Attachment 3

Estimation of the amount of planned water intake

The amount of water intake has to be estimated based on rational ground, and it has to be within a necessary and appropriate amount in line with the purpose and plan of the water use. This paper shows the way of estimation by the purposes of water use.

(1)   Water For Water Supply

Q1 (Water Demand for Water supply) = **Q2** (Water Intake From River) + **Q3** (Water Intake From Other Water Resources)

Q1 = (Daily Maximum Supply amount) $\times$ (Design Population Served) $\times$ 1/ 1- (Leakage Rate)
Q3 = (Water Supply From Groundwater) + (Water Diversion From Other Water Suppliers)
Q2 = Q1 – Q3

(2)   Industrial Water

Q1 (Water Demand For Industrial Water) = **Q2** (Water Intake From River) + {**Q3** (Water Intake From Other Water Resources) + **Q4** (Recycling Water)}

Q1 = (The Amount of Industrial Productivity) $\times$ (Supply Unit)

(3)   Irrigation Water

Q1 (Water Demand For Irrigation Water) = {(Area Irrigated) $\times$ (Water Requirement in Depth (the amount of evaporation & penetration))} + (The Amount of Leakage) – {(Net Rainfall) + (The Amount of Repeated Use)

(4)   Water for Power Generation

Q1 (Water Demand) = (Generating Power) / 9.8 $\times$ (Drop)