



Horizon 2020 Societal challenge 5: Climate
action, environment, resource efficiency and raw
materials

COP21 RIPPLES

COP21: Results and Implications for Pathways and Policies for Low Emissions European Societies

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Estimated effort contributor(s) (PM):	0.4 PM (IDDRI), 0.1 (CS)
Internal reviewer:	Caroline Hoogendoorn (IDDRI)



1. Changes with respect to the DoA

NA

2. Dissemination and uptake

The following stakeholders will use this deliverable:

- Project partners (in order to remember the main takeaways from the project meeting and to adapt their activities to the decisions taken).
- Advisory Board members and external stakeholders (in order to find out about the project's ongoing progress and first results).

3. Short Summary of results (<250 words)

The third consortium-wide project meeting took place on 25-26 April 2018 in Warsaw. Approaching the halfway of the project, the meeting provided the opportunity to share preliminary results and collectively discuss how to build a common story that will benefit from the multidisciplinary consortium. There was an update on progress across tasks and work packages (WPs), and a focused discussion on the upcoming dissemination and outreach activities, particularly about the policy briefs, policy dialogues and inputs into the Talanoa Dialogue. Advisory Board members and external stakeholders were invited to attend selected parts of the Project Meeting, which was held back-to-back with the 2nd Stakeholder Workshop. This report summarises the main outcomes of the Project Meeting. The agenda, project minutes and list of participants can be found in the Annexes.

4. Evidence of accomplishment

- Report (D1.4)
- Meeting (25-26/05/2018, Warsaw): Agenda, participant list, signature list, and minutes are available



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1. Introduction

The third Project Meeting of RIPPLES took place in Warsaw (Poland), seventeen months after the start of the project. The two preceding meetings were in Paris in January 2017¹ (kick-off meeting) and in London in June 2017². The event was co-organised between Climate Strategies (outreach, communication & stakeholder engagement), WiseEuropa (local partner) and IDDRI (agenda). A total of 31 experts from 14 partner organization were represented at the meeting, as well as seven Advisory Board members (including one stand-in colleague) and four external stakeholders from the Polish region.³ The meeting provided the opportunity to share preliminary results and collectively discuss how to build a common story that will benefit from the multidisciplinary consortium. There was an update of progress across tasks and work packages, and a focused discussion on the upcoming dissemination and outreach activities, particularly the policy briefs, policy dialogues and inputs into the Talanoa Dialogue. The agenda can be found under Annex 2.

The main outcomes of the Meeting are described for each of the following categories:

1. Increasing policy-relevance of the RIPPLES research
2. Emerging insights from preliminary results
3. Operationalizing a multidisciplinary approach: RIPPLES Narratives
4. Building a portfolio of policy briefs and other outreach activities
5. Managing COP21 RIPPLES project: staff, progress, reporting, and next steps

¹ See Deliverable D1.2 *Report of 1st Project Meeting*

² See Deliverable D1.3 *Report of 2nd Project Meeting*

³ See full participants list in Annex 2.

2. Increasing Policy-Relevance of the COP21 RIPPLES Research

One of the objectives of the third Project Meeting was to improve the understanding of knowledge gaps and emerging policy windows in the rapidly changing climate policy context. Several presentations directly informed this debate.

First, Ms. Olivia Gippner from DG Climate Action provided an overview of EU strategic objectives as part of the international commitments, and the domestic policy formulations and implementation. She explained how a project like COP21 RIPPLES could inform the negotiations, stressing the window of the 2018 Talanoa Dialogue. Ms. Gippner made the point that informing global climate policy is not just a matter of informing the UNFCCC process, but informing the formulation of NDCs, long-term strategies and measures for implementing them, in the context of national priorities and global action.

