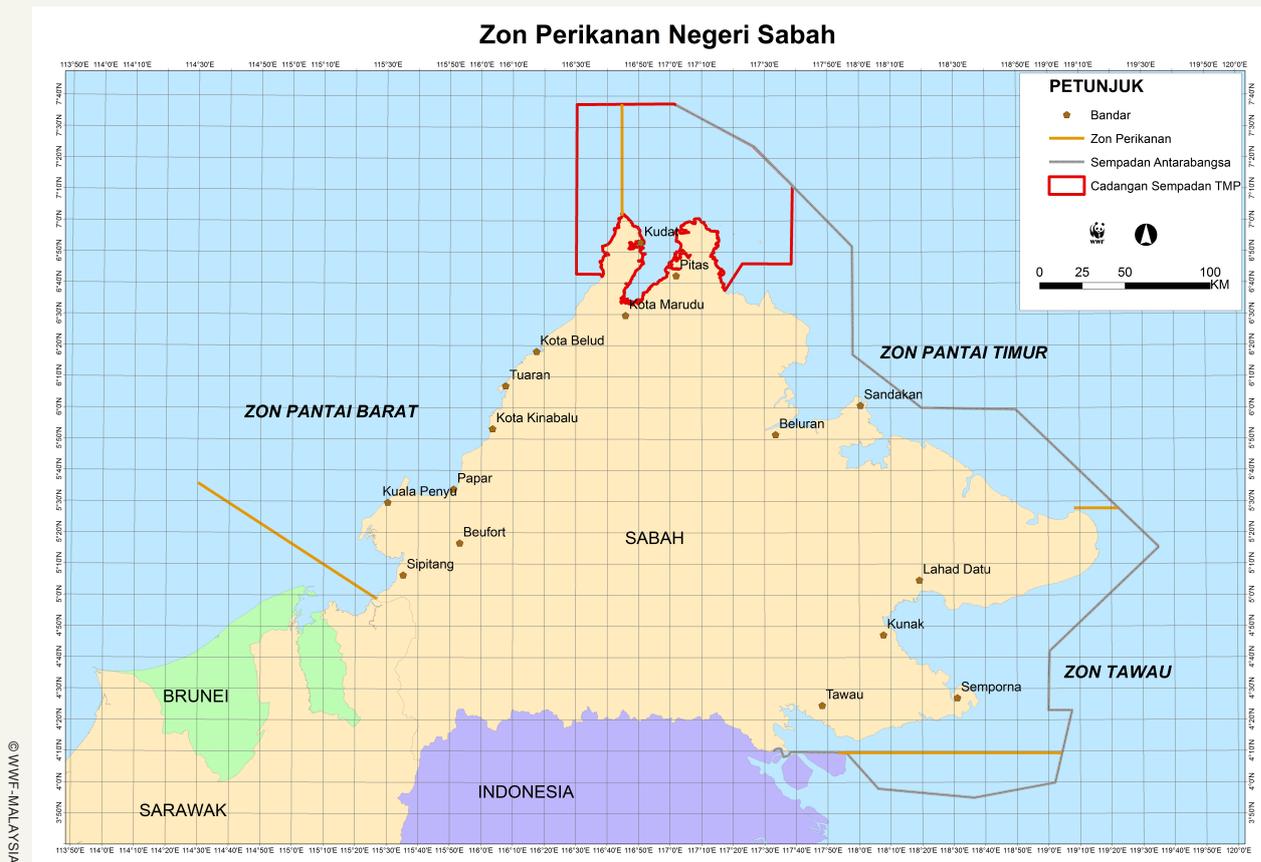


Fisheries Management in Tun Mustapha Park

Tun Mustapha Park (TMP) is home to many coastal and marine ecosystems such as mangrove forests, sea grass beds, and coral reefs. These habitats are important in providing productive fisheries that support coastal populations living in the area.



The intention to gazette Tun Mustapha Park was first approved by the Sabah State Government in March 2003. The Park falls mainly within the East Coast Fishing Zone (ECFZ), with a small area within the West Coast Fishing Zone (WCFZ). As one of the most important fishing grounds in this Malaysian state, fisheries remain an integral component and influence on efforts to achieve the gazettement of TMP.

Challenges in the management of fisheries in Tun Mustapha Park continue to exist - encroachment by commercial fishing vessels into traditional fishing areas, use of excessive lights on purse seiners, trawling in vulnerable reef areas, overfishing, and use of destructive (and illegal) fishing methods. These have resulted in declining fish stocks and habitat degradation that threatens the sustainability of fisheries, including high value fish species such as the Humphead wrasse.

