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Tyndall Centre for Climate Change Research, University of East Anglia, UK  
Fariborz Zelli

Institute for Environmental Studies (IVM), Vrije Universiteit Amsterdam  
Philipp Pattberg

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| <b>PU</b>   | Public  | X |
| <b>PP</b>   | Restricted to other programme participants (including the Commission Services)        |   |
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| <b>CO</b>   | Confidential, only for members of the Consortium (including the Commission Services)  |   |

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## Executive Summary

This report has been compiled as deliverable D-P3a.4b of Work Package P3a of the EU Integrated Project ADAM—Adaptation and Mitigation Strategies: Supporting European Climate Policy. The report summarizes the application of the core methodologies of the research group ‘Post-2012 Climate Governance’.

As stressed in our Month 18 deliverable D-P3a.4a, the ADAM project has moved from the original objective of creating and testing a single, generic framework in the second half of the project. Hence, there was no second iteration of the application the Policy Appraisal Framework (PAF). In this regard, the title of this deliverable – which has been assigned at the beginning of the project – is misleading.

Instead of presenting a second PAF iteration, D-P3a.4b has been independently developed by the P3a team, summarising our own P3a form of appraisal, specifically geared to the policy context of the post-2012 global climate architecture.

Whereas this deliverable is a brief synopsis of our research *activities*, please consult our other Month 39 deliverable (D-P3a.3b) for a summary of our research *findings* and of the options for post-2012 climate governance we have developed. The complete findings of this study programme are presented in the forthcoming volume *Global Climate Governance Beyond 2012: Architecture, Agency and Adaptation* (Biermann, Pattberg and Zelli 2010).

The report is structured as follows:

*Section 1* introduces P3a as a case study of the ADAM project, naming its core objectives.

*Section 2* presents two major categories along which the team has structured its work: a. three methodological approaches (policy analysis, modelling tools, participatory assessment approaches); b. three research themes (Architecture, Agency and Adaptation).

*Section 3* presents a brief overview of which methodological approaches have been applied to which research foci.

# 1 Introduction: Aim of Work Package P3a as a Case Study of the ADAM Project

Within the ADAM project, Work Package (WP) P3a serves as a case study that analyses options for global climate governance beyond 2012.

More concretely, the objectives of P3a are:

- To co- ordinate the integration of outputs from the Adaptation and Mitigation Work Domains and the WP P2 to develop portfolios of policy options that could provide the basis of a post-2012 climate governance architecture;
- To organise these options, as well as other current and future proposals on the post-2012 climate governance architecture, in an innovative matrix;
- To appraise these policy options through
  - a) a set of tailored approaches to climate change appraisal in different policy contexts;
  - b) input from WP P2 and the A and M Domains;
  - c) deliberative exercises with public and private actors in Europe, developing countries and in the United States;
- To explore ways of re-framing the policy debate in terms of wider development issues or new theoretical or empirical perspectives (together with WP P3b and P2); and, eventually,
- To develop novel, integrative proposals for (elements of) a post-2012 climate governance architecture that are based on scientific research of all ADAM work domains as well as intense deliberative exercises;
- To communicate findings and new options to the policy debate in a timely manner and with an appropriate level of complexity; and, to develop and maintain a science-policy interface that allows this research to respond rapidly to the fast moving policy debate during 2006-2008.

This deliverable addresses the third of these objectives, summarising the activities of Work Package P3a.

## 2 Structural Categories of Work Package P3a: Three Methodologies and Three Research Themes

### 2.1 Research Themes: Architecture, Agency and Adaptation

To outline innovative options for post-2012 climate governance, we have focused on three crucial aspects of future climate governance<sup>1</sup>: (1) the relative performance of different *architectures* of global climate governance; (2) the relative performance of new forms of *agency* (in particular beyond the state), including the role of business and environmentalist organisations in governance arrangements; and (3) the relative performance of different possible global governance arrangements for *adaptation* to climate change. As also presented in Deliverable D-P3a.3b (section 2), research on each of these domains centres on unique, clear-cut research questions:

**Architecture.** Which type of global governance architecture promises a higher degree of institutional performance in terms of social and environmental effectiveness, in particular: is an almost universal, strongly integrated governance architecture likely to be more effective than a heavily fragmented, heterogeneous governance architecture? How can the increasing fragmentation of global climate governance be addressed?

**Agency (beyond the state).** What is the role and relevance of an increasing trend towards privatised and market-based governance mechanisms for climate change mitigation and the host of private actors, from non-governmental organisations to business actors, that surrounds these new mechanisms in global climate governance? To what extent, and under what conditions, do private or public-private transnational governance mechanisms produce policy outcomes that are comparable, or even superior, to (traditional) forms of intergovernmental co-operation?

