



POTSDAM INSTITUTE FOR
CLIMATE IMPACT RESEARCH

Overview on the AMPERE project

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What is AMPERE?

Assessment of **M**itigation **P**athways and **E**valuation of the **R**obustness of Mitigation Cost **E**stimates

- Project under the European Community Framework Programme 7 (FP7)
- Proposal prepared in response to following call:

Policy making on mitigation strategies **needs more robust cost figures**. Existing models propose many different mitigation costs scenarios and such a situation results in **excessively large uncertainties for policy makers**. The objective of this activity is **to improve knowledge in particular on climate change mitigation costs** (including negative costs) **by better integrating climate and economic models and in particular by systematically comparing the economic components of these models**.

What is AMPERE?

- Proposal prepared in response to following call:

...

The project should establish a common platform dedicated to climate-economics modelling research activities in Europe, so as to permit to reduce the uncertainties in the quantification of climate change mitigation costs. **Model development, validation, performance assessments and inter-comparisons should all be taken in consideration.** ... In that spirit, the proposal should **provide operational information on the interpretation of the model outputs and uncertainties.** International collaboration can be considered with countries undertaking similar activities.

*Expected impact: Better quantify the costs of climate change mitigation within an inter-comparison framework; increased consistency in cost-related information for policy making. **Provide input to international assessments including the 5th IPCC report.***

What is AMPERE?

AMPERE consortium: 21 institutions (models in brackets)

Coordinated by Potsdam Institute for Climate Impact Research
(**ReMIND**; Edenhofer & Kriegler)

17 European partners:

- WP leaders – IIASA (**MESSAGE**), PBL (**IMAGE**), FEEM (**WITCH**), ICCS (**PRIMES & GEM-E3**)
- Further global modeling teams:
 - CIREN (**IMACLIM**), Grenoble / Enerdata (**POLES**), IPTS (**POLES & GEM-E3**), PSI (**MERGE-ETL**), IER Stuttgart (**TIAM World & TIMES PanEU**), CPB (**WorldScan**)
- Further modeling teams on Europe: TU Vienna (**Green-X**), ERASME (**NEMESIS**); (plus **PRIMES**, **TIMES PanEU**, **WorldScan** focusing on Europe)

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European partners continued:

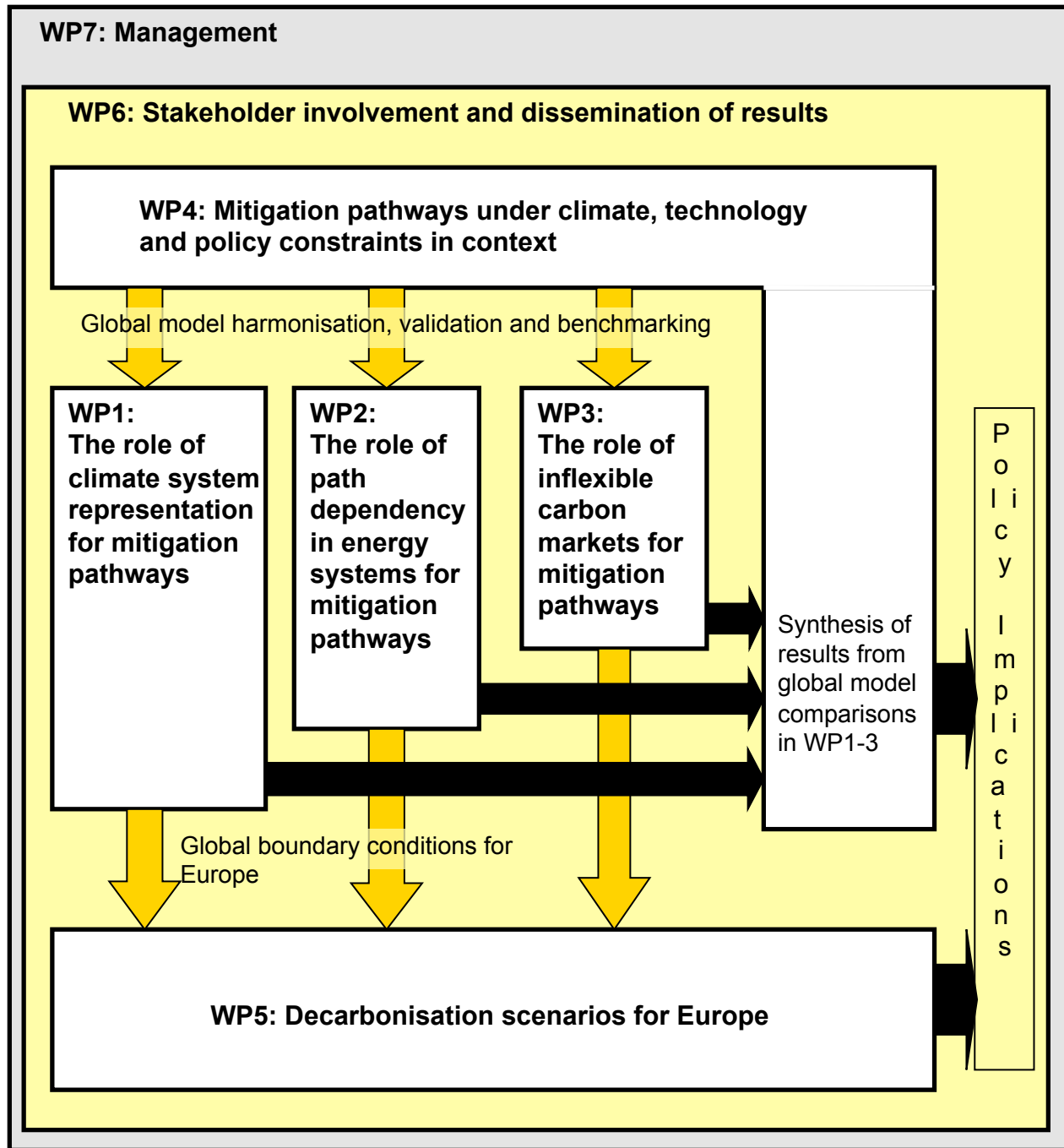
- Climate: Hadley Centre (Hadley model suite, access to CMIP5), ClimateAnalytics (MAGICC)
- Dissemination: CEPS

