

Abstract

A study was carried out from June to September to assess habitat quality for manatees (*Trichechus manatus manatus*) in the Coswine swamps in French Guiana.

The Coswine swamps are one of the largest wetlands in French Guiana and totally under the influence of the tides. The climate is typical for the tropics and has a huge impact on the water regime. In the area, three different protection zones exist. The swamps are quite untouched from humans, perhaps a reason for the high number of manatee sightings in the recent past and the its suspected large population size.

As the manatee is an aquatic herbivore, in a first part the submerged aquatic vegetation was investigated. At the same time, some parameters important for manatee distribution were measured, which had been determined by literature survey. The whole area was divided into sections and in each such section the vegetation and water parameters were recorded during a preliminary study. The results showed, that no submerged aquatic vegetation was present in the Coswine swamps. The aquatic parameters were similar to those obtained in other studies in French Guiana and South America if climatic circumstances are taken in account.

The second part of the study is based on the first one and deals with the bank vegetation, as it is supposed, that this is the only available food resource for manatees in the area. The methodological approach was slightly altered for the assessment of the water quality, considering the recommendations made after the first study. The vegetation was sampled in 100 m long transects at the banks with a distance of 1 500 m between each in the whole study area.

During the study rarely any manatee was spotted, but this more likely was due to the methods applied than an indicator for the non-presence of sirenians. The aquatic parameters varied slightly more than in the first part of the study. Salinity unexpectedly was low and more than $\frac{3}{4}$ of all samples were taken in fresh water. The vegetation sampling showed an overwhelming importance of Red Mangrove (*Rhizophora racemosa*) in the whole study area. In contrast to the first impression on the site, the swamps are quite homogenous when regarding only the aquatic parameters. It is therefore difficult to distinguish any zones of changing environmental aspects. Regarding the vegetation the Coswine swamps are also homogenous but to a lesser degree as the plants are more influenced by the soil on which they thrive than by the water quality.

For manatees, the Coswine swamps seems to provide a suitable habitat with plenty of food in the form of overhanging branches and leaves of Red Mangrove, some mouko-mouko (*Montrichardia arborescens*) and other consumable plants. The aquatic parameter are in a range which is described in literature as manatee-fitting. The quite untouched Coswine swamps provide shelter from wave action, humans and pollution. Therefore they can be judged to be important manatee areas. Corresponding steps for the conservation of this still natural area should be taken and secured by nature protection laws.