

OUR OCEAN WEALTH CONSULTATION

This document outlines the IMERC response to the national consultation on the development of an Integrated Marine Plan for Ireland. IMERC aims to develop a research and commercial cluster of world standing that positions Ireland in the global maritime and energy markets of tomorrow (IMERC, 2011). The contributions expressed below reflect the IMERC approach, which prioritises the development of the maritime and energy sectors using industry-led research as a catalyst for growth. The contributions also reflect the emphasis in IMERC on good governance, a subject well understood by a number of leading academics and practitioners in the field of coastal and ocean governance, working within the cluster. The document was developed following consultation across the IMERC partners in UCC, CIT (National Maritime College of Ireland) and the Irish Naval Service. This submission is complementary to individual institutional submissions from the partners.

SUMMARY OF KEY POINTS

1. A systematic macro-economic expert-led approach must be used to define **GDP** targets, which should also help to identify priority areas for public and private investment. The communication of these types of targets will be necessary to indicate that Ireland is **open for business** in the maritime space and to project the right message concerning trajectories of growth to potential investors.
2. Initiatives such as **IMERC** are **poised to attract MNC investment** on the back of the infrastructure and ecosystem of innovation on offer. Initial success in this area could be a game changer for growing GDP targets by 2020.
3. The Ocean Wealth Consultation process needs to evolve to a point where a detailed approach to restructure and reform of the system can be provided for. It is clear that **a business as usual model has not delivered to date**.
4. The **interdepartmental group is limited** in its expertise. It should systematically access representations from the third level, NGO and industry sectors. It should also include direct representation of the Irish Naval Service as the principal sea-going agency of the State. Further consolidation of political support and the democratisation of the policy development process, can be enhanced through the development of a cabinet sub-committee going forward.
5. The overhaul of the **foreshore licensing system** is one of the most pressing issues in the delivery of public service because of the negative impact it has on growth across every sector in the maritime domain, including the development of marine recreation, marine renewable energy, offshore hydrocarbons, and aquaculture.
6. **Public investment** will be essential to provide the conditions for economic growth, particularly in emerging sectors such as ocean energy. An economic valuation of the levels of public investment

required across multiple marine sectors from now to 2020 is currently lacking. As well as direct investment for critical infrastructure, innovative approaches to economic incentivisation must be developed to order to tip the balance of trade to allow the home-base to grow.

7. The Ocean Wealth document is currently weighted towards short term economic development. However, the wealth of our marine and coastal resources is in their **ecological diversity and social value**. These assets must be protected to ensure long term sustainable resource utilisation. The need to implement **ICZM** is more urgent now than ever. Coasts are the frontline in our endeavour to develop offshore resources, as well as being the critical interface for most sea-based activities.
8. The **commercialisation of research** in the marine space in Ireland has traditionally been relatively weak. Addressing this issue must become one of the primary objectives of HEIs, industry and relevant agencies in the current economic context.
9. Traditional approaches to **policy making** need to be replaced with a more open, **inclusive** process at all levels. The new policy framework needs to consider the best organisational structures for engaging with stakeholders on an on-going basis at the appropriate scale.
10. The IMERC partners welcome and will support the development of an MSP initiative in Ireland, however it should be noted that **MSP is not a panacea** for delivering Our Ocean Wealth. MSP is a tool for decision making,. It is not the complete solution for conflict resolution and needs to be framed under appropriate policy..
11. The Ocean Wealth Consultation process provides an opportunity to provide greater clarity on the **national approach to maritime clusters**.

RESPONSES TO THE QUESTIONS

1. **In 2007, Ireland generated €3.4billion in turnover, €2.4billion direct and indirect GVA (1.2% GDP) from our ocean resources. It is generally believed this performance could be substantially improved. What is a sufficiently ambitious yet realistic target for our ocean economy by 2020?**

While it is useful to pose the question concerning a sufficiently ambitious yet realistic target for our ocean economy by 2020, non-expert “guestimates” provided as part of this consultation process need to be regarded with extreme caution. A systematic macro-economic expert-led approach must be used to define the targets, which should also help to identify priority areas for public and private investment. The communication of these types of targets will be necessary to indicate that Ireland is open for business in the maritime space and to project the right message concerning trajectories of growth to potential investors.

Setting an ambitious yet realistic target for 2020 will be important for focusing the national effort in the short-term on the development of the ocean economy of Ireland. However, given the severe public finance difficulties likely to prevail for the rest of this decade, it may be necessary to set longer term targets for 2025 and 2030. The economic outlook indicates that overcoming the current weakness in domestic demand will be a slow process. Positive trends show a strong export performance, coupled with improvements in cost competitiveness. However, other factors must align, including restructuring of the public finances, a return to the market and an up-turn in the global economic outlook.

