

connections in the coastal systems magnified unintended consequences of poorly coordinated rules (e.g., rules governing coastal development, environmental protection, watershed management, etc.) which often pursue disparate goals; (2) a devolution of authority from the national to the local level coupled with government austerity measures is limiting the ability of local governments to mitigate the effects of climate change, and is fostering an under-provisioning of public soft infrastructure; and (3) short-term political agendas are favoring the production of large-scale hard infrastructure projects over long-term mitigation/adaptation strategies. These three characteristics inhibited institutional robustness, magnified CIS fragilities, and caused vulnerability transfers. We argue that our iterative and transdisciplinary comparative approach provides insights into key features of complex coastal CIS which may be useful to the examination and understanding of other densely linked systems.

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Contributed session oral presentation:

**Maladaptation: inescapable or preventable?**

Christo Fabricius<sup>1</sup>, Katrina Brown<sup>2</sup>, Olivier Barreteau<sup>3</sup>, Chloe Guerbois<sup>1</sup>

<sup>1</sup> Nelson Mandela University, South Africa, George, South Africa

<sup>2</sup> Exeter University, Exeter, United Kingdom

<sup>3</sup> IRSTEA, Montpellier, France

Vulnerability in social-ecological systems might be transferred through maladaptation, disconnectedness, risk perceptions and place attachment. But what are the traits of maladaptation? Is it possible to develop a typology of maladaptation based on the outcomes? And how can the unintended consequences due to maladaptation be avoided? We compiled a database of maladaptation that transferred vulnerability, based on our research on coastal vulnerability in three case studies in Cornwall (UK); Languedoc-Roussillon (France) and Eden (South Africa). We included information about a) description of the adaptation; b) who is pursuing the adaptation; c) the intended goal of the adaptation and d) unintended consequence; e) who / what bore the consequences; and e) the root cause(s). We then inductively developed a typology of maladaptation and its consequences using several iterations of inspection, classification, consensus seeking and re-classification. The ultimate driver of maladaptation is partiality: partial participation of knowledge-holders; partial incorporation of knowledge through e.g. considering only single disciplines or sectors; incomplete spatial perspectives; and incomplete temporal perspectives. This results in misdirected policies (soft infrastructure), and misemployed hard infrastructure. Maladaptation can be typified by win-win consequences (everyone gains); lose-lose (everyone is worse off); spatial win-lose (actors at one scale or place gain while actors at another scale or place are worse off); temporal win-lose (present actors gain while future actors are worse off). A diagram depicts the different dimensions and nuances of maladaptation. Maladaptation can be avoided by considering broader spatial, temporal and social scales; bearing plausible futures in mind; listening to more knowledge holders; collaborating across disciplines and sectors; thinking about the long term social and ecological consequences. These findings may assist researchers in exploring the nuances of adaptation and maladaptation and help practitioners and policy makers become more aware of the unintended consequences of their decisions for people and ecosystems.

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Contributed session oral presentation:

**How global change challenge coordination amongst action situations in coastal systems: a case study from Languedoc, France.**

Final PDF-version, August 18th 2017. For later updates please see the interactive programme.

Clara Therville<sup>1, 2, 3</sup>, Ute Brady<sup>4</sup>, Olivier Barreteau<sup>2</sup>, François Bousquet<sup>1</sup>, Raphaël Mathevet<sup>3</sup>, Sandrine Dhenain<sup>2</sup>, Frédéric Grelot<sup>2</sup>, John Marty Anderies<sup>4</sup>

<sup>1</sup> CIRAD, UPR GREEN, Montpellier, France

<sup>2</sup> IRSTEA, UMR GEAU, Montpellier, France

<sup>3</sup> CNRS, UMR 5175 CEFE, Montpellier, France

<sup>4</sup> ASU, School of Human Evolution and Social Change, Tempe, United States

Coastal areas around the world are facing multiple challenges leading to diverse adaptations to manage their vulnerability. Since coastal regions represent complex social-ecological systems (SES) that are characterized by high interdependency among individual components, adaptations can have a wide range of positive and negative consequences. To better anticipate these feedbacks and identify interdependencies among multiple components of a SES, frameworks of analysis can be particularly useful. We used Anderies et al.'s (2004, 2015) Robustness Framework to analyse a case study located along the Languedoc coastline in southern France. Through the examples of land-use planning and coastal management policies, we identified the main changes taking place, the responses to those changes, and resulting consequences at the system scale. We found that the presence of multiple, interacting global changes place growing pressure upon resources and infrastructures, leading to a redefinition of social organization. The study highlights the importance of envisioning coastal SES at multiple scales and considering them as a combination of nested and interdependent feedback systems where choices made in separate decision-making contexts will have cross-scale implications for the whole SES. This modular configuration can be seen as a network of adjacent action situations and raises challenges about the definition of modules' boundaries and coordination. Refining the robustness framework with additional institutional analysis can be helpful to analyze multiple interdependencies, to foresee consequences of adaptation in inter-related decisional contexts, and to promote collective action to cope with global change along coastlines.

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Contributed session oral presentation:

**Framing coastal management in the face of global changes: insights from a cross-country comparison**

Clara Therville<sup>1, 2, 3</sup>, Tara Quinn<sup>4</sup>, Sandrine Dhenain<sup>1</sup>, Chloé Guerbois<sup>5</sup>, François Bousquet<sup>1</sup>, Christo Fabricius<sup>5</sup>, Raphaël Mathevet<sup>3</sup>, Katrina Brown<sup>4</sup>

<sup>1</sup> CIRAD, UPR GREEN, Montpellier, France

<sup>2</sup> IRSTEA, UMR GEAU, Montpellier, France

<sup>3</sup> CNRS, UMR 5175 CEFE, Montpellier, France

<sup>4</sup> Exeter University, Exeter, United Kingdom

<sup>5</sup> Nelson Mandela Metropolitan University, Sustainability Research Unit, George, South Africa

People living along coastlines are facing multiple risks such as flooding, submersion and erosion. The association of growing issues and risks in the face of global change is challenging the responses of individual, collective and public authorities to manage vulnerability of these areas and of their social and ecological components. Depending on the context and on the dominant world views, decision-makers are referring to a multitude of discursive arguments to tell their stories about coastal management and to comment on their adaptation choices. Here, we identify the main frames mobilized in coastal management in three contexts: Cornwall in England, Languedoc in France and Garden Route in South Africa. Through a revision of coastal management documents and a thematic analysis of interviews conducted with institutional decision-makers, we identify the main frames mobilized in the three study cases. Two opposed frames of response emerged across the three sites: the command and control VS living with the