



GLOBAL-IQ

IMPACT QUANTIFICATION OF GLOBAL CHANGES

FP 7 theme SSH-2010-2.1-3
Grant agreement n° 266992

ANNUAL MEETING

10-12 OCTOBER 2012

PRAGUE

MINUTES OF THE MEETING

Redactor: J. P. AMIGUES (Fondation Jean-Jacques Laffont / TSE)

THE RESEARCH LEADING TO THESE RESULTS HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S SEVENTH FRAMEWORK PROGRAMME (FP7/2007-2013) UNDER THE GRANT AGREEMENT N° 266992 (GLOBAL IQ)

GLOBAL-IQ

1ST ANNUAL MEETING AGENDA

JOINT MEETING WITH THE PSC (PROJECT STEERING COMMITTEE)

10TH-12TH OCTOBER

KAROLINUM, CHARLES UNIVERSITY IN PRAGUE

OVOČNÝ TRH 3, PRAGUE 1

Day 1 - 10/10/2012: *Starting at 14h30 (everyone can arrive during the morning)*

14h30 – 15h00: Welcoming word (Jean-Pierre Amigues) & Introduction with the Project Officer – Perla Srou-Gandon

15h00 – 18h30: WP workshop in parallel:

- WP 2: leader of the session – Milan Ščasný
- WP 6: leader of the session – Magnus Hennlock
- WP 1 – 3 – 4 & 5: leader of the session – Emanuele Massetti

15h00 – 18h30: administrative meeting: preparation of the report.

Coffee break at 16h30

20h00 Dinner

Day 2 – 11/10/2012:

8h30 – 10h00: plenary session: Introduction with the Project Officer – Perla Srou-Gandon & Debriefing of WP workshop by the leader of each sessions (day 1) – Chair: Jean-Pierre Amigues

- WP 2: leader of the session – Milan Ščasný
- WP 6: leader of the session – Magnus Hennlock
- WP 1 – 3 – 4 & 5: leader of the session – Emanuele Massetti

10h00 – 10h30: coffee break

10h30 – 12h00: plenary session: Interaction between WP's - Round-Table debate – Chair: Emanuele Massetti

12h00 – 13h30: lunch

13h30 – 16h00: plenary session: Global IQ presentation (standard presentation of each WP) – Chair: Jean-Pierre Amigues

13h30 – 14h00: Presentation of work from WP1: Carlo Sessa (ISIS)

14h00 – 14h35: Presentation of work from WP2 - Preliminary result from the survey in China: Chiara Ravetti (HEID)

15' talk plus 20' discussion (35' total)

14h35 – 15h15: Presentation of work from WP2 - Health impacts and ancillary benefits (Vojtech Maca and Jan Melichar, CUNI), 10min each plus 20min discussion (40' total)

15h15 – 15h30: Presentation of work from WP2 - Production functions (Lukáš Rečka, CUNI), 5-10' talk plus 5-10' discussion (15' total)

15h30 – 16h00: Presentation of work from WP6 (Magnus Hennlock, UGOT), 10' talk plus 20' discussion (30' total)

16h00 – 16h30: coffee break

16h30 – 18h30: plenary session: Global IQ presentation of WP3 – Chair: Emanuele Massetti

16h30 – 17h00: Sabine Fuss (IIASA)

17h00 – 17h30: Emanuele Massetti (FEEM)

17h30 – 18h00: Joseph Francois (WIIW)

18h00 – 18h30: Franziska Piontek and Miodrag Stevanovic (PIK)

20h30 dinner

Day 3 – 12/10/2012:

8h30 – 10h00: WP debriefing in parallel (2 // 6 // 1 – 3 – 4 &5) – next steps

- WP 2: leader of the session – Milan Ščasný
- WP 6: leader of the session – Magnus Hennlock
- WP 1 – 3 – 4 &5: leader of the session – Emanuele Massetti

10h00 – 10h30: coffee break

10h30 – 12h00: plenary debriefing – next steps – Chair: Jean-Pierre Amigues- Emanuele Massetti