The development of a knowledge-based, high value-added ocean sector will be influenced by all of the above. The Ocean Wealth Process must deliver quick wins linked to short term, rapid growth of high

potential areas, such as the job creation targets linked to the development of the offshore aquaculture sector, yielding up to 4,000 new jobs by 2020. It must also take a longer term perspective on the evolution of established sectors such as the shipping and maritime transport sector, as well as the maturing of emerging sectors, such as marine renewable energy. Ocean Energy alone could yield 17,000-52,000 jobs for Ireland by 2030 (SQW, 2010). Other areas that merit consideration include the development of:

- Ports as global gateways
- Coastal locations for off-season tourism and leisure activities
- Marine IT and technological innovation
- Improved licencing structure for all maritime industries

It will be important to develop a fully comprehensive suite of progress indicators that can be used internally to gauge if Ireland is on track for evolving as state with a discernable maritime economic. Traditional economic indicators, such as GDP, need to be applied together with coastal sustainability indicators that can demonstrate the value added dimension of doing business in maritime Ireland such as include efficient decision support systems, political stability and, appropriate planning frameworks in place. Reference should be made to the vast volume of literature on the subject of coastal progress indicators, including the work done on the European Working Group on Indicators and Data for DG Environment in this regard.

2. What contributions can:

a. The private sector make to achieving growth potential in this area?

The private sector is the critical enabler to achieving growth potential in the maritime area and needs to be more actively supported by the government. The role of this sector is largely neglected in the Ocean Wealth documentation. Even though the term 'governance' is referred to on numerous occasions, the *governmental* aspect of governance are discussed, with little or no reference to the roles of markets or civil society in shaping the way plans and decisions are made. Good governance provides the focus for government, the seedbed for business, and the supports for civil society, necessary to develop the Irish maritime economy. All three should be considered equally.

The role of the private sector must be considered in the development of the Ocean Wealth vision in a more integrated way. The role of industry is multifaceted, from identifying market opportunities, to attracting investment, developing niches, creating jobs, promoting Ireland overseas, supporting communities, and influencing government. The contribution from the private sector can be looked at from the perspective of multiple scales. For example Multinational Corporations setting up shop in Ireland have a well-established record of delivering transformative impacts in regional and national economies in sectors such as pharmaceuticals, ICT and medical technology. A concerted effort needs to be put in place by the IDA and associated partners to develop a cluster of MNC activity in the maritime sector. Initiatives such as IMERC are poised to attract MNC investment on the back of the infrastructure and ecosystem of innovation on offer. Initial success in this area could be a game changer for growing GDP targets by 2020.

As we seek to entice multinationals to work with us to develop our marine resources, we must bear in mind that stability is an important factor influencing companies to conduct business here. Stability is not just economic stability. Investors need to be given confidence about the capability of Ireland Inc. to provide a stable offshore operating environment. A robust defence and security architecture is critical for safe and

compliant activity, and also as an attractor for FDI. Therefore, whilst major private sector companies can positively influence the ability to achieve growth in maritime Ireland, the growth equation is contingent upon inputs from both the private sector and the State. It is a two way investment process. State investments must ensure that organisations such as the Irish Naval Service and the Coastguard are sufficiently resourced to provide the stable operating environment required for investment, and demanded by citizens of the State in terms of protecting their interests in our natural marine resources. The issues of security, defence, enforcement and compliance are hardly mentioned in the Consultation Documentation. Any future policy development must address this fundamental and critical imbalance in discussing key enabling mechanisms for sustainable resource and economic development.

The indigenous sector equally has significant potential to influence, not least in the creation IP that can be marketed and sold both locally and globally. Levels of innovation in the indigenous maritime sectors of both Norway and Finland have helped to position those countries as world leaders in niches within shipbuilding and offshore hydrocarbons respectively. The same position should be emulated in Ireland, where a better balance needs to be achieved between dependence on foreign direct investment, and levels of exposure to the global markets. Attention needs to be applied to a process of identifying niche markets where Ireland can position itself to accrue long term benefits. Industry has to work closely with government to steer this market identification process, so that limited opportunities for government investment can be targeted for the maximum impact possible. Industry speakers at the recent IMERC Conference (Geostrategic Thinking for Maritime Ireland, March 9th 2012) identified market trends in Shipping, Logistics and Transport, as well as priority areas for further indigenous development. These included ship finance, ship owning, and project logistics.

The recent structuring of Science Foundation Ireland (SFI) presents an opportunity for greater engagement by industry in developing research capacity focused on new areas of opportunity. Industry has an important responsibility in this regard, not only in setting research topics, but in providing research match funding to enable the development of new innovations to be accelerated. Well-developed approaches to industry participation in research and development need to be rolled out across multiple programmes including EPA, MI and PRTL funded marine initiatives.

Finally, industry associations such as the Federation of Irish Fishermen and the Marine Renewables Industry Association have an essential role to play. The role and potential of these industry associations should be considered in the formulation of the Integrated Marine Plan for Ireland.

b. The public sector make to create an environment that provides the conditions needed for economic growth, investment and job creation in the ocean economy?

