

Parallel session A – Deciphering Landscape

This paper concerns ex-urbanites' rural in-migration associated with imaginations and...

Chia Sui Hsu, batch 13

This paper concerns ex-urbanites' rural in-migration associated with imaginations and practices of agricultural lifestyles. To illustrate these in-migrations I offer an account of a complex and contradictory agrarian landscape emerging in peri-urban areas of Eastern Taiwan. Firstly, unlike traditional farming practices using pesticides and fertilizers, new farmers, one of the ex-urbanite groups, adopt organic farming or other earth-friendly ways of farming to produce agricultural products. Secondly, the amendment of Agricultural Development Act in 2000 is a government-led policy that encourage individuals with non-farm occupations to purchase farmland and move to the countryside. The change from regulative and protective policies of farmland to market-based pricing has reinforced tendencies within the real estate market to allocate land in a socially and economically efficient way. The landscape of luxury newly-built farmhouses, in particular, has caused concerns over processes of rural gentrification. To contribute to discussions of rural gentrification, this study present a case study in which agricultural landscape can act as a replacement of natural amenities and create a similar process of landscape-specific gentrification models in the countryside. Through walking interview, empirical materials from interviewing ex-urbanites that relocate to the countryside provide rich accounts of binary perceptions of 'rural' and 'urban', ex-urbanites' life experiences of expected and unexpected countryside living, and tensions regarding how farmland and the agriculture landscape should be maintained. This paper addresses these debates and discuss landscape's role in social justice.

The politics of landscape production in the history of development along Florida's Atlantic coast

Chad Boda, batch 14

The politics of landscape production involve questions about the power to define what landscape means, who or what belongs to landscape and who or what belongs in landscape. Asserting the right to participate in landscape production and thus to help steer landscape along desirable development pathways remains a core component of landscape politics and grows in importance as many societies experience widespread citizen withdrawal from engagement in political processes. In this article, I review the history of landscape production in Florida, USA, to reveal the interrelated consequences of adjustments in political economy, administration, land use, and spatial representations for future landscape development. In particular, my analysis of the strategic contestation of undesirable development in the production of the local landscape in a small coastal community highlights the increasing need to engage strategically in the politics of landscape production in the pursuit of socially and environmentally desirable landscapes the world over.

Constructions: a sustainable mobility opportunity for the Swedish Ministry of transportation

Camille Delepierre, batch 10

Mobility Management during construction time (byggskedet) is an important aspect and an opportunity for increased sustainable transportation for the Swedish ministry of transportation both. The Western region and Gothenburg have been working with these aspects more than the rest of Sweden as there is a large construction investment in the area (Västsvenska Paketet). Several mobility management actions are carrying out right now within a pilotproject within the E45 project.

Parallel session B – Energy Panaceas

Merging sustainability science and energy economics' perspectives to address the "why" and the "how" in an integrated tool - Illustrated on the example of biogas from agricultural waste in Ecuador

Alejandro Equez and Ralf Bilke, batch 14

Sustainability challenges associated with energy systems are complex and need an interdisciplinary approach. This paper explores the complementarity between selected tools from Energy Economics and Sustainability Science by merging them into an integrated tool applied to the case of biogas from agricultural waste in Ecuador. The case focuses on the motivations to promote biogas, its obstacles, and the design of policy instruments. The selected tools to be integrated are: market and non-market valuation from the Energy Economics perspective; and the Driving forces, Pressures, State, Impact, and Responses (DPSIR) framework as well as Systems Dynamics (SD) from the Sustainability Science perspective. A literature review of these tools is conducted to highlight the main foundations on which they are grounded. Then, their essence is used to create an integrated assessment tool. This tool is used to analyze: Why biogas from agricultural waste has not been promoted in Ecuador despite its potential and how to promote it? The application of the proposed tool demonstrates that SD can use inputs from the DPSIR framework and from market and non-market valuation. Specifically, the DPSIR framework proves to be a useful step prior to the model building in SD, while economic valuation are key to establish the relationship between stock and flow variables in the SD model. Moreover, SD and DPSIR are suitable to understand the root causes and dynamics of problems from a holistic perspective, while market and non-market valuation provide quantitative criterion for decision making. These strengths are complemented in the proposed integrated tool.