A second set of interventions on policy-relevance was made up presentations from Teresa Ribera and Lola Vallejo (IDDRI) presentations. Teresa focused on setting the scene for the role of global climate community post-Paris and, in particular, the role of RIPPLES in reflecting on the complexity and the challenges of meeting the Paris Agreement, while being a voice for potential options and solutions to address them. She also reflected on the meaning of the Paris Agreement, and encouraged the COP21 RIPPLES consortium to help connect the dots between governance responses and the tools that we need to develop, through excellent research and engagement with external communities via policy dialogues.

Lola opened the debate on how RIPPLES could support future European policy. She explained the project's potential to inform the review of Nationally Determined Contributions (NDCs) and/or long-term strategies, including strengthening governance in certain sectors. She called for a discussion on how to best feed EU-level and EU-countries processes, and how to structure the discussion around key indicators, questions, and targets. To end, she noted that RIPPLES will be a success if among all the wealth of knowledge it has produced, specific priorities emerge for the next two to five years that are factored into decision-making processes.

Last, Advisory Board members were fundamental to this debate, as they come from different regions of the world and represent diverse sectors and actors of society. Their responses to the emerging results became a reality-check for the relevance and adequacy from multiple disciplines and perspectives.

The COP21 RIPPLES consortium agreed in the continuous, careful consideration of policy-relevance for all the work undertaken under this project. The policy context discussion was mainstreamed throughout the Meeting. The discussion of preliminary results included an interrogation of policy relevance. Critically, the debate on the COP21 RIPPLES Narratives (see point 4) picked up the policy development insights to create storylines that are aligned with the key policy questions addressed by the project's research.

3. Emerging Insights from Preliminary Results

The breakout groups for internal coordination of WP3 and WP4 included sharing of some preliminary results.

WP3 is about the assessment of social and economic implications of different transition pathways, as well as enabling conditions in terms of finance and technology. The discussion in Warsaw focused on the analysis of the first set of scenarios used by the different modelling teams. The first scenario refers to well below-2C global pathways that follow the current NDC global trajectory until 2030 and then evolve to meet a Paris-compatible carbon budget. The second scenario considers a similar carbon budget of cumulative emissions up to 2050, but embraces a higher ambition before 2030 (i.e. higher than the current global NDC ambition level).

The comparison of both scenarios allows for us to understand the implications of increasing ambition in the short term. A dimension that was discussed at length was energy security, and in particular, implications on natural gas supplies at EU-level. It was found that higher ambition would increase diversity of gas supply and reduce imports from Russia, but it might encounter bottle-neck in intra-EU pipelines. The implications for Eastern European countries are significant, and specific case studies would illustrate the case for Poland and Bulgaria. This debate was considered key for advancing domestic ambition within Europe.

Task 3.3 is dedicated to finance and investment. One of the results is expected to be the scale of international climate finance required to make a difference in outcomes for developing countries. Given the European focus of COP21 RIPPLES, attention will be given to the options for EU-sourced financing that will be most effective. Preliminary results show the importance of financial friction (delays) in the macroeconomic results at country-level. On the technology side, researchers from Task 3.5 showed results on the identification of key low carbon technologies and their likely contribution to meeting Paris targets.

The on-going research focuses on the potential for learning-by-doing cost reductions, potential countries for technology development, connections/spill overs to other sectors, and financing needs. The knowledge to be produced is critical in informing industrial policy mix for accelerating the transition to low carbon societies. More work is needed on the policy implications at technology-level. The technology layer remains central to the transition, and the synergies between industrial policy and climate policy are poorly developed. The roundtable discussion on technology development by Bruegel, CNRS and COPPE enriched further the argument for improving the understanding of technology learning, costs and deployment. Several methods presented by different teams converged into the need to revisit expectations (and associated modelling assumptions) for technology development at country-level.

With regards to WP4, the work carried to date is conclusive about the value of the sector-based approach. The roundtable discussion on Institutions and Governance (UEA, CA, UCT) reinforced the message by providing the lens of one specific sector: international transport, and the lens of a national context in the developing world. The differences among sectors found during the research of the specific governance functions provides further arguments. There is now a need to reflect on

sectoral contextual differences and where gaps mostly appear. Adopting a more sectoral breakdown should be recommended for the next revision of NDCs and long-term strategies.