The Croke Park Agreement fundamentally shapes the delivery of public service in Ireland. It sets the context for the way the public service conducts its business so that the cost and the number of people working in the public service can fall significantly, while continuing to meet the need for services and delivery to end users. Public sector transformation provides an opportunity to publically engage with the public sector to re-organise and re-structure the workforce, as well as identifying the potential contribution of the public sector to the creation of an environment that provides the conditions needed for economic growth, investment and job creation in the ocean economy.

The IMERC partnership warrants consideration as an example of a bottom-up, evidence-based and collaborative approach to public sector transformation in two Higher Education Institutions (UCC and CIT) and in the Irish Naval Service. By coming together to develop and implement the IMERC strategy, these partners are delivering a value added service within and across the respective partner organisations that

aims to deliver up to 70 new jobs by 2014, the construction of the world's largest marine renewable energy research centre, commercialisation of research, and a magnet for FDI. The HEIs are focused on the commercialisation of research leading to job creation; while the Naval Service is targeting the economic deficit as an enemy of the state. As a result, the Naval Service is uniquely positioned to support SMEs, collaborate with researchers, and target FDI clients. The IMERC approach to shared services on the campus in Ringaskiddy, (e.g. library, workshops, laboratories and car parking) also yields direct savings to the tax payer.

IMERC offers a microcosm of a future national picture, where existing public sector organisations successfully share services, as well as integrating common job creation objectives across administrative boundaries. The Ocean Wealth Consultation process needs to evolve to a point where a detailed approach to restructure and reform of the system can be provided for. It is clear that a *business as usual* model has not delivered to date. However it is not clear, if or when, any meaningful level of reflection about how we have managed and promoted marine resources to date may be undertaken so that lessons learned from the past can be used to progress future developments (social learning). It is also noted that deep rooted reform takes time. Therefore a phased approach to the Ocean Wealth Consultation should be adopted, with outputs marked in milestones as follows:

1. Vision statement and operating principles
2. Policy framework
3. Action plan and enabling mechanisms
4. Review and refine process

One of the key characteristics of efficient government identified for Ireland by Goddard *et al.*, (2010) is the separation of policy and implementation. Policy development is currently an activity in all main government departments and agencies. The integration of policy and operations can inhibit ambitious or radically new policy development because the undertow of concern is centred on protecting arrangements for current service providers as opposed to working in the national interest. This begs the following questions: is the inter-departmental marine coordination group the best possible vehicle for the development of a policy framework into the future? How can international best practice inform the identification of a best practice model for Ireland? How can our politically elected public representatives create the right public sector environment for creating ocean wealth? In response to these questions, the IMERC partners suggest:

- The Interdepartmental Group is limited in its expertise. It should be able to draw systematically from representations of the third level, NGO and industry sectors, for example through an advisory/mentor group process.
- The Naval Service as the principal sea-going agency of the State should be represented on the Interdepartmental Group.
- The interdepartmental group is not the best vehicle for the development of a policy framework due to issues arising from the close relationship between policy formulation and implementation.
- International best practice can inform how a policy framework can be developed for the marine sector in Ireland. Lessons learned from the UK, in the development of its Marine and Coastal Access Act, can provide insights into stakeholder engagement, the development of a centralised co-ordination unit, and legislative reform. Other examples of integrated national approaches of merit to the development of coastal and marine resources can be derived from the United States, Canada, Australia and New Zealand.
- A significant body of knowledge already exists on this topic through peer reviewed published papers (e.g. Special Edition of Marine Policy edited by Cummins & Kopke, 2010), and through

unpublished thesis, e.g. Cummins (2011), Mellett (2009), O Hagan (2003). There is a need for much better connectivity between researchers involved in policy research and the Inter-Departmental Co-ordination Group, to ensure this expertise is harnessed and used.

- The strong political support for the Ocean Wealth Consultation process is noted. The lead taken by An Taoiseach's office is to be commended. This type of leadership is essential to ensure an integrated approach to the development of maritime affairs can prevail. It is suggested that further consolidation of political support and the democratisation of the policy development process, can be enhanced through the development of a cabinet sub- committee going forward.

The reform approach advocated above, will not impact significantly on the public purse. However, a considered approach to change management to deliver meaningful and long term outcomes will take an investment of time and effort that should not be underestimated. The unique opportunity and the motivation behind the current Consultation Process needs to be sustained for the long term, and should not be rushed for the sake of producing an immediate outcome.

Aside from policy formulation, at the policy implementation/ operational level, there is an obvious concern that needs to be addressed with a high degree of urgency. The overhaul of the foreshore licensing system is one of the most pressing issues in the delivery of public service because of the negative impact it has on growth across every sector in the maritime domain, including the development of marine recreation, marine renewable energy, offshore hydrocarbons, and aquaculture.

