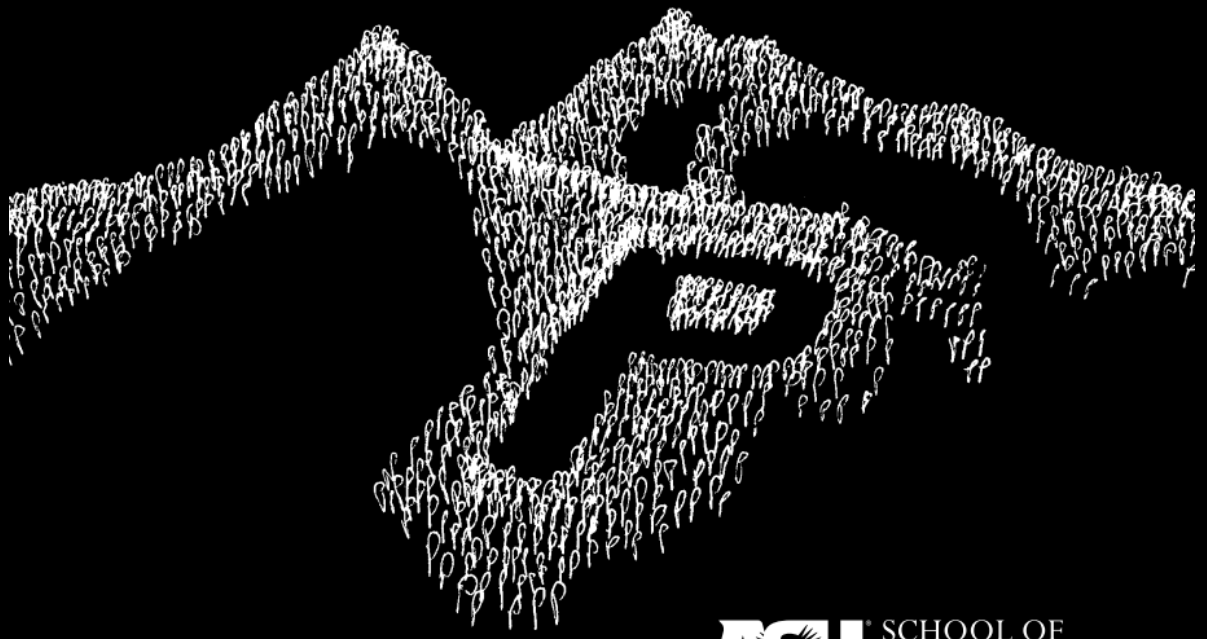
frontiers in life sciences:

sustainable phosphorus summit

phosphorus, food and our future

A summit to define the scale and scope of the P sustainability problem, to develop and communicate possible solutions for achieving sustainable P use, and to raise awareness about the issue, locally and globally.

February 3-5, 2011
sols.asu.edu/p_summit
sustainablePsummit@gmail.com



ASU SCHOOL OF Life Sciences
ARIZONA STATE UNIVERSITY

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Book: *Phosphorus, Food and our Future*

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Consensus Statement: Sustainable Phosphorus Summit

Essential and limited. *Phosphorus is essential for all life because it is part of critical molecules like DNA. It is a limited natural resource needed to sustain the vitality and productivity of all ecosystems,* including farms.

Imbalanced cycle. *Mining of phosphorus for fertilizer production has massively altered the cycling of phosphorus on Earth.* This increased phosphorus use has greatly expanded global capacity for food production but also has led to amplified phosphorus losses from cities, towns, and farms that can lead to degraded water quality, impair freshwater and marine fisheries, and alter natural biodiversity.

Food security. *Phosphorus has a key role in global food security,* as reliable access to affordable fertilizer can allow farmers to improve yields and increase quality of life, especially in the developing world.

Recycle and reuse. Currently, much phosphorus is lost in crop waste, food spoilage, and animal & human waste. *Recycling this phosphorus can reduce geopolitical and other uncertainties surrounding phosphorus fertilizer markets* and enhance farmer prosperity.

Reduce demand. *Phosphorus natural resources can be extended* by improving efficiency of use in agriculture, reducing erosion, limiting losses in mining & industry, and eating lower in the food chain.

Interconnected. *Phosphorus stewardship is coupled to other major global sustainability challenges,* including those involving energy, water, and other chemical elements.

Entrepreneurship. There are great *economic opportunities to innovate and create new industries* for phosphorus supply diversification and for improved agricultural phosphorus efficiency. However, the suitability of such measures will differ for different environments, cultures, and contexts.