Environmental diagnostics as a tool for the planning of tourist activity – the case of Lago Azul and Nossa Sra. Aparecida caves – Bonito, MS, - Brazil

Paulo César Boggiani [1], Eunice Aparecida Bianchi Galati[2], Geraldo Alves Damasceno[1], Vânia Lúcia.Brandão Nunes[1], Márcia Aiko Shirakawa[3], Osvaldo José da Silva[4], Nicoletta Moracchioli[5]; Ana Lúcia Desenzi Gesicki[1]; Maria Margareth Escobar Ribas[6], Ricardo Marra[7], Benilva Paim Carvalho de Sousa[7]

1 – Universidade Federal de Mato Grosso do Sul; 2 – Faculdade de Saúde Pública – Universidade de São Paulo; 3 – Universidade de São Paulo;4 – Programa de Pós-Graduação em Tecnologias Ambientais – Universidade Federal de Mato Grosso do Sul; 5 – Instituto do Patrimônio Artístico e Histórico Nacional – IPHAN; 6 – Centro Nacional de Estudo, Proteção e Manejo de Cavernas - IBAMA.

The increase of tourist interest in caves in Brazil has been faster than the studies required for their protection. With regard to this problem, researchers from several areas and members of environmental and heritage protection governmental institutes have been working together to acquire the minimal parameters necessary for the evaluation of tourist activity in the two main caves of Bonito, Mato Grosso do Sul State, Brazil: the Lago Azul Cave (LA) and Nossa Sra. Aparecida Cave (NSA). The first cave has been receiving visits from tourists (40000 visitors per year) since the 80's, while the second is closed. The studies involved the monitoring of the temperature and relative humidity of the air of the subterranean environments (5 data loggers in the LA and 4 in the NSA), with continuous records from June 1999 till June 2000, geological and biological investigations, bacterial and fungal colonization, ecological studies, identification of the phlebotomine fauna, with the aim of assessing the risk factors of leishmaniasis transmission, and taxonomic identification of the vegetation around the caves. The parameters obtained were used to define the carrying capacity of visitation of the two caves, with the application of Cifuentes Method. The estimated number of visitors per cave were 95 a day from November to March (rainy season) and 264 from April to October (dry season) for the Lago Azul Cave, under the present conditions of visitation, and around 300 visitors a day for the Nossa Sra. Aparecida Cave, with management strategies to be proposed for better definition of this number. With the carrying capacity defined, it is possible to determine the nature of tourist visits, and to analyse the environmental impacts of these activities on the subterranean environment and surrounding areas.