

Agricultural Practices to Prevent Eutrophication

- 'Controlled Drainage and Irrigation(CDI)', 'Catch Crops(*)' and 'Spring Tillage' prevent eutrophication of creeks, lakes and sea.
- Focus is to describe how CDI is implemented on Ragnabo Farm
- Results from analytical model is presented
- Farm is located in Southeast of Sweden, closed to the Baltic Sea.

(*) Catch Crops *'catches'* the nitrogen in the field before it reaches the sea.

Environment benefit: Improved water quality in outlet to Kalmarsund and Baltic Sea

- Good farm practices can prohibit over-fertilisation and eutrophication in downstream waters such as ditches, creeks, rivers, lakes and sea.
- Reduced nitrogen leakage of 25 kgN/ha can be achieved



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Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google earth

Bilddatum: 1-1-2007

latitud 56.399754° longitud 16.076687° höjd 4 m

Visningshöjd 533 m

Farm benefit: Less mineral fertilizer required to get same revenue and high crop production and less variety between years.

- Practices make crop farming less weather dependence
- Water resource is not an issue (problem) anymore
 - Not in dry, nor in wet season
 - Cost efficient (low energy) irrigation
 - No water is wasted
- Effects on upcoming climate changes are reduced

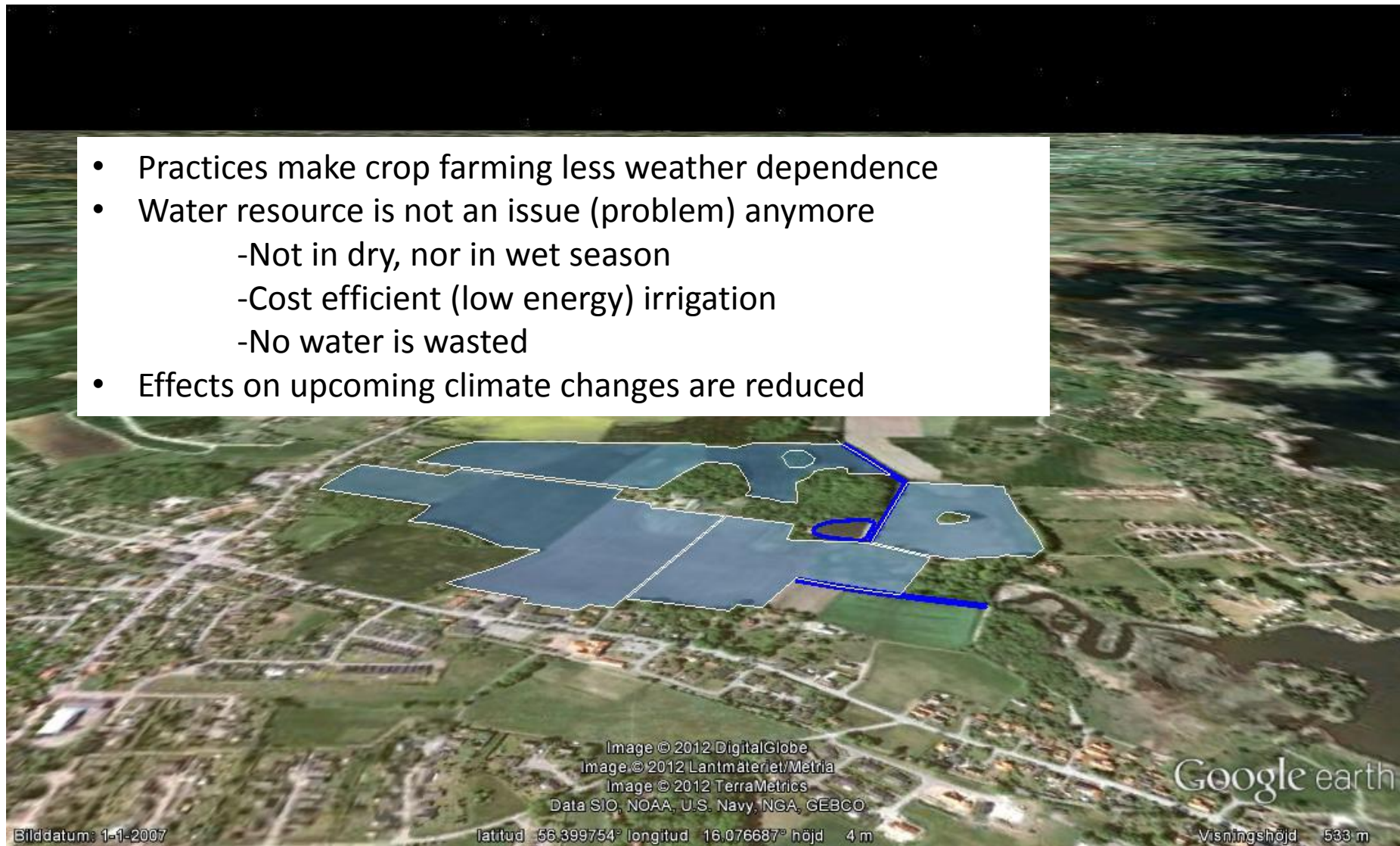


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Farm practice: Controlled Drainage, Catch Crops & Spring Tillage reduces nitrogen leaching