The adoption of a multiple-use concept allows for full protection of core areas and partial use of others; various zones are identified for different types of uses and managed through a collaborative management mechanism. Multiple resource use management regimes in TMP will result in more benefits for all stakeholders, including fisheries, and fewer resource use conflicts.

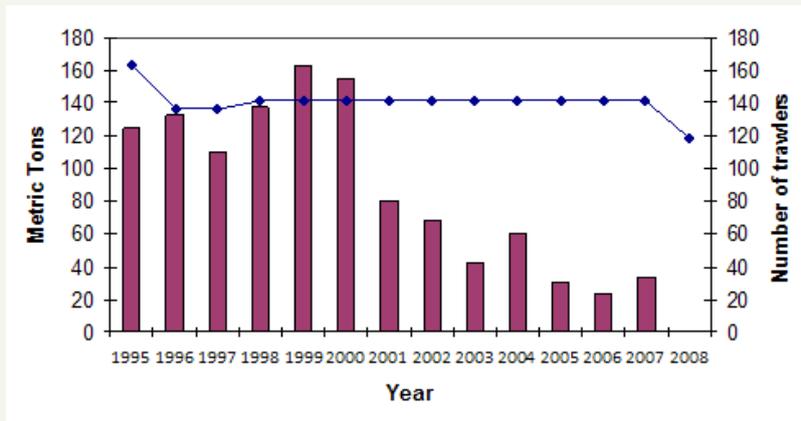


Marine protected areas (MPAs) that prohibit fishing (i.e. within no-take zones) improve fisheries in adjacent waters.

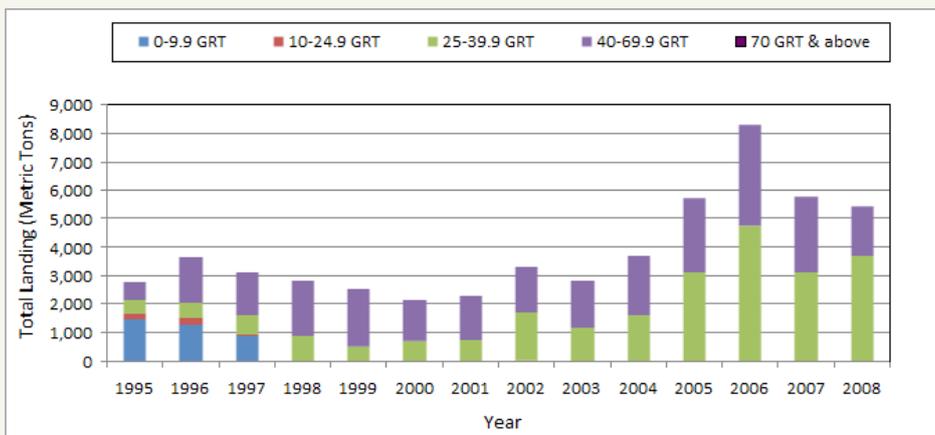
Fisheries in Tun Mustapha Park

Fisheries in Tun Mustapha Park are typically characterised as traditional fisheries (small scale fisheries using hook & line, driftnet, and traps; fishing activities are carried out at a distance less than 3 nautical miles from the mainland) and commercial fisheries. Two dominant commercial fishing gears are used in TMP – the trawl net and the purse seine net. Fishing activities are concentrated around Banggi-Balambangan, Malawali-Mandidarah, and Banggi-Kudat; prawn trawling activities are concentrated around Marudu Bay, Mandi Darah, and Tigabu. Fisheries statistics (2008) indicate annual catches of Kudat to be approximately 7,000 metric tonnes and Sandakan at approximately 10,000 metric tonnes.

The Fisheries Assessment for Feasibility of Spatial Management of Two Gears in Tun Mustapha Park incorporating field surveys, deskwork analysis of Sabah's annual fisheries statistics (14 years data from 1995-2008), and a two-day practical fish taxonomy workshop provides catch trend analyses for both trawlers and purse seiners for the period 1995-2008 of four districts (Beluran, Sandakan, Kota Marudu and Kudat) within the ECFZ. For both types of commercial fishing, the data indicates the importance of Kudat as a major fish landing port.