A holistic Approach to Healthy Indoor Environment

Yujing Li, batch 3

The quality of the indoor environment is determined by many factors: indoor-air-quality, thermal comfort, light, aesthetics, sound etc. These factors are further influenced by the outdoor-environment, building design, people, building quality and even more global factors, e.g., the concern of energy consumption, sustainability, policies, socio-economic impact and considerations etc. It is also known that the quality of the indoor environment may have significant impacts on human health, productivity and learning capability. Such impacts will in return influence the society, buildings, policy making etc. Indoor environment is not an independent phenomenon.

It is difficult to achieve a healthy indoor environment from only one perspective without an understanding of the broader picture. Therefore an inter-disciplinary research theme named "Healthy Indoor Environment" has been created at Lund University. The scientists included in this theme covered multiple disciplines: engineering, medicine, psychology, microbiology, natural sciences, aerosol science, ergonomics, architecture, building physics, building materials, materials and services, energy science, and acoustics.

The aim of the research theme is to create a cooperation platform focused on healthy indoor environments. We hope to gain a more complete picture of the many complexities associated with the indoor environments by bridging different research areas and study their complex interactions. System analysis will be applied by taking into account of the contributions from stakeholders related to indoor environment. The model can be used to locate and highlight the areas need to be further

investigated. It also seeks to find possible solutions and study the development of the situation. The overall goal is to improve our understanding of how to create a sound and healthy indoor environment.

Residential Energy Efficiency potential

Eric Daugherty, batch 4

I plan to attend the LUMES Conference and provide a great presentation on Residential Energy Efficiency potential, featuring eight(8) years of energy-modeling, building, certification, and follow-up Case Studies. I have ENERGY STAR and LEED for HOMES homes featured as well as high-performance building envelopes, geothermal heating/cooling systems, and solar PV... I will feature E3 Case Studies --> <http://www.e3innovate.com/projects>

Tags = Residential Energy Computer Modeling, Builder Consulting, Field Diagnostic Testing, Energy & GHG emissions savings, Certification programs (ENERGY STAR, LEED for HOMES), etc...

Improving rural livelihoods in Africa through the diffusion of improved cookstoves - Short film

Barry Ness, batch 3

Despite market-oriented approaches being promoted in numerous sectors and settings around the globe, much is still unknown about their effectiveness for both larger scale and longer-term poverty alleviation and sustainable development efforts. This film contributes to decreasing these knowledge gaps by concentrating on the potentials and related barriers in the sale of improved cookstoves to rural smallholders in Africa, and the specific and longer-term challenges in both out-scaling (e.g., new regions) and up-scaling (e.g., new technologies, diffusion models) efforts. More specifically, concentration is placed on understanding the on-going experiences of an entrepreneur to diffuse the stoves in Nyanza Province in western Kenya. Emphases are placed on the understanding and contributing to solutions to overcome the main impediments in the diffusion process challenges at multiple scales and levels, e.g., poor infrastructural development, competition with aid programs in the region, poor loan repayment rates.

Parallel session C – Science and Politics of Climate Change

The South African Government is committed to mitigating the GHGs associated with climate change. Currently the Department of Environmental Affairs are working...

Kent Buchanan, batch 13

The South African Government is committed to mitigating the GHGs associated with climate change. Currently the Department of Environmental Affairs are working towards establishing a national mitigation system that includes setting Desired Emission Reduction Outcomes (DEROs) and a mix of measures to reduce greenhouse gas emissions. Two such measures, the carbon tax and carbon budgets, is planned to come into effect in 2016. This presentation will shed light on the planned greenhouse gas mitigation system planned for South Africa.

