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Climate and Energy Workshop

Alberto Troccoli (CSIRO)

APEC Climate Symposium

Honolulu, Hawaii, 17-19 October 2011

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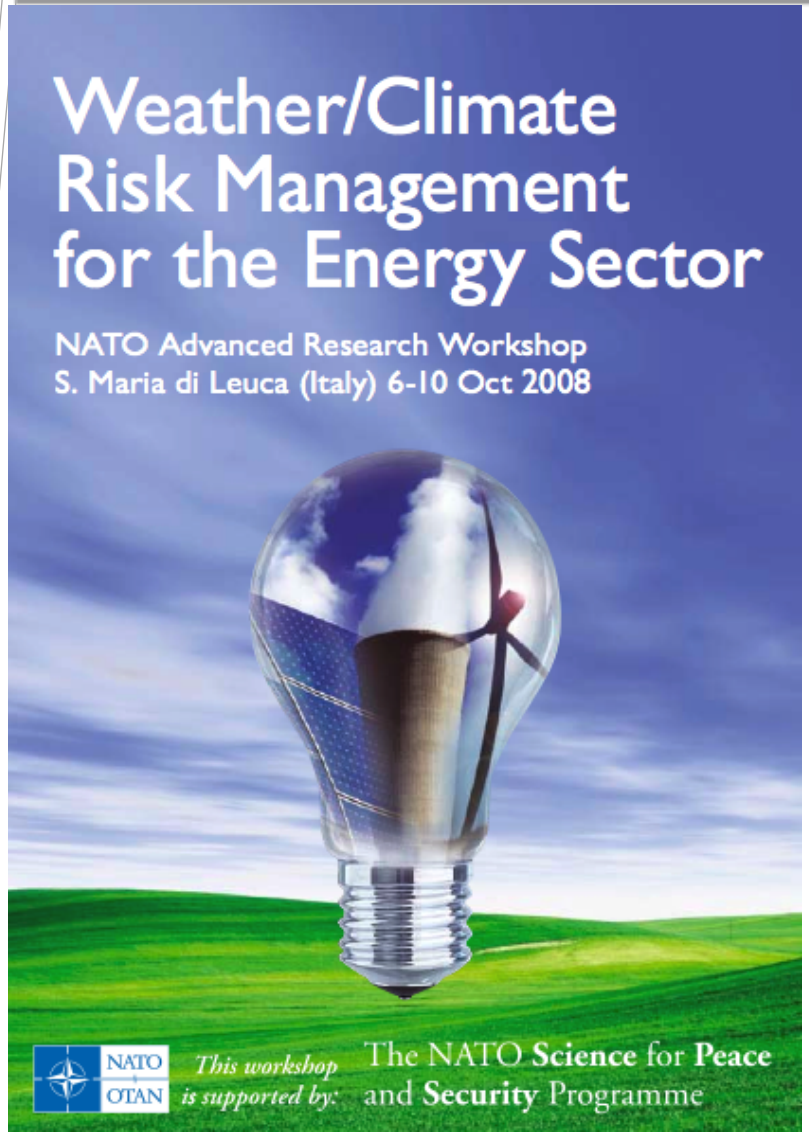
NATO Workshop on Climate & Energy
When, Where and What



About thirty participants including weather and climate scientists, engineers, economists, and other specialists (both from the developed and developing worlds) in the use of energy formulated recommendations aimed at improving the collaborative use of information by climate scientists and the energy industry

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Workshop Objectives (in a nutshell)

Recognize importance of Weather & Climate for Energy supply & demand

Recommend ways to improve interaction between Weather & Climate and Energy communities

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Workshop Objectives

1. Identify **vulnerabilities** of the energy sector to extreme weather events
2. Identify **impediments** to the use of weather and climate information for the energy sector
3. Suggest ways to improve and facilitate the **transfer of knowledge** between weather/climate scientists and energy experts to optimize climate risk management
4. Outline proposals to improve the way weather/climate information is used for modelling demand as well as providing warnings for potential disruptions in energy operations and infrastructure
5. Discuss possible contributions of weather/climate scientists and energy experts to climate change adaptation **policies for energy security**

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Selected Workshop Recommendations

Rec 1 – Vulnerabilities of the energy sector to weather events (e.g. unexpected demand, access, and/or physical damage) should be examined as a prelude to understanding longer-term risk

Rec 2 – Formulating guidelines for using weather and climate information in energy projects – through their life cycles – would be beneficial and could be illustrated with case studies

Rec 3 – Development of stronger partnerships between the climate and energy communities, through e.g. a better understanding of the needs of the energy sector and how atmospheric information can be transformed to meet them ("*energy advocacy groups*")

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Selected Workshop Recommendations (ctd)

Rec 4 – Requirements for modeling and meeting the demand for energy by the energy sector, with different data required for routine efficient operation and for emergencies (e.g. quality observations, data consistency, **access to data**)

Rec 5 – Development of environmental energy security profiles and scenarios for countries to serve as models for study: they would assist in structuring the forecast process and in anticipating emergency management requirements

• Troccoli (ed) (2010) "Management of Weather and Climate Risk in the Energy Industry", Springer, 344 p.
• Troccoli et al. (2010) in Bulletin of Am. Met. Soc.

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NATO Science for Peace and Security Series - C:
Environmental Security

Management of Weather and Climate Risk in the Energy Industry

Edited by
Alberto Troccoli

Springer

A WORLD BANK STUDY

Climate Impacts on Energy Systems

KEY ISSUES FOR ENERGY SECTOR ADAPTATION

THE WORLD BANK

Jane Ebinger, Walter Vergara

Working Group discussion
Workshop Objectives

- To identify vulnerabilities of energy sector to weather and climate events;
- To identify impediments to the use of weather/ climate information for the energy sector;
- To suggest ways to improve and/or facilitate the transfer of knowledge between weather/climate scientists and the energy experts to allow an optimal use of climate risk management;

- Identify energy sector vulnerabilities shared with other sectors, e.g. link with agriculture via biofuel crops
- Define specific **inter-sectoral scientific problems**, which share similar weather and climate events/ processes

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