waste tightly enough and the quality of the water has suffered as a result, particularly in sections closer to urban centres.

Figure 6. Nong La Han Sai Reservoir

4. DISCUSSION

Becu et al. created an agent based simulation of small catchment water management in northern Thailand. The results of the investigation were similar to the outcomes of this research project. There are water resource management problems stemming from a lack of supply for agricultural demand on a year-round basis. The conclusion of Bacu et al.'s investigation was the development of a CATCHSCAPE model. This is "a Multi-Agent System (MAS) that enables us to simulate the whole catchment features as well as farmer's individual decisions. The biophysical modules simulate the hydrological system with its distributed water balance, irrigation scheme management and crop and vegetation dynamics. The social dynamics are described as a set of resource management processes (water, land, cash, labour force). Water management is described according to the actual different levels of control (individual, scheme and catchment)." The researchers argue that, as there are multiple rural stakeholders concerned with water management, the best policy is one of negotiation that stresses the transparency of regulations and methods implemented.

Water resource management problems are becoming increasingly severe in Thailand due to rapid development. This has reinforced the need for integrated resource management. Such an approach can help reduce the severity of the extreme annual problems of drought and flood. "Deforestation is seen as a major cause of these problems and so it is in watershed management that the first initiatives" need to be taken. There have in fact been a number of models developed to try and address the problem of water management in Thailand. The