12h00 lunch

Global IQ First annual meeting – Prague - 10 - 11 & 12/10/2012
List of participants

AMIGUES	Jean-Pierre	TSE
CASSINELLI	Mariaester	FEEM
CLAUSTRE	Céline	TSE
D'ALBIS	Hippolyte	TSE
EGBENDEWE MONDZOZO	Aklesso	FEEM
FUSS	Sabine	IIASA
HENNLOCK	Magnus	UGOT
ILSKENS	Dorothe	PIK
LADOUX	Norbert	TSE
MACA	Vojtech	CUNI
MANCHANDA	Monica	IIASA
MASSETTI	Emanuele	FEEM
MCDERMOTT	Tom	LSE
MELICHAR	Jan	CUNI
MOREAUX	Michel	TSE
PARRADO	Ramiro	FEEM
PIONTEK	Franziska	PIK
POPP	Alexander	PIK
RAVETTI	Chiara	IHEID
RECKA	Lukás	CUNI
SESSA	Carlo	ISIS
SKOPKOVA	Hana	CUNI
SROUR-GANDON	Perla	European Commission
STEVANOVIC	Miodrag	PIK

GLOBAL-IQ 1ST ANNUAL MEETING

PRAGUE 10-12TH OCTOBER 2012

The meeting begins at 14H30 with a welcome address by Jean-Pierre Amigues, project coordinator, and Perla Srour-Gandon, EU project officer in charge of the GLOBAL-IQ project. Then the participants move to four parallel sessions.

PARALLEL SESSIONS OF THE 10TH OCTOBER

► WP1-3-4-5 session: This session has been mainly devoted to the discussion of global changes scenarios. WP1 has addressed the issue starting from 5 scenarios (Shared Socio-Economic Pathways, SSPs) developed by the research community to facilitate the integrated analysis of climate change impacts as well as adaptation and mitigation efforts. It is decided to focus on the SSP2 scenario (middle-of-the-road) for the quantitative assessment part. The variables not quantified in the original description of SSP2 have to be agreed upon by the participants of the modelling WP's before running the models. This is part of the modelling work inside WP3. Sensitivity analysis will be performed around this scenario. To the list of the main global changes drivers (population, affluence, technology) is added a list of global challenges (discussed below). This will serve to address several pertinent cutting issues to the project. The phasing of the WP is a stepwise approach. WP3 is mainly about modelling issues. A list of the different models features has been built. Soft and hard links between the models are under development. The modelling toolkit developed inside the WP3 will be used later in the assessment part (WP4) and in the adaptation part (WP5).

► WP 2 session. Activities in WP2 were discussed in detail during the WP2 workshop held on Wednesday 15:00-18:30 and then on Friday 8:30-10:00. Preliminary results of several tasks were presented and discussed with other project partners on Thursday 14:00-16:00, while possible linkages were discussed on Thursday 10:30-12:00. Further working steps including linkages between WPs were summarised with whole project team on Friday 10:30-12:00. WP2 includes in total 14 subtasks. To date activities and further steps and actions are summarised below.

A) Valuation of ancillary effect and externalities, Tasks 2.1.2 & 2.1.3

There are 3 subtasks performed by CUNI, IHEID and ISIS.

CUNI - Method: CUNI work is applying ExterneE method based on bottom-up approach. Damage factors per energy output of energy technology (€ per kWh or GJ) or per pollutants (€ per tonne) are derived by relying on impact pathway analysis that chains i) technology characteristics (emission, location), ii) changes in atmospheric concentration, iii) dose-

response functions, and iv) monetary valuation. Impact categories covered: health effects, crops, building materials, biodiversity, climate change. Regional scale of the impacts: Europe but also outside Europe (North Hemispheric model). WTPs: EU-representative values, but can be adjusted per country.

Input needed: emission of AQ pollutants and heavy metals, or energy use/energy production (as a proxy of emission, but this would assume emission intensities of fuels as fixed)

Output: Euro per technology, Euro per pollutant, Euro for a GHG mitigation scenario

Linkages: macro modellers expressed their interest in extending their macro models by the impact assessment.

