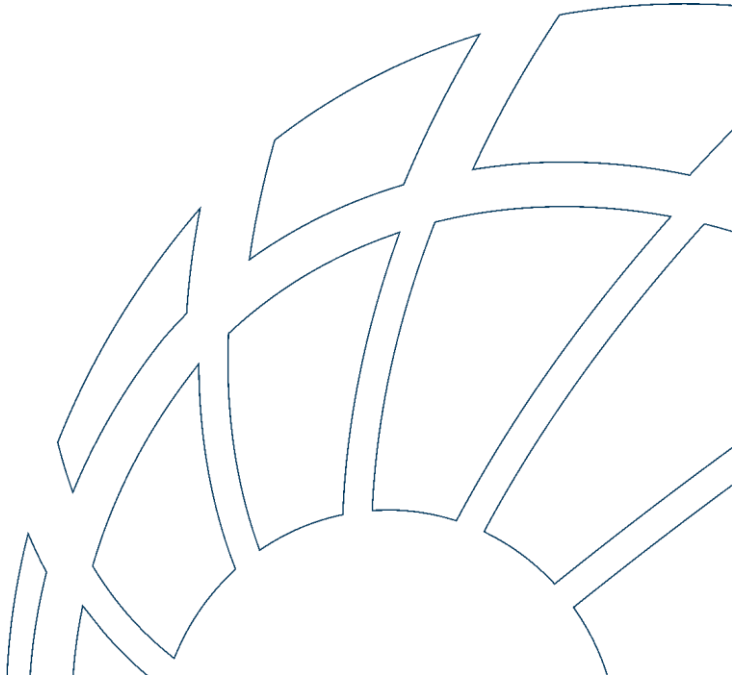
BMT WBM

"Where will our knowledge take you?"

EIANZ-SEQ Growing Offsets Forum: *Marine Offsets*

August 2012



Overview

- Development activities that typically attract marine offsets
- Policy Context
- Application
- Lessons Learned and Opportunities

Types of development that attract offsets

- Coastal and marine (offshore) developments
- Public or Private
- Generally applies to works >25 m^2
- Activities (direct and indirect impacts):
  - Reclamation
  - Breakwaters, jetties, piles or other maritime structures
  - Dredging (particularly capital)
  - Underwater blasting
  - Dredge material placement at sea (sea dumping)
  - Coastal protection works (groynes, artificial reefs, seawalls, beach nourishment)

Impact hierarchy

- Like any project, coastal and marine development proposals need to demonstrate:
  - Avoidance of impacts
  - Minimisation of impacts
  - Mitigation of impacts
- With the remaining residual (unavoidable) impacts those that are subject to offset

BUT…

Greater uncertainty about impacts

- High **natural variability** (spatial and temporal)
- **Lack of data** on the extent, condition and/or relative importance of habitats and populations
- **Threshold responses** (acute and chronic) to stressors poorly understood
- **Difficult (and expensive)** to monitor, detect and attribute impact
- **Climate change**

Policy Framework – Marine Offsets

- Environmental Offsets Policy
  - *Fish Habitat Management Operational Policy FHMOP 005 (2002)*
  - *Recently replaced FHMOP 005.2 (2012)*
- EPBC Draft Environmental Offsets Policy (August 2011)
  - *GBRMPA?*
- Considering the need for Environmental Offsets are common feature of Federal and State EIS Guidelines/ToR

Port of Townsville Expansion EIS Guidelines

"The Section of the EIS must outline plans to offset the remaining residual impacts of the proposal. Environmental offsets may be appropriate when they:

- *Are necessary to protect or repair impacts to a protected matter – i.e. a matter of national environmental significance or the environment more broadly;*
- *Relate specifically to the matter (for example, species) being impacted; and*
- *Seek to ensure that the health, diversity and productivity of the environment are maintained or enhanced."*

Application of Offset Principles to Marine Proposals (QG 2009)

