

WP1: Assessing and valuing marine ecosystems

- **Action 1.1 Development of an operational framework for assessing and valuing marine ecosystem services**
- Deliverable: Guidelines for assessing marine ecosystem services



Guidelines

- Draft version online – available *now*
- Structure:
 - Back ground to Ecosystem Service Approach
 - Ecosystem service assessment: concepts and definitions
 - Operational framework
 - Methods and tools (including sensitivity and social and economic assessment)

Comments welcome!



WP1: Assessing and valuing marine ecosystems

- **Action 1.1 Development of an operational framework for assessing and valuing marine ecosystem services**
- Deliverable: Guidelines for assessing marine ecosystem services
- Deliverable: Best practice exchange on assessing marine ecosystem services – social, economic and environmental scientists. Nov 2014. Brest.WP1 +



WP1: Assessing and valuing marine ecosystems

- **Action 1.1 Development of an operational framework for assessing and valuing marine ecosystem services**
 - Deliverable: Guidelines for assessing marine ecosystem services
 - Deliverable: Best practice exchange on assessing marine ecosystem services
- **Action 1.2 Trialling ecosystem service assessments and valuations at pilot case study locations**
 - Deliverable: Lessons learned and recommendations synthesis for practitioners



1.	Triage Pendleton et al.	Submitted
2.	Assessing marine ecosystem services in marine policy, Charles et al	In development
3.	TCM in Poole Harbour (Hooper et al)	Dec 2014
4.	Production functions in N Devon (Hooper et al)	March 2015
5.	Mapping marine ES in Sound – Fowey (Beaumont et al)	March 2015
6.	Cultural marine ES (Fish et al)	July 2013
7.	Linking habitat risk assessment and ecosystem services based management : a tentative approach in the GNB (Cabral et al)	Submitted abstract to special issues. Deadline June 2014 Ecosystem Services
8.	Applying the SEEA-EEA methodology for marine ecosystem accounting in the GNB (Martin et al)	Conference submission Sept 2014, paper submission Sept 2014. Review of wealth and income
9.	Indicators for kelp ecosystem services in the PNMI (Marzin et al)	Submitted to ICES conference. Sept 2014
10.	A system dynamic model in support of kelp ecosystem services management in the PNMI (Mongruel or Guyader et al)	March 2015
11.	Choice experiment for the elicitation of seagrass management objectives (Voltaire	
12.	Choice experiment GNB - kermagoret	
13.	Indicators for provisioning services in GNB – Fabienne Daures	
14.	Seagrass workshop – Eric	March 2015
15.	Ecosystem function – GNB – Eric (poss collaborative)	March 2015
16.	Comparative papers – Methods: Harold ; habitats; policy context	March 2015 or later
17.	Book	2 step – publications first. So post-March 2015

Poole Harbour

- Survey carried out with recreational users (Birdwatching; Kayaking, canoeing; Wind/kitesurfing; Jet/waterskiing)
- Travel cost method and assessment of local spending used to determine a monetary values
- Preferences for different environmental, infrastructure and cost factors of recreational experiences also determined
- Additional information collected on opinions, alternative recreational sites and potential responses to management interventions
- Data analysis and reporting complete



PML

Plymouth Marine
Laboratory

North Devon Biosphere Reserve

- “Triage” assessment carried out to determine focus for study (subtidal sedimentary habitats)
- Monetary valuation hampered by absence of data (on
 - habitat changes for production function
 - spatial distribution of juvenile bass)
- ES therefore assessed in terms of relative importance
- Carbon sequestration and nursery function linked to substrate type (mud, sand, coarse)
- New indicator for bioremediation of waste using community bioturbation potential (BPc)
- ES related to biotopes to facilitate mapping and extrapolation across whole case study area
- Next....consider changes to ES resulting from scenarios



