Development, Adaptation and Mitigation to Climate Risks
Jean-Philippe Boulanger
Outline

• Climate Research and Risk Mitigation

• Adaptation to Climate (Change)
Outline

- Climate Research and Risk Mitigation
- Adaptation to Climate (Change)
Climate Research and Risk Mitigation

- Perception of Society

- From research to societal needs
Perception

from a forecast user’s point of view
Perception

from a forecast user’s point of view

The agnostic
Perception

from a forecast user’s point of view

The agnostic
The Pragmatic
Perception

from a forecast user’s point of view

The agnostic

The Pragmatic

The believer

Climate Research and Risk Mitigation

jueves 28 de abril de 2011
Perception
from a forecast user’s point of view

The agnostic

“I don’t believe in forecasts, they are always wrong”

The Pragmatic

The believer
Perception

from a forecast user’s point of view

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“I don’t believe in forecasts,...they are always wrong”

The Pragmatic

The believer

“I only look at “www.perfect” forecasts because it works for me”

Climate Research and Risk Mitigation
Perception

from a forecast user’s point of view

The agnostic

“I don’t believe in forecasts,...they are always wrong”

The Pragmatic

“I consult 5 to 10 forecasts on the web, and I make my mind”

The believer

“I only look at “www.perfect” forecasts because it works for me”

Climate Research and Risk Mitigation
Perception

from a forecast “big” user’s point of view
Perception

from a forecast “big” user’s point of view

We already know all that we need
Perception

from a forecast "big" user's point of view

We welcome all that it is coming from INTA, CONICET, Universities,...

We already know all that we need
Perception

from a forecast "big" user’s point of view

We have needs, but our different timings and decision-making processes make difficult working operationally with public research

We welcome all that it is coming from INTA, CONICET, Universities,...

We already know all that we need
From Research to Societal Needs
From Research to Societal Needs

Public Research

Climate Research

Climate Modelling

Where Knowledge is Created
From Research to Societal Needs

Public Research

Climate Research
Climate Modelling

Where Knowledge is Created

Societal Needs

Formation
Specific Information
Operational Response

Where Specific Knowledge is Needed

Climate Research and Risk Mitigation
From Research to Societal Needs

Public Research
- Climate Research
- Climate Modelling
Where Knowledge is Created

Societal Needs
- Formation
- Specific Information
- Operational Response
Where Specific Knowledge is Needed

Climate Research and Risk Mitigation
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From Research to Societal Needs

Public Research
- Climate Research
- Climate Modelling

Where Knowledge is Created

Public/Private Interface
- Customize climate information
- Added value (from climate to...yields, production, sales,...)
- Web interfaces

Societal Needs
- Formation
- Specific Information
- Operational Response

Where Knowledge is customized

Where Specific Knowledge is Needed

Climate Research and Risk Mitigation
Public/Private Interface Objectives

TO REDUCE THE VULNERABILITY OF SOCIETY TO CLIMATE
Public/Private Interface Objectives

TO REDUCE THE VULNERABILITY OF SOCIETY TO CLIMATE

Integral Vision/Understanding of the sector, local government, community, company...
Public/Private Interface Objectives

TO REDUCE THE VULNERABILITY OF SOCIETY TO CLIMATE

- Identify the appropriate climate information/service
  - Weather forecasts / Climate Forecasts / Specific variable Forecasts / Climate Insurance Solutions / Risk Mitigation Plans / Adaptation Plans /...

- Integral Vision/Understanding of the sector, local government, community, company...
Public/Private Interface Objectives

TO REDUCE THE VULNERABILITY OF SOCIETY TO CLIMATE

Work with Research Groups
State-of-the-Art, Feasability, Development, Calibration, Evaluation, ....

Identify the appropriate climate information/service
Weather forecasts / Climate Forecasts / Specific variable Forecasts / Climate Insurance Solutions / Risk Mitigation Plans / Adaptation Plans / ...