IHEID - Method: IHEID has been reviewing literature on ancillary effects in developing countries. Meta-analysis of values will be performed. Impact categories: health effects. Regional scale of the impacts: developing countries. WTPs: country or region specific based on the review.

Input needed: IHEID will provide DRFs and monetary values. Changes in pollutant concentration foremission scenarios are not analysed in GLOBAL-IQ, so this task will rather provide very useful tool for further work.

Output: Monetary values of health effect in developing countries based on benefit transfer

Linkages: most likely none.

ISIS - Method: update simulation environment to derive the external costs for transport modes based on the ExternE method. Impact categories: health effects, accidents, congestion. External cost categories: air pollution, noise, accidents, congestion, wear and tear (obsolescence of infrastructures). Distinction of urban and non urban road transport. Wider use of cost functions and limited use of reference WTP values where cost functions are not available. Preferable application is the estimate of air pollution cost in different situations (as stated in the DoW), but other cost categories can be analysed as well if appropriate. The tool may be used both for analysing the external cost of transport in aggregate regions and for relevant corridors (e.g. international trade, although maritime transport impacts are only related to ports). Regional scale of the impacts: Europe. WTPs: EU-wide values.

Input needed: vkm per mode and in urban non-urban area.

Output: Euro per technology, Euro per pollutant, Euro for a scenario

Linkages: most likely none.

Actions:

1) contact FEEM, IIASA and PIK and find out which pollutants are included as endogenous variables in the macro models. If there is none but GHGs in the model, then think about an alternative approach to linking ancillary benefit to the models (CUNI)

- 2) Contact Chinese partners (PKU, ARUP) involved in PURGE project whether they plan to run AQ dispersion model (CUNI)
- 3) Contact Chinese partners involved in URBANCHINA project whether there is any dispersion modelling (IHEID)
- 4) Discuss with CGE modellers disaggregation of their model wrt transport (ISIS)
- 5) Opened questions: how to upscale actual WTPs when valuing impacts in very far future?; will ancillary effect associated with reduced abatement costs to mitigate AQ pollutants be included in the impact modeling in WP3?; how the GRACE model will be used in impact assessment of some scenarios of global changes? (ALL)

B) Non-market benefit of climate change, Tasks 2.1.1 & 2.1.3

There are again 3 subtasks performed by CUNI, IHEID and TSE.

CUNI - CUNI has been reviewing literature on health effect of climate change. Then, literature on effect of climate change on ecosystems/biodiversity is to be reviewed.

Linkages: via damage function in a IAM model, if we make a link, the monetary values of non-marketed impacts on biodiversity will be linked to a IAM externally

IHEID – a survey has been conducted in urban China on effect of air pollution on health. In a survey the loss of productivity, medical expenditures of individuals and averting behavior was examined. From the responses on acute and/or chronic health impairment over past 12 months, simple DRFs will be estimated. Other components of health benefit, WTP related to pain, suffer and inconveniences, will be valued based on literature review performed under IHEID task on Ancillary benefit and by utilizing previous survey on WTP conducted by IHEID in China.

Linkages: most likely none

TSE – a theoretical model will be built to analyse possible health effect of climate change on mortality rate and demography. Milan mentioned indirect effect of climate change on spreading of diseases from increased migration from developing to developed world. This task is to start now.

Linkages: it is possible to link this analysis with CGE ICE model; separate meeting is planned to work on the links in Spring 2013. Similarly, the model can be linked with a work of CUNI on review of health effects of climate change.

Actions:

- 7) Avoid double work on literature review on health effects of climate change and valuation of health effects; coordination is required (CUNI & IHEID)
- 8) Contact IAM modellers to check damage functions used (CUNI)
- 9) Prepare separate meetings between TSE-WIIW, consider links for assessment of health effect of CC and meeting between TSE-CUNI (TSE & CUNI)

C) Tax incidence, Task 2.3.1

There are 2 subtasks performed by CUNI and TSE.

