SUT, MASTS and the D’Arcy Thompson Forum present:

The first Sustainable Responsible Impact+ Investment+ (SRII++) Workshop

Wednesday 9th November 2022 (Auditorium A)

**Custodianship of Marine Life:**

**Ecosystems Impact of Anthropogenic Activity in the ‘Blue Space’**

**What does ‘Good’ look like and How do we Explain it to Others?**

***Welcome: Moya Crawford, President, SUT: Welcome: What to expect from the first SRII++ workshop – the need to think differently***

**Session 1: Environmental governance of the ‘Blue Space’: What is the right thing?**

* Looking at components of an economic ecosystem
  + Industry commerce and trade are important to look at, can't just look at technology and policy
  + Six elements in the economy that are important to deliver if we are going to have a just transition
  + Not having money be the only metric

***Chair: Mike Elliott, Chair in Estuarine & Coastal Sciences, University of Hull***

* Challenges for marine science and management
  + How do we protect nature and then deliver what humans want?
  + We need to think out of the box, be transdisciplinary and move out of our box
* Apple Example
  + We want to be the apple cake, where everything is really mixed up, or a more mature version of apples
* When we think of the health and status of the marine environment we need to think about a good system
  + As soon as we start putting human activity in, we lose the ”goodness” of the environmental state
  + Keep getting worse with more human activity, even with some mitigation measures
* Solutions
  + What aspects do we have to build in to get sustainability?
    - Governance
      * Where does governance come in? How do we put it all together?
    - Local level is technical, marine plans, moving up from local to global actions
      * Where do we think about governance?
      * Vertical is local → global
      * Horizontal is action on the same level
    - The crazy chart is the effects of Brexit, shows all the elements of the marine environment that have to be managed
      * Everything in the middle is the global aspect
      * We need vertical and horizontal integration
        + We need organisations to integrate them
* Linking environmental social governance with data as a currency
  + Data: the way we use it, how much we have, etc
  + This is where we’re going

**Part 1: Environmental Social Governance (ESG) – Are we doing the right thing?**

ESG is usually associated with climate change, pollution, resource scarcity…In reality it covers a wide spectrum of socio-economic issues such as diversity, ethics, data security, sustainability. In this session we look at ESG from varying perspectives through a series of short talks to stimulate your thinking

***Keynote: Kelly Malynn, Senior Risk Manager, Beazley Leviathan: Perceptions of ESG versus reality – the Underwriters’ perspective***

* In insurance, working in the areas of emerging and complex risk, ESG strategy
* Going to talk about perception of ESG, lei person, how she sees the reality
* How to apply within sectors, how data is a currency
* Perception
  + Unique to everyone, ESG has its own
* ESG definition
  + Represent organisations corporate interests focus on sustainable and ethical impacts
  + Used to establish accountabilities
  + It’s to appeal to investors and customers, this is problematic, but it’s what it’s used for
* Rise of ESG
  + More people looking up ESG
  + Huge increase in investment funds
* Reality
  + Over 100 orgs providing ESG research and ratings
  + With every company comes a methodology
    - Understanding how they put this data together is a full-time job, hard to understand ESG scores
    - Is the balance between the E and S adjusted for the Ukraine war? They say it’s not that dynamic, maybe we need to reconsider this
* Greenwashing is increasing as company look to appeal to investors and customers
  + What is certification and assurance?
    - The symbols mean little, what are consumers buying into?
  + Litigation
    - More cases in US waiting to go through, from carbon pollution, greenwashing, etc
  + Action
    - There is an impact of action
    - Has an effect on people wanting to do the right thing
* Insurance context
  + Responsible for climate risk
  + What impact does the changing world have on their physical risk?
  + Within the marine division
    - Their responsibility within impact, how to move in line with the transition and support the transition
* ESG in Underwriting
  + Want to support the transition and support ESG everywhere
  + Important to see if there is an impact through risk assessment
* Consortium 4321
  + Syndicate began last year, embeds ESG
  + Want to provide insurance and capital throughout the transition
  + Have 3 ESG score providers, huge process to choose them and their methods
  + Every client has this assessment ran, differs for each, to see if they get their coverage
* Build scenarios on expenses, etc
  + A number of scenarios built
  + How does a client's responsibility and approach impact their underwriting performance?
  + What scores are they using, what governance are they going through?
* Perception to reality
  + Trying to understand where the company performs better relative to ESG scores
  + There needs to be clear transparency on methodology
  + We can assist with a just transition by people are doing the right thing, what is a customer’s ESG score