Plymouth Sound - Fowey

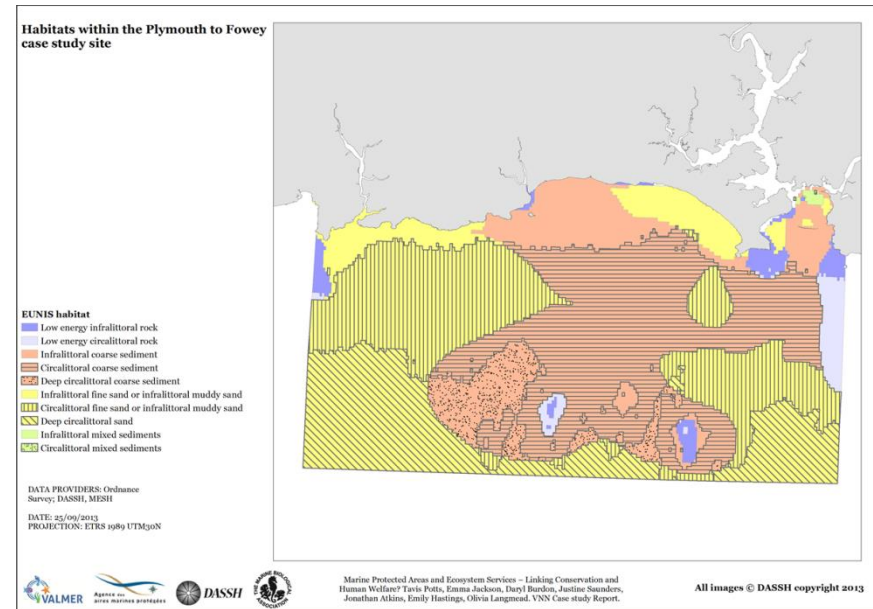
Validation of Potts et al ES – Habitat

WCO data:

- Climate regulation / Carbon budget
- Nutrient cycling (linked to bioremediation of waste)
- Species diversity (linked to cognitive value and resilience)
- Food source for fish species
- Cognitive value

New Surveys:

- Cultural survey
- Recreation questionnaire
- Blue/green spaces



Some common work among the French study sites

-preliminary implementation of the triage approach: June 2013

purpose, scope, methods ...	Purposes of Marine ES Assessment	GNB	PNMI	GM
	Improve knowledge		2	2
	Integrate knowledge	2		2
	Initial diagnosis	1		
	Raising awareness	2		1
	Anticipating future changes	1		
	Facilitate trade-offs	2	3	3
	Designing management options	2		3
	Compare management options		1	
	Increasing well-being			

1 = main purpose ; 2 = secondary purpose ; 3 = complementary purpose

-workshop on the ES assessment: 2-4 December 2013, Le Conquet
 based on the WP1 guidelines document: more on functions and ES definitions, indicators and assessment methods

Gulf Normand-Breton Study Site

- ✓ Aim: Initial diagnosis of ES and exploratory scenarios of changes in the prospect of the creation of a MPA
- ✓ Habitat assessment: data gathering, literature review, maps
- ✓ Invest models: habitat sensitivity assessment, overlapping activities
- ✓ Ecosystem accounting
- ✓ Indicators of provisioning services: fisheries and aquaculture
- ✓ Choice experiment methods: comparison of compensatory measures in the context of windfarm development

Iroise Sea Marine Park study site

- ✓ Compare management options for the kelp fisheries, while maintaining other ES
- ✓ Literature review on ES delivered by kelp forests
- ✓ Assessment method: system dynamic model (ecosystem, ecological functions, uses and governance)
- ✓ Expert workshop to validate the conceptual model (February 2014)
- ✓ Model to be developed from now (3-4 people)

Gulf of Morbihan study site

- ✓ Aim: raising awareness, based on improved knowledge, for improved seagrass management
- ✓ Seagrass ES: literature review, knowledge integration platform
- ✓ Expert workshop (January 2014): main seagrass ES are cultural services (symbolic and aesthetic values) and pollutants storage
- ✓ Assessment method: choice experiment for comparing different level of human impacts, seagrass good ecological status (fragmentation) and management costs