TSE – is developing an empirical second-best optimal taxation model in order to derive the second best optimal energy taxes in the presence of externalities. Focus is on Pigouvian and redistributive component of optimal tax. The model includes employed households. It is intended to extend the model towards to inclusion of energy/specific capital that delivers jointly energy service with energy use.

CUNI – is updating a microsimulation optimisation model for the Czech households. By means of this model distributive effect of energy and labour taxation can be assessed for many household segments.

Linkages:

There is an intention to apply this model framework on Czech data in order to examine the optimal tax. Details will be discussed in next months, separate TSE-CUNI meeting is planned for Spring.

IIASA partner expressed an interest to feed detailed energy consumption data for the Czech households in one of their model. This possibility will be further worked out.

Actions:

10) Examine possibilities to apply TSE tax optimisation model to the Czech data (TSE & CUNI)

11) Discuss what energy demand data would be required by IIASA (CUNI)

D) Trade Policy and Climate Change, Tasks 2.4

There are 3 subtasks performed by TSE and IHEID.

IHEID – has been developing a theoretical static trade model that allows agglomeration economies and firms' heterogeneity introduced via different marginal productivity of labour. This model is going to be developed further.

TSE – is working on another theoretical trade model that would search for optimal taxes when nations differ wrt environmental quality in dynamic framework in order to specifically examine convergence of GDP growth.

Both teams have been encouraged to pay attention for drawing policy recommendations from their theoretical models and recommendations for further improvement of modelling impacts by a CGE models.

Linkages:

Possible link might be between theoretical work of these tasks and multiregion CGE trade model being used by WIIW.

Actions:

12) Discuss later possibility to utilise findings from these tasks in ICE model (IHEID & TSE)

E) Micro-estimations

There are 3 subtasks performed by CUNI, TSE is also involved in the last one.

CUNI is recently reviewing literature on barriers, obstacles and potentials to adopt micro-generation technologies in households. Pre-survey work is planned for this Autumn, a draft of instrument will be prepared in the Spring and data will be collected by interviewing Czech population in the late Spring.

Linkages: no linkages are expected

CUNI has also been reviewing literature on estimation of production functions with an aim to estimate elasticity of substitution for production factors in CEE countries. We were encouraged to test several variants of nested structure of the function.

Linkages: the estimates can be used in CGE model

CUNI and TSE are planning to analyse household-level data on energy and water saving behaviour including the effect of climatic conditions and environmental concern. Recently, country-specific data are gathered. Analysis is planned to be performed in Winter and Spring 2013.

Linkages: no linkages are expected

Actions:

13) Discuss nested structure of production function of ICES FEEM model (CUNI)

► The various presentations (appended below) allowed to settle the state of advancement of the subtasks and to identify the links between subtasks of WP2 together with the links to the other WPs.

Wed 10, 15:00-16:40	Ancillary effects and externalities, Tasks 2.1.2 & 2.1.3
	Jan Melichar, CUNI: in developed countries
	Chiara Ravetti, HEID: in developing countries
	Carlo Sessa, ISIS: transport externalities & GRACE model
Wed 17:00-17:45	Tax incidence, Task 2.3.1
	Ladoux Norbert, TSE: Second-best tax model
	Milan Ščasný, CUNI: DASMOM microsim model
Wed 17:45-18:30	Health benefit valuations, Tasks 2.1.1 & 2.1.3
	Vojtěch Máca, CUNI: Review of health impacts
	Chiara Ravetti, HEID: Health impact of air pollution – a survey in China
	Jean-Pierre Amigues, TSE: Population dynamics: age, epidemic, population
Fri 8:30-10:00	Trade Policy and Climate Change, Tasks 2.4
	Chiara Ravetti, HEID: Where we are in Task 2.4.1 & 2.4.2
	Jean-Pierre Amigues, TSE: Task 2.4.3
	Next steps in all task with emphasis on linking tasks and WPs

► WP 6 session. WP6 is composed of two main groups of tasks. A first group is mainly theoretical. Working papers have been drafted and others are in progress. This allowed refine the contents of the WP6 deliverables. The second group is more empirical and requires a link with the modelling WPs.