***Feargal Brennan, Director of the University of Strathclyde Offshore Engineering Institute: What should we be thinking about, given what’s coming our way?***

* What’s changing, what technology is there?
* Original target was 30 GW
* Offshore wind GW keeps going up, 50 by 2030 is the goal
  + Took 20+ years to get the first 13 GW
* Other good things are 60% local, 33 female
* China has overtaken us in offshore wind
  + UK is second
  + Why?
    - Southern north sea is unusually shallow, sandy soil easy to build
    - Close proximity to energy demand
  + UK government is losing money on offshore wind
    - Germany is getting 200 bil in exports from there
* We have two suppliers world wide of onshore wind, this has to change, bad to be dependent on few sources
* We make big steel structure on the other side of the world to be shipped here, not sustainable, not carbon footprint
* Macroeconomics
  + We cannot get to 50 GW without making it here
  + We must do it in an enviro sensitive way that makes max benefit to economy
* Hywind Scotland
  + World's first floating wind array
  + More resource and reliance offshore, lots of wind offshore
    - Much more capacity than onshore turbines
  + Recordable injury rate
    - Been disinvited for talking about safety, no we need to get all of these things together
* By 2030 we will have more than 8,000 turbines offshore
  + Huge opportunities for macroeconomics through investment and employment
* Putting things close to shore and floating is safer
  + We need to think about it in a different way
  + Replace equipment
* More than one turbine on a platform? Share moorings beneath the surface to reduce touch points? Impacts on marine life?
  + Need to be discussed, not enough communications

***Vidar Åhjem, Senior Principal Specialist, Structural Integrity Advisory, DNV AS: How do you make sure these systems work?***

* Expectations
* Two stages related to implementation
  + Building and supplying
  + Delivery
    - If you have a piece of equipment you need to deliver function from the use is important
* Value is created by user, not owner
  + Functionality drives value creation - not just want a fast car, you want it to start every day
* People can be standing in different places, things are not binary
  + Words of many meetings
    - Certification is a statement of something - what is being stated? what that certification is
    - Classification is defining a category, how is the category defined?
    - Approval - who has the authority? What is being approved?
    - Qualified - what [position are you in?
    - Proven cannot stand by itself, all relative. To what extent has it been proven what context of use?
    - Tested - demonstration test different from stress test
    - Standard can be misleading dependent on the standard
    - Assurance, what is the information, context dependent
* Why do we want to insure a function?
  + We test products at the beginning when they are new
  + Things deteriorate over time, so we need to be testing then
* 3 criteria
  + Assigning acceptable criteria for product certification
  + Attention to use it in the right way
  + Combined balance between acceptance criteria and limits, provide assurance
  + Assurance dependent on how sure you are about limits of use and focus
* Validating requirements
  + Need to ask what is need

***Andrew McGlynn*** ***Head of Business Intelligence and Onboarding, CrowdX: Integration of ESG with raising finance to fund the ‘net zero transition’***

* Will be frank about successes and failures
* Companies they deal with have grown from small home companies to large ones
  + Some don’t have correct procedure for operations
  + ESG can be part of that
* ESG problems
  + People want a number from ESG data, not a spreadsheet
  + In relation to what?
    - Best ESG in the sector? So what? What does score mean?
  + Business wants quick answers to complex problems
    - They don’t want to think about the planet
  + Greenwashing
    - Carbon tokens
      * Incentives not to cut down the forest, not rewilding
* Integrating ESG
  + ESG values alongside financial values
  + Easy to measure and avoid claims of greenwashing
    - Hard to integrate academic standards
* Partners can calculator greenhouse gas emissions from every UK company, base clients on ESG scores
* No standardised ESG accounting metrics
  + Trying to understand academic vernacular
  + No one in finance understand that, needs to be translatable
* Important to strengthen the S and G, the E is more focused on but especially the G gets left behind
  + Governance hugely important