4 Asian partners:

- NIES (**AIM**), RITE (**DNE21+**), ERI (**IPAC**), IIM

Support and interest in collaboration from US partners:

- PIAMDDI, JGCRI (**GCAM**)



WP leaders:

WP 1: PBL (van Vuuren)

WP 2: IIASA (Riahi)

WP 3: PIK (Kriegler)

WP 4: PIK, IIASA, PBL

WP 5: ICCS (Kaproš)

WP 6: FEEM

WP1: Role of climate representations for mitigation

- How do climate modules and the representation of different forcing parameters in IAMs compare?
- How do emission budgets and short/long term emission reduction targets relate to long-term climate targets?
- What is the (potential) influence of climate feedbacks on achieving long-term climate-targets?

WP2: Role of path dependency in energy systems

- What are critical components of the technology portfolio in the short-to-medium term to reach very low GHG emissions levels?
- What are the implications of short-term targets and technology uncertainty for the costs and attainability of long-term climate objectives?
- What is the “option value” of specific technologies in the short and long run?
- How do technology diffusion rates in the model compare with historical experience?

WP3: Role of inflexible carbon markets

- Model diagnostics: How do mitigation pathways and regional mitigation costs compare in the benchmark case of a globally harmonised carbon price?
- How does incomplete sectoral and regional coverage for affect the feasibility of ambitious climate targets, increase global mitigation costs, and alters the distribution of regional costs?
- What decarbonisation rates, energy efficiency improvements and income growth rates are projected by the models, both in the reference and in the climate policy cases, and how do they compare to historical developments of these variables?

WP4: Synthesis

- Model baseline harmonisation
- Model benchmarking (comparability of costs and baselines) and validation (trend comparison, price shock response, hindcasting)
- Synthesizing results from all model intercomparisons in WP1-3
- Identification of policy implications

WP5: Decarbonisation scenarios for Europe

- What are the implications of the global mitigation pathways for EU27 and Member States?
- Does myopia about EU emissions reductions targets lead to lock-ins in the EU energy sector?
- What are the costs and benefits for EU27 in fragmented international climate policy regimes?
- What are the implications for emission reduction measures of EU27 and individual EU MS

Status and timeline of AMPERE

EC has entered into contract negotiations with AMPERE Consortium

Negotiations have progressed, but no contracts have been signed

Start date not fixed, but likely to be early 2011

3 year project

Project meetings roughly in Month 1, 8, 15, 22, 29, 36

Two stakeholder workshops (Month 15, 29) and final conference

Thank you!



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