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Participants: IRD, UNIFESP, WUR in coordination with WPO

WWP3

The image features the text 'WWP3' in a large, bold, sans-serif font. The letters are primarily black, but the 'W' and 'P' are filled with a vibrant red color. The text is set against a background of blue water with visible ripples, creating a textured and dynamic visual effect.

WP3: Social processes explaining climate information appropriation

- WP3 is intended to fulfill the 4th general objective of the proposal through addressing specific sectors of relevant activities on each country: the hydropower and wind energy sector in Brazil, and the agricultural sector in Argentina, as described under WPO. Ethnographic method will be applied in both case studies. Ethnographic fieldwork allows the application of diverse data collection techniques (i.e. questionnaires, focus groups, workshops, seminars) relocating and articulating its results in their social interaction context, which is in turn analyzed in a global and historical framework. Moreover, the methodological approach that will be adopted is complementary to the above theoretical notions, and emphasizes two supplementary aspects: i) the need of applying micro-social studies accounting for the concrete ways in which diverse social actors consider climate variables in relation to other factors of the socio-economic structure; ii) the importance of questioning the current approaches for knowledge transfer. In fact, far from being a linear process and an individual decision, the ways in which climate knowledge is appropriated and engaged with is the result of a combination of various individual and structural factors such as soil's agronomic properties, sociocultural traditions and macroeconomics and the soil's agronomic properties. This leads to a configuration that must be considered in each case.

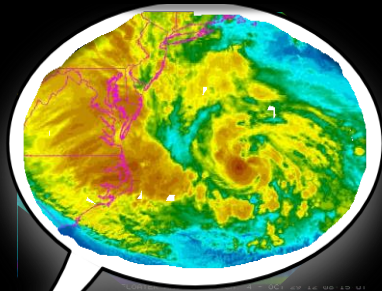
Specific objectives

- WP3.O1. Identify social representations and strategies of agriculture producers and hydropower stakeholders towards extreme climate events.
- WP3.O2. Describe and analyze the contexts and situations in which climate becomes a relevant variable, and how the interaction between the agents and providers of climate information takes place.
- WP3.O3. Document and analyze conflicts and controversies related to the interactions between stakeholders and providers of climate related information.
- WP3.O4. Assess the agro climatic and hydropower forecast production process and the products released by SSA-RCC
- WP3.O5. Contribute with WP0 to establishing communication and co-production bonds between scientific experts, meteorological institutions and territorial actors.

Tasks

- WP3.T1. Ethnographic fieldwork at sites of the chosen case studies and each relevant institutional context. The fieldwork will include: a description of the region's productive calendar, performance of semi-structured interviews with diverse actors, a determination of the spontaneous strategies they implement towards different climatic factors, microeconomic and socio-climatic surveys, assessing their effectiveness on each case study.
- WP3.T2. Based on WP3.T1's result, determination of risks thresholds for each actor's category towards extreme climate events.
- WP3.T3. Analysis of mass media publications, like news and articles on meteorology and public policies related to risk management and climate variability, as well as academic bibliography on the subject. Such material represents one of the main ways of climate social construction, central to better understand social perceptions and climate representations of the communities involved in the trans- disciplinary dialogue.
- WP3.T4. Analysis and interpretation of the collected empirical data based in grounded theory: systematization, open codification, contrasting native categories and disciplinary analytical conceptual categories.
- WP3.T5. Analysis about how the representations of climatic demands and services relate to socio-cultural conditions and politic context of the studied populations.
- WP3.T6. Analysis of on workshops, meetings and training activities held by the project and by SSA-RCC, as central instances for ethnographic fieldwork. In these scenarios all engaged actors interact: academics, developers, forecasters, institutions, stakeholders and local actors.

What
the



are
anthropologists
doing here?

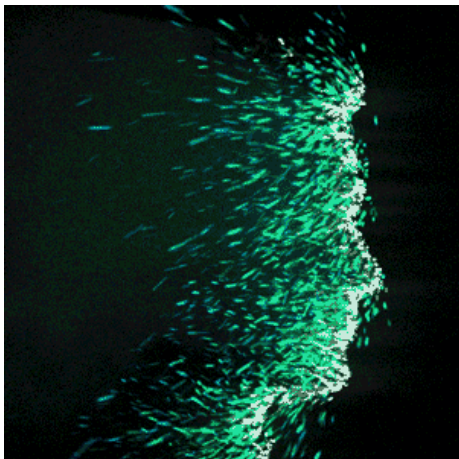
What kind of marriage is this?