***Discussion/Q&A***

* Are we inflating governance with management?
* How do we feed science into the beginning, not when it’s too late and it’s gone wrong?
* What does ESG MEAN?
  + Means different things to different people
  + Can say sustainability
  + Trying to move the dial in a direction
  + The E becomes about emissions for oil and gas, important for funding and for customers
  + Each one of the 3 words means something different to each company
  + These “acronyms” are always changing, we need some ideal to build off
* Standardisation of the ESG seems important
  + There are other certifications that are standardised and meaningful
  + It’s a problem because companies don’t even know where to start with what it means to them, what criteria?
  + Many competing standards
  + Governance is about method, comes in many forms can come in the form of research, or mentorship, etc
    - Can’t conflate governance with government
  + Good governance is changing based on evidence and culture
    - Hard to standardise when these factors are changing
    - Methodology could be standardised
* Difficult to insure things that have not been done before
  + There is too much risk falling on underwriters
  + What would underwriters like to see from the academic community to better support governance?
    - Insurance should be for the unexpected not the unavoidable
    - When it comes to new technology, they have to look at unintended consequences, and do it’s part in that way

**Part 2: Data as a Currency**

We use money as our main exchange mechanism and yet it is just a concept. Others, like Mark Carney think of it as a convention, and yet that is not strictly true as developments such as crypto currency completely change the rules we take as tacit. In this light, we should also be thinking about other items of worth that fulfil the same purpose. Reliable data maintained to an agreed standard is one of them. The fundamental question, however, is - are we measuring the right things? What can be used as a proxy for measuring the health of an ecosystem? And what are the criteria of success? In this session we explore these questions to probe expert input.

***Nick Hanley, Professor of Environmental Economics, Glasgow University: The economics of biodiversity – The challenge to creating a holistic system***

* Economic values from marine biodiversity conservation
* Valuing biodiversity
  + Markets don’t measure economic values of enhancing biodiversity
* Economic data is persuasive in policy making
  + Not going to talk about how industry can capture those values to create biodiversity incentives in the private sector - another topics completely
* Changes in biodiversity have impact on people’s wellbeing
  + Using the concept of utility- life satisfaction for economists
    - Impossible to measure, but can make monetary metric - the most someone is willing to pay for something
  + Biodiversity → ecosystem function → ecosystem services
    - How might changes to biodiversity change people’s wellbeing
* Markets fail to deliver adequate biodiversity values , the incentives are missing
* We have metrics for changes in environment, direct and indirect
* Deep sea context
  + Cold water corals - what are the benefits of conservation to Norwegian citizens?
    - Trade-offs between developing oil and gas and conservation
    - Estimated value to Norwegian citizens of those separate goals
  + Reducing plastic pollution in Svalbard
    - Specific threat in specific location
    - What is the value of reducing it?
* Coastal context
  + Vietnam
    - Toughening up of MPA protections
      * Stressors: sewage, aquaculture pollution, plastic waste
    - Asked about increases in local taxes and improvement in biodiversity
    - People responded to choice cards
    - Result: highest benefits that local people perceived was reduction of plastics, and significant in water quality
  + Caribbean
    - How do divers value improvements in marine biodiversity (coral reefs improvement)?
    - Would the economic benefits be big enough to pay for the management program? Increases in diving fee to improve biodiversity and water quality?
      * Economic benefits to divers far exceeded costs of the management program!
* There is increasing emphasis on these kinds of values within policy conversations
* Using this knowledge to incentivize people to conserve more

***Andy Matkin, Commercial Manager (Environmental Services), Fugro: What should we be measuring? Is there a ‘best’ approach?***

* Increased focus on the environment
  + More public awareness
* As a result, more net zero pledges
  + Some making net positive impact pledges
* How do we measure impact on the environment?
* Increasing data acquisition form different types of vehicles
* What data is collected?
  + Seabed texture
  + Sediment
  + Hard substrates
  + Biogenic reefs
  + Seabed imagery, what organisms are there?
  + Water quality and composition
  + What birds and bats are coming through an area?
  + Tides, waves, temperature, salinity, currents underwater, nutrients, microbes, eDNA
* What should we collect?
  + We need to be thinking about the data we need in 5 years time
* How do we collect data that is needed?
  + We can ask contractor to take additional data
  + We can change policy
  + Operator or developer approach is the middle ground
    - Talk to contractors and developers
    - What additional data does the scientific community think is beneficial?

