#### Transitions Pathways and Risk Analysis for Climate Change Mitigation and Adaptation Strategies



# TRANSrisk: A European Research Partnership



# TRANSRISK OVERVIEW



- Title: Transitions pathways and risk analysis for climate change mitigation and adaptation strategies (TRANSrisk)
- Funding: H2020 Societal Challenges
- Started: September 2015
- Duration: 36 Months
- Coordinator: SPRU Science Policy Research Unit, University of Sussex
- Partners: 12
- \* Budget: € 7,454,000 H2020, plus €520,200 additional funding

**UK based partners awarded 22.4% of EU funding (€1.67m)** 



### BACKGROUND



#### The EU has an ambitious policy goal:

An 80% emissions cut from 1990 levels by 2050, through domestic reductions alone (COM (2011) 112). The Paris Agreement strengthens the needs to meet this goal.

# But there are many uncertainties and risks on the road to a low carbon future:

**There is a high degree of uncertainty** in models concerning the future evolution of climate and its impacts, and also in models assessing the costs & benefits associated with different mitigation pathways.

**Public acceptance** of low-carbon (technology) options is untested – promising technologies could fail if the public turns again them.

There is an urgent need to understand **costs** and **risks** associated with **climate change**, and risks, uncertainties and co-effects related to different **mitigation pathways** 



### ACTIONS AND OUTPUTS



TRANSrisk aims to *innovatively transform* the way in which climate change policy pathways are developed:

# TRANSrisk actions

Assess **low emission transition pathways** that are technically & economically feasible & socially & environmentally acceptable.

Bring together **quantitative** models and **qualitative** approaches, focusing on participatory consultations with stakeholders.

A **novel assessment framework** for analysing the costs and benefits of transition pathways while considering risks and uncertainties.

A **decision support tool** to assist policy makers to include risk assessments when designing policy and policy mixes.

# TRANSrisk outputs



# TRANSRISK PARTNERS

































# TRANSRISK PARTNERS



| SPRU - Science Policy Research Unit, University of Sussex                  | UK           |
|--|--------------|
| BC3 - Basque Centre for Climate Change                                     | ES           |
| CE - Cambridge Econometrics  | UK           |
| ECN - Energy Research Centre of the Netherlands                            | NL           |
| ETH Zurich - Swiss Federal Institute of Technology (funded by Swiss Gov't) | СН           |
| IBS - Institute for Structural Research                                    | PL           |
| JIN - Joint Implementation Network   | NL           |
| NTUA - National Technical University of Athens                             | GR           |
| SEI - Stockholm Environment Institute                                      | SE,<br>KE,UK |
| UniGraz - University of Graz   | AT           |
| UPRC - University of Piraeus Research Centre                               | GR           |
| CLAPESUC - Pontifical Catholic University of Chile                         | CL           |



# METHODOLOGICAL FRAMEWORK



DISSEMINATION

#### STAKEHOLDER ENGAGEMENT NATIONAL/ REGIONAL CASE STUDIES TRANSRISK MANAGEMENT Synergies & Conflicts Comparison of I transition pathways/ ENSEMBLE decision Innovation support tools **Uncertainty &** Policies & Risks Transition **Pathways FULL EU** Non-EU LIMITED EU **CASE STUDIES CASE STUDIES CASE STUDIES**



### EXPECTED OUTCOMES



# TRANSrisk expects to have an impact across the policy, business, social and academic sectors:

- ✓ Provide insights on *mitigation pathways* across multiple sectors and geographical areas, based on *15 case studies* in the EU as well as Canada, Chile, China, India and Indonesia.
- ✓ Provide decision makers with a non-specialist "*tool box*" to assess and evaluate the socio-economic costs & benefits of mitigation options.
- ✓ Facilitate EU and global *climate policy goals* such as the implementation and review of the EC's "Roadmap for moving to a low-carbon economy by 2050".
- ✓ Contribute to major international scientific assessments (e.g. IPCC).





# SCIENTIFIC PAPERS (TO DATE)



- González-Eguino, M., Neumann, M. B. (2016). "Significant implications of permafrost thawing for climate change control", Climatic Change 136(2), 381-388.
- Markandya A., Arto I., González-Eguino M., Román M. V. (2016). "Towards a green energy economy? Tracking the employment effects of low-carbon technologies in the European Union", Applied Energy, In Press.
- Nikas A., Doukas H. (2016). "Developing robust climate policies a Fuzzy Cognitive Map approach", In Doumpos, M., Zopounidis, C., Grigoroudis, E. (Eds.), Robustness Analysis in Decision Aiding, Optimization, and Analytics, Springer International Series in Operations Research & Management Science 241, 2016, In Press.
- Nikas A., Klironomou M., Marinakis V., Doukas H. (2016). "Comparison of alternative pathways for the transition of EU countries to low carbon economies using Fuzzy Cognitive Maps", Book of proceedings 4th Student Conference of the Hellenic Operational Research Society, 17-18 December 2015, Athens, Greece.



# OTHER DISSEMINATION OUTPUTS (TO DATE)



- 1 TRANSrisk article in a scientific magazine;
- Participation in 10 external conferences/ events;
- Newsletters and press releases sent to more than 2,400 recipients;
- Organisation of two TRANSrisk workshops in Athens and Graz;
- Development and distribution of dissemination materials (website, social media, video);
- Brief descriptions, references or links to the official TRANSrisk website on 60 websites;
- TRANSrisk articles in 4 partners' newsletters.



# BENEFITS OF EU (H2020) FUNDING







# HOW TO CONTACT US



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