- For love?
- Arranged?
- We need a prenuptial contract.
 - ▣ Management of mutual expectations.

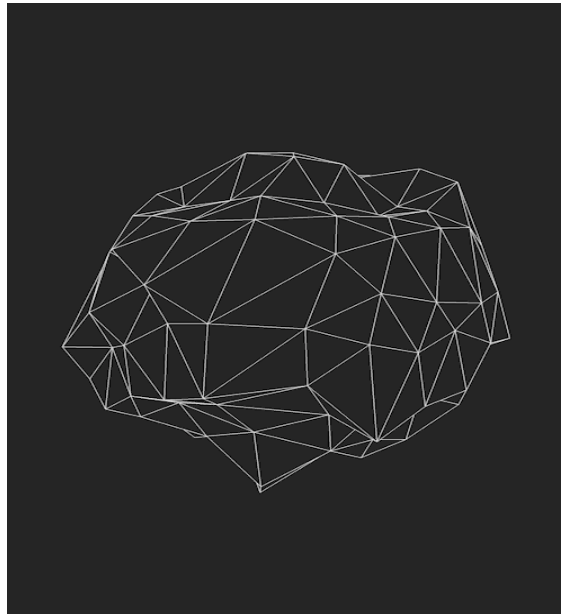
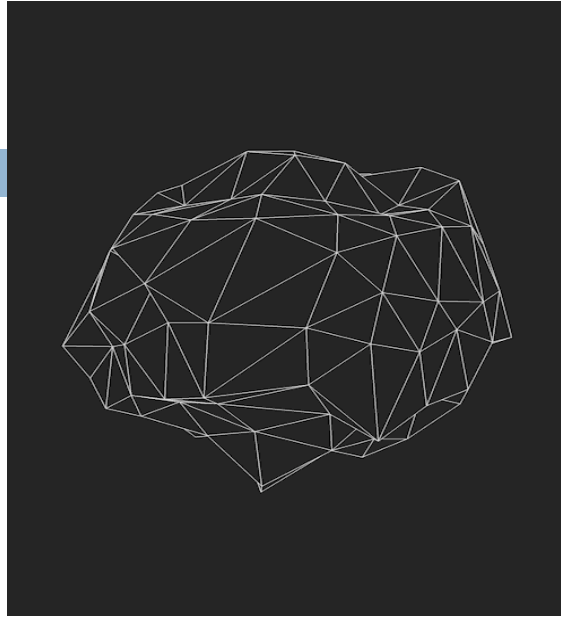
Who are we, the anthropologists?

- What do anthropologists do?
 - ▣ Systematic research on social and cultural realities;
 - ▣ Basic scientific research AND applied research;
 - ▣ Main methodological approach is qualitative (case studies);
- Interdisciplinary work: scars from the past
 - ▣ Int. Research Inst. for Climate and Society (IRI),
 - ▣ Center for Research on Env. Decisions (CRED),
 - ▣ Inter-American Instit. for Gl. Chg. Res. (2 projects)

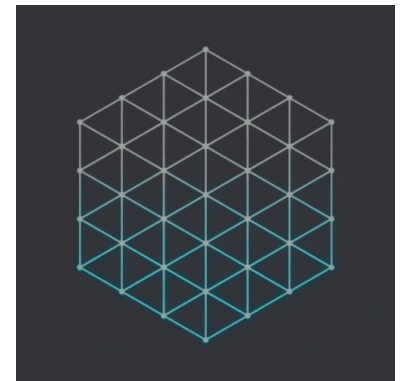
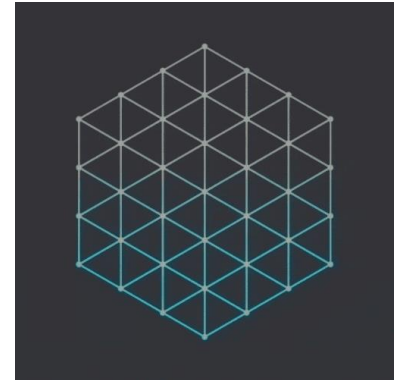
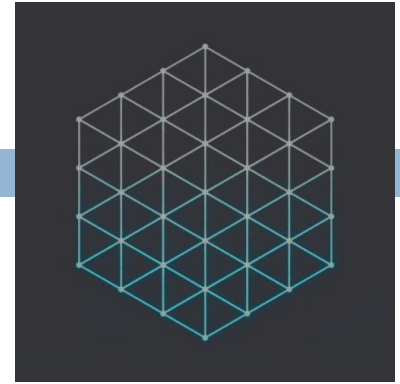
The world