An action plan, or an Integrated Marine Plan for Ireland, will require a detailed approach to the development of the multiple sectors outlined in the Ocean Wealth Background Documentation. The issue of public investment will have to be taken into account if the Government is genuine about its commitment to the Ocean Wealth process. Public investment will be essential to provide the conditions for economic growth, particularly in emerging sectors such as ocean energy. For example, the government's €11million commitment to the Beaufort Laboratory in IMERC will create 150 new construction jobs and 70 new research positions by 2014. Even more importantly, this investment in public research infrastructure sends the right message to the private sector, i.e. that Ireland is open for marine renewable energy business.

More than anything else, the government will have to signal to private investors that it is willing to prioritise support for job creation in the marine sector, by putting enabling infrastructure in place, from coastal access (piers, slips, jetties), to the marine grid. An economic valuation of the levels of public investment required across multiple marine sectors from now to 2020 is currently lacking. It is proposed that this is an essential piece of work that needs to be undertaken as a national priority.

As well as direct investment for critical infrastructure, innovative approaches to economic incentivisation must be developed to order to tip the balance of trade to allow the home-base to grow. Ireland's tonnage tax regime, combined with the low corporate tax rate, continues to enable new enterprise as well as attracting inward investment from international shipping companies. This model shows how the public sector can fundamentally contribute to job creation and growth, by creating the right conditions for the development of private industry. Surely, similar models can be pursued for high potential marine sectors including ocean energy and financial services for shipping?

Creating the right conditions for development is also about ensuring that the regulatory regime is delivered in a fair and competent way by the public sector. Issues of enforcement and compliance are hardly mentioned in the Consultation Documentation. This whole area needs to be examined and integrated into

future marine policy development, particularly in the context of Sovereign Rights. The UNCLOS (Law of the Sea Convention), 1982, provides for “*exclusive sovereign rights over seabed, subsea and resources in the water column*”. Till (2009) states that “*with these rights go equivalent duties of care*”. Sovereign rights which are not upheld are more imaginary than real. Damage to ecosystem health is not just an offence against the habitats or species that suffer the consequences of activities such as pollution or overfishing. The offence is against the State. Ireland must demonstrate international leadership in taking a strong and proactive role in sovereign rights, property rights and maritime security.

c. Our communities make to the achievement of our growth potential

The role and potential contribution of communities (the third pillar of governance) to the achievement of our growth potential is largely absent from the Consultation Document. Engagement of community stakeholders in the decision making process is well established in the academic literature on participatory democracy as an essential ingredient in delivering sustainable development. This may be one of the most challenging areas in which to deliver real reform.

Firstly, the principle of sustainable development of marine and coastal resources needs to be interpreted. This can be a complex task, given different levels of expectation around resource use and protection by different stakeholders. The Ocean Wealth document is currently weighted towards short term economic development. However, the wealth of our marine and coastal resources is in their ecological diversity and social value. These assets must be protected to ensure long term sustainable resource utilisation. Sustainable development which balances the economic imperative with social and environmental concerns must be embedded as a guiding principle for the entire Ocean Wealth process. Operating principles need to be articulated at an early stage in the process, and ideally these should be included in the publication of the Ocean Wealth Vision Statement.

Previous Governments successively failed to implement the European Commission’s Recommendation on Integrated Coastal Zone Management (ICZM). However, that is not to say that ICZM is without merit. In fact, the need to implement ICZM is more urgent now than ever. Coasts are the frontline in our endeavour to develop offshore resources, as well as being the critical interface for most sea-based activities. Our failure to implement ICZM is more of a reflection of the sea blindness that traditionally characterised our approach to the sea. ICZM incorporates modern principles of planning and resource management. It has proven to be an effective framework for dealing with conflicts arising from multiple and interactions among coastal stakeholders. ICZM is shown to be relevant and beneficial by the level of implementation of ICZM programmes worldwide. In 2002 ICZM was being implemented in over 700 coastal management programmes in 145 coastal nations worldwide (Sorenson, 2002). There is no need to reinvent the wheel. The European Principles of best practice in ICZM provide an excellent point of reference for a set of well-developed and relevant guiding principles. Work on the COREPOINT project, led by the Coastal and Marine Research Centre (CMRC) in UCC, provides valuable insights into the operationalisation of these principles (COREPOINT, 2008):

1. Adopt a broad, holistic approach to management
2. Take a long term perspective
3. Apply local specificity
4. Work with natural processes
5. Implement adaptive management
6. Use a combination of instruments
7. Support and involve all stakeholders
8. Use a participatory approach

Secondly, Ireland has a poor track record in public participation. The development of the Corrib Gas field by Shell is a classic example of how not to engage with a community. The Corrib Gas case study shows why public participation is an essential prerequisite to the achievement of our future growth potential. Without local buy-in, implementation of government and industry development objectives can be challenged or blocked. Lessons can also be learned from projects concerned with community engagement in coastal management such as the Bantry Bay Charter project. The main aim of the project was to establish consensus among all stakeholders to produce a sustainable management strategy, with community ownership and regulatory authority involvement, for Bantry Bay's coastal resources. A critical reflection of the project (Cummins, 2010) showed that public participation is not a panacea for successful coastal management and that care needs to be taken in raising the expectations of coastal stakeholders. Careful consideration must be given to community engagement to enable communities to make a positive contribution, not just to achieving our growth potential, but to achieving our sustainable development potential. Our Ocean Wealth needs to value the tacit knowledge of coastal communities in this regard.

d. The higher education sector make to the achievement of our growth potential?

