



# World Heritage / Patrimoine Mondial

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**Title of thesis:** Development of Geographic Information Systems for the management of the World Heritage Site Jesuit Missions of Chiquitos, Bolivia

**Type of thesis:** M.A. World Heritage Studies

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**Please provide a 500 words abstract outlining your thesis; you may wish to attach a table of contents or any other relevant material:**

Nowadays the common shortage of public funds for the protection of cultural heritage obliges national agencies worldwide to develop new strategic approaches to protect resources of outstanding cultural value with a smaller budget but without sacrificing the quality of their work. The establishment of computer-based planning support systems can be understood as an efficient method.

Geographic Information Systems (GIS) support not only the improvement of tools and methodologies, but also the development of an adequate conceptual framework among stakeholders and institutions. Improved interaction between different disciplines and users is a considerable asset for heritage protection, especially in developing countries, where this task is a challenging commitment.

The objective of this study was to assess the feasibility of GIS as a tool for improved management of resources of cultural value in a developing country, given the particularly scarce funding and training in the local organisational framework. While on the one hand, developing advanced analysis techniques under these conditions may be considered as too risky and intricate, on the other hand, the advantages provided by current information technologies, networking and affordable equipment and software can be understood as a new arising opportunity for developing countries.

The assessment is performed in a three steps process: (1) analysis of data and needs, and (2) an extensive empirical experiment with the development of a large pilot data system as well as training with the local agencies. This leads to (3) substantial conclusions and recommendations for full system development.

The results of this research confirm that developing computer-based planning support systems of higher complexity in a developing country imply careful planning and meticulous implementation, but it also corroborates that the advantages may be long-lasting in terms of improved interaction, commitment to documentation, data standardisation, training and steady monitoring of processes and impacts, which are improvements of enormous value for heritage conservation.

The system was the first developed in Bolivia and has motivated similar implementations in other heritage sites in the country.