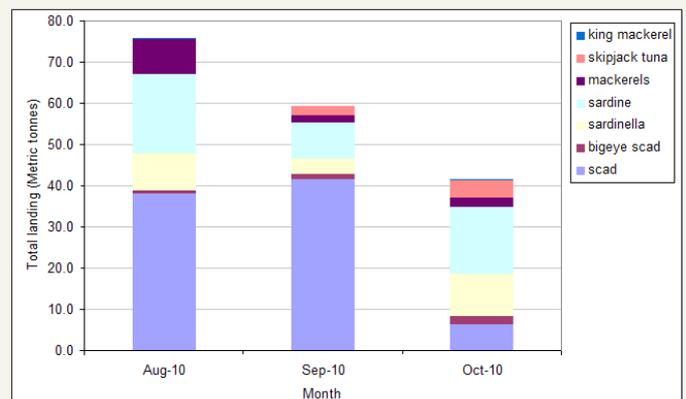
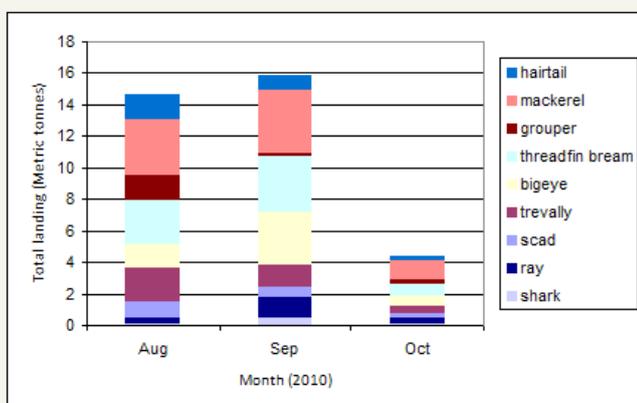
The relationship between average catch per unit effort for a boat and number of fishing vessels (1995-2008) in Kudat. Although there were more trawlers in Beluran, Sandakan, and Kota Marudu combined, Kudat recorded the highest average catch per unit effort for a boat. This may be due to many Sandakan-registered trawlers fishing in 'TMP waters', and landing their catch in Kudat.



(Left) Catch trend of marine fish by purse seiners (1995-2008) in Kudat.

(Bottom Left) Catch trend of marine fish by fish trawlers in Kudat (August-October 2010).

(Bottom Right) Catch trend of marine fish by purse seiners (August – October 2010).



Commercial fishing permits (licenses) prohibit operation within 3 nautical miles (nm) from the mainland, and between 1 to 2 nm from islands (depending on the protection status of an island; e.g. 2 nm from Turtle Island Marine Protected Area). This zone is reserved for fishing using traditional or non-mechanised gears.

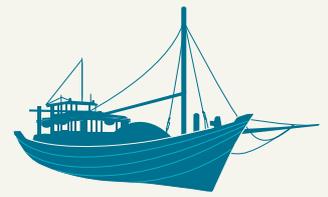
Data Collection for Fisheries Management

The Tun Mustapha Park Pilot Fisheries Observer Program (FOP) was carried out as a learning case for implementation as well as providing input (process and data) into the drafting of the management plan for fisheries in Tun Mustapha Park, in particular for two commercial fishing gears – trawl net and purse seine net. The study covered 1,457 hours of fishing operations of fish and prawn trawlers, and purse seine vessels over 148 days, and almost 180 tonnes of fish landing data at two landing sites in Kudat over 69 days.

Prior to its implementation, consultations with resource managers and commercial fishers highlighted program objectives, and clarified methods of implementation and handling of information collected. This was followed by a workshop to train a group of fishery observers with the knowledge and skills to carry out effective observation and data collection.

As demonstrated through the study, the Fisheries Observer Program provides monitoring and surveillance information required by fisheries management authorities to enhance management measures. Twenty one (21) recommendations were formed based on the pilot program, the most critical relating to long-term incentives for fishing industry participation in sustainable fisheries management actions. Direct results from the FOP include the development of the FOP Protocol Manual, and the development of the Identification Guide.

The biggest obstacles identified are in securing participation from the commercial fishery, with a lack of incentive for the industry to support actions contributing to sustainable fishery management in TMP.



The establishment of TMP requires spatial management of fishing grounds and fishing operations within this area, whilst taking into account existing fishing zones.

A study visit to the Philippines Bureau of Fisheries and Aquatic Resources (BFAR)'s Monitoring, Control and Surveillance (MCS) Station at Navotas City in March 2011 included commercial fishers from Kudat, fisheries resource managers (Department of Fisheries Sabah, Sabah Parks) and WWF-Malaysia. The goal of the visit was to learn about the FOP at the BFAR MCS Station – their objectives, operation and their training and data protocol, and to learn on the issues related to fishing and FOP implementation in the Philippines.



