

The Phosphate cycle

Where does it go when it leaves us and how does it get back? Follow the phosphate cycle...

Follow the world flow

- A. Phosphate (PO_4) comes from rock. Microbes, fungi and roots 'mine' it.
- B. It enters soil and sea to join an endless cycle between the living (plant, animal, plankton, microbe) and the dead (recycled by 'rotter' microbes).

Enter the flow

- C. We eat plants (which contain PO_4). PO_4 helps make our DNA, vital proteins, bones, teeth and ATP (our cells' 'batteries'). We are 1.0% phosphorus.
- D. Poo and dead bits (recycled by 'rotter' microbes) enter the endless cycle.

Challenges?

- More people means more food, more plants, more phosphate fertiliser...
- What happens to the flow when we mine more?
- Where does the PO_4 end up?
- Reserves may only last 100 more years. Fix the challenge? Fix the flow.