Overall, the focus is much stronger on phasing in the new options but there is reluctance to explicitly face the tough challenge of sunsetting unsustainable technologies and practices. For some sectors, research and development (R&D)/technological innovation remains a major challenge (e.g. in international transport and energy-intensive sectors). On finance governance, lack of transparency is evident, beyond just the power sector (where green/brown finance divide is clearer). Clearer targets from the sectors would help finance do its bit towards decarbonisation.

With regards to EU policy, a debate regarding the role for EU in facing down extractive industries is worth being explored, potentially in the context of G20. Research at country-level (Task 4.4) is designed to complement the above by looking at the barriers of implementation. In South Africa, the focus will be on coal mining, other extractive mining, energy-intensive businesses and the electricity monopoly, whereas Brazil will study the wind energy-related sub sector.

4. Operationalizing a Multidisciplinary Approach: COP21 RIPPLES Narratives

A key added value of COP21 RIPPLES is its multidisciplinary approach, which is known to be critical to addressing the complex nature of such transitions. The consortium brings together world-class communities in modelling, and political and social science, to build a common story. Between the modellers, the project embraces a large diversity of models, featuring different paradigms and specificities, which allow the project to cover a wide range of socio-economic aspects. It also provides global assessments in parallel to those at country-level. The political and social science body embraces the branches economics, development studies, political economy, and international studies and politics. In order to realise this multidisciplinary work in a practical way that is policy-relevant, the consortium of COP21 RIPPLES establishes a common set of narratives. These narratives are built to allow for the different tools and bodies of knowledge to “tell the same story” from their respective perspectives, which together can provide a comprehensive, consistent -but also granular - vision of the different aspects of the transformation.

The third Project Meeting was an important milestone to settle the COP21 RIPPLES narratives, as well as discussing how individual research will contribute to create this common story. Whereas the first set of narratives was clearer, given the amount of work realised by WP3 members on early action, the second and third set of narratives needed input from the consortium members. After the framing of the methodological approach was introduced by Henri Waisman (IDDRI), a large share of the meeting was dedicated to the set of narratives about differentiated levels of ambition (also referred to the “clubs narratives”).

Regarding the 1.5C-related narratives, after a presentation by Michiel Shaeffer (Climate Analytics), views were exchanged around the availability of 1.5C scenarios both at global and national-level, and the main differences between them and the ‘well below 2C’ scenario. The team concluded that the work around 1.5C scenarios should build on the conclusions emerging from the IPCC Special Report due for publication in October 2018. WP4 members expressed concerns about the possibility to distil

distinct storylines for each of the different ambition levels. The conclusions were to instead focus on certain peculiarities of the different scenarios that matter from a governance perspective.

For the clubs-type of narratives, the presentation from Michael Grubb (UCL) contributed to the structure the consortium discussion. The team agreed to support a sector-based rationale for the coalitions, in line with emerging results under 4.2, and the role of specific sectors in enabling the transformation needed for 1.5C. Still, governance experts discussed the possibility for “market-power” rationale and/or “leadership by example” rationale. Energy-intensive industries were highlighted as a prime case to be explored. For the development of EU-recommendations, the research should be driven by the question “why does it make sense to be the early mover, why won’t you lose out being the first mover and what are the benefits you will gain?”.

The details from these discussions can be found in the project’s minutes under Annex 2. Based on the rich discussions, it was decided that IDDRI would propose a written proposal for the narratives before the end of June 2018. Follow-up work will then be required to translate the narratives into scenarios to be run by modellers (both 1.5C and clubs-related), as well as to unpack storylines to shape the design of upcoming research under WP4 and integrate preliminary results.