The Warring Gods of Sustainability – Approaches to Sustainability within Capitalism

Lukas von Schuckmann, batch 17

There is no answer to the question “Are sustainability challenges solvable within capitalism?” which is not already taking sides in a debate about values, perceptions and motivations. There are several different approaches to sustainability, based on assumed feasibilities and expected agents of change. By revealing one’s own stand in the debate while being aware and acknowledging other possible approaches and their rationale would not only be constructive but essential if we are to find solutions to the pressing challenges ahead in the short time frame we have. This is especially true for the sustainability movement as such, whose momentum could be increased by a better understanding and acknowledgement of different approaches to sustainability.

The aim of this thesis and so of this presentation is therefore to enable the reader to grasp the differences between approaches to sustainability within capitalism, as well as to take an informed decision for him-/herself.

I distinguish between four approaches to sustainability within capitalism based on the type of envisaged change mechanism, i.e. formal institutions – laws, constitutions, regulations – and informal institutions – norms, values, perceptions. Each approach is elaborated and presented in detail: neoliberal sustainability, based on the neoliberal rationale and without any considerable demand for institutional change; neoliberal deep sustainability, advocating informal, i.e. value and perception, change within neoliberalism; Keynesian sustainability, which favours stricter regulation and does not focus too much on informal institutional advance; and republican sustainability, which suggests a revival of civic values in combination with stronger regulation. The selection of approaches is based on an extensive literature review across disciplines, and schemes are pooled according to common characteristics. After presenting the four approaches, each is extensively critiqued with arguments of proponents of other approaches including arguments from Eco-Socialist/Marxist and De-/Post-Growth, which serve to critique capitalism as such.

This thesis was intended to be a thought-provoking presentation of the plurality of sustainability, proposed to facilitate deliberative processes in our daily encounters as well as political debates which have the potential to render clashes of worldviews and interests more constructive.

Who’s the better environmentalist? Perceptions of geoengineering and grand-scale technology in climate change

Ina Möller, batch 16

In the face of rising CO₂ emissions and protracted international negotiations on how to deal with climate change, climate geoengineering through solar radiation management has been suggested as a strategy to supplement climate change mitigation and adaptation. Principal ideas here are to increase the Earth’s albedo by injecting particles into the stratosphere or increasing the whiteness of clouds through cloud seeding. Apart from the technical, ethical and economic issues that have been raised in the course of these proposals, a discussion has formed around ways to govern research on, and potential implementation of, this very contested technology. Within this governance debate, scientific experts play a significant and special role. I argue that the controversy of geoengineering, its emotional and ethics laden nature, and the perceived urgency around action on climate change is causing scientists to move away from taking an objective, fact-communication role to a normative and value-laden policy entrepreneur role. Based on Sheila Jasanoff’s theory of science-policy interaction, I analyse this new role of scientific experts and the circumstances that have induced it for

the case of geoengineering. Using interview material and text-analysis of prominent scholars involved in the geoengineering debate, I show how scientists are taking on a normative political stance and the reasons why they feel urged to do so.

Parallel session D – Workshop “Handprint” part 1

Increasing your personal “Handprint” - How Design Thinking can help tackling local challenges

Hosted by **Verena Hermelingmeier, batch 16** (max 12 participants)

The discourse on sustainability is more and more prominent on professional levels but what do we all do on a daily basis, in our personal environment, on a local level?

The Handprint concept is the counterpart to the well-known Ecological Footprint. It measures your active engagement for your personal environment as a supplement to measuring your negative impact only. The question is, how do you increase your handprint effectively?

In this workshop, we will combine the Handprint concept with Design Thinking, an innovation method that can help you to come up with out-of-the-box-solutions that respond to the needs that are out there.