Principle	Statement	Applicable?
1	Should not replace or undermine existing environmental standards or regulatory requirements or allow development in areas otherwise prohibited through legislation or policy	Yes
2	Environmental impacts must be first avoided, then minimised, before considering the use of offsets for any remaining impacts	Yes
3	Offsets must achieve an equivalent or better environmental outcomes	Yes; but difficult to achieve without indirect offsets for large proposals
4	Offsets must provide environmental values as similar as possible to those being lost (like for like)	Difficult to achieve for sub-tidal habitats that cannot be easily re-created or rehabilitated
5	Offset provision should minimise the time lag between the impact and the delivery of the offset	Yes; but often development staged over time
6	Offsets must provide additional protection to environmental values at risk or additional management actions to improve environmental values	Yes
7	Offsets must be legally secured for the duration of the offset requirement	Difficult to achieve given tenure of tidal water and lands vested in the State

FHMOP 005 (2002) - Overview

- Provides most relevant direction to clients and practitioners to how to approach marine offsets
- Scope is defined – key objective to maintain fisheries values including fish habitat values (both a strength and a weakness)
- Generally limited to activities that require a fisheries permit (e.g. that involve works that result in the disturbance or removal of a marine plant)
- Supported by Departmental guidance for calculating $/ha for marine ecosystem services based on Costanza et al (1997)
- Different valuation metrics have been applied for seagrass, mangroves/saltmarsh and bare substrate habitats

FHMOP 005 – Type of Offsets

Contemplates:

- Direct (hard) – habitat creation, restoration, rehabilitation (productivity enhancement), stock enhancement
- Direct (soft) – affording habitat protection through acquisition/exchange, land swaps, covenants, conservation agreements, etc.;
- Indirect – monetary contribution to research, education, management, etc.

Some Implementation Observations

- Wide variety of offset packages have been approved – hierarchy not always clear between preference for direct versus indirect offsets
- Applicant driven - sometimes addressed at EIS stage in other cases deferred to detailed approvals stage (to satisfaction of regulator)
- Proposals that involve the removal or disturbance of unvegetated substrate don't always require a fisheries permit (but are still impacting on fish habitat)
- Application of a consistent metric for productivity lost 'over time' – $/ha supposed to be times the number of years of lost productivity (rubbery)
- Proposals often also impact on non-fisheries values in the marine environment (protected species, life cycle functions, migratory species, amenity) but there is no clear offset policy governing these values

Observations on the new Policy (FHMOP 005.2)

- Establishing a metric for fisheries specific ecosystem services value set at 11% of Total Ecosystem Services (TES) for estuaries that is applied across ***all*** marine fish habitat types (bare, seagrass, mangrove or saltmarsh area). This equates to a 2012 value of $6,800 per hectare per year.
- Use of an annual discount rate of 0% to determine the present value of marine fish habitat mosaic value lost or gained using a timeframe of fifty (50) years for calculating the permanent loss/gain of fish habitat and two (2) to twenty (20) years for temporary losses/gains of fish habitat.
- Requiring an impact area ratio of 1:1 for direct offsets involving enhancement, restoration, rehabilitation, connectivity or creation and a ratio of 5:1 for direct offsets involving fish habitat exchange or increased security.
- Differential application of the TES valuation metric if in intertidal versus subtidal areas (subtidal of greater value)

Marine Offset Lessons Learned

- Habitat replacement or rehabilitation opportunities are more limited in the marine environment – so need greater emphasis on direct (soft) and indirect offsets
- Setting aside areas for conservation in perpetuity - for tidal lands above high water mark use of conservation agreements; for tidal lands and water below high water mark expansion of fish habitat areas and other regulatory regimes
- Long term management and maintenance of set aside areas a key issue
- Investment in indirect actions and activities that build resilience of retained habitats to development and climate change – improvements to catchment water quality and hydrology
- Investment in long term monitoring that validates EIS findings and informs adaptive management actions

Opportunities

- Government-funded Strategic Assessments could scope and develop a register of regional habitat restoration projects for investment by proponents (gold, silver, bronze)
- Better alignment between Federal and State offset policies for marine areas (building on FHMOP as a model) incorporating –
  - Marine and Coastal World Heritage Values
  - Threatened and Migratory Species
  - GBRMP
  - Fish Habitats, Marine Parks and other State interests in the coastal/marine environment