5. Building a Portfolio of Policy Briefs and Other Outreach Activities

5.1. Policy Briefs

A brainstorming on policy briefs took place during the Warsaw meeting, specifically during the presentation from Alexandras Carr (Climate Strategies), and throughout the discussions on preliminary results. The following summarises the list of policy briefs that were identified for further consideration:

- How to pragmatically increase ambition in the short term, sector-by-sector: Perspectives from governance and modelling:
 - a) What are the sectors, technologies and countries where greatest mitigation potential exists?
 - b) What are the investment needs?
 - c) What are the main recommendations to strengthen the international governance landscape to realise the existing mitigation potential?
 - d) What other considerations need to be taken into account at country-level?
 - e) What can the EU do in the different sectoral systems, and in terms of promoting progress within the framework of the UNFCCC?
- Implications of more ambitious/early climate policy action for energy security – focus on natural gas supplies.
- How much does it really cost, and who pays for the short-term action? Ensuring consensus for increasing European climate ambition: making the most of the benefits and managing the risks of transition for CEE:

- a) Socio-economic effects to be expected (based on work on the industrial competitiveness, technology spill-overs, and perhaps social inequalities); Macroeconomic outcomes depend on the financial constraints and the investment flows at country-level -> the importance of finance
 - b) The role of the finance sector and technology cooperation (and Art.6?)
 - c) Strengths and weaknesses of the international governance landscape in terms of provision of capacity building, technology (transfer), and financial resources
- Climate-industrial policy mix for key low-carbon technologies (Focus Europe).
A multi-criteria assessment of low-carbon technologies based on their likely contribution to meeting Paris goals, potential for learning-by-doing cost reductions, connections/spill-overs to other sectors, financing needs, etc. implications for industrial policy, trade & competitiveness.
 - Staying below 1.5C: from A to Z – What should be done in the next 5-years to keep the 1.5 windows open:
 - a) The role of innovation
 - b) The role of implementation
 - c) The role of technology
 - d) The role of citizens
 - e) The role of governance
 - f) The role of finance
 - g) Why we say it is possible?
 - The role of technology in the low-carbon transition.
Focus on the technology layer of the transition: Key roles, how does technology development works, challenges, enabling conditions. This could include:
 - historical examples of tech development (for example, on RE costs by UOXF) and the work on learning curves; –
 - case of CCS: national-driven technology and inter-cooperation/transfer.
 - Meaning and implications of the EU taking leadership on climate?
 - a) Co-benefits and other opportunities
 - b) Where should EU money go?
 - c) How can Europe accelerate global action by addressing the gaps/weaknesses of the int governance landscape?

This could include an example of EU's role as an orchestrator (e.g. to the IMO/ICAO-UNFCCC, perhaps others?)

- Beyond 100bn in 2020 (or rather, shifting the trillions): Making the most of the international climate finance.
Rationale and key areas/instruments after 2020, with potential benefits highlighted based on the modelling and governance aspects.



5.2. Policy Dialogues

The team extensively discussed the idea of having a policy dialogue by the end of the year, in conjunction with COP24. However, by the end of the Warsaw meeting, the sense was that COPs are too busy for an optimised outreach result. The COP is also not the most productive place for a dialogue on the EU long-term roadmap, if this is to be the targeted policy window. The emerging consensus was for having a dialogue early 2019 instead (around Jan-March), aligned to the original schedule.

5.3. Other Outreach Activities

With the half-term of the project approaching, Climate Strategies pointed to the need to update the projects Dissemination and Exploitation Plan. Main events for COP21 RIPPLES dissemination were identified and will be reflected in the updated Plan. The team highlighted the importance of equilibrium between UNFCCC-driven events, and EU-level ones. COP21 RIPPLES remains committed to inform the European climate policy position in the context of the negotiations and a deep understanding of global developments. The participation of COP21 RIPPLES in COP24, at least through an official side-event was confirmed. Lastly, there was agreement about the need to specifically define the project's input into the Talanoa Dialogue under IDDRI's leadership.

