

## Environment – Tanzania

### Indigenous Trees for the Afforestation of Mining Areas

<b>Objectives:</b>	Establishment of a tree nursery according to Tanzania Tree Seed Agency criteria
<b>Partners:</b>	Heidelberg Cement Group / Tanzania Portland Cement Company (TPCC)
<b>TC Programme:</b>	-
<b>Duration:</b>	2010 – 2013
<b>Partner contribution:</b>	€ 132.200
<b>GIZ contribution:</b>	€ 126.000



#### **Problem: Plants and seedlings to re-cultivate deforested areas in and around Dar es Salaam are not available**

The pressure on natural resources and land in and around Dar es Salaam will continue to rise due to ongoing influx of people. While surrounding forests such as Pugu Hills (one of the last parts of indigenous tropical coastal forest) are nearly destroyed, re-naturation and re-cultivation are still no priority in Tanzania. The areas surrounding the TPCC quarries are heavily affected. Extraction activities have contributed to largely disturbed landscapes and many hectares of forest are destroyed. Charcoal production by the local population, clearing for settlements and small-scale mining exacerbate the effects. Results are extensive surface erosion and flooding in the rainy season and water shortage in the dry season, leading to direct and indirect negative effects for the population and agriculture (e.g. crop failures, lack of firewood, water shortage). The felling of trees has also caused a serious decline of autochthonous animal and plant species. Nurseries capable of supplying the plant and seed material of such species in the required quality and quantity for afforestation are not available.

#### **Our partners**

Tanzania Portland Cement Company (TPCC) is the market leader in Tanzania's cement industry. Current shareholders in the company are Scancem International (69.3%), a full subsidiary of Heidelberg Cement Group (HCG) and individual private shareholders (30.7%). Its stock is actively traded in the Dar es Salaam Stock Exchange. Its mother company, HCG, is one of the biggest producers of construction materials worldwide. Through Scancem it operates 2 cement plants and 9 grinding plants in Africa.

#### **Contribution by TPCC**

- Provision and rehabilitation of land for the nursery
- Investment Capital for the nursery and its establishment
- Management and provision of operational expenditure

#### **Contribution by GIZ**

- Know-How and training on natural resource management issues
- Making and managing contact to public and private stakeholders, including its networks and institutional arrangements
- Funding of trees and shrubs for the public urban area(s)
- Monitoring support and dissemination of results

## Strategy and activities

TPCC has begun re-naturation measures at Wazo Hill Quarry, 25 km away from the city centre of Dar es Salaam, based on Heidelberg Cement's guideline for the promotion of biodiversity at mineral extraction sites of. It is based on a modern re-cultivation plan, resting upon results from detailed field mappings. The PPP supports these efforts by establishing a tree nursery to produce plant material in accordance with Tanzania Tree Seed Agency (TTSA) criteria. The nursery will not only supply re-naturation of the TPCC extraction site and its surrounding settlement areas, but also be used for afforestation of an urban forest or park area in the periphery of Dar es Salaam. The resettlement of endangered animal and plant species and the implementation of nature protection zones is also an integral part of the project. Options for cooperation with the Global Mechanism to combat Desertification will be explored

Training sessions for the tree nursery employees will be conducted in close collaboration with existing education institutes. A business model for the nursery will be developed and implemented, based on commercial principles. The nursery will remain in the ownership of TPCC as long as mining activity requires rehabilitation measures (time period 30-50 years).

Activities (trainings, workshops, roundtables, open days) to raise awareness for sustainable land-use will be conducted, focusing on the reconstitution of landscapes following mineral extraction as well as on afforestation, nature protection and the promotion of biodiversity. A cooperation network for the mining sector will be established. For the urban forest a long-term maintenance and protection concept will be implemented.

## Relevance for the partners

TPCC is bound to undertake re-naturation measures by legal provisions and its own environmental policy. Modern re-cultivation measures can be cost-efficient and enhance the acceptance of mineral extraction projects. They thus contribute considerably to securing the long-term supply of raw materials for cement works. TPCC hereby benefits from contacts of GIZ Tanzania, especially to authorizing

bodies without whose consent the afforestation actions, the protection of environment and the promotion of biodiversity would not be possible. Participating NGOs and other agencies or companies will probably accept the action far better if the initial contact is made in the context of an international development project.

## Expected Results

An area of 3 ha in the former quarry will be re-cultivated for the nursery. Seeds will be collected from indigenous tree and shrub species and full operations will be established. It is expected to produce 100.000 plants and seedlings, of which 50.000 will be used by TPCC for re-naturation and a further 50.000 for the urban afforestation. An urban area will be designated for afforestation early in the project. An agreement to secure the rehabilitation work and the long-term conservation work with authorities will be established and local public and private stakeholders will be enabled to maintain the new urban green area.

## Expected Effects: Afforestation – enhanced biodiversity – better living conditions

Immediate afforestation of the immediate extraction site will create natural habitats for endangered animal and plant species. A total of 73 ha are envisaged for rehabilitation. The establishment of nature protection zones will allow sustainable resettlement and serve for the production of firewood and lumber.

Together with the new urban forest, recreational purposes will be served, biodiversity, nature education and general environmental protection issues will be promoted. Greater awareness will lead to increased public and private participation in environmental conservation and greening activities, eventually leading to better living conditions for the urban and peri-urban population. Examples for an improved land-use management around the mining sites of the TPCC are set. The project will have a lighthouse effect for other non-metallic mineral processing companies and public bodies.

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