The Higher Education Institutes (HEIs) have an important contribution to make to the achievement of our growth potential. A number of HEIs have well-established, long-term track records in conducting marine research, including UCC, NUIG and UL. Other HEIs such as UCD, NUIM and NMCI have started to build marine research capacity in more recent years. Programmes such as the HEA PRTLTI programmes and SFI investments have helped to build a strong marine research base, in terms of both physical and human capital. However, the commercialisation of research in the marine space in Ireland has traditionally been relatively weak. Addressing this issue must become one of the primary objectives of HEIs in the current economic context. In order to achieve this, the HEIs need to deliver greater coherency between disparate elements of innovation, including knowledge transfer, commercialisation, entrepreneurship, education and consultancy.

The Forfás Report (2012) describes how the future challenge will be to align publically funded research more closely with industry and societal needs, achieve critical mass in a small number of areas and facilitate the transfer of knowledge between academia and industry, while maintaining commitment to excellent research. IMERC partners are well positioned to deliver on this challenge, not least because of the IMERC Technical Working Group (TWG) process, which helped to define industry-led research priorities in the maritime space (IMERC, in press).

The Forfás Report (2012) identifies 13 national research priority areas, one of which is Marine Renewable Energy (MRE). It recognises the need to position Ireland as a research, development and innovation hub for the deployment of marine renewable energy technologies and services. This will facilitate the creation of an early stage industry and research cluster and open up the possibility of Ireland becoming a net exporter of electricity. The prioritisation of MRE is of significant relevance to IMERC, which will house UCC's Beaufort Laboratory, the world's largest marine renewable energy research centre, with 135 researchers and including the national ocean energy test tank facility. The successful development of this sector is dependent upon a multidisciplinary approach to research (e.g. engineering, ecosystems governance and ICT), underpinned by knowledge of the maritime operational environment that can leveraged at multiple levels for device development, deployment, operations and management. The respective HEIs have a responsibility to deliver on this approach, to achieve the desired national outcomes in terms of job creation. The recently launched SFI Research Centres programme will be an important opportunity for

demonstrating inter-institutional, multi-disciplinary collaboration on marine renewable energy and other topics.

The HEIs also have a key role to play in providing expertise that can support effective policy making. Studies in the social and political sciences can inform the policy making process in a generic way, while topic specific policy research on subjects such as climate change are required to understand how Ireland will make the transition to a low carbon economy, and where the implications and opportunities in the marine sector may lie (e.g. using the oceans for carbon sequestration; adaptation to climate change in the coastal zone). Policy expertise amongst the research community is largely untapped, with limited opportunities for researchers to engage in policy development in a meaningful way. This trend needs to be reversed to make sure that national investment in policy related research is optimised, and to make sure that existing expertise is leveraged on behalf of the State.

The administration of research funding in the marine space has traditionally been delivered in an ad-hoc way, with little or no alignment between the funding agencies. Perhaps this situation has prevailed because of a lack of a unified voice from the third level sector, representing the perspectives of the marine researchers. We now have an opportunity to address issues in the way that marine research is funded and administered. An unusual situation prevailed in direct funding for marine research through the SeaChange programme, where the funding body was also competing against HEIs for access to the funds it ultimately administered. There is a need for the HEIs to develop a coordinated action to engage in the Ocean Wealth Process at the highest levels possible, to ensure that new arrangements for marine research will be more appropriate.

Government, industry and the third level institutions need to work together to develop curriculum that more adequately reflect the skillsets required for employment in the maritime sectors. These need to be focussed not just on obvious engineering disciplines but on aligned subjects such as law, management, economics and government. The links between traditional education and vocational training (as provided at the NMCI) needs to be strengthened as future graduates will require additional skills and training if they are to be truly competitive in the labour market. Therefore the benefits of synergies between Universities, IT and Colleges such as the alliance between UCC and NMCI (CIT / INS) should be fully supported and widely promoted.

The role of the National Maritime College of Ireland should be recognised for the impact it can make in the delivery of training and education to support growing maritime industries. The NMCI is an extremely valuable national resource, with unique infrastructure and human capital available to educate students for the merchant marine and the naval service, as well as professional training at home and overseas. The NMCI is maturing as a College with strong growth in the commercial and research pillars. The educational outputs from the NMCI can be ramped up, to meet growing demands for new courses and qualifications.

