Analyses
The current situation in the Sedawgyi basin is the low efficiency of the water usage in the water resources system. During the rainy season lots of water gets released to avoid spillage. Not all this released water can be used in the agricultural areas, so the water flows towards Mandalay and causes serious floods in the city. On the other hand the during the drought periods the water is accumulated in the basin and there is not enough water for all the demand. Another issue in the area is the flood risk caused by the Shan Hills to the east of Mandalay. Precipitation in the catchment area flows towards Mandalay city and causes floods eastern parts of Mandalay.

Results
After the simulations it was clear that in the ‘Do Nothing Case’ in 2040 some sincere issues were raised in water availability for both PWS and irrigation. The climate change effects and other long term autonomous effects which were included in the 2040 models, seriously reduce the total water availability by the Sedawgyi Reservoir. For all the other scenarios the results were evident that it is not possible with the current operational settings to combine PWS and irrigation. This is in line with the expectations of ‘ADP PPTA’. In order to raise total water usage efficiency the water resources system has to be separated and combined with increased irrigation efficiency.

Scenarios
1. ‘Base Case’; In this case the current situation is shown.
2. ‘Do Nothing Case’; This case is similar to the ‘Base Case’, but it is now including long term effects and visualizes the issues if nothing is done in 2040.
3. ‘ADB Reference Case’; Here all future plans of ‘ADB PPTA’ are included in the model for 2040.
4. ‘SUDS scenario’; Increasing the return flow to the surface water and reduce flood risk in the city in 2040, in order to increase quality of life in Mandalay.
5. ‘Capacity Training Agriculture scenario’; By increasing the irrigation efficiency a higher production yield can be achieved with less supply.
6. ‘Secondary Open Channel’; The purpose of this secondary channel is to reduce flood risk by rainfall in the Shan Hills. The water is then redirected as a new inflow into the Sedawgyi water resources system.
7. ‘Separation of water resources system’; By dividing the water resources for public water supply for Mandalay and irrigational purposes.

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