The aim of this workshop is to get to know the handprint concept, to work with the method of Design Thinking and to finally take home a concrete idea on how to increase your personal handprint as a contribution to sustainability on a local level.

Parallel session F – Gender and Sustainability

From Daily Lives to Disasters; An Interdisciplinary view

Ahoo Salem, batch 13

Awareness of the centrality of the social and natural phenomena in human-environment interactions is now emerging in the social sciences. Accordingly social vulnerability to disasters has been introduced as one of the most important factors at work on the human side of the society – environment relationship. Trying to bridge conditions of daily life to extreme events, this paper moves beyond the view that perceives vulnerability as a unique situation to disasters and instead defines it as an attribute of people’s daily lives. Adopting an interdisciplinary perspective, social theories of gender and migration are applied to studies of natural hazards and disasters to investigate intersections of “gender” and “migrant status” among a group of Afghan women residing in Tehran, Iran’s capital. Concepts of marginalization and social mobility are used to explain for the everyday progression of vulnerability or differential coping strategies. The empirical data identify several synergies between social relations and power structures generated through Iran’s migration and gender policies with the intra-household dynamics and power relations among the Afghan community. The final outcome of these dynamics are translated into daily life conditions of Afghan women and girls as well as their differential levels of vulnerability and coping capacity in case of a disasters.

Food for Naught: The politics of food in agricultural modernization for African smallholder food security

Cheryl Sjöström, batch 6

Why is there hunger in sub-Saharan Africa? What forces drive the global food system? What is the global food system? To approach these questions, this study investigates power and politics in food, in its production and in its organization. Proceeding from a critical realist approach, focus of this study is on the challenge of African smallholder food insecurity and how it is presented as part of a dominant discourse of agricultural modernization.

This study identifies a framing of agricultural modernization being used and promoted by influential actors of international development that respectively represent the inspiration, the science and the mobilization of resources for contemporary African agricultural development efforts. Several contradictions of this framing are identified regarding how it serves to depoliticize food insecurity. This includes the way it presents specific images of and oversimplified relationships between the environment, the people, the livelihoods, the institutions and the ideologies that are involved in smallholder food production.

This framing of agricultural modernization has since 2005 been applied in the form of an on-the-ground development intervention in sub-Saharan Africa through the Millennium Villages Project (MVP). As part of this critical discourse analysis, fieldwork was conducted at the MVP project site in southern Malawi. Findings from fieldwork indicate ways in which the MVP, either advertently or inadvertently, contributes to the marginalization of smallholders through impacts on power at different levels.

Food waste and food loss in households

Evelin Urbel-Piirsalu, batch 4

There are 850 million people living in famine in the world. At the same time there are thousands of tonnes of food thrown away each day. The food loss (eatable food intended for human consumption thrown away) occurs in all stages of the food chain including food processing, food retail, catering as well as in households. Studies for estimating the extent of food loss have been carried out in many countries in recent years. For example, it has been estimated that an average household in UK generates 160 kg of avoidable food waste per year. While Western European countries have produced quite good data about food waste and food loss generated in the food chain, the new member states lack data about food loss in their countries. In 2014 - 2015 Estonia as one of the first countries of the new member states carried out two studies to estimate the food loss during the whole food chain. In the first study the food loss was estimated in households and in catering companies. The second study estimated food loss in food retail and during the processing of food. The results show that for example an average household in Estonia wastes 47 kg of food annually. At the same time there are 20 000 children in Estonia that have lack of money to get necessary food products each day to prepare good and healthy food.

Parallel session G – Social Movements and Sustainability

The role of the Degrowth-Movement on the way to a socio-ecological transformation

Kai Kuhnhenh, batch 6

In recent years the concept of never-ending economic growth has been challenged (again) by a number of authors mostly from France, Spain, Italy and the English-speaking world. Beyond theoretical discussions, the Degrowth-Movement is characterised by practical alternatives, such as community-based agriculture, Transition Towns and alternative companies.

