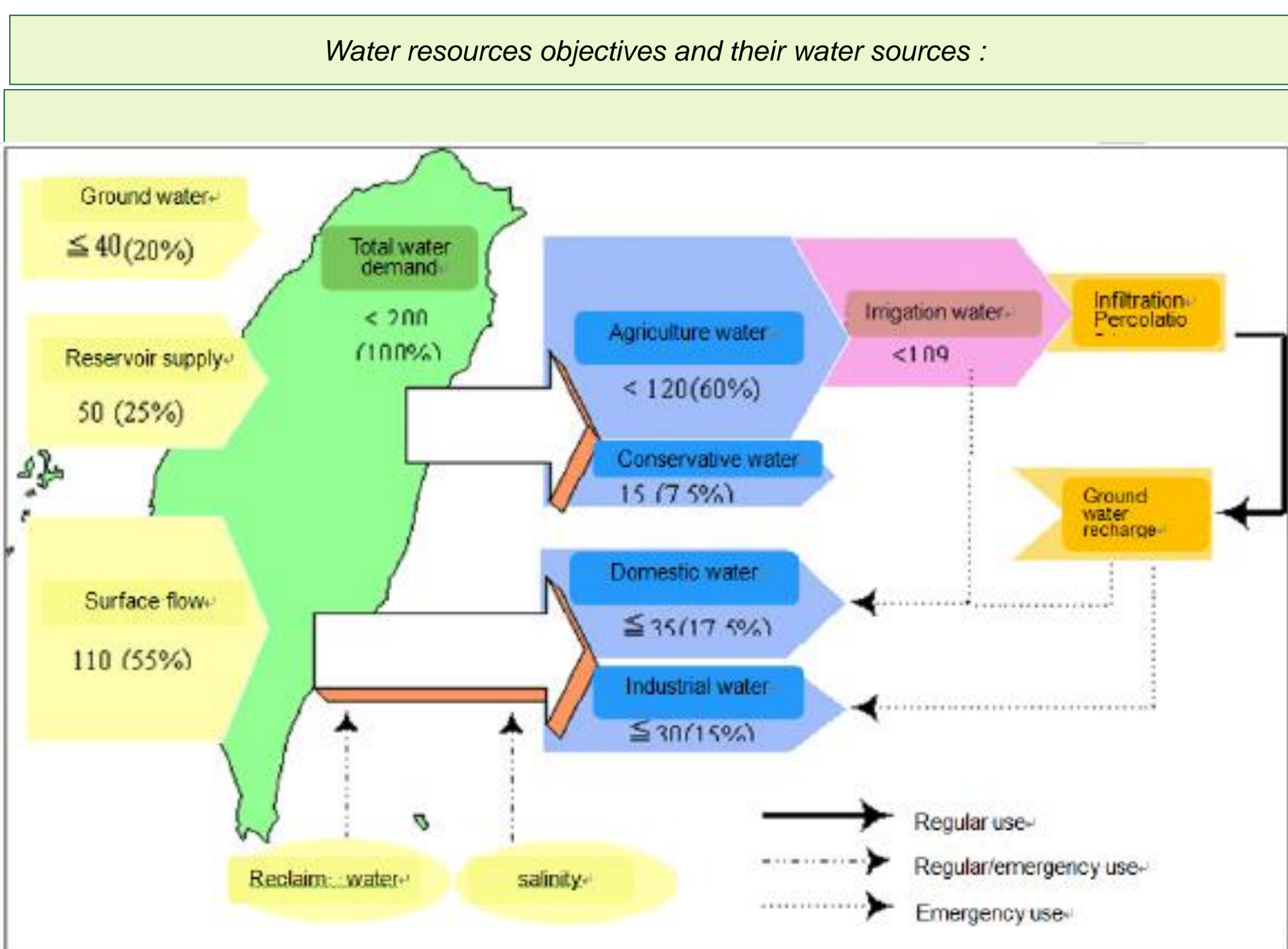


Water Governance for Drought/Water-Scarcity in Taiwan – a Multi-Layer Management System

Background

Taiwan is located in the mid-latitude area of northern hemisphere with annual rainfall reaching 2,300mm. However, rainy season accounts for over 80% of the total annual rainfall while there's only scattered rainfall in dry seasons. Overall speaking, the short of water resources in the spring each year has become an important issue for the management agencies in Taiwan. Over the years, a multi-layer management model has gradually formed, and it's worthwhile to share it as well as for discussion.

As the demand for irrigation water is closely related to crop types, there is competition as well as cooperation among every water sectors in the spring. And further water shortage requires negotiation in an effective and fair manner..