**Adaptation.** What are the policy options for the adaptation of regions, countries and international institutions to the impacts of climate change? To what extent do effective adaptation policies require global regulatory mechanisms, as opposed to local policy-making? To what extent does effective adaptation governance require the integration of adaptation policies in the overall climate governance architecture, and/or in other policy domains?

These three domains are not mutually exclusive. Questions of architecture are also relevant when developing institutions for future adaptation governance, and non-state

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<sup>1</sup> For detailed definitions of the three concepts of architecture, agency and adaptation, please refer to deliverable P3a.3b.

actors are important for adaptation. Instead of providing clear-cut distinctions, the three domains thus rather serve as different lenses that together advance understanding of the complexity of global climate governance. Furthermore, this link of our research with broader theoretical debates in the social sciences – such as on governance architectures or on the role of the state versus non-state actors – increases knowledge of contemporary climate governance while also contributing to theory consolidation within and across disciplines. In particular, the selection of the three themes has been informed by current debates in international relations and international law on globalisation, transnationalisation, fragmentation and legitimacy (Ruggie 2001; Rosenau 2003; Hafner 2004; Börzel and Risse 2005).

## **2.2 Methodologies: Policy Analysis, Modelling and Participatory Assessment Approaches**

Our project work has built on the systematic and comprehensive integration of different disciplinary bodies of knowledge and of different methodological tools and approaches, from international law, political science and global governance studies to place-based development research and computer-based scenarios and modelling exercises. In particular, the three research themes of architectures, agency and global adaptation have been analyzed from the perspective of three methodological approaches, each contributing to a comprehensive examination:

First, we analyzed each theme by means of **policy analysis**. These studies advanced understanding of opportunities and barriers for policy-making at different stages of the policy process, as well as of institutional interlinkages and barriers to rule-making. We covered criteria of inclusiveness and legitimacy (regarding the participation of different types of actors), social acceptability, and political feasibility. These methods helped determine the viability and the legal and political effectiveness of policy strategies, that is, their chances to materialize as concrete legal provisions (for example new rules under a future climate regime) and to change the compliance incentives of actors. Theoretical approaches applied in our research include institutional theory and global governance research, bargaining and game theory, international law analysis and economic analysis.

Second, the use of **modelling tools** helped to create a structured and quantitative framework for analysis. These methods focus less on political or legal implications but rather on criteria of long-term effectiveness and efficiency of policy options. They assist in determining the structural effects of selected strategies on both the global climate and social systems, for example regarding long-term emission reductions or effects on national incomes. Methods applied in this research include the FAIR meta-model, developed by the Netherlands Environmental Assessment Agency (Hof et al.

2010 [fc.]). FAIR is a stylized multi-region formal model that integrates modelling of the climate system (the relation between greenhouse gas emissions, concentrations and temperature) with the social-economic system (costs of mitigation, emissions trading, and effects of climate change on national income). A second model employed is REMIND, developed by the Potsdam Institute for Climate Impact Research. REMIND is a hybrid model designed to integrate macroeconomic, energy system and climate modules. It is a multi-region endogenous economic growth model that can focus on regional interactions such as trade flows, foreign investments or technological spill over.

Third, many contributions to this research draw on **participatory assessment approaches**. Such tools give voice to stakeholders' perspectives. They allow for a critical examination of policy recommendations against the interests and concerns of key stakeholders, and can assist in refining recommendations into feasible and socially robust strategies. Participatory assessments hence complement the examination of political feasibility criteria provided by policy analysis. Participatory methods applied here include a series of structured international workshops with experts and policy-makers; regular consultations with an advisory group of senior experts and policy-makers; and a major survey of Southern policy-makers, academics and representatives of non-governmental organizations. The participatory appraisal exercises were held in New Delhi, India, on developing country perspectives; in Geneva, Switzerland, jointly with the Economics and Trade Branch of the UN Environment Programme, on climate and trade policies; in Lund, Sweden, on the reform of the Clean Development Mechanism; in Brussels, Belgium, on adaptation funding; in Brussels, Belgium, jointly with the Centre for European Policy Studies, on the overall research results; and finally a dialogue-event at the thirteenth conference of the parties of the climate convention in Bali.

