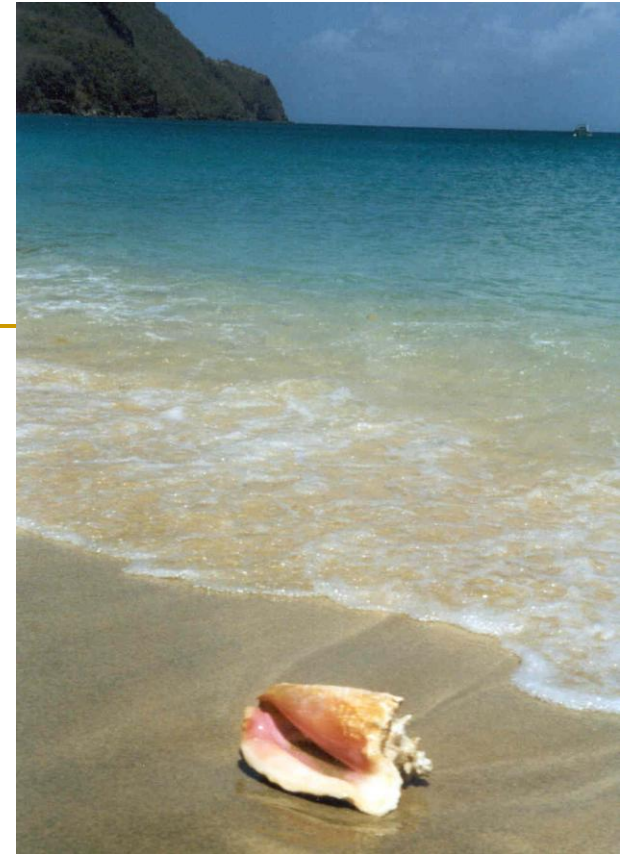


Aquatic Invertebrate working group



Aquatic invertebrates case studies

- Hard corals – Indonesia & Australia
- Black coral – USA (Hawai'i)
- Queen conch – Colombia
- Giant clams – Palau

Other CITES species not covered

- European date mussel – *Lithophaga*
 - App III listings – 1 sea cucumber & 4 red corals
-

Working group approach

- No need to treat taxa differently
 - No matrix!
 - No decision tree!
 - No flow chart!
 - Used 'document 2' as checklist to stimulate thinking
 - Some significant problems with taxonomy, identification and multi-species fisheries
-

Process for NDF

Approach based on a suggested cyclic 4 step process – four ‘R’s

- Risk assessment
- Regulate harvests
- Record harvests, trade and population responses
- Review, revise and refine measures and risks

Potential to produce guidance in a manual

Risk assessment

- Biological characteristics - **vulnerability**
 - Proportion of population subject to harvest (legal & illegal, international and domestic) and harvesting methods
 - Nature of trade (continuous or one-off) and value of commodity in trade - **value**
 - Governance of resource – ‘**violability**’
 - Degree of tenure / ownership of the resource and incentives for stewardship
 - Shared stocks / multiple harvests
 - External factors – other impacts on populations
 - Ecosystem impacts – non-target organisms & habitats
 - Document rationale even if only intuitive / qualitative and identify time period for review
-

Regulate the harvest

Options based on risk assessment and available capacity – toolbox approach – tools not mutually exclusive

- Do nothing (but monitor)
 - Use refugia (no-take zones or de facto refuges)
 - Quotas (relevant)
 - Size limits (relevant)
 - Limit harvest effort or methods
 - Set thresholds / reference points
 - Shift to other production systems
 - Seek co-management and public participation
 - Collaborate over shared stocks
 - Population modelling
 - Prohibit harvest / export for a period
-