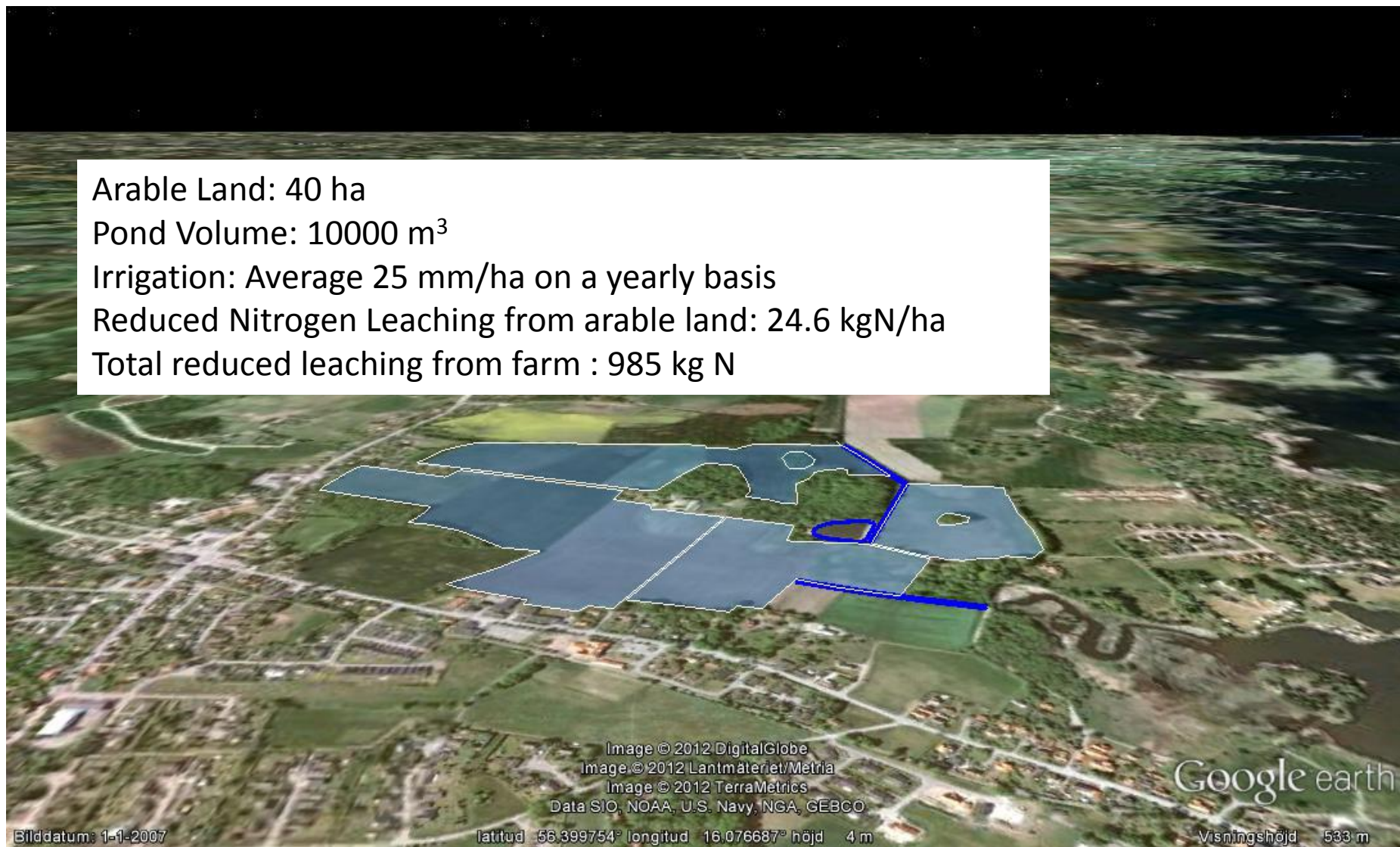
Arable Land: 40 ha

Pond Volume: 10000 m³