► Administrative meeting:

1. What has been done since the beginning of the project?

1.1. Communication:

- Global IQ website – www.global-iq.eu - MS5 and twitter account @global_iq
- Dissemination Plan – D7.1
- Brochure & Powerpoint – D7.2
- 1st annual Newsletter – D7.3

→ The documents are available on the public area of Global IQ Website

Next step: First policy brief – TSE – Due date: December 2012

1.2. Research:

- Concepts and scenarios of global challenges – MS1

→ This document is available on the public area of Global IQ Website

Next steps:

- First set of results from WP2 to be used in WP3, WP4 and WP5 – MS2 – CUNI
- Conceptual issues and review of global change assessment and analysis – D1.1 – ISIS - Due date: December 2012
- Socio-economic impact assessment framework operational for the key sectors identified – MS3 – IIASA - Due date: January 2013

1.3. Management:

- 1st Grant Agreement amendment: we added a third party (GIE linked to TSE) and change a part of the TSE budget for the implementation on Global IQ Website
- New Project Officer: Perla Srour Gandon

2. Preparation of the first periodic report

The first period will ended the 31/01/2013 and we will have 60 days after this date to submit our first report.

TSE will circulate the template and the forms to be filled in due time and will collect all the information/documents and then will submit them via the Participant Portal.

2.1. Scientific report

TSE will contact each work package leader in order to centralize all the information needed for the first reporting: main S&T results, publications, dissemination activities,...
A draft will be circulated among the partners.

2.2. Financial report

Only the Financial Statements (Forms C) must be submitted by each partner electronically (via the Participant Portal). Once you have submitted your Form C electronically and the coordinator has accepted it, you should send two signed paper copies by post to the coordinator. We will use an internal deadline for the submission: 30 days after the end of the reporting period to submit it. An internal document (table) will be circulated in order to prepare the first financial reporting and the explanation of use of resources. For the financial report we will need to explain the use of resources:

Entering the explanations on the use of resources

Upon clicking on a cell of a cost table, the following pop-up is shown:

Eligible costs (in €)	Type of activities				Total (E)=(A)+(B)+(C)+(D)
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	
Personal costs					0.00
Transaction with the RTD performer					
Subcontracting					
Other direct costs					
Indirect costs					
Lump sums / flat-rate / scale of unit declared					
Total					
Maximum EU Contribution	0.00	0.00	0.00	0.00	0.00
Requested EU contribution					0.00

RTD/Personnel costs		
Cost	Explanation	Work Package
0.00		
0.00		TOTAL
<input type="button" value="Clear All"/> <input type="button" value="Done"/>		

Sufficient level of detail should be provided in the field "Explanation" with clear link to the Description of Work (Annex I)

Examples:

RTD/personnel costs: *6 man-months for Prof. NN senior researcher, 2 post-doctoral researcher for 18 man-months, 1 lab technician for 4 man-months*

Management/subcontracting: *web-site development and maintenance*

RTD/other direct costs: *Purchase of server as indicated in the DoW*

Management/other direct: *travel to annual meeting (date, city) including tickets, hotel and subsistence*

The partners who receive more €375,000 EU contribution should proceed to a Certificate of Financial Statement (CFS).

PLENARY SESSIONS OF 11TH OCTOBER

The session begins by a presentation from Perla Srour-Gandon about the main SSH EU programs orientations and information concerning the next calls planned by the commission. The importance of policy briefs for EU communication is insisted on. New issues emerge concerning security and global changes, new calls should appear: obstacles for a green economy in Europe and European post-carbon cities, new technologies, switching life styles toward sustainability. A social platform with stakeholders has been created about sustainable lifestyles.

