

### **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)

$Q1 = (\text{Daily Maximum Supply amount}) \times (\text{Design Population Served}) \times 1 / 1 - (\text{Leakage Rate})$

$Q3 = (\text{Water Supply From Groundwater}) + (\text{Water Diversion From Other Water Suppliers})$

$Q2 = Q1 - Q3$

##### **(2) Industrial Water**

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

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

##### **(3) Irrigation Water**

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

##### **(4) Water for Power Generation**

**Q1** (Water Demand) =  $(\text{Generating Power}) / 9.8 \times (\text{Drop})$