Mangrove Project Suriname

Summary
The Weg naar Zee (WnZ) region of Suriname’s capital Paramaribo is dealing with coastal erosion. Images from the past 30 years have shown coastal retreats of up to 1.3 km. Mangrove forest used to be present in large numbers at the location. These forests enhance accretion, but due to different reasons, the number of mangroves has decreased significantly.

Several attempts have been made to rehabilitate the mangrove at WnZ. Sediment Trapping Units (STUs) have been constructed, with the purpose to enhance accretion and thereby create ideal conditions for mangrove development. The units consist of walaba poles with bamboo as filling material. Walaba is a suitable wood type for this and also grows in Suriname. From bed level change results, field observations and interviews it could be concluded that there is room for improvement. Therefore, the following project goal was formulated: ‘To present methods for mangrove rehabilitation at the WnZ coast, which can be supported by the key stakeholders’.

To present mangrove rehabilitation methods, it was necessary to gain insight regarding the WnZ stakeholders’ involvement when it comes to coastal management. Fourteen key stakeholders were identified and analyzed.

To gain even more insight into the views, perceptions and wishes of the WnZ region’s inhabitants, a survey was also conducted.

Knowing the success factors and design requirements resulted in the analysis of which mangrove rehabilitation designs are applicable and supported by the region’s stakeholders. The first step was conducting a Multi-Criteria Analysis (MCA) in which five alternatives are weighed. From this analysis the top three variants were chosen as preliminary designs: 1) Adapted STU, 2) STU with Nourishment and 3) STU with chenier.

Finally, support by stakeholders for the mangrove rehabilitation designs can only be gained if they are engaged. This was tackled by composing a stakeholder engagement plan. In this plan, the following three strategies were formulated: 1) Setting up a bamboo farm, 2) Setting up a Mangrove Vacation Resort and 3) Growing salt-tolerant plants. These strategies can contribute to the economic development of the region if implemented, which could then also benefit the various stakeholders.

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