

## Ant-ICON R3 Workshop #1

Wednesday, 30<sup>th</sup> March 2022, 1900 UTC

Steve Chignell (Intro), Daniela Liggett (Discussion Chair), Adrian Howkins (Notes)

### Introduction

Human dimensions of Antarctic conservation and management.

Ant-ICON introduction. Doing research to inform policy development.

Four major research themes. R3 Socio-ecological approaches to Antarctic and Southern Ocean conservation.

Four research questions of R3:

1. Taking into consideration socio-ecological connectivity, what are the **socio-political and economic impacts** and consequences of environmental change in Antarctica?
2. What are the characteristics and implications of **responsible and ethical governance for Antarctica** in the 21<sup>st</sup> Century?
3. What does **socio-ecological resilience** look like in Antarctica and the Southern Ocean?
4. What are the potential **implications of global social, health and economic shifts** for Antarctic activities?

### Speakers

#### Natasha Gardiner

What are the characteristics and implications of responsible and ethical governance for Antarctica in the 21<sup>st</sup> century?

Jalal al Din Muhammad Rumi poem 'I'll meet you there'.

The answer to any question related to Antarctic governance depends on who is asked.

54 countries party to AT, with 29 Consultative members – undertaking substantial science

What do we mean by Antarctica? Also talking about the rest of the world. Climate change an example of this inseparable relationship.

Basic fundamental question is what kind of world do we want to live in?

Covers 10% of world surface. What does ethical and responsible governance look like?

Reflective – engaged actors reflecting on stated goals and objectives. AT promises a lot. Proactive. Now we're reactive and lethargic. Since 2009 there haven't been any priority measures.

Globally integrated. Antarctic decision makers acting in interests of humanity. In reality the ATS operates largely in isolation.

Inclusive and equitable. Serve and engage all of humanity. Ensure decision making is transparent and visible to those unable to participate. How can those who are not involved in Antarctic governance have a voice.

Accountable. Willingness to accept accountability. Compliance mechanisms to hold countries to account. Liability protocol 2005 has not yet entered into force.

Moral. Russia Ukraine crisis. Reflect on what kind of world we want to live in. Leaving external conflicts outside Antarctica – is this fit for purpose?

Research informed. Using best available science. Are we making decisions with urgency the science warrants?

Strategic. What is most pressing?

The Ross Sea region MPA. A showcase for ethical and responsible Antarctic governance? Or not?

CCAMLR. Inclusivity and equity. How transparent is the decision-making process? Difficult to access information that is feeding into decision making. Could do more to make inclusive.

Is it moral to extract a top predator?

Research informed.

Doesn't fully accept Ethical and Responsible governance. Room to move in this direction.

What kind of world do you want to live in? Rumi again.

How do we have a meaningful conversation about what we want for Antarctic.

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## **Ricardo Rozzi and Tamara Contador**

*Ricardo*

Cape Horn Biosphere Reserve and Diego Ramirez Islands Drake Passage Marine Park

Bio-Cultural Ethics. Values links between life habits between humans and co-inhabitants. Share a habit. Conservation of habitat as a necessary condition.

Best conserved area of planet.

General framework followed by illustration of actions.

Development of framework for marine park

A sentinel site for global climate change and planetary sustainability.

Governance Framework Man and Biosphere framework – UNESCO.

4 Areas of Action (working with UNESCO):

Creation of Marine Park, etc.

Aligns with sustainable development goals. 15m hectares

Economic and conservation activities, being monitored. Blindspot until recently. Chilean

Work at multiple scales.

Reinos Biogeographics

Fjords characterised by fresh water. Circumpolar Antarctic current. Key to design of marine park, submarine canyon, for emergence of nutrients. Shape of park is very curious.

Ethical approach needs to satisfy needs of humans and non-humans. Critical of no-take approach. Needs an economic approach.

LTER 2012. Blindspot. Several sets of sites.

Cape Horn sub-Antarctic centre being opened in Puerto Williams.

*Tamara*

Underwater with a lens. How we communicate what we do and share. Field environmental philosophy.... Links environmental ethics and ecological science.

Interdisciplinary research.

Works with freshwater invertebrates. Often considered pests.

Applying idea of intrinsic value to aquatic insects. Observed in field rather than collected and taken away.