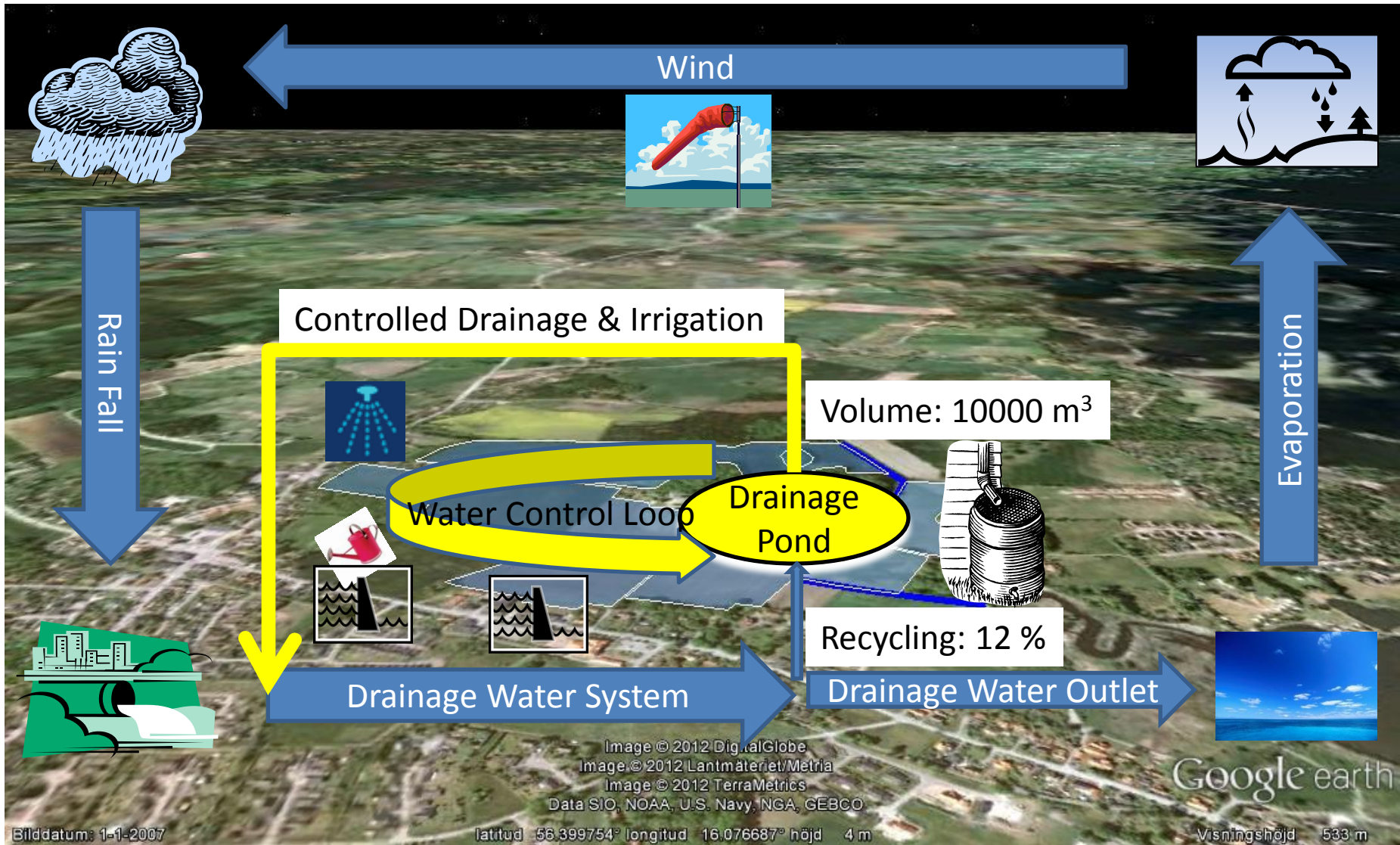
Irrigation: Average 25 mm/ha on a yearly basis