3. What actions should be taken to strengthen our marine awareness/identity

Actions to strengthen our marine awareness/identity need to be specified following the identification of the target audience for such actions. Assuming that the Our Ocean Wealth process should aid the development of a strong maritime constituency then the voting public should be identified as a key target audience. There is a question of how to reach out to those members of the public who are largely unaware of maritime affairs. The power of television and celebrity culture to pervade social consciousness is well established. Yet, the potential to reach this cohort via the medium of popular culture is relatively unexplored territory when it comes to communicating maritime issues. Perhaps an opportunity exists to

appoint national maritime ambassadors, with a celebrity type of media appeal, to do for maritime Ireland what Jamie Oliver managed to achieve for the quality of school lunches in the UK! Questions arise about the message to be communicated. A key message to inculcate into the national mind-set is that of Ireland as a maritime nation.

Internalisation of a maritime identity nationally needs to be coupled with the internationalisation of the message. The international audience is a second major target audience. Ireland is well represented in Brussels, thanks to the work of the Marine Institute and the Irish marine attaché. However, beyond this, there is a need to put maritime Ireland more firmly on the map. A key message to communicate immediately is that Ireland is open for business in the maritime space. Political representatives, journalists, civil servants, industry representatives, educators and scientists all have a role to play to feed this message across the thousands of international networks that are used almost daily.

4. Is the draft of Our Ocean Wealth sufficiently ambitious and realistic or would you suggest an alternative

“By 2020 our ocean wealth will be a key element of our sustainable economic growth. It will be managed in an integrated manner and supported by coherent policy, planning and regulation, generating economic, social and environmental benefits for our citizens”

The objective should not be solely on economic development, as suggested by the statement above. The emphasis on economic growth needs to be balanced. The term ‘sustainable development’ though frequently overused and seldom actually achieved, is still the best term to capture an intention to consider economic, social and environmental parameters equally. An alternative example is as follows:

By 2020 Ireland will provide a stand-out example internationally of a country that can demonstrate a targeted course of action to deliver the sustainable development of its maritime resources.

By 2020 Ireland will be an outstanding example of how an inclusive, targeted course of action can deliver sustainable development of maritime resources.

5. How can we maximise the benefits of our ocean wealth and protect the marine ecosystems/environment?

As discussed above, maximising the benefits of our ocean wealth requires the engagement of government, industry and civil society through innovative governance arrangements. We need to develop an integrated policy formulation process that deals with major issues of restructuring, transformation, prioritisation, investment, accountability *and* sustainable development. Policy formulation will have to reconcile the need to exploit the economic opportunity with protecting the asset upon which our ocean wealth is based. We have not had a good track record to date and the sustainability crisis is deepening.

Maritime activities can have detrimental impacts on the marine and coastal environment, including aquaculture, marine transport, coastal development and fishing. The OSPAR Quality Status Report (OSPAR 2010) shows that pressures on the marine environment are increasing, with growing evidence of the impacts of climate change, the exploitation of fish stocks beyond sustainable biological levels, and loss of critical habitats such as coastal wetlands and deep water corals. To date, the protection of the marine environment in Ireland has largely been based on a *reactive* approach. European Directives, such as the Birds and Habitats Directives, the Water Framework Directive, and the EIA Directive, have been the primary drivers for environmental protection and monitoring. Most recently, the Marine Strategy Framework Directive is stimulating a national response towards the objective of achieving good environmental status in EU marine waters by 2020.

It is imperative that Ireland moves towards a more *proactive* approach to protecting the marine environment. The Ocean Wealth Consultation Process is an opportunity to commence a national dialogue on the value of ecosystem health and services. Little effort has been done to date to quantify the *non-economic value* of coastal and marine resources, such as the value of coastal space for health and well-being or the value of natural coastal systems for coastal defence. This work needs to be undertaken, alongside more regular stocktakes of marine environmental status. The last QSR report for Ireland's marine environment was published by the Marine Institute in 1999 (Boleans *et al*, 1999). The EPA's millennium report in 2000 gave an overview of the status of the marine environment (EPA, 2000). There has been no comprehensive, publication since. It should be noted that 2012 is the year of the Earth Summit (which marks twenty years since the United Nations Conference on Environment and Development in Rio). A marine environmental stocktake is long overdue.

The need to adopt an ecosystems approach has become the mantra of many environmental lobbyists, scientists and policy makers alike. It is now enshrined in the Marine Strategy Framework Directive. It is considered one of the most important principles of modern environmental management. The academic literature abounds with case studies and methodologies for the implementation of the approach, which is essentially about the integrated approach to the management of habitats and living resources that promotes sustainable use. Importantly, it recognises that humans, with their cultural diversity are an integral component of the ecosystem. Thus, understanding of the functionality of an ecosystem requires capacity building in the type of multidisciplinary approach advocated by the relatively new field of Sustainability Science. In Ireland, we need to build capacity to adopt a broader approach to understanding ecosystem dynamics. The traditional approach to marine science has been centred on a linear, reductionist approach, focused on species specific studies, or basic ecological profiling. There is a need to develop more sophisticated approaches to modelling that can link cause and effect of human interactions in the marine environment, taking earth systems complexity into consideration. Lessons should be noted from research in Framework projects such as KnowSeas and Spicosa conducted in the CMRC.