Then the session continues with a debriefing of the previous parallel sessions and the links to be established between WPs. WP2 has to assess non market and ancillary benefits. The possibility to input the results into the global cost assessment in WP4 is discussed. The difficulty is to link benefit measures to emissions and pollution levels. For health, developing countries is the problem. The Chinese case study planned in WP2 is helpful but must be completed by a literature review. Whenever possible, available figures for health costs will be transferred to the modelling WPs 3-4-5. Distributive effects of energy policies may be jointly assessed by CUNI and TSE. The possibility of using the substitution elasticities estimations for the European eastern countries inside WITCH (which has eastern countries as a region) will be explored.

The work in WP6 has materialized into several working papers: discounting with consumers envy (Stern, Johansson-Stenman), Discounting with other values: past consumption, catastrophes and environment (Gollier, Johansson-Stenman), Ambiguity and precautionary behaviour (Dietz, Hennlock), Public goods with several countries (Stern, Johansson-Stenman), Sector and spatial discounting (Dietz, McDermott). Some of the papers are already completed, others are in progress. A stochastic version of GLOBIOM is under preparation to meet their involvement into the WP6 empirical part. The opportunity to input investment under uncertainty procedures inside WITCH is discussed. The idea to develop slim versions of the big IAMs models of the partners for simulation purposes of ambiguity issues (to be made by Hennlock, Dietz and Mc Dermott) is also discussed. Last the planned draft in 10 chapters of the report is presented.

The agenda of the WPs 1-3-4-5 is to complete the model development of WP3 at month 24 (July 2013) and the WP4-5 parts at month 34 (May 2014). Several confcalls and active interactions between partners have taken place during the first half of 2012. It is planned to use seven models inside the project: Remind and WITCH for energy, GLOBIOM and MagPie for land use, ICE and ICES for trade together with GRACE for transport. The initial role for ICES (FEEM's model) was to generate total cost estimates, not to generate scenarios of global impacts on a specific sector. FEEM is exploring the possibility to switch part of the work from total cost estimates to sectoral estimates. At this stage of the project however, the final role of ICES remains uncertain.

A lot of effort has been devoted to describe the different models features (e.g. variables lists) and build links between models. With respect to the SSP scenarios currently under development by the IPCC, it is decided to focus on SSP2 (middle-of-the-road) scenario. This scenario approach has to be confronted with several global challenges: climate change, fossil fuels depletion and more generally energy issues, environmental threats, population ageing and trade. The strategy is to use the most relevant models for the different challenges. Meanwhile a wikitoool has been developed by ISIS inside WP1 to organize the interactions between partners. The approach has to combine qualitative aspects (refine the SSP2 narrative) and quantitative aspects (IAM projections) in an interactive way.

The afternoon session is devoted to presentations of the state of advancement of various tasks inside the WPs (see the meeting agenda).

PARALLEL AND PLENARY SESSIONS OF 12TH OCTOBER

During the first half of the morning, parallel sessions are devoted to planning future work inside the WPs.

Several important points are raised in the final session. The immediate objective is to finalize the global change scenario version to organize the future simulation plan. This should be done at the end of this year. The requirements of the modelling tasks in WP3 will be impacted by the scenario definition. It will also serve to build the sensitivity analysis of the scenario.

For the main challenges, it is planned to focus on specific issues: renewable and non renewable energies for the energy challenge, water for the environmental threat challenge, trade barriers and trade regulation in the trade challenge.

After discussion, it is decided to change slightly the respective organization of the work in WP4 and WP5. The first scenario to be tested will be of full adaptation (a swap of the original planning of some tasks in WP4 and 5). Then different constraints to adaptation (defined with respect to the previously identified global challenges) will be introduced in the simulation procedures.

The transfer of output from WP2 tasks to WP3 and 4 will be initiated by a conf call in November.

A policy brief is due for fall 2012. The topic will be the global change scenarios and the global challenges. TSE (J.P. Amigues) is in charge of drafting the brief.

The next project meeting is planned in Rome in fall 2013. ISIS is the organizer. The idea to organize a special event (large audience keynote lecture + roundtable with policy makers) in order to attract attention onto the GLOBAL-IQ project is discussed. In the meantime, interactions will continue between the participants to meet the July 2013 delivery deadline.

