



Blue Communities

Interdisciplinary research underpinning marine management

Iloilo 28th Nov 2018

HC Goh, AYH Then, Austen M¹, Fatimah K, M. Ali SH², Affendi YA,, Kamal S, Maznah D, Julia S, VC Lim, Rimi R³, Wan Syazana WMA, S. Liew, S. Boey, Sofia J.

University of Malaya, ¹Plymouth Marine Lab,
²Universiti Malaysia Sabah, ³Sabah Parks

Funded by:

www.blue-communities.org

Twitter: @BlueCommunities | FaceBook: @BlueCommunitiesGCRF



UK Research
and Innovation



1. The importance of interdisciplinary research due to the complexities of marine management
2. The issues of interdisciplinary in marine management
3. Lesson (to be) learned

The importance of
interdisciplinary research
due to the complexities
of marine management

The issues of
interdisciplinary in
marine management

Lesson (to be) learned

Interdisciplinary research is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or field of research practice.

...The rationality behind the necessity of an interdisciplinary approach to problems is simply that problems in general are not ordered according to the scientific disciplines...

(D. Barković 2010:952)

Table 1 – Characteristics of multidisciplinary, interdisciplinary, and transdisciplinary research in environment and human health.

	Participants/discipline	Problem definition	Research style	Presentation of findings
Multidisciplinary	Two or more disciplines	Same question but different paradigm <u>OR</u> different but related questions	“Parallel play” Combines rather than integrates different expertises	Separate publications by participants from each discipline
Interdisciplinary	Two or more distinct academic fields	Described/defined in language of at least two fields, using multiple models or intersecting models	Drawn from more than one, with multiple data sources and varying analysis of same data, Some integration demonstrated	Shared publications, with language intelligible to all involved fields
Transdisciplinary	Two or more distinct academic fields	Stated in new language or theory that is broader than any one discipline	Fully synthesized methods and ideas, which may result in creation of new conceptual frameworks	Shared publications, probably using at least some new language developed for translation across traditional lines

Adapted from Aboelela et al. (2007).

Source: Phoenix et al 2012

The importance of
interdisciplinary due to
the complexities of
marine management

The issues of
interdisciplinary in
marine management

Lesson (to be) learned



The importance of
interdisciplinary research
due to the complexities
of marine management

The issues of
interdisciplinary in
marine management

Lesson (to be) learned

Geographical context

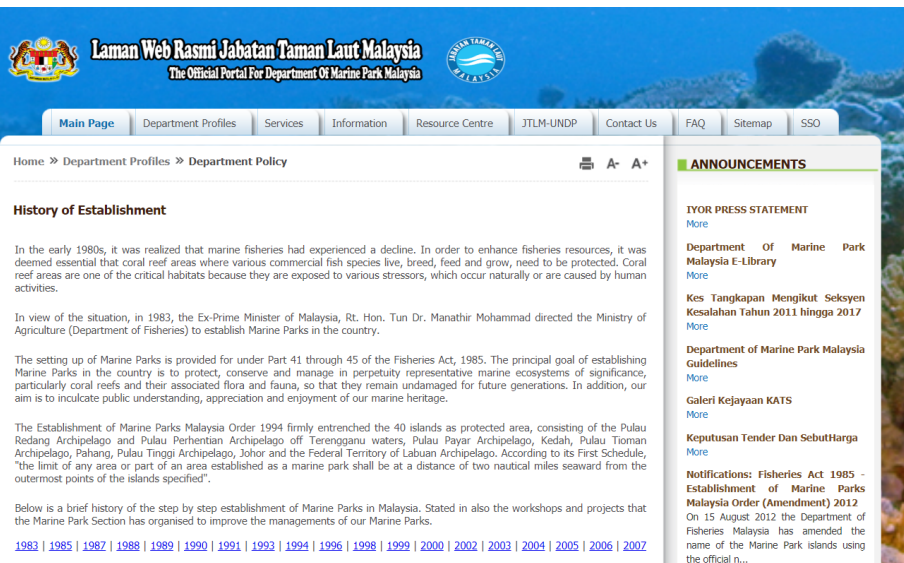
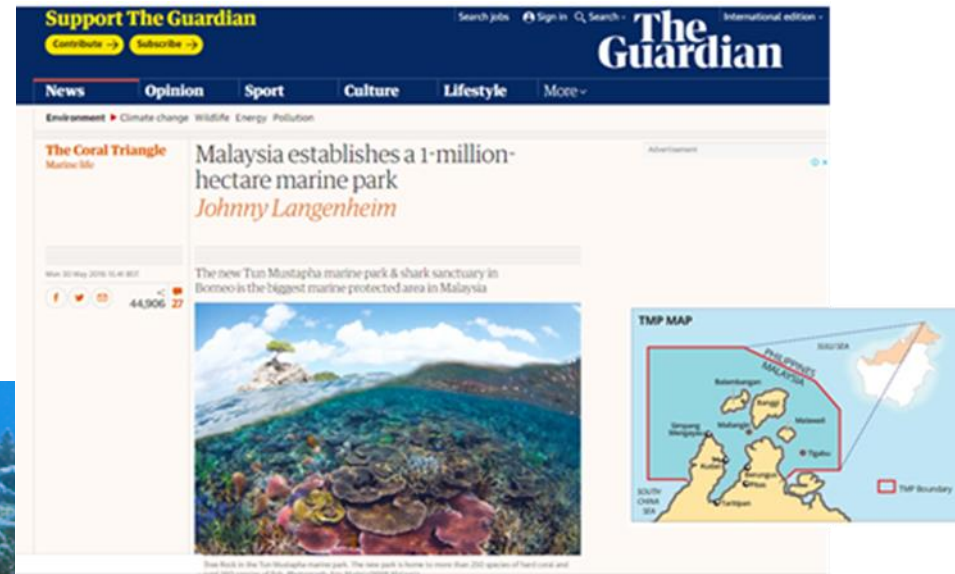
Marine management for whose benefits?