The SmartOcean approach to networked observation systems, promoting test-bed infrastructure and technology convergence should continue to be supported at the national level, as an important initiative for making data more readily available for science and management. New opportunities for data collection should also be sought, for example via the deployment of automated marine monitoring equipment on commercial ships or passenger vessels. The willingness of the Naval Service to support data collection at sea can also be further promoted.

Over the last 30 years Marine Protected Areas (MPAs) have become an increasingly important and effective tool in marine conservation worldwide. However there are no MPAs in Ireland. Progress has been made in designating coastal and offshore areas as Special Areas of Conservation (SACs). However, the level of protection provided by this process is limited. Prosecutions are rare. By comparison, MPAs create no-take zones. Therefore illegal activity in an MPA is much easier to establish and enforce.

The issue of enforcement versus compliance is a major issue to be addressed. From an enforcement perspective, there is no shortage of legislation covering permissible activities along the coast or at sea (23 separate acts). There may be a need to streamline and update the legislation, which should be considered by legal experts as part of the Ocean Wealth process. Most importantly, there is a need to enhance national capacity to implement existing legislation for the protection of the marine environment. In a time when public finances are extremely limited, the economic case for the protection of the marine environment has to be clearly articulated, to ensure that important resources are deployed to protect the national interest

(e.g. naval service patrols, NPWS rangers). Inculcating a culture of compliance is also dependent on developing convincing arguments about the need to protect our national marine resource.

Coastal areas are dynamic and have been recognised as the most susceptible to climate change and therefore there is a need for local authorities to develop strategies to adapt to the potential impacts of climate change in order to meet economic, social and environmental targets. The CMRC, through projects such as CoastAdapt and IMCORE, has been working with a number of local authorities and has developed techniques and tools that can help local authorities the requisite strategies. It is important to recognise that whilst there are significant challenges, there are also significant opportunities arising from climate change and both should be considered under any integrated plan.

6. How can the interest of competing sectors be balanced when it comes to planning the use of our ocean space and what criteria should be used to balance them?

As discussed above, an initial step in the development of a national policy framework should be the identification of guiding principles for the development of our Ocean Wealth. This process should involve multiple stakeholders from government, industry and civil society in a process of deliberative coastal governance. The ultimate aim should be to build capacity for improved community problem solving to balance the interests of competing sectors when it comes to planning the use of our ocean space. Previous governments have paid lip service to enabling better public participation in decision making, as a way of avoiding or resolving use-conflicts. Policy makers have often been concerned with reaching the endpoint of producing a policy document (that can end up gathering dust on a shelf), than with the importance of engaging with relevant stakeholders during the policy development process. Substantial stakeholder engagement lengthens a policy development process, but it should be noted that time invested upfront should be offset by an enhanced ability to implement new policy more efficiently as a result of greater stakeholder buy-in.

According to Glavovic (in press) *“discursive processes that encompass visioning, experimentation, social learning and institutional reform, and cut across governance episodes, processes and cultures, are needed to catalyse the sustainability transition. Deliberation is thus the key ingredient- the yeast- necessary to foment the transformative innovation for coastal sustainability”*.

Taking this into consideration, it becomes clear that traditional approaches to policy making need to be replaced with a more open, inclusive processes at all levels. The new policy framework needs to consider the best organisational structures for engaging with stakeholders on an on-going basis at the appropriate scale. Use should be made of existing tools and know-how, such as the Futures Scenario Planning work conducted in the IMCORE project, co-ordinated by the CMRC. Maritime Spatial Planning is another tool that can be applied to balance competing stakeholder interests. This is discussed further below.

7. To what extent could the development of a Maritime Spatial Plan assist in this balancing process?

Maritime Spatial Planning is about planning and regulating all human uses of the sea, while protecting marine ecosystems. A large focus of MSP is to balance frequently competing sector based interests, which makes it an obvious tool for addressing this issue. There is a general trend towards the implementation of MSP across Europe, with drivers such as the Integrated Maritime Policy (IMP, 2007) and the Commissions Communication on MSP (EC, 2010), and more recently, the referencing of MSP in the development of the

Atlantic Strategy. As a result, it is hardly surprising to see a large degree of emphasis on MSP in the Ocean Wealth Consultation Documentation. Coupled with this, is the fact that a Maritime Spatial Plan may provide the legal certainty, transparency and predictability necessary to reduce costs and risks to investors and offshore operators alike (i.e. therefore helping to deliver ocean wealth), as well as providing a template for reducing spatially orientated use conflicts.

The IMERC partners welcome and will support the development of an MSP initiative in Ireland, however it should be noted that MSP is not a panacea for delivering Our Ocean Wealth. MSP is a tool for decision making. It is not the complete solution for conflict resolution. The background documentation for Our Ocean Wealth currently reads like a manifesto for MSP. There are clearly policy drivers emerging from Europe. We may be pressured into action, but MSP is not the only course to be pursued. MSP needs to be placed within an innovative architecture for better governance. The need to link MSP and ICZM must be taken into consideration. Planning and property rights on land are different than at sea and there is a need for better integration between marine and terrestrial strategies and plans. Local Authorities are well placed to apply their knowledge of the terrestrial planning system into the coastal zone to address this issue.

