

4SEA Conference Workshop Outputs
March 13th, 2013

A. Fisheries and Aquaculture (Chair: Sarah Culloty)

Risks:

- Climate change
- Bioaccumulation
- Lack of Knowledge
- Biosecurity (inappropriate legislation)
- Invasives/Escapees/Associated Pathogens
- Policies not implemented
- Access to raw materials, seed etc
- Water quality (regulation, investment and implementation)
- Public Perception
- Escalating energy costs
- MPAs
- Chemotherapeutants
- Wind farms and all renewables
- Public perception of the industry

Opportunities:

- Bioremediation
- Co-location
- Invasives
- Healthy proteins, fatty acids etc.
- Application of new technologies (GM)
- Chemotherapeutants
- Growth opportunities
- Education public awareness
- Triploid Pacific oysters

Ideas for collaboration/innovation:

- Greater coordination & release of data
- More input from industry
- More studies on fishery interactions
- Mitigation of risks
- Big party “speed dating” introductions
- Mechanisms to allow transfer of people between institutions

Needs for collaboration/innovation:

- Looking at the Irish Sea as an entity or “Eco-region”
- More coordination between the UK and Ireland
- More integration of policy
- More stakeholder input
- More local based initiatives
- More cooperation between scientists and those at government level
- Develop a network of expert opinion
- Integrated oceanographic and bioeconomic models
- More climate scenarios
- Breakdown silos and build up trust

- More information on seabed habitats and how fish use them

Challenges for management/policy:

- High level ministerial councils are difficult to access
- Lack of integrated governance for the Irish Sea
- (eg Irish government discusses fisheries with EU not UK must consider all seas)

Policy Recommendations:

- More integrated jurisdiction in the Irish Sea to include and fisheries and marine policy in general
- Integrated intergovernmental standing committee?
- Initiative should come from Wales. Greatest stake in the Irish Sea
- Coordinated spat assessments
- Reduce the number of policy recommendations & Eliminate redundancy
- Structure to allow all stakeholder groups to participate equally-management & technical (Money)

B. **Ecosystem Services** (Chair: Dr. Bill Sanderson)

Risks:

- Lack of understanding by public and policy makers (definitions)
- Habitat loss
- Underestimating ecosystem services due to lack of knowledge
- Incompatibilities between different sectors for ecosystem services

Opportunities:

- Provide definition
- Outreach-popularize science
- Define boundaries
- Provide concrete examples of ecosystem services
- Opportunity within marine special planning to recognize ecosystem services (Irish Sea)
- Identify interdependence between services and sectors
- EFH/Sequestration/WQ/Energy

Ideas for collaboration/innovation:

- Connectivity across political regions (e.g. larval flows)
- Package information
- Research Forum for Irish Sea

Needs for collaboration/innovation:

- Data sharing
- Whole-system studies (require x-border collaboration)
- Put figure on Ecosystem services
- Need for overarching body to achieve consensus
- Equivalence between aquaculture and land based farming
- Greater understanding of ecosystem
- More confidence in using estimates

- interdisciplinary approach is vital
- opportunities for industry to participate in events without financial disadvantage

Policy Recommendations:

- Organizations represented at 4SEA should petition ministers for Irish Sea Forum
- MCIP – funded, various organizations, makes recommendations, simple language, report care, open access, journal article
- Irish Sea Maritime Forum Exists
- Integration of different sectors – not just fishing and conservation
- Should ecosystem services be included in member states reporting observations under draft marine spatial planning document
- Look at MPAs from whole Irish Sea Basin perspective

C. **Energy and Infrastructure** (Chair: Dr. Mike Bell)

Risks:

- Challenge of getting power to where it is needed – remote from point of generation
- Grid limitations
- Costs and impacts of cables (both marine and terrestrial)
- Lack of understanding – about many issues, but impacts on fine and coarse sediments highlighted as frequently not considered in development plans
- Challenge of developing tidal barrages without large impacts on estuarine and terrestrial habitats behind the barrage
- Challenge of developing new technologies that are less damaging
- Wind companies stalled investing owing to co-locations and infrastructure regulations
- Commercial clout of wind industry overshadowing fishery interests
- No-signal zones for radar within wind arrays – problems for navigation and safety of fishing and other vessels
- Exclusion of fisheries
- Licensing and ownership issues for co-location with aquaculture
- Enough space for aquaculture within arrays?
- Underwater noise impacts of energy extraction

Opportunities:

- Co-location of aquaculture with wind farms
- Economic stimulation, job creation from development of renewable energy
- MCZ value of renewable energy developments
- Spatial fishery management opportunities from exclusion zones around renewable energy developments
- Artificial reef effects of energy infrastructure (including oil and gas)
- Introduction of new hard structure into marine environments, creating habitat to enhance shellfish recruitment and opportunities for aquaculture

Ideas for collaboration/innovation:

- Irish Sea Maritime Forum as a focus for developing consortia for research proposals
- SUSFISH 2 to extend work of SUSFISH to bring in energy industry partners and be more geographically inclusive (include Wales, Ireland, Northern Ireland, Isle of Man, Scotland, England)
- Low Carbon Research Institute Marine Energy Themes
- Research to design out the flaws in existing energy extraction technology in terms of impacts
- Research to design in desirable properties of energy extraction technology, e.g. to favour co-location with aquaculture and other activities

Needs for collaboration/innovation:

- Data sharing is everything!
- Whole system studies
- Wind-aquaculture collaboration to explore possibilities for joint activities (e.g. shared boat time for wind farm maintenance and feeding of aquaculture stocks)
- Industry to work with academia to explore opportunities for joint research for sustainable development
- Research into what kinds of aquaculture are most appropriate to co-location with renewable energy, in terms of smallest footprint, least impacts and greatest returns

Policy Recommendations:

- Meet the challenge of Marine Spatial Planning – locating a new industry in an already crowded arena – a cross-border issue
- Join up marine planning between areas and countries – joined up thinking for the Irish Sea as an ecological unit
- Deal with cross-border issues for shared estuaries
- Government policy/target driven research funding
- Address policy needs in relation to interactions between climate change and energy developments in relation to the spread of invasive species
- Get ROCs right to favour the appropriate mix of renewable energy technologies
- Address the balance between renewable energy targets and needs for ecosystem protection