Hydropower development in the Mekong Basin – From a Canadian Private Environmental Consultancy Experience, G. Bruce, T. Boivin, S. Pech and A. Datta, Hatfield Consultants Partnership (gbruce@hatfieldgroup.com)

The BC Ministry of Environment (BCMOE), Alberta Environment and Sustainable Resource Development (AESRD), and Fisheries and Oceans Canada (DFO), have guidelines designed to mitigate impacts of hydro-electric dams on fish. Specific issues of concern include; ensuring migratory fish passage, maintaining downstream flows and minimizing dissolved gas super saturation levels below dams. Impact mitigation approaches that have been developed in temperate regions like Canada are only partially effective and largely untested in tropical regions. In the Mekong Region, there are plans for development of numerous large-scale hydropower developments on both the main stem Mekong River, and tributaries to the Mekong River. Millions of people depend on fish caught in the Mekong River as a primary source of protein and food security. Innovative approaches are required to balance the needs of revenues generated from hydroelectricity with the basic livelihood requirements of local citizens.

The construction of dams typically has negative impacts on several ecosystem components, improvements to dam design and operations can help mitigate impacts on some resources and potentially result in opportunities for compensation and/or enhancement activities for other aquatic resources. Hatfield staff are actively engaged in working with both hydro developers and regulatory authorities in Canada and internationally (specifically in the lower reaches of the Mekong river that includes Lao PDR, Cambodia, Viet Nam and Thailand).