Striking a chord with people both on a political as well as on an individual level, Degrowth has established itself as a movement within Europe with more than 3000 participants attending the last Degrowth Conference in Germany.

A common critique of Degrowth is that with its focus on either theoretical discussions or the creation of alternative niches, it lacks a shared idea on how to achieve societal change.

Reflecting on the „Degrowth in Action: Climate Justice – Summerschool 2015“, which will take place in August in Germany, I will argue that this critique can be overcome by connecting the Degrowth-Movement with other movements that serve as thematic foci. Furthermore, I will reason that this connection is also beneficial for the Climate Justice movement by providing solutions to the social consequences of a coal phase-out.

I will conclude that Degrowth should embrace its role as a meta-movement since it

- a) provides a perspective on society as a whole and
- b) is aware/sceptical enough to not be „incorporated“ but undogmatic and pluralistic enough to unite relevant movements in a struggle for a more just, democratic and environmentally sustainable society.

Social Movements for Sustainability

Michael Benson, batch 14

Social movements play an essential yet largely unexamined role in addressing sustainability challenges in democratic societies. This is perplexing given that sustainability scientists acknowledge the need work with others to develop practical solutions. Without support from civil society, ideas will likely be cast aside into the shadows of history. This paper suggests that sustainability scientists need to engage with civil society to create constructive social movements and develop appropriate solutions.

Sustainable development is a process that moves us towards a vision of sustainability. Both the process and the vision are shaped by social goals, which continuously change because of the evolving expectations and values of society. Every society is different so there needs to be two levels of interaction. First, sustainability scientists need to listen to civil society to design and implement an appropriate process and vision that are adapted to the specific context. Second, sustainability scientists need to educate and empower civil society about potential solutions to create or strengthen a social movement.

I will rely on case studies from the energy, forestry and chemical sectors, to highlight conditions that influence the success of social movements to solve sustainability challenges. The variations in different cases in terms of their drivers, agents, and the institutional settings will be discussed.

Failure to address both the process and the vision of sustainability, or to consider the counter social movements, or to entice civil society with a more appealing alternative can create unintended consequences that undermine efforts to achieve sustainability.

Sustainability and the New Economy: An insider account of an incubator for economic alternatives **Andrea Fiscal Woodhouse, batch 14**

Since graduating from LUMES I have become a co-founding staff member of Groundswell, a training program located in Vancouver, Canada, aiming to create economic alternatives through reimagining what a business is, how it functions in civil society, and possibilities for addressing environmental sustainability through social entrepreneurship. Theoretical perspectives on social movements highlight that social change contextually emerges in response to local needs and pressure, crafting forms of resilience, innovation, and new social orientations.

Examples of this are the Autonomist Movement in Argentina and the Solidarity Movement in Brazil. In the context of Vancouver, limited governmental aid and support under austerity have resulted in community and business-centered initiatives to address the shortfalls of government intervention concerning necessary economic change. Therefore, Groundswell has organically grown from community needs, aims, and values.

The purpose of this presentation is to explore the community initiative of Groundswell, sharing both the story of establishing this social movement and lessons learned in gaining the critical support necessary for its growth. As a social movement Groundswell has two aims. Firstly, Groundswell mentors and trains young adults to establish economically-viable social-enterprises that address the shortcoming of capitalism, directly engaging with pressing issues such as environmental sustainability. Secondly, Groundswell works to advocate for establishing a larger voice within civil society, bringing together community partners who seek alternatives-to-business. In this vein, I will suggest in this presentation that addressing sustainability must be done through reimagining economic value.