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Climate Research and Risk Mitigation

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Public/Private Interface Objectives

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Climate Research and Risk Mitigation
Outline

• Climate Research and Risk Mitigation

• Adaptation to Climate (Change)
Adaptation

A multi-disciplinary and multi-sectorial process

• Impact Reports

• Adaptation Process
Impact Reports

From Scientific and Technical Knowledge to Impact Risks and Maps

Adaptation: a multi-disciplinary and multi-sectorial process
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Adaptation: a multi-disciplinary and multi-sectorial process
The Adaptation Process in Developing Countries

Development and Adaptation

Adaptation: a multi-disciplinary and multi-sectorial process
The Adaptation Process in Developing Countries

Development and Adaptation

Fortuitous Adaptation

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Climate-Proof Development

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Discrete Adaptation

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- Fortuitous Adaptation
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Adaptation: a multi-disciplinary and multi-sectorial process
The Adaptation Process in Developing Countries

Development and Adaptation

- Fortuitous Adaptation
- Climate-Proof Development
- Discrete Adaptation

Climate Information

Adaptation: a multi-disciplinary and multi-sectorial process
The Adaptation Process in Developing Countries

Development and Adaptation

Fortuitous Adaptation

Climate-Proof Development

Discrete Adaptation

Climate Information

Climate Information

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The Adaptation Process in Developing Countries

Seeking synergies between Development, Adaptation and Mitigation Strategies

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Development
Adaptation
Mitigation

Adaptation: a multi-disciplinary and multi-sectorial process
The Adaptation Process in Developing Countries

Seeking synergies between Development, Adaptation and Mitigation Strategies

Development

Adaptation

Mitigation

Reduce poverty

Reduce vulnerability

Improve the life of the citizens

Adaptation: a multi-disciplinary and multi-sectorial process
The Adaptation Process in Developing Countries

Seeking synergies between Development, Adaptation and Mitigation Strategies

Development
- Reduce poverty
- Reduce vulnerability
- Improve the life of the citizens

Adaptation
- Reduce present and future vulnerability to climate
- Public engagement

Mitigation

Adaptation: a multi-disciplinary and multi-sectorial process
The Adaptation Process in Developing Countries

Seeking synergies between Development, Adaptation and Mitigation Strategies

**Development**
- Reduce poverty
- Reduce vulnerability
- Improve the life of the citizens

**Adaptation**
- Reduce present and future vulnerability to climate
- Public engagement

**Mitigation**
- Reduce emissions
- Modify processes, energy consumptions, ways of living,...

Adaptation: a multi-disciplinary and multi-sectorial process
Adaptation Process
with and for stakeholders

Case Study
• Analyze its vulnerability to present climate
• Identify the socio-economic causes of its vulnerability

Post-Normal Research

Adaptation: a multi-disciplinary and multi-sectorial process
Adaptation Process
with and for stakeholders

Case Study
• Analyze its vulnerability to present climate
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Post-Normal Research

• Which actions can be implemented to reduce the vulnerability (climate-independent)?
• Which actions can be implemented to reduce climate-related vulnerability?
• Seek for multiple/complementary strategies
• Are the strategies coherent with development actions?
• Are they consistent with future climate threats?
• Are they contrary to mitigation objectives?

Adaptation: a multi-disciplinary and multi-sectorial process
Adaptation Process
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MODELS

Adaptation: a multi-disciplinary and multi-sectorial process
Development, Adaptation and Mitigation Process

A multidisciplinary and multi-sectorial approach
Development, Adaptation and Mitigation Process

A multidisciplinary and multi-sectorial approach

Phase 1

Descriptive phase (past, impacts, sectors)

Adaptation: a multi-disciplinary and multi-sectorial process
Development, Adaptation and Mitigation Process

A multidisciplinary and multi-sectorial approach

Phase 1  Descriptive phase (past, impacts, sectors)

Phase 2  Perception phase (sectors)
### Development, Adaptation and Mitigation Process

A multidisciplinary and multi-sectorial approach

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Development, Adaptation and Mitigation Process

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### Development, Adaptation and Mitigation Process

A multidisciplinary and multi-sectorial approach

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Conclusions

• Reducing Society Vulnerability to Climate is a “Seamless” Issue:
  • Weather forecasts to climate change projections

• Need for a multi-disciplinary / multi-sectorial integrated (systemic) approach
  • Bridging climate research to societal needs through an interface combining research skills and operational capabilities
Two Proposals
Two Proposals
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• Twin Franco-Argentine Project on Adaptation to Climate (Change): two cities or two regions or two sectors.... To be discussed
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  • Create a “climate” awareness in the society
  • Identify and quantify the weather/climate events/risks affecting the sectors
  • Investigate how climate research can respond to these needs
  • Develop specific interface tools and services to make operational the provision of customized climate information
THANK YOU!

WHAT MODERN SCIENCE CAN TELL US ABOUT EL NIÑO’S EXACT CAUSES AND EFFECTS?

OR, TO PUT IT SUCCINCTLY: DAAAAAAMN!