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Training in Fisheries Management

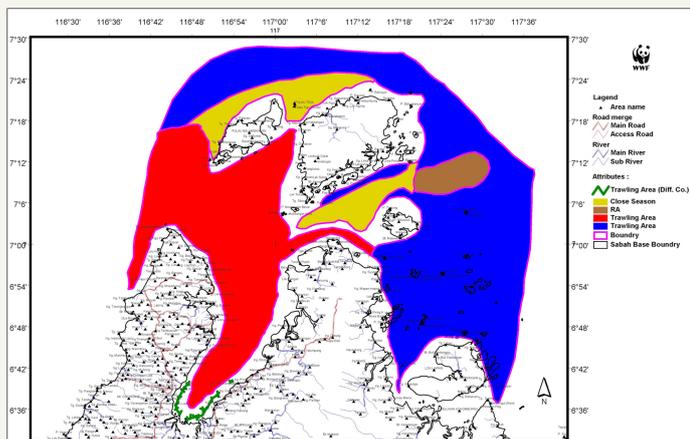
Training modules on Ecosystem Approach for Fisheries Management (EAFM) were developed in 2012 for two stakeholder groups in Tun Mustapha Park – resource users, including fishers, traders and others involved in the trade, and resource managers, who are directly involved in fisheries management and those looking at habitats and land use management. Inaugural training sessions were carried out in Kudat in January 2013 involving 25 participants for Module 1 (Resource Users) and 15 participants for Module 2 (Resource Managers).

Following this, modification of the training module for resource users, further trainings to select EAFM trainers from among resource users, and replication of the training in five demonstration sites in TMP to increase awareness among fishers on EAFM will be carried out.

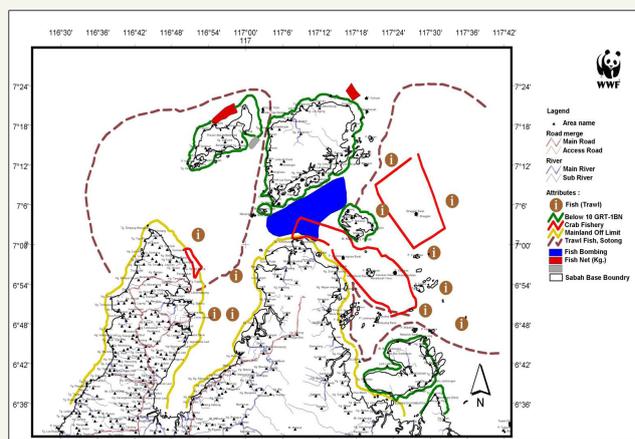
Engagement with Commercial Fishers

Early engagements with commercial fishers in 2006 initiated discussions and consultation with key players from the industry resulting in awareness of Tun Mustapha Park, sharing of issues faced by the industry, and the identification of important fishing locations and fishing seasons serving as input for the identification of fishing zones and close seasons as recommended in the Park's management plan. Continuous consultations have been pivotal in achieving agreement among stakeholders from the commercial fisheries industries pertaining to the zoning and management plans for Tun Mustapha Park.





Location of commercial fishing grounds (mapping by Juragan/skipper)



Location of commercial fishing grounds (mapping by boat owners)

In September 2010, a vision for the fisheries industry was developed on sustainable fisheries for TMP - Commercial fishing activities are conducted sustainably in Tun Mustapha Park, whereby fisheries resources is available and sufficient to support socio-economic development of local community and demand for seafood from within and beyond the area. Fisheries management is conducted holistically taking into account conservation of marine ecosystem, protection of species and well being of local community. All stakeholders including government agencies, private sectors, commercial fishermen and local community work together to manage Tun Mustapha Park.

Recommendations

Recommended inputs for fisheries management in Tun Mustapha Park are envisioned based on the vision highlighting sustainable fisheries. Steps outlined to achieve this vision include improvement in fisheries management by having a fisheries management plan that will include stronger enforcement, policy and regulation on use of environmentally friendly fishing gears and technology, control in fishing capacity, spatial and temporal management of fishing ground, and awareness and capacity building for fishermen to increase compliance and adopt best fisheries management practices.

- Fisheries management has to be holistic in nature, consistent with EAFM principles.
- Fishing has to be undertaken sustainably, ensuring the socio-economic status and food security of relevant communities are not compromised.
- All communities and institutional stakeholders must be involved in the consultative process to formulate the management plan for the fisheries resources.

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More information can be found in the study report:
The Fisheries Assessment for Feasibility of Spatial Management of Two Gears in Tun Mustapha Park.
By B.M. Manjaji-Matsumoto and Rebecca Jumin (WWF-Malaysia). 63 pages.