



The 3rd International Forum
on Water and Food
Tshwane, South Africa
November 14 – 17, 2011



Co-hosted by:

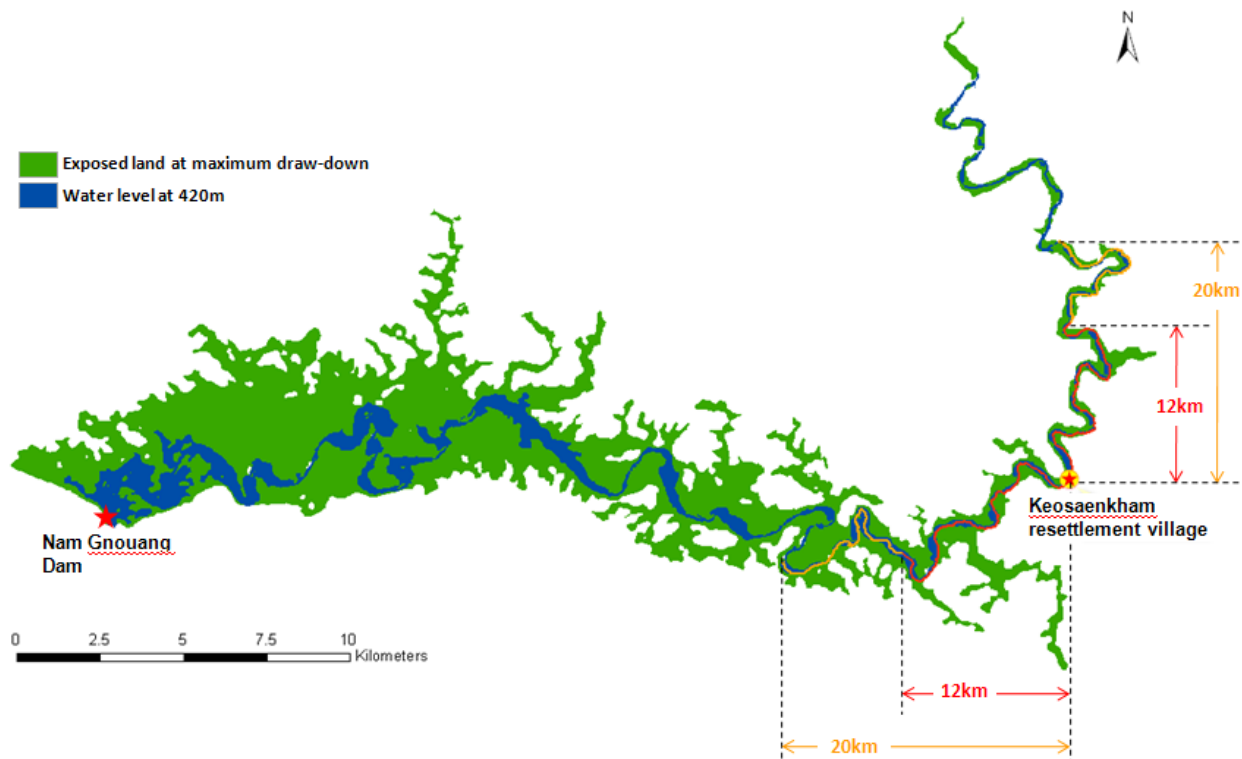


Identifying land and water resources for improving livelihoods of people living around reservoirs in the Mekong Basin

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Session: Emerging TWG



AVAILABILITY AND EXCESS TO LAND AND WATER RESOURCES OF THE NAM GNOUANG RESERVOIR UNDER DIFFERENT WATER DRAW-DOWN CONDITIONS

Key Message

Availability and accessibility of land and water resources are important factors for improving livelihoods of local people who are living around reservoirs. The analysis of these factors also helps inform the need for adjustment in reservoir operation to accommodate the livelihood needs of affected communities.

Summary

Identifying available land and water resources around reservoirs is important for supporting the livelihoods of affected communities who depend on these resources. For our research, we used time-series satellite imagery and digital elevation data in the area of the Nam Gnouang reservoir in Lao PDR, to map current land use and determine areas of seasonally-flooded land along the reservoir fringes that are accessible by local farmers for cultivation. As these land areas vary with the reservoir water level, their emergence and duration are determined by the scheduling of water draw-down. We also use GIS-based accessibility analysis to evaluate local communities' access to the water body for fisheries or aquaculture. This analytical approach takes account of the needs of local livelihoods. Its results, when incorporated into a DSS for reservoir management, would inform and suggest adjustments in reservoir operation that could accommodate these needs. The method will subsequently be applied to the other two study sites of the CPWF Mekong basin project: the Yali in Vietnam which has been in operation since 2002, and the planned Lower Sesan 2 in Cambodia. The approach is also generically applicable to address similar issues on reservoir management to accommodate local livelihoods in other river basins.