Parallel session H – Workshop “Handprint” part 2

Increasing your personal “Handprint” - How Design Thinking can help tackling local challenges

Hosted by **Verena Hermelingmeier, batch 16** (max 12 participants)

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Parallel session J – Energy Panaceas

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Kent Buchanan, batch 13

Approximately 32% of sub-saharan Africa has been electrified. There is significant political will in these countries to significantly increase the electrification rate. This, coupled with the push for low carbon development, has resulted in a drive to push renewable energy solutions. However, a large scale solution has not yet been realised. This research focuses on the South African context where sustainable decentralised renewable energy systems are studied to understand what may be needed to electrifying the remaining 15% of the population who are not connected to the national grid.

The research project currently being conducted looks at solution is needed to implement successful large scale off-grid renewable energy systems by the national government. The study assesses current local and international projects using the following criteria: performance, sustainability, socio-economic impacts and policy considerations. Initial results show that there are a multitude of options that are being implemented at a small scale independent from each other. It is recommended that a centralised plan is necessary to be developed to orchestrate a large scale rollout. The plan should consider technology maturation rates, political commitment, adequate incentives for business and investors to participate and a strong end-user training and education focus.

Urban Mining and Renewable Energies. How to apply the principles of circular economy to the life cycle of wind and solar energy systems.

Julia Hoffmann, batch 14

The transition towards a fossil fuel free and renewable energy system-based society is one of the key leverages for climate change mitigation. However, while a mere shift to low-carbon renewable energy technologies might bring us closer to solving the problem of climate change, it can and will cause new environmental and social problems – unless designed and implemented in a real sustainable manner.

The presentation uses life-cycle assessment to provide a brief overview on different environmental and social impacts occurring at the stage of extraction, production, usage and disposal of solar and wind energy technologies. Particular focus shall be put on materials and selected examples will be presented: e.g. the environmental and social problems related with the extraction of non-renewable mineral resources (e.g. gold, copper, silver, rare earths) such as land use change, pollution or human rights violations, as well as geo-political conflicts and the (still very much) unsolved problem of how to recycle or reuse those toxic and non-degradable materials.

Alternative approaches such as cradle-to-cradle and circular economy will then be presented. The potential of urban mining – the process of reclaiming compounds and elements from products, building and waste - shall be particularly discussed.

The presentation will showcase examples (best practices) of wind and solar power technologies and projects that have successfully applied the above mentioned approaches - in different countries and scale.

The presentation shall encourage LUMES alumni currently working in renewable energy business, politics, science or civil society to incorporate the issue into their field of action.

Promoting a Sustainable Energy Transition

Michael Benson, in collaboration with Takehiro Kawahara and Ralf Bilke, batch 14

Energy is an essential component of our modern society because it is the primary means for providing human beings with access to basic needs such as food, water, and shelter and it facilitates various opportunities for the achievement of a decent quality of life. The production and consumption of energy is also linked to many of the today's sustainability challenges (for example, climate change, environmental and social impacts).

The first part of this paper will identify relevant international trends that are influencing the production and consumption of energy (for example, investments in green energy, advances in renewable energy technologies, energy storage, carbon pricing, and distributed energy). These trends provide great optimism about the potential for a sustainable transformation of the global energy system.

The second part of this paper will rely on critical and system thinking approaches to better understand the energy systems in Germany, Japan and Canada. The complicated interactions within each of these energy systems will be identified with causal loop diagrams. Focusing on these three countries will also allow for the identification of country-specific technical and social innovations that are significant for the transformation of energy systems.

The final part of this paper will be to identify specific suggestions to help stimulate a sustainable transformation of energy systems. If we are to improve sustainability in the real world, then we need to be able to translate the potential created by international trends into concrete actions.

Parallel session K – Deciphering Landscape/ Water and Sustainability

Risk communication on industrial water pollution – interfacing between government agencies and local people in Dongying, the Yellow River Delta of China

Jiixin Tan, batch 14

China in the past few years has witnessed a rapid process of urbanization and industrial boom. Limited by scarce water resources and frail environments, increasing industrial water use and poor industrial waste water treatment pose a big challenge to the society. In particular, this has led to the questioning of credibility and accountability of local government's performance of dealing with industrial water pollution.