Reduced Nitrogen Leaching from arable land: 24.6 kgN/ha

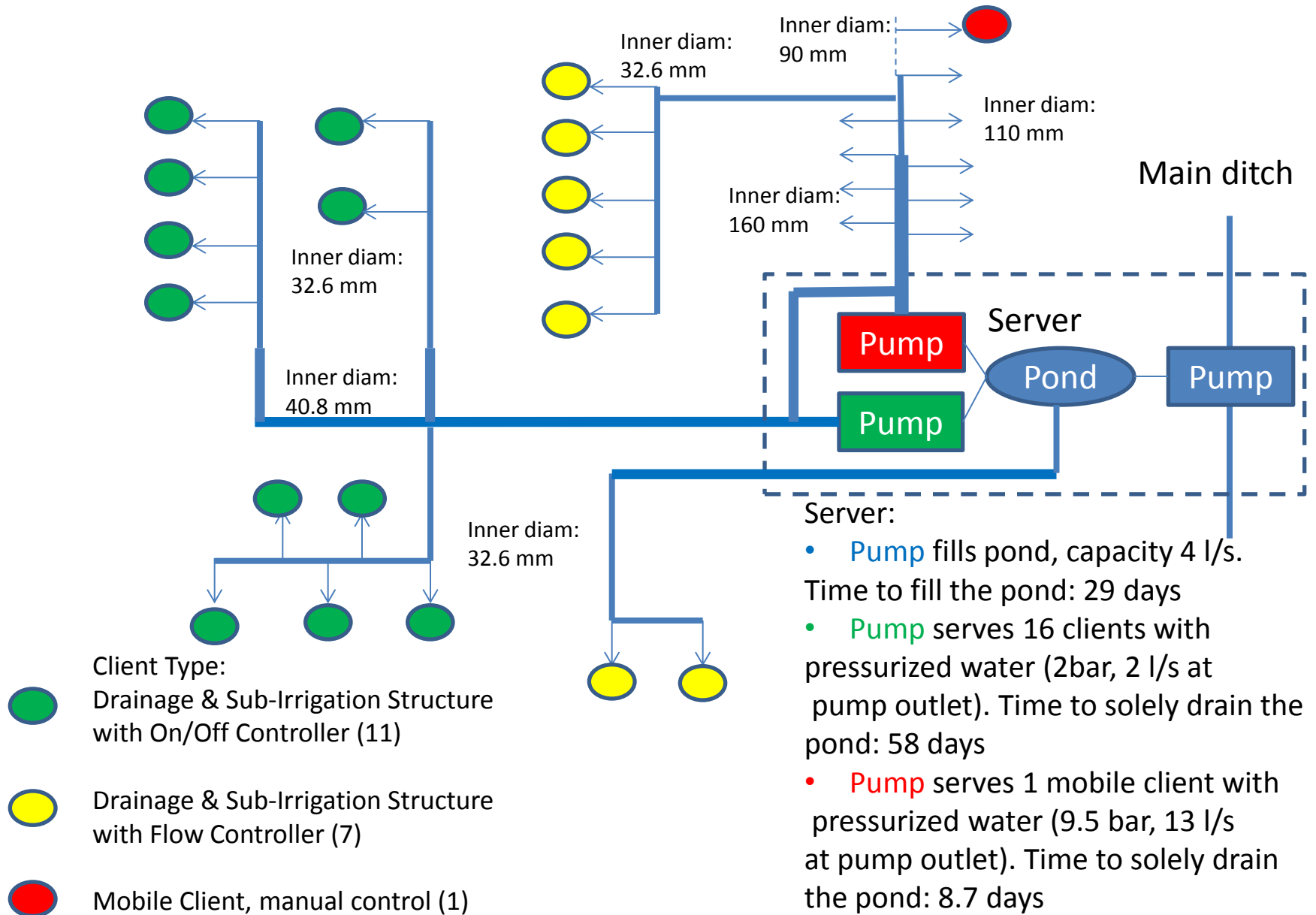
Total reduced leaching from farm : 985 kg N



Water Recycling & Control



Controlled Drainage & Irrigation as a Client - Server Solution



Drainage & Irrigation Controller