### **3. Overview: Application of Methodologies to Research Themes**

Our research has been policy-relevant in orientation while remaining academic in nature. Most efforts were directed at scoping or developing policy options that could provide a basis for future climate governance, and at appraising these options through multi-disciplinary assessment methodologies. While many of these policy options are derived from current debates, their appraisal took a much broader, long-term perspective, in a search for solutions that may be relevant and viable long after the current negotiations have ended. Also, while core elements of this research drew on local facts and findings – for example in studies on vulnerabilities of the poorest of the poor – our focus remained at the global level and at the most important elements of an overarching governance architecture for mitigating, and adapting to, global climate change.

Table 1 summarises the application of these different methods to the three research themes.

|                                 | <b>Architecture</b>  | <b>Agency beyond the state</b>   | <b>Adaptation</b>   |
|---------------------------------|--|--|---|
| <b>Policy analysis</b>          | <p>Institutional fragmentation (<i>institutional theory, bargaining theory, international law</i>)</p> <p>UN climate regime and world trade regime (<i>institutional theory, bargaining theory, international law</i>)</p> <p>Equity-based architecture for North-South cooperation (<i>qualitative policy analysis</i>)</p>   | <p>Transnational climate governance (<i>institutional theory</i>)</p> <p>CDM reform (<i>institutional theory</i>)</p> <p>Research and development, and technological change (<i>economic analysis</i>)</p>   | <p>Climate refugees (<i>institutional theory, international law</i>)</p> <p>Food insecurity (<i>institutional theory</i>)</p> <p>Adaptation funding (<i>qualitative economic analysis</i>)</p> <p>Interests and perspectives of developing countries (<i>institutional theory, international law</i>)</p> <p>Vulnerability of the poorest of the poor (<i>socio-economic analysis</i>)</p>  |
| <b>Modelling</b>                | <p>Institutional fragmentation (<i>FAIR meta-model</i>)</p> <p>Linking of emission trading systems (<i>REMIND model</i>)</p>   | <p>Sectoral mitigation (<i>FAIR meta-model</i>)</p>  | <p>Cost-benefit interlinkages between adaptation and mitigation (<i>FAIR meta-model</i>)</p>  |
| <b>Participatory approaches</b> | <p>Institutional fragmentation (<i>side-events at conferences of the parties, UNEP workshop, policy workshop in Brussels, developing country conference in Delhi, interviews, survey</i>)</p> <p>UN climate regime and world trade regime (<i>UNEP workshop, policy workshop in Brussels, interviews</i>)</p> <p>Southern perspectives (<i>developing country conference in Delhi</i>)</p> | <p>Transnational climate governance (<i>interviews, survey</i>)</p> <p>Reform of Clean Development Mechanism (<i>policy workshop in Lund, policy workshop in Brussels</i>)</p> <p>Market-based mechanisms and developing countries (<i>developing country conference in Delhi, survey</i>)</p> | <p>Climate refugees (<i>side-events at conferences of the parties, policy workshop in Brussels, interviews</i>)</p> <p>Food insecurity (<i>side-events at conferences of the parties, developing country conference in Delhi, policy workshop in Brussels, interviews</i>)</p> <p>Adaptation in developing countries (<i>developing country conference in Delhi</i>)</p> <p>Adaptation funding (<i>policy workshop in Brussels, interviews</i>)</p> |

**Table 1: Research themes and methodologies**

## 4. Conclusions

This report has been compiled as deliverable D-P3a.4b of Work Package P3a of the EU Integrated Project ADAM—Adaptation and Mitigation Strategies: Supporting European Climate Policy. The report summarizes the application of the core methodologies of the research group ‘Post-2012 Climate Governance’. As outlined in deliverable D-P3a.4a, the ADAM project has moved from the original objective of creating and testing a single, generic framework in the second half of the project. Instead of presenting a second PAF iteration, D-P3a.4b has been independently developed by the P3a team, summarising our own P3a form of appraisal, specifically geared to the policy context of the post-2012 global climate architecture.

Based on our experiences, there are three concrete lessons learned that might be important in future global climate governance research. First, the multi-faceted nature of global climate governance makes one common framework of assessment very hard to achieve. However, this makes comparison across cases very difficult, which in turn explains why despite the abundance of single case studies, few overall assessments of global climate governance exist. Second, integrating modelling into more standard qualitative social science research or vice versa requires greater attention to the underlying logics of both approaches as well as to aspects that might make bridging easier in the future. And finally, although participatory assessments have proven to be a highly effective tool for making the research more robust and socially embedded, a three year project such as ADAM does not leave sufficient room for possible multi-looped learning processes to occur (and to analyze).

## 5. References

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## **Annex I: List of acronyms**

|      |                                      |
|------|--------------------------------------|
| CDM  | Clean Development Mechanism          |
| UN   | United Nations                       |
| UNEP | United Nations Environment Programme |