This presentation introduces industrial waste water management in Dongying city, located in the Yellow River Delta of China. Since 2009 the industrial zones of Dongying have increased substantially due to the central government's will to boom the local industries. However, the municipality faces

issues of i.e. unsustainable land use, un-rational planning, environmental pollution. In particular, residential areas surrounded by intensive industrial enterprises are threaten by issues such as chemical accidents and pollution of local fresh water bodies. From the perspectives of the local people, the industrial boom turns into environmental risk which affect much on their health and living conditions.

The presentation will discuss the process of environmental risk communication between governmental agencies and local people using an interface approach. Preliminary analysis shows that the interfacing process is contextualized and can be categorized according to variables such as environmental awareness, leadership, industrial dependence, political will, capacity and awareness of local cadres. Through categorizing the interfacing process, this study infers that it is crucial for the local government to promote & develop an informative society, to broaden communicative channel to the local people using more inclusive environmental information management i.e. information disclosure, decentralization of information control.

Orienting Ecosystem Services and the diagnostic Social-Ecological Framework for holistic landscape research

Klara Winkler, batch 16

Landscapes are interlinked social and ecological systems that facilitate food and fiber production, human use of land for e.g. agriculture but also housing, nature and its diversity, but also intangible values to exist such as sense of place and identity. To allow landscapes to compromise with the ideas of sustainability, it is crucial to better understand the existing social-ecological processes. In social-ecological system (SES) research, two concepts are currently largely discussed: the ecosystem services (ES) concept and the diagnostic SES framework. To understand today's sustainability challenges, sustainability research employs three types of knowledge: system, normative and transformative knowledge. We argue that the ES concept and the diagnostic SES framework help to create these types of knowledge when analyzing complex SESs like landscapes. However, so far the two concepts (but also other existing concepts) have focused on certain aspects of the SESs, like the ecological system or on transformative knowledge. In our paper, we identify the strengths and weakness of the two concepts and how the strength of the one concept can inform the other. Finally, we demonstrate how a combination of the two creates truly holistic system, normative and transformative knowledge with an equal input of the social and the ecological system sides, concerning all three types of knowledge. This combination also improves the analysis and thus the planning and management of landscapes.

Pollution impact assessment and diagnostic indicators for global marine protected areas

Stefan Partelow, batch 16

Abstract: Marine Protected Areas (MPAs) worldwide are facing increasing difficulties in achieving their conservation outcomes. It is recognized that this is due to a lack of MPA design considerations for the scales at which social and ecological processes interact and affect the system holistically. In this study we analyze the wide range of anthropogenic pollution impacts incurred on bio-physical groupings of the global MPA fleet. We analyze the spatial extent in which pollution impacts, organized by current and future threats, are currently having or may potentially have on MPAs with particular characteristic signatures. We grouped MPAs by their characteristics, termed their signature, by certain indicators including bathymetry, baseline biodiversity, distance from shore, mean sea surface temperature and mean sea surface salinity. We assess the extent at which each signature group is impacted by pollution, and discuss how the challenges facing MPAs today can be

addressed through design and implementation considerations for more integrated land-sea management approaches within regional level networks. Furthermore, we present diagnostic social-ecological indicators for addressing the challenges facing MPAs.

Parallel session M – Workshop on Sustainability and Journalism

Hosted by [Anja Humburg, batch 13](#)

Sustainability is a hidden issue, at least among journalists. Most media work like any other part of the game: they are economic units and have to make money. A cultural and creative source? Not anymore, in many cases. Capacities for deep and holistic reporting on questions of transformation are rare. Nevertheless, there are great examples for an adequate and knowledgeable journalism on sustainability. This talk gives a glimpse on examples of articles and media sources from Germany, new methods of story telling and criteria for high quality in sustainability journalism. It opens the floor to a discussion on media reporting on sustainability in different countries and their media landscapes.