Biodiversity

About 20 tree and shrubs species are identified as undergrowth or colonisers in the open field of tin tailings. Many wildlife species especially birds are sighted.



On-going research

- Monitoring of demonstration plots
- Accumulation of heavy metals by timber species
- Biodiversity of colonisation species
- Carbon sequestration potential of timber species
- Silviculture of aromatic herbal species

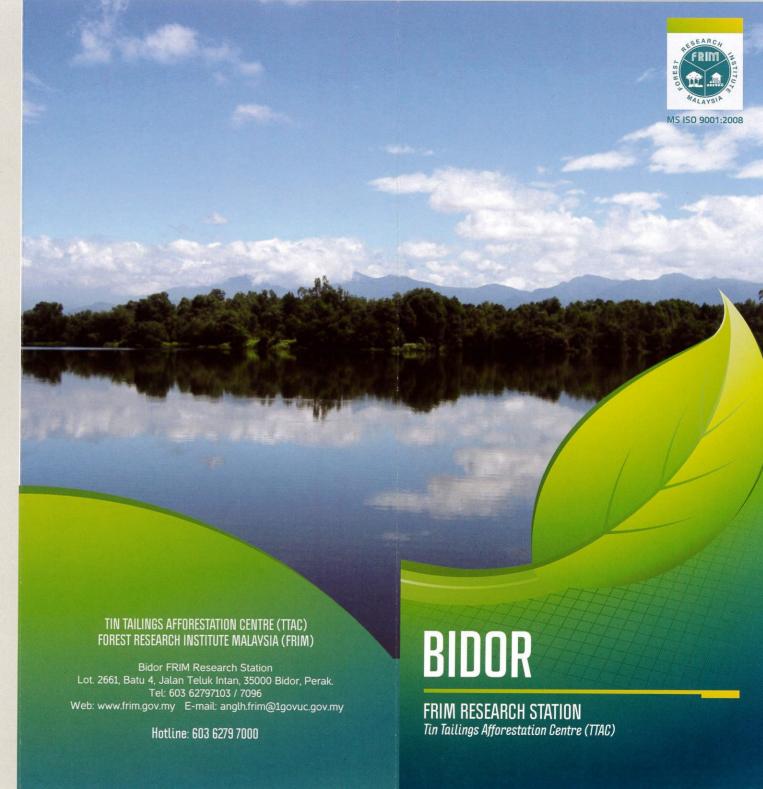


FACILITIES

- Guesthouse \ Meeting room
- Recreational area

CONTACTS

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INTRODUCTION

Bidor FRIM Research Station, also known as the Tin Tailings Afforestation Centre (TTAC) was established in 1996 over 121.5 ha of ex-tin mine leased by the Perak state government.

Nutrients deficiency, low available soil water and heavy metal contamination are some of the problems associated with tin tailing which inhibit the growth of forest species. The tailings are thus considered as marginal lands that are predominantly covered by weeds and ferns, and sparsely colonised by pioneer species such as *Macaranga gigantea* and *Melastoma malabathricum*.

In order improve and ecological economical of the values ex-tin mine. policy makers as well as the state government have acknowledged and endorsed the need to green and to rehabilitate these tailings.



OBJECTIVES



- To conduct research in developing cost-effective tree planting techniques on tin tailings,
- To conduct research in improving the site quality of tin tailings,
- To establish demonstration plots of plantations species
- To enrich plant species on tin tailings for biodiversity conservation, and
- To generate revenue from ecotourism activities

RESEARCH ACTIVITIES

Research activities and consultation services

Successful establishment of mixed-forest plantation on barren tin tailings at TTAC has received various supports from government agencies, private companies as well as international institutions in its R&D activities and consultations services. Areas of interest include:

- Phytoremediation of heavy metals
- Biodiversity and conservation
- Agroforestry
- Carbon sequestration
- Tree physiology
- Soil amendment techniques
- Timber and herbal species trials
- · Bioremediation of domestic and industrial wastes

The research station welcomes collaborations with all interested parties and is a choiced destination for field visits of seminars/workshops to demonstrate the successful rehabilitation of a degraded area.

Species Planted

Species suitable growing on sand tailings are wood- and fibreproducing species including Hopea odorata (merawan Khaya siput jantan), (African ivorensis Swietenia mahogany). macrophylla (mahogany), Dyera Acacia spp., costulata (jelutung), Dryobalanops oblongifolia (keladan) and Hibiscus cannabinus (kenaf). In addition, some medicinal plants like Eurycoma longifolia (tongkat ali),



Morinda ctrifolia (mengkudu), and Zingiber officinale (ginger) are found to be suitably cultivated at the degraded site. Fagraea crenulata (malabera), Acacia spp. and Hibiscus cannabinus (kenaf) are found to be suitable species for greening the tailings.