Midge in Antarctica also studied this way. Belica Antarctica.

Subantarctic Natural Laboratory.

Showing beauty of aquatic insects. Co-inhabit with other beings.

Metaphors to better communicate, e.g. the river as a community of life. Engaging with local school. Students grow up to take better decisions.

Underwater with a hand lens. Incorporated into a tourism activity.

Whole point is that after encountering invertebrates people can value and respect them, more than objects.

In situ conservation. Interpretative trail. Importance of working with local communities.

Field guides and books talk about invertebrates. Photography exhibitions.

## **Cassandra Brooks and Anna Wright**

### *Anna Wright*

Based at UC Boulder. What does socio-ecological resilience look like in Antarctic and the Southern Ocean.

Resilience happens through protection.

Most biodiversity concentrated in ice-free regions. Field camps helicopter supported from McMurdo Station. Valley of the dead.

No vascular plants or insects. E.O. Wilson in Half Earth. Best places in the biosphere.

Unparalleled in rest of world.

Scientific interest. Primary interest for science.

Tourist numbers in MDV. 30 scientists per year.

Activities have stayed relatively consistent, but possibility for cumulative impacts.

As human presence increases, we need to think carefully about co-existence

These systems are at a threshold where small changes can lead to a cascade of changes.

Already an ASMA, with 5 ASPAs. Studies have shown that well managed areas that are protected are good. Most of research focused in Taylor and Wright Valleys.

Overlap between high biodiversity areas and high human areas, and protection.

5.5% ASMA protected by ASPA. 4.8% of streams and 22% lakes are protected.

Looking forward. Research is important but has an impact.

Need to understand the system at all levels to know how it will respond to change. Etc.

*Cassandra Brooks*

Greek idea of symmetry.

90% fresh water.

Despite harsh conditions, waters team with life. Last healthy ecosystems left.

Science: Framework for International Collaboration. IGY.

CCAMLR manages marine living resources in waters around Antarctica. Considered by some to be a leader.

2 commercial fisheries: krill and toothfish.

CCAMLR Marine protected areas. Ross Sea a priority area.

Most intact marine ecosystem in the world. Lots of media 'e.g. the last ocean'

Flood of science supporting MPA. NZ and US pushing (since 2010)

Stories from within room at CCAMLR. Kerry took on effort, and wanted to achieve.  
Incorporated into

Lots to share.

Oct 28 2016, CCAMLR reached consensus. Felt like a diplomatic win. Exceptional space?

Science-Policy-Public led to consensus on Ross Sea MPA. Public engagement was crucial.

Ross Sea was a start. But we need a representative sample.

**Cristian Lorenzo**

*RQ3: What does socio-ecological resilience look like in Antarctica and the Southern Ocean?*  
Initial thoughts from an International Relations perspective from Argentina

Environmental Changes in Antarctic Peninsula reflect widespread influence of humans.  
Changes to Antarctic. Calls for expansion of network of terrestrial and MPAs

One main idea: Knowledge production & socio-ecological resilience.

The division of disciplines in the social sciences is the first obstacle. This has implications on the way of doing science, and the way we try to influence politicians. Breadth of different scholars that go beyond disciplinary thinking. How to move to a broader thinking?

Questions to ponder:

1. Time as a category:
  - a. Usually, we think of the past as being the domain of historians and the present of social science. Rather, perhaps we should think about historical social sciences.
  - b. International Relations in Latin America and the need to be empirically grounded.
  - c. Different geography in South America. Many schools, but only one in Latin America that has hegemony – US school.
  - d. We know that humans impact Antarctic Peninsula. Becomes more complex.
  - e. Time as a category can be used to unify disciplines. To understand human dimension, exploration of thinking about different timescales.
  - f. Link to different disciplines and Antarctic regions
2. How to use knowledge of biocultural regions are related to geographies? What is influence of geopolitics?
3. How does knowledge about Antarctica circulate?
4. What does the use of socio-ecological resilience mean in global north and Global South?
5. How will scientific communities communicate changes?

## **Discussion**

**Kevin:** Are ASPAs working in the MDV? Yes, because you only enter if you have a specific research project. Inside the ASPA there are specific regions. Definitely works.