***Brian O’Donnell, Employability Project Co-ordinator, Fife Council: The RIGHT Project and the Blue Consortium – a collaborative approach***

* Last project - how do we help companies improve innovation by addressing skills gaps
* Partnership project
* What did we find?
* Huge analysis of skills gaps
  + Biggest was engineering, manufacturing, tech
  + There is collaboration, it’s just fragmented even within organisations
* Opportunity to improve it
  + Excluding people from roles because of their academic experience
  + Developed educational tool
* Try to do things as cross sector or cross-organizational as possible
  + Triple helix approach to improving innovation
  + Objectives for inclusive growth - how do we practically do it?
* Using it to shape policy
* Key objectives
  + Short - midterm
  + Long term
* Using partnerships as a tool, getting young people to think about these questions
  + Ethics
  + Applications
  + Using outputs of projects
* Outputs - wanted to have a focus on usable outputs
* Mind the gaps - skills analysis tool
  + Identify point they want to get to
  + Create workable action plan
* Every job will have a “green” aspect, how to include that

***Sarah Brown, Fund Manager, Scottish Marine Environmental Enhancement Fund (SMEEF): Supporting impactful projects through strategic investment***

* SMEEF
  + Bring private finance to bear on nature and biodiversity
  + Partnership set up by Scottish government
  + Supported by offshore wind, always seeking new partners
  + Accountability is important, consider ESG
  + Ethical cont board - money coming in, grants - money coming out
  + Have academic network, mailing list
* What does an impactful project look like?
  + We don’t know, we need to do a lot of mapping and investigation
  + What data, what results, how do these results feed into our projects?
  + Outputs
    - Increase sample opportunities
    - Wellbeing and enhancement
    - Biodiversity
    - Improving evidence base, etc
* Strategic investment
  + Right now we are using best-available evidence
* What we can measure with certainty
  + Number of grants, value of grants (3 million pounds total)
  + Heavy on supporting restoration
  + Also strategic support
* Case studies
* Next steps
  + First privately funded round of grants going out

***Discussion/Q&A***

* Access to data? How to get data from oil and gas companies for decommissioning?
  + If they aren’t required to collect it by legislation they won’t unless it’s beneficial for them to collect it
  + We have access to certain sums of data, but it’s not made available
    - They collect it but they don’t make it available
  + It goes back to fragmentation, oil and gas data is different from maritime data
    - Required a different mandate
  + Some companies don’t know what data they have

**Session 2**

***Chair: Abigail Davies, PhD Student, National Decommissioning Centre/University of Aberdeen***

**Part 1: Workshop**

Split into four groups to ask ourselves three questions:

With respect to thinking about things differently in line with the Dasgupta Review on the Economics of Biodiversity, what do we think should be (1) the key criteria of success? (2) the key measures of success? And how 3) what mechanisms are there already on place that we should be building upon?

**Part 2: The Energy Transition and Sustainable Development – Are we really transitioning?**

What we are experiencing, now, is just one leg of a long, tough relay race. Starting from a relative

standstill, we need to accelerate at a staggering pace in order to cut green house gas emissions.

Improved understanding and rigorous thinking is required in order to achieve the desired outcomes. In this session we explore the impacts of decisions and their subsequent actions.

***Tavis Potts, Professor in Sustainable Development, University of Aberdeen: Ensuring a ‘just’ and sustainable transition***

* There have been many examples of bad transitions over the decades
  + There are going to be winners and losers in transitions
  + Just transition minimises losers
* Huge list of things we need to do to transition
  + 63% of the changes we need are behavioural and social
  + Just transition is at the centre of it, linked to net zero and nature-positive
* Transition
  + What does it mean? A bridge between two systems
  + The new system will be a very different looking system
  + We agree on B (in A to B), but not how to get there
  + Justice
    - Social justice
    - Energy justice
    - Build equity
  + Justice needs to be included meaningfully or it won’t work
* How to do it?
  + Ensure the good things about transition are shared equitably and fairly
  + Don’t make it harder for those that are already deprived and marginalised
* The work they are doing in the Just Transitions Lab
  + Net zero jobs
    - Diversity economy around jobs
    - Skills passports
    - Accessibility of these new opportunities - we’re not including marginalised communities yet
  + Community revitalization
    - Many coastal communities marginalised
    - They will be centre of the new energy with offshore wind
    - Community ownership of land, of energy assets
  + Enhancing natural capital in a way that works with communities, not against
    - Empower voices
  + Need to focus on all of these things for it to work
    - It will be contested politically and legally, you will not succeed
* Role of the ocean is essential in net zero with the blue economy
* We need to triple GW by 2030, triple again by 2050
  + Offshore wind capacity is low right now, but it will grow immensely in the next 10 years
* Oil and gas related jobs will halve by 2030, offshore energy jobs will triple
* Jobs have increased in UK for offshore renewables, mostly driven by England (Scotland lags behind)
* More marine jobs in west and north of Scotland, because of marine tourism, will change with increase in renewables
* Aberdeen
  + Divided city in terms of income distribution
    - Needs to be addressed to have just transition
    - Access to jobs and training is for certain socioeconomic standing - this is a fundamental injustice that must be changed for just transition
* Offshore wind jobs target for 33% women, not 50%
  + Currently only 18% representation of women, 3# of black and asian communities
* Coastal communities
  + Wage gap - people earned less in coastal communities, access to jobs and services, widening life gap
  + This is right next to huge reservoirs of biodiversity