6. Managing the COP21 RIPPLES Project: Team, Progress and Reporting

6.1. Team

The third Project Meeting provided opportunity to introduce two new staff members based at IDDRI, with relevant roles for the COP21 RIPPLES project. Lola Vallejo has been appointed as the new Director for the Climate Programme at IDDRI and she will play an oversight role within COP21 RIPPLES, notably contributing to the governance-related research and assisting with the leadership and management of the project as necessary. Marta Torres Gunfaus is replacing Roberta Pierfederici as the COP21 RIPPLES Project Coordinator as from April 16th 2018.

The participation of an Indian research partner within COP21 RIPPLES was queried. Confusion had emerged because during the proposal phase, an Indian case study had been considered under Task 4.4. COP21 RIPPLES management confirmed that there is no involvement of an Indian partner under the COP21 RIPPLES framework. Case studies for 4.4 will include South Africa, China and Brazil only.

6.2. Progress

The first session of the Warsaw Project Meeting consisted of a progress update across WPs. The report by WP leaders confirmed that all the scheduled milestones and deliverables had been successfully delivered on time up to April 2018, except for D2.1 and D2.2 who had been delayed for justified reasons. In the case of D2.1, a database of scenarios, a draft was submitted by the deadline, and remains a draft up to this date in order to allow for continuous updates as new scenarios emerge. Regarding D2.2, IDDRI decided to postpone it to facilitate the input from all the consortium

partners during the Warsaw Meeting. As an instrumental delivery to ensure consistency in this multidisciplinary project, it was considered critical the co-design the nature of the storylines. Based on the inputs from all partners, D2.2 is scheduled to be submitted by the end of June 2018.

6.3. Reporting

Dr. Frederik Accoe, COP21 RIPPLES Project Officer at the European Commission, dedicated a large part of his presentation to the half-term project report, due by the end of July 2018. He explained the nature, elements and timeline of the report. During the last session, Marta Torres presented to the consortium partners the specific roles, contributions and timing of the different partners to complete the report on time. She informed that Caroline Hoogendoorn (IDDRI) will be the overall coordinator of the half-term project report. The timeline was agreed, with a few partners urging the management team to provide reporting templates as soon as possible:

- Email from IDDRI with templates: End May / early June
- Deadline for submission to IDDRI: 15/06/2018
- Consolidated technical reports sent for comments: 29/06/2018
- Submission of draft report to the European Commission: 11/07/2018
- Submission on portal (after incorporation EC comments): 30/05/2018

6.4. Next Steps

Cross-cutting next steps reported by the end of the Warsaw Meeting are summarized below:

WP	Activity	Responsible	Timeline
2, 3, 4	To coordinate internal reviews (including reviewers from different WPs) for deliverables: 2.3, 2.4, 3.2, 3.3, 4.2.	Lead author of each delivery with IDDRI	End April 2018
All	To assign responsibilities (financial and technical) and prepare inputs for half-term reporting to European Commission. Reporting templates to be circulated by IDDRI by the latest 31 st May.	All	Mid-June 2018
2	To propose a final narratives framework (D2.2) based on partners input and collect further feedback from WPs leaders on their application.	IDDRI	June 2018
5	To develop a proposal for a policy briefs portfolio, based on the meeting discussions, for circulation among partners.	IDDRI, CS	June 2018

5	To develop a skeleton for the first Policy Dialogue (specific dates, topic etc.) based on the meeting discussions for circulation among partners.	CS, IDDRI	July 2018
5	To develop a proposal for COP21 RPPLES input into the Talanoa Dialogue input to discuss with the European Commission.	IDDRI	June 2018
3	To discuss the consideration of a new 1.5 scenario(s) in the context of deliverables, and impact on delivery dates.	UCL (lead), CNRS, IDDRI	June 2018
1	To strengthen links with other initiatives (such as COACH).	IDDRI, CA	July 2018
5	To apply for a side-event at COP24.	CS	According to UNFCCC application deadline