**Daniela:** What does ethical and responsible governance look like? How would you go about addressing this question?

**Ricardo:** Three things. One suggestion is to take into account the idea that they are interdependent ecosystems with specific interconnections, and to Sub-Antarctic. Ethical

discussion about Antarctica (e.g. Holmes Rolston), but we need contextual situated ethical proposals to complement the traditional ethics, e.g. biocultural ethics. Idea of 'half earth' we need to avoid paternalism for Antarctica. Third point in terms of governance, it is complex, but we can look at what is going on right now. How is conservation and economics going together? Need to be empirical and ground this in data.

**Tamara:** Rather than collecting and removing insects, we photograph and keep the onsite. How do we measure? What are the ethical implications of our research methods? Should we be collecting 200,000 individuals to see density? Is it necessary/ethical to collect them just to count them? Do we value these creatures as numbers or value them as individuals?

We don't always need to collect, but still need to be rigorous. This is difficult in Antarctica, since fieldwork is a challenge, but is still a key part of valuing life in Antarctica. These ideas are counter to the dominant approaches, and they recently published in *Scientific Naturalist*, since they were receptive to the ideas. Doing this out of love for the insect. Leaving them in the field. Contribution from the insect point of view. We don't collect birds, but we still collect insects.

We need a much more contextually nuanced and situated approach to assessing the current status of socio-ecological resilience in Antarctica. The biocultural perspective needs to be developed further and integrate a One Health approach. Spending more time on ecosystem function *in situ*.

**Falk:** Comment and question:

- Comment: We need to revisit the concept of "resilience". There is lots of talk about resilience in Alaska, but it is the wrong theory because it implies that everything will rebound when it won't. Perhaps we need to start thinking about extinctions.
- Question: how do we achieve inclusion in decision making? For example, the rather low diversity among participants in this call. What about perspectives from indigenous peoples, and what about land-locked countries not currently involved in Antarctic Science (e.g., Papua New Guinea). How can we widen inclusion?

**Daniela:** Yes, we need to be more inclusive with research approach. We do have some diversity, with Turkey, India, Iran, various countries from South America, and others present on call.

**Cassandra:** Relates to inclusivity. Need to collaborate with UN groups.

**Ricardo Roura:** Speaking of inclusivity for himself, not for ASOC, can be quite anthropocentric in its approach. Should Antarctica have its own voice? How do we find that out?

**Daniela:** Acknowledge our anthropocentric perspective. Take note of the question of resilience. Need to think differently in terms of time.



**Natasha:** Inclusivity question. Governance being more reflective. Criteria for participating being the need to conduct science. Countries having zero impact in Antarctica are still going to be impacted by Antarctica.

**Germana:** Resilience. Work on supply chains has a lot of reference to resilience. Viability systems is also being used in this context. Not just about surviving, but about flourishing. Includes spiritual value. Models being developed that go beyond resilience. Idea of adaptability build into models.

**Gabriela:** Importance of language. Perhaps we should host parallel meetings in other languages (e.g., Spanish) so that non-native English speakers can more freely speak their mind.

**Adele:** Question about tourism in the Dry Valleys. Is it anticipated that tourism will go back to pre-COVID levels?

**Anna:** Numbers likely to go up again. The landing zone is close to an ASPA and not very far inland.

**Adrian:** Question for Ricardo and Tamara: how has the biocultural approach been received in your case?

**Tamara:** Biocultural approach has been well-received. Taxonomy is difficult in the field, so there have been questions about this, and DNA work as well. Need to develop a methodology that ensures there will be a good result.

**Ricardo Rozzi:** At the level of individual we have the concept of taxonomic chauvinism. There is a focus on ethics with respect to vertebrates, however, invertebrates are also capable of sentience and reason. We should extend the ethical treatment that we already give to mammals and birds. We cannot protect individuals separate from their habitats, and we cannot separate ourselves from our environments. Last level of complexity is conflict. Conflict is part of the negotiation. Cannot do conservation without conflict. They had to work through and negotiate conflicts with corporations, local communities, and conservationists in the setup of their protected area. Chile is currently re-writing the constitution of country, and this is an intensive process. We should not be afraid of conflict; it is, like disturbances, part of ecosystems. Is there a fear of conflict in Antarctica?