

## Application of SWAT using the Japanese soil taxonomy of agricultural fields and SolphyJ to the Sakura River watershed

YOSHIKAWA, Seiko<sup>1\*</sup>, ASADA, Kei<sup>1</sup>, Sadao Eguchi<sup>1</sup>

<sup>1</sup>Natl. Inst. Agro-Environ. Sci.

To apply SWAT to agricultural watersheds in Japan, the soil taxonomy polygon data for agricultural fields and the SolphyJ (Agricultural soil profile physical properties database, Japan) were utilized as input data. The procedure was applied to the Sakura River watershed in Ibaraki to simulate water and N and P movements. As a first approximation, river flow by SWAT reasonably agreed with the measured one by changing physical parameters relating river water flow, although irrigation and drainage to paddy fields, occupying 30% of all the area, were not taken into account. The N and P movements were difficult to be simulated by the current version of SWAT that does not consider the physical and chemical processes occurred in ponded water in paddy fields.

Keywords: SolphyJ, SWAT, soil taxonomy of agricultural fields, paddy field

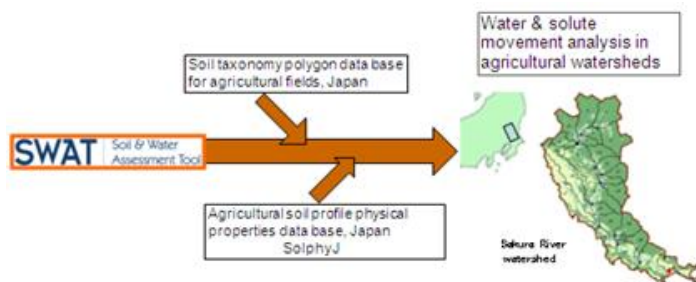


Figure Scheme of research procedure