Annex 1: Agenda



COP21: Results and Implications for Pathways and Policies for Low Emissions European Societies (COP21 RPPLES)

Project and Stakeholder Meeting

Wednesday - Thursday, April 25-26, 2018

**Venue: Nowy Świat Banking and Financial Centre (Room B)
Nowy Świat 6/12, Warsaw, Poland**

AGENDA

WEDNESDAY, 25 APRIL

INTERNAL PROJECT MEETING

9:00 - 9:30 Registration and Coffee

9:30 - 9:50 Welcome session
Introduction and objectives of the project meeting [5min] – Henri Waisman and Lola Vallejo (IDDRI) & Bogna Gudowska (WiseEuropa)

Scientific report deliverable & review process [10min] – Frederik Accoe, Project Advisor Climate Action (EC- EASME)

Q&A [5min]
[20min]

9:50 – 10:30 Project Progress Update
Overview of WP2 [10min] – Henri Waisman (IDDRI)

Overview of WP3 [10min] – Gabriel Anandarajah (UCL)

Overview of WP4 [10min] – Sebastian Obertur (ULB-BUW)

Q&A with consortium [10min]
[40min]

10:30 - 10:45 Coffee Break

10:45 - 13:00 Break Out Groups
WP3 (Lead by UCL), Room B
WP4 (Lead by IES-VUB and WI), Room B1
[2hr 15min]



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13:00 - 14:00 **Lunch + Stakeholder Registration**

STAKEHOLDER MEETING

14:00 - 14:05 **Welcome**
Andrzej Błachowicz (Climate Strategies)
[5min]

14:05 - 15:30 **Policy Expectations**
Update on the EC strategic objectives on climate negotiation process and how COP21RPPLES could support those [15min] – Miles Perry and Olivia Gippner, Policy officers, Strategy & Economic Assessment Unit (EC DG CLIMA)

Setting the scene: what does the global community need to do to deliver Paris? [15min] Teresa Ribera (IDDRI)

COP21-RPPLES: how to support future European policy [10min] - Lola Vallejo (IDDRI)

Comments: Ruta Bubniene and Clare Sierawski (Advisory Board Members)

Q&A with advisory board and consortium members
[45min + 40min Q&A]

15:30 - 15:45 **Coffee Break**



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15:45 -
17:45

Roundtable Discussion on Governance and Technology

Institutions and Governance [1hr]

Moderation and introduction: Lola Vallejo (IDDRI)

Speakers:

- Tim Rayner (UEA): International governance landscape, sectoral perspective & the role of the EU
- Bianka Kretschmer (Climate Analytics): Example of the financial sector
- Hilton Trollip (UCT): Challenges from a national perspective

[30min]

Comments: Gilberto Arias and Pierre Cannet (Advisory Board Members)

Group discussion with Advisory Board, stakeholders and consortium members [30min]

Technology Development [1hr]

Moderation and introduction: Henri Waisman (IDDRI)

Speakers:

- Silvana Mima (CNRS): The importance of technology learning
- Georg Zachmann (Bruegel): Countries comparative advantages to deploy low-carbon technologies
- Carolina Grottera (COPPE): Specific case for wind energy in Brazil

[30min]

Comments: Hans van der Loo and Timur Guel (Advisory Board Members)

Group discussion with Advisory Board, stakeholders and consortium members [30min]

[2hr]

19:00

Social Dinner

[Kameralna Restaurant Warsaw](#)

THURSDAY, 26 APRIL

STAKEHOLDER MEETING

8:30 - 9:00

Registration and Coffee

9:00 - 11:00

Project Narratives

First Session

Introduction of the role of narratives in the RPPLES project [10min] – Henri Waisman (IDDRI)

Connecting quantitative and legal aspects of narratives [10 min] - Michiel



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Schaeffer (Climate Analytics)

Questions and comments [30min]