Axioms



Variables



Epistemological dimensions

- Presupposition often present in meteorology:
 - everything is “modelable”;
 - everything RELEVANT is modelable;
 - Social scientists are translators;
 - The problem is lack of information or of education (of the user);
- Scale: governments and/or large scale market players;
- Contextual detail is lost in the statistical processing of data; focus on averages.

Epistemological dimensions [II]

- Qualitative approach (anthropology)
 - ▣ Few things are modelable;
 - ▣ Models are not numeric;
 - ▣ No statistical validation (samples too small). Robustness comes from “saturation”;
 - ▣ The problem defines the scale of analysis. (Scale tends to be small);
 - ▣ Contextual detail is VERY important;
 - ▣ Focus on extremes, not on averages (vulnerability).
- No direct extrapolation or generalization.
- Failure teaches more than success stories (“good practices”)

Foundational illusion (and frustration)

“The ability to anticipate how climate will change from one year to the next will lead to better management of agriculture, water supplies, fisheries, and other resources. By incorporating climate predictions into management decisions, humankind is becoming better adapted to the irregular rhythms of climate.”

National Oceanographic and Atmospheric Administration, 1994
(in Broad, Pfaff e Glantz, 2002).

Mental models and schemas

- Difference between the mental models used by technicians and groups of users – metaphors, analogies, proxies, etc (Hansen, Marx e Weber, 2004; Roncoli, Ingran, Jost e Kirshen, 2001)
- Incompatibility between abstract, statistical information and forms of understanding reality grounded in experience (Hansen, Marx e Weber, 2004);
- Difficulties with the jargon, especially when it uses words of colloquial language (Glantz, 1979; Broad, Pfaff e Glantz, 2002; Hansen, Marx e Weber, 2004; Roncoli, Ingran, Jost e Kirshen, 2001; Lemos et al., 1999);
- Difficulties with handling probabilistic information (Glantz, 1979; Broad, Pfaff e Glantz, 2002; Lemos et al., 1999);
- Difference in the ways different sectors in the same group understand “benefit”, given social and economic diversity, and the existence of conflict and competition (Broad, Pfaff e Glantz, 2002).

Operational and organizational incompatibilities

- Difficulty in the transformation of circulation models into impact forecasts (Glantz, 1979; Broad, Pfaff e Glantz, 2002);
- Variability in the duration and intensity of phenomena like the El Niño (Glantz, 1979; Broad, Pfaff e Glantz, 2002), generating incompatibilities in calendars (prediction vs. decisions) and in spatial scales (Hansen, Marx e Weber, 2004; Orlove and Tosteson, 1999; Lemos et al, 1999);
- Lack of flexibility of the involved actors for changing their established decision or production processes (Hilton, 1981; Orlove e Tosteson, 1999; Lemos et al., 1999; Roncoli, Ingran, Jost e Kirshen, 2001); more specifically, insufficient time between prediction and climatic events may make mitigation and adaptation impossible (Glantz, 1979; Broad, Pfaff e Glantz, 2002);

Operational and organizational incompatibilities [II]

- Existence of political and socioeconomic pressure coming from powerful stakeholders, affecting content, interpretation and dissemination of forecasts (Glantz, 1979; Broad, Pfaff e Glantz, 2002; Roncoli, Ingran, Jost e Kirshen, 2001; Tosteson e Orlove, 1999; Lemos et al., 1999);
- Difficulty in the evaluation of degree of previsibility and confidence of available forecasts, such as under or overestimation of confidence, sensationalistic use of it, or dissemination without the required tools for proper interpretation of the information (Broad, Pfaff e Glantz, 2002; Hansen, Marx e Weber, 2004; Lemos et al., 1999; Orlove e Tosteson, 1999)
- Legitimacy crisis: multiple sources of forecasts, associated to the lack of clear quality indicators results in the decrease of the general acceptance and attribution of value to forecasts (Broad, Pfaff e Glantz, 2002).