***Moya Crawford, Managing Director, D’Arcy Thompson Simulator Centre and Deep Tek: Being prepared for the opening up the North-East Atlantic passage and Sustainability***

* Want to go to salvage side and the maritime sector, moving aware from energy discussion
* Focus on Arctic and loss of ice/opening up of shipping
* Balanced conversation from bringing in salvage and insurance voices
* It’s not just materials we are looking at
* There is the premise that we are stimulate economic growth with what we are doing
  + The challenge should be instead to raise the circumstances while diminishing out need for resources
  + We need to talk about cargo, what are we transporting around the world?
* We ship noxious substances (HNS) around the world
  + Number of ships carrying them growing
* Economic attraction of the Northeast Passage
  + Especially to pacific countries
  + Do we have prevention and preparedness and response in place? No
    - What policy should be in place
    - The premise that the governments know best is flawed, we need ESG
  + We will have casualties if these routes are used
    - To habitats, pollution, etc
    - We WILL destroy sensitive habitats,
* This is a conversation that needs to happen before the event, or we will lose our opportunity

***Kate Gormley, Research Fellow, Universities of Aberdeen and Herriot Watt: Exploring the Challenges and Opportunities for Sustainable Development of Arctic Shipping***

* Loss of sea ice has social and environmental implications
  + Need to understand these
* All the threats are a result of increased shipping in the arctic
* Loss of summer ice = further exploration of the arctic
  + Protections need to be in place before that happens
* Data we need:
  + Habitats
  + Human uses
* ePIcenter
  + Looking at all aspects of supply chains
  + Creating a tool for modelling ice and ship routes
  + Bering Strait
    - We need to consider not just shipping, important to consider migration of whales
    - Need to consider vessel speed along route, speed reduced based on management requirement, increasing shipping time
    - The shortest route might not be the best if time is increased to account for biodiversity!
  + Creating models for different ice thicknesses, adding ice into management requirements
  + Transit type, emissions, etc are including in management
* Future work
  + Looking at future projections
  + Most plausible scenario has 30% increase in shipping in Bering Strait
* How can we promote and encourage sustainable development in the arctic?
  + Knowledge exchange
  + Considering indigenous communities and involving them
  + Balancing human wellbeing and environment
  + Including cumulative impacts
  + Precautionary where data is limited
  + Invest in targeted Arctic research, engaging society, including traditional knowledge

***Discussion and Q&A***

* How much of the increase in wind power is projected to be in conjunction with hydrogen?
  + Yes, the UK target is 10 GW by 2030, some will be blue hydrogen but looking shaky because of price of gas
  + Part of the strategy, so yes, but when we are electrifying everything there are questions about what we do with the surplus if it’s better to export
  + You cannot operate research vessel on batteries only, hydrogen needs to be part of the solution
  + We don’t know the validity of blue hydrogen in terms of greenhouse gases
    - Might produce more than methane
    - Some of these solutions might not be as great as we think they are, because we don’t have great accounting
  + Carbon storage
    - Costly, do we have storage, do we have the long term picture?
* To Travis Potts:
  + What jobs will be available to coastal communities?
  + Tripling of offshoring wind force in 9 years
  + More jobs in the running of the offshore wind
  + Industrial strategy is needed
  + Strong link between jobs and carbon emissions
    - Have to think about doing more locally
    - More jobs in manufacturing