**Tropentag, September 17-19, 2014, Prague, Czech Republic**

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# *Egeria densa* in Itaparica Reservoir, Brazil – Need for a Management Strategy

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**Abstract**

*Egeria densa* is a submerged macrophyte native from South America, yet it can be found widespread in waterbodies in different parts of the globe. It has been regarded as a pest species, due to its high growth rate and good adaptability to different environmental conditions. At the Itaparica reservoir, in the São Francisco River in Northeast Brazil, this species shows a high development of biomass since the past years. It forms monospecific and dense stands in shallow and undisturbed areas, such as bays. In this reservoir *Egeria densa* occurs down to 8 m water depth, showing high tolerance to light and sediment characteristics. The low nutrient levels in the water of Itaparica reservoir also do not seem to restrain the growth of this plant.

Blooms of macrophytes such as *Egeria densa* can be considered detrimental in different ways. On a biological point of view, it leads to the reduction of macrophyte biodiversity by out competing other species, it promotes mosquito breeding in stagnant mats and it provides habitat for snails, vectors of the human parasite *Schistosoma mansoni*. Recreation and fishery activities are also hindered by this plant (rod fishing, swimming and navigation, by fouling boat motors), as well as power production, by blockage of turbines. For these reasons, it seems essential to develop a reservoir management strategy for the control of *Egeria densa*.

Itaparica reservoir is located in the semi-arid region of Brazil, where water availability is scarce and soils in the watershed are poor. Feed for animals in this region is also limited, especially in dry seasons. The use of *Egeria densa* as an extra source of nutrients for soil amendment or as feed for livestock is considered in this study, as well as the opportunity of using this plant as substrate for the production of biogas, on a local scale. The regular removal of *Egeria densa* would not only prevent the predominance of this plant in the reservoir, but also help improving life conditions in the region, in a sustainable way.

**Keywords:** *Egeria densa*, management, reservoir

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