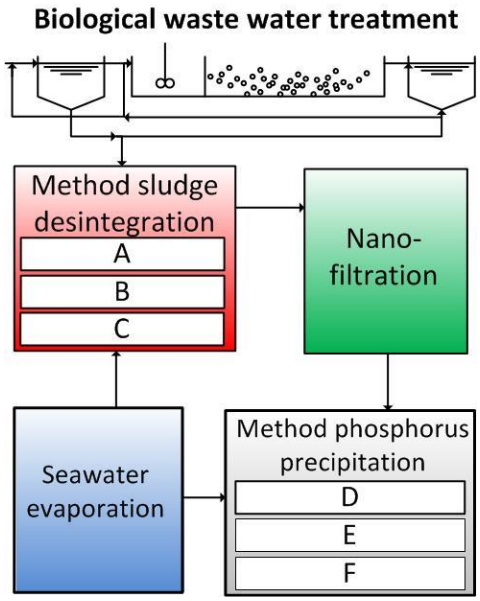
BULGARIAN-SWISS COOPERATION PROGRAMME
БЪЛГАРО-ШВЕЙЦАРСКА ПРОГРАМА ЗА СЪТРУДНИЧЕСТВО

Innovative phosphorus recovery from waste sludge

Starting Date 01.02.2013

Duration 24 Months

Discipline Environmental engineering



Main Goals

- Elucidate the phosphorus recovery potential in Bulgaria
- Assess a series of innovative technical approaches
- Develop a tailor-made process making use of local resource supply and technical synergies

Activities

Scientific research including data collection, lab scale and pilot scale experiments in order to:

- establish phosphorus flow balances for three Bulgarian waste water treatment plants
- disintegrate sludge by use of seawater concentrate, spent acids and microbial fuel cell
- separate phosphorus from metals by application of nanofiltration
- precipitate phosphorus with seawater concentrate and natural flocculants by air or microbial fuel cell stripping

Expected results

- Propose an efficient phosphorus recovery process for Bulgaria
- Educate five master and PhD students (two in Switzerland, three in Bulgaria)
- Establish a long-lasting cooperation between the Swiss and the Bulgarian partners

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