- Ecosystem services

Stakeholders

- National, state, district, local levels, international
- Government agencies, private sector, communities, industry, universities
- Political regime, rules and regulations, cultural practice and mainstream influence
- Funding, enforcement, implementation, scientific research, outreach

- Malaysia has a total coastline of 4,675 km (Peninsular Malaysia- 2,068 km, East Malaysia- 2,607 km)
- History of marine park establishment in Malaysia



- High biodiversity (252 species of hard coral and 350 species of fishes)
- Kudat-Banggi Priority Conservation area
- Sulu-Sulawesi Marine Ecoregion
- Only water gazetted

Protecting such a large area requires a collaborative approach, explains Jomitol. “It is a special park because this is the first park that’s [been designated] multi-use. [There are] more than 80,000 people living on the coastline dependent on the marine resources so we cannot simply close the park. We must take into consideration the livelihoods of these people.”

The multi-use model breaks the park into zones to restrict fishing activity and allow reef regeneration; some are for community fishing, others commercial, and some are designated as completely off limits.

But introducing limits on fishing for communities of subsistence fishermen creates problems if the objectives are not fully understood. Multiple sources confirm the marine park is still a source of contention and estimate that around half the population are for, half against, splitting some communities down the middle.

Despite these successes, the logistics of informing and correcting misconceptions across 1 million hectares and over 80,000 people present a challenge to the WWF.

British owner of eco-guesthouse Tampat Do Aman, Howard Stanton, thinks it’s an information issue, “Different groups as a whole could do a lot more to listen and explain. They need to get onboard because, if they say no, it’s their back garden. It’s just gonna end up a right mess again.”

Stanton empathizes with local villagers who don’t understand why their fishing is being restricted. “It’s their livelihood, that’s their food. You tell a local fella, ‘Your families have been fishing in these local areas for the last 200-odd years and now [you] can’t go there. [They’ll be] frightened of the authoritarianism, of what could happen. You’ve got to feed your kids.’”

Source: Ben Blackledge, July 17, 2018, The Diplomat

The importance of
interdisciplinary research
due to the complexities
of marine management

The issues of
interdisciplinary in
marine management

Lesson (to be) learned



Sciences

Anthropology

Environmental economics

Fisheries

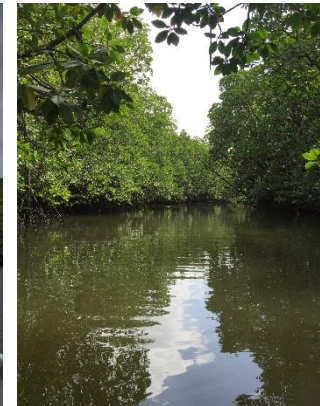
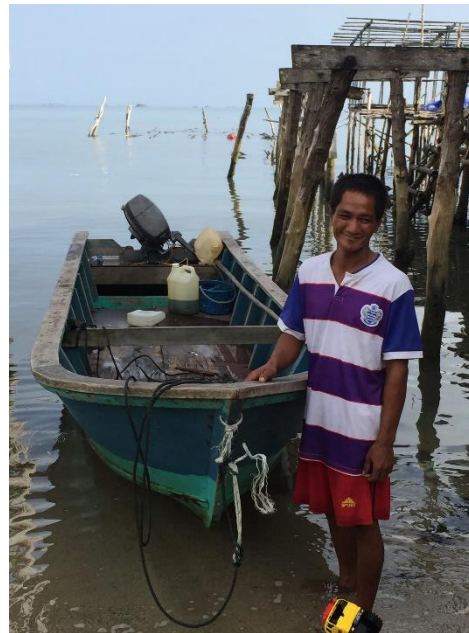
Marine ecology

Natural resource governance

Public health

Tourism

Applied geography



The importance of
interdisciplinary due to
the complexities of
marine management

The issues of
interdisciplinary in
marine management

Lesson (to be) learned



The importance of
interdisciplinary due to
the complexities of
marine management

The issues of
interdisciplinary in
marine management

Lesson (to be) learned



Approach to research
Different languages of communication
Understanding and respecting each other

It takes (longer) time
It is often said that personality can be a more significant factor than discipline base and interdisciplinary collaborations need to be based on trust and knowledge of collaborating partners. (D. Barković 2010: 958)

Research capacity building
Provide integrated solutions to marine
planning



Building capacity for sustainable interactions with marine ecosystems for the benefit of the health, well-being, food security and livelihoods of coastal communities in East and Southeast Asia.

© Paul Hilton & IPNLF