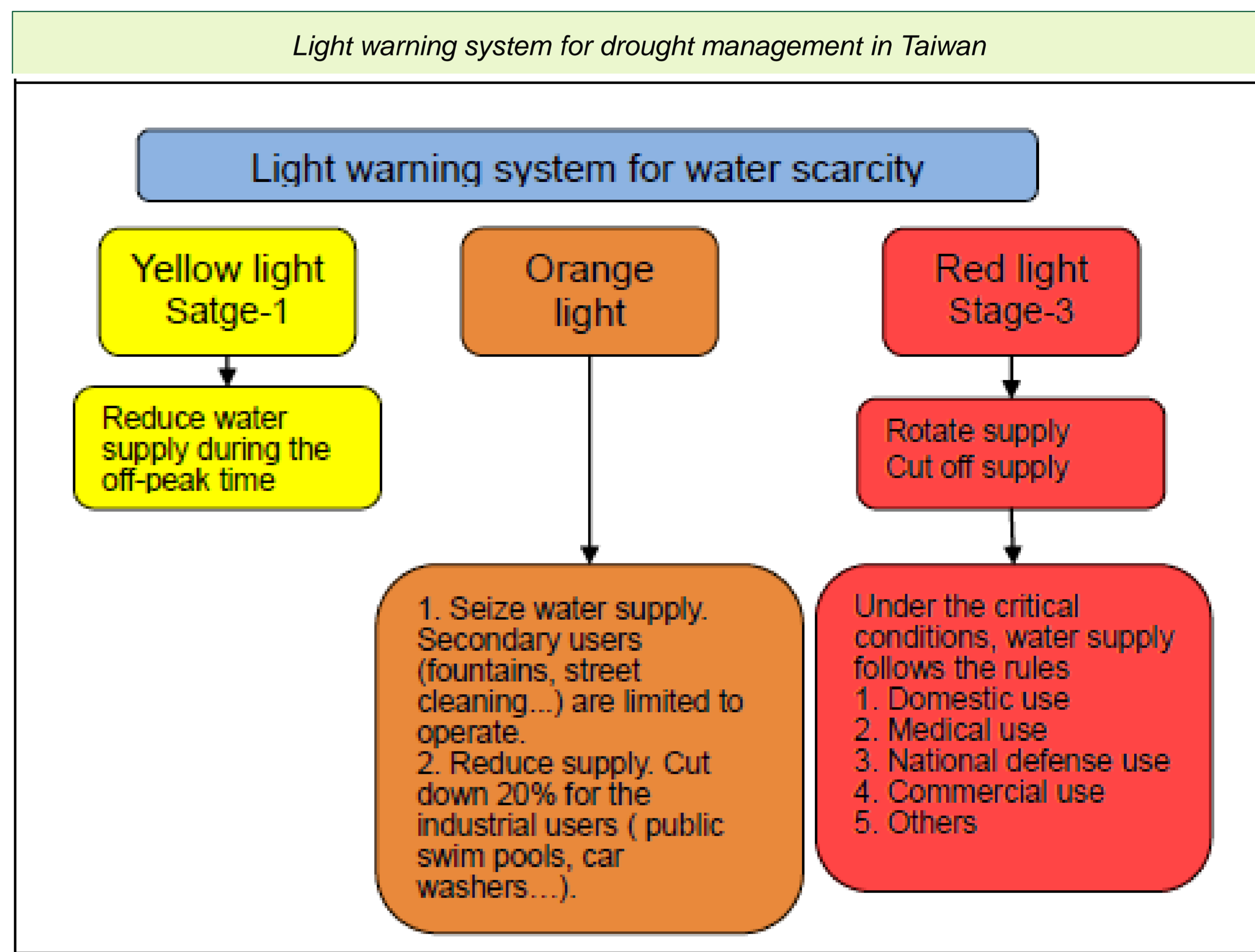


Classification

On the distribution or management of water shortage in Taiwan from the perspective of water management, the roles for the water-use negotiation could be briefly classified as follows.

- 1) the governing units(GU), which mainly are the government agencies, e.g., the Water Resources Agencies of the Ministry of Economic Affairs, and /or the Department of Agricultural Water Resources, Council of Agriculture. These agencies are responsible for the distribution of water rights and the preparation of administrative guidelines, and the activation of the negotiation process.
- 2) the distribution units(DU), which operate with a complete organization, e.g., Water Companies, regional Irrigation Associations, or centralized Science Parks. Organizations in this category generally have clear targets for service, a more precise water-use records, and negotiation capabilities.
- 3) the end users(EU), which are those receiving distributed water in the water-supply system, e.g., households, farm units, or small production

businesses. No solid organization, no clear representatives, and possibly no information on the minimum demand are characterized in this category.



Experience

There is a lot of experience in the management of water-shortage scenarios. In this article, the hydrological as well as water-use characteristics, past water-shortage situations, and water-shortage cases (2014~2015) would first be introduced, then a multi-layered strategic management framework is stated (fig-5). This framework is basically a negotiation model of water-scarcity management, and has been practiced for years. Once the written format is confirmed, it can be a guideline to be followed for future water-scarcity management.