Record harvests, trade and population responses

Options based on risk and available capacity – need to consider data limitations

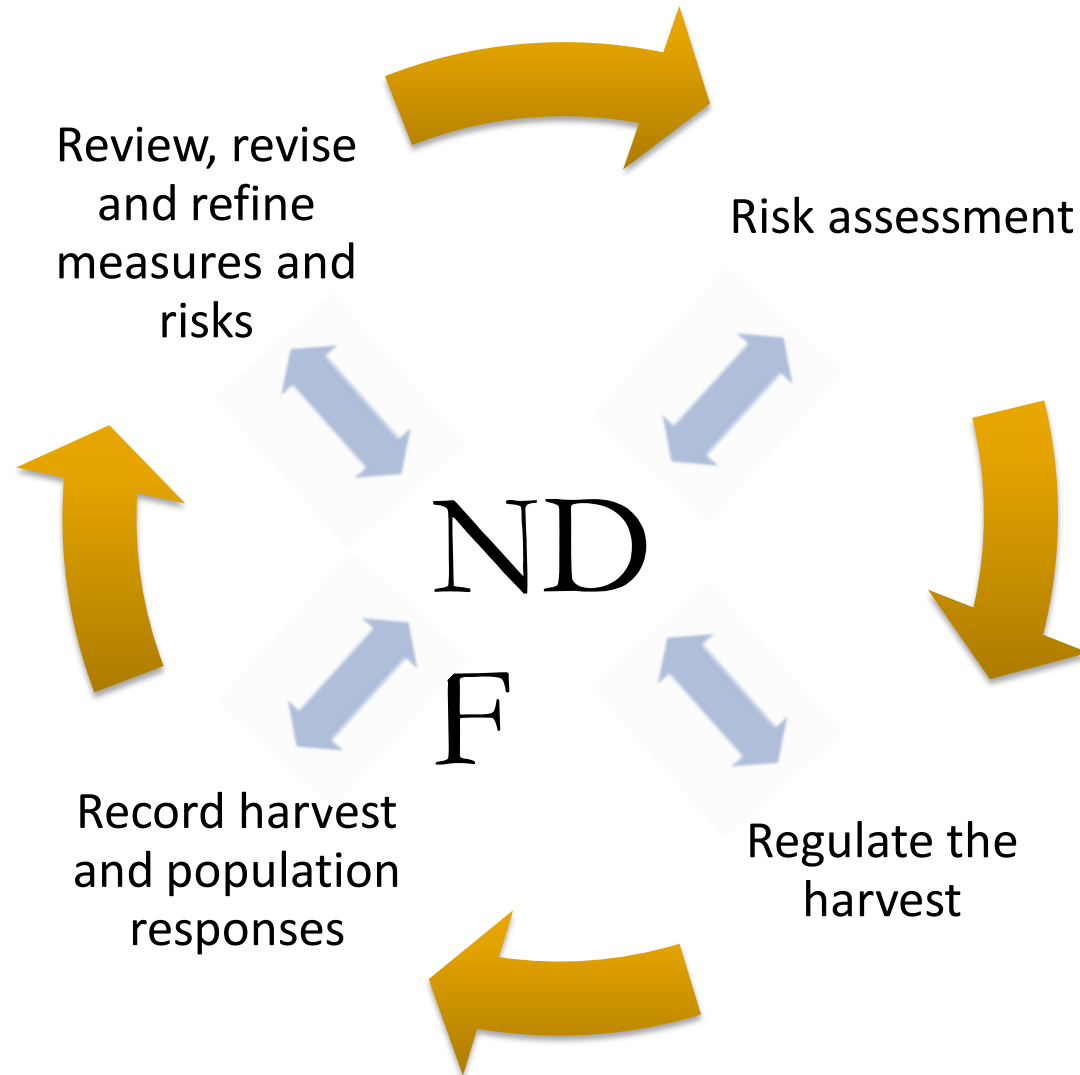
- Fishery independent data (surveys – repeatable and standardised and at suitable taxonomic level, local & expert knowledge and consensus, are any refuges actually functioning)
 - Fishery dependent data (landings, cpue, logbooks, size data) with conversion factors
 - Market responses (changes in price, market demand) & actual trade (CITES permits)
 - External factors (record any changes)
-

Review, revise, refine

- Use feedback from monitoring to review and if necessary revise management measures
 - Identify gaps in knowledge and seek to address
 - Review original risk assessment
-

Have we achieved non-detriment??

- Non-detriment achieved if population trends (or indicators of these), despite harvests, are positive or stable (within defined thresholds) or measures have been set in place to achieve this.
 - Any risks are being effectively mitigated and addressed.
 - Ongoing process
-



Thankyou!