8. Are the opportunities and constraints identified the right ones? Are the enablers the right ones to be focusing on in order to unlock the potential of our oceans?

The Enablers identified are all extremely relevant (Licensing, planning and compliance; Marine research and innovation; Integrated mapping; Maritime safety, security and surveillance; Education and training; European marine policy framework).

A couple of gaps have been noted as follows. Firstly, Industrial Development is an essential enabler that is not included. This is an essential pre-requisite to unlocking the potential of our oceans. Existing capacity exists among the development agencies such as the IDA and Enterprise Ireland. The Irish Maritime Development Office (IMDO) has an extremely important role to play in this space, as does IMERC. There is a need for a more integrated agency led approach to industrial development for maritime Ireland, where a concerted, joined-up effort is well co-ordinated and better able to deliver results on behalf of the State.

Secondly, Better Governance should be high on the list of priorities as an enabling mechanism, to enable the types and levels of discourse needed between the governance actors for strategic visioning at the national level, to issue resolution at the local or level. Innovation in governance and a move away from the 'business as usual' model will be the key to unlocking Our Ocean Wealth in a sustainable way.

9. How can we ensure appropriate governance in national maritime affairs for optimal results (at local, regional, national, European and international levels?)

The first step will be to ensure clarity of understanding of the differences between *governance* and *management*, as there is often ambiguity in the way terms are applied. According to Olsen (2003) governance sets the stage in which management occurs, by defining, or redefining, the fundamental objectives, policies, laws and institutions by which societal issues are addressed. A huge amount of expertise on governance exists in our universities, with particular expertise residing in the CMRC's Coastal Governance Group. Reference should be made to the keynote paper presented by Prof. Devoy at the ICoNet Conference 2011. This gives key recommendations on the needs for Marine and Coastal Governance, as creating the seedbed from which effective marine growth and the harnessing of marine

resources can take place. There are many points in the presentation that need consideration in the Ocean Wealth process. The presentation, and the ICoNet 2011 Conference overall, communicated particularly, a need for urgency and coherent action (by government and all parties involved) in developing the marine resource; the need for national investment and aid to key industries; (to be strategically defined, e.g. marine renewable energy).

Better connections need to be made between policy makers and experts in this coastal governance field. An advisory group to the Marine Inter-Departmental Co-ordination Group would make sense in this regard. We need to be innovating, not just technically, but in social and governance arenas too. Rethinking coastal governance must consider how key actors interact, how power is shared, and how to achieve social co-ordination and collective action across the three pillars of governance. Coastal governance is fundamentally a deliberative process (conversation, negotiation, decision-making) achieved across multiple scales. The transformative practice of deliberative coastal governance is a long-term undertaking. There is little point in using the language of governance unless this investment of time and effort is fully understood.

Different approaches to governance will be required for dealing with trans-boundary issues at an international level, to dealing with spatial planning issues at a local level. The routes to stakeholder engagement need to be mapped and new organisational structures need to be established. Lessons learned from the Stakeholder Councils established under the auspices of the Water Framework Directive should be noted.

10. Suggest ways we can foster and / integrate marine policy and planning in Ireland? With less resources, how can we do better?

Doing more with less is a massive challenge. However, it is also an opportunity to streamline activities, to derive synergies from partnership approaches, and to deliver greater joined-up-thinking. A certain amount can be achieved within the current resource base. Activities such as communicating that *Maritime Ireland is Open for Business*, engaging with stakeholders, and reforming regulatory regimes such as the foreshore licensing system, cost little, and should be prioritised in any case.

However, it must be emphasised that if the Government are serious about transforming our ability to create new jobs from marine resources, then public investment will have to occur to put critical infrastructure in place, not least enabling mechanisms for marine grid, better port infrastructure, and coastal access facilities.

11. Having read the background material, do you have any specific suggestions / ideas / comments on what we can do to realise the potential of our ocean wealth?

The EU Integrated Maritime Policy aims to promote maritime clusters across Member States as a vehicle for job creation and maritime development. Maritime cluster development has become topical in Ireland in response to this driver. In recent times, the term cluster has been linked to network or centre based activities, which is inaccurate. Clusters have been defined as “*a group of economic actors and institutions that are located near each other and have reached sufficient scale to develop specialised expertise, services, resources, suppliers and skills*” (US Council on Competitiveness, 2007). Internationally renowned Harvard expert Michael Porter’s work on Cluster development should be referenced. Porter emphasises that physical proximity between business and academia is an essential building block for cluster success, where

opportunities for face-to-face interactions and sharing of innovative ideas are presented on a daily basis, such as in the IMERC campus in Ringaskiddy. The Ocean Wealth Consultation process provides an opportunity to provide greater clarity on the national approach to maritime clusters.

For further information

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