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- Two supplementary aspects:
 - ▣ i) the need of applying micro-social studies accounting for the concrete ways in which diverse social actors consider climate variables in relation to other factors of the socio-economic structure;
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- In fact, far from being a linear process and an individual decision, the ways in which climate knowledge is appropriated and engaged with is the result of a combination of various individual and structural factors.

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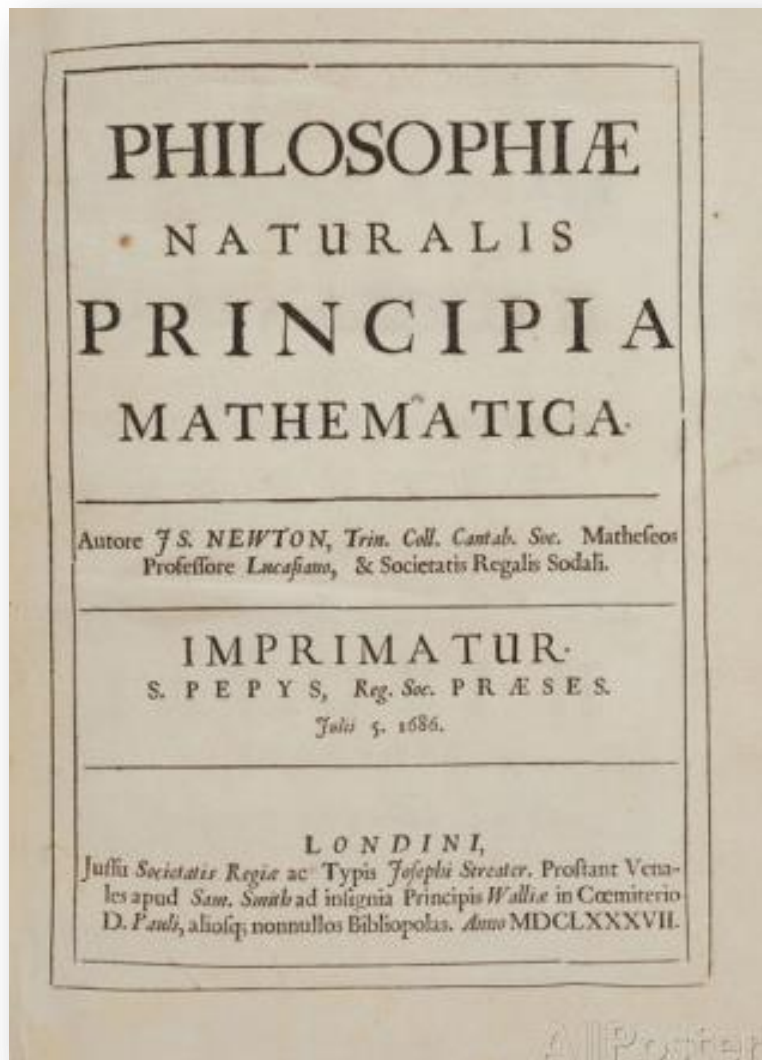
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What do we expect to produce?

- Products, papers and reports;
- Saying what?
 - ▣ Possibility that the conclusions suggest the need for dramatic changes in the ways organizations exist;
 - ▣ And in the way meteorology is organized and works;
 - ▣ And the same for anthropology;
 - Are we ready for that?
 - ▣ We won't be able to “domesticate” politics. What to do with it then?

Which principle? Principia or the prince?



WEATHER FORECASTS ARE FOR WIMPS*: WHY WATER RESOURCE MANAGERS DO NOT USE CLIMATE FORECASTS

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Abstract. Short-term climate forecasting offers the promise of improved hydrologic management strategies. However, water resource managers in the United States have proven reluctant to incorporate them in decision making. While managers usually cite “poor reliability” of the forecasts as the reason for this, they are seldom able to demonstrate knowledge of the actual performance of forecasts or to consistently articulate the level of reliability that they would require. Analysis of three case studies in California, the Pacific Northwest, and metro Washington DC identifies institutional reasons that appear to lie behind managers’ reluctance to use the forecasts. These include traditional reliance on large built infrastructure, organizational conservatism and complexity, mismatch of temporal and spatial scales of forecasts to management needs, political disincentives to innovation, and regulatory constraints. The paper concludes that wider acceptance of the forecasts will depend on their being incorporated in existing organizational routines and industrial codes and practices, as well as changes in management incentives to innovation. Finer spatial resolution of forecasts and the regional integration of multi-agency functions would also enhance their usability.