Second Session

Defining a second family of narratives on different levels of climate ambition/action [30min] – Michael Grubb (UCL) (2nd sub-session)

Comment: Andrzej Kraszewski (Advisory Board Member)

Moderated discussion with advisory board, stakeholders and consortium members on the content of second narrative [35min]
[2hr]

**11:00 -
11:15**

Coffee Break

**11:15 -
12:45**

Policy impact and Outreach Strategy

Presentation of a preliminary outreach strategy: focus on upcoming policy briefs & policy dialogues [15min]– Andrzej Błachowicz and Alexandra Carr (Climate Strategies)

Moderated discussion with Advisory Board, stakeholders and consortium members on outreach
[1hr 30min]

**12:45 -
13:45**

Lunch

**13:45 -
15:15**

INTERNAL PROJECT MEETING

Opening floor to consortium members for reactions to Advisory Board Meeting [20min]

Building a consistent RPPLES story across WPs on NDCs ambition based on the first narrative

Introduction framing of the session [10min] – Henri Waisman (IDDRI)

Emerging insights within WP3 from the application of the first narrative/Feedback from break out group discussion [20min] – Gabriel Anadaradjah and Alvaro Calzadilla (UCL)

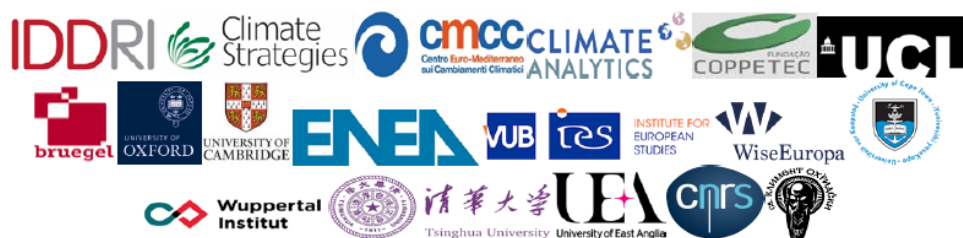
Collective discussion moderated by IDDRI on perspectives of further use of first narrative and other possible connections across WPs [40min]
[1hr 10min]

**15:30 -
15:45**

Coffee Break

15:45 -	Conclusions and Next Steps
16:45	Key conclusions of the workshop and next steps [10min] - Marta Torres (IDDRI)
	Questions and comments [50min]

Project Partners:



<https://www.cop21ripples.eu/>

Annex 2: Participants List

Consortium

First Name	Last Name	Institution
Teresa	Ribera	IDDRI
Lola	Vallejo	IDDRI
Henri	Waisman	IDDRI
Marta	Torres-Gunfaus	IDDRI
Andrzej	Blachowicz	Climate Strategies
Alexandra	Carr	Climate Strategies
Maciej	Bukowski	WiseEuropa
Aleksander	Śniegocki	WiseEuropa
Wojciech	Białyżył	WiseEuropa
Zofia	Wetmańska	WiseEuropa
Bogna	Gudowska	WiseEuropa
Anna	Kobyłeczka	WiseEuropa
Michael	Grubb	UCL
Gabrial	Anandarajah	UCL
Olivier	Dessens	UCL
Lukas	Hermwille	Wuppertal Institute
Wolfgang	Obergassel	Wuppertal Institute
Georg	Zachmann	Bruegel
Alexander	Roth	Bruegel
Sebastian	Oberthür	IES-VUB
Rupert	Way	Oxford University
Carolina	Grottera	COPPTEC
Tim	Rayner	UEA
Michiel	Scheaffer	Climate Analytics
Bianka	Kretschmer	Climate Analytics
Silvana	Mima	CNRS
Laureline	Coindoz	CNRS
Elena	Stolyarova	CNRS
Cristina	Tommasino	ENEA
Hilton	Trollip	University of Cape Town
Britta	Rennkamp	University of Cape Town

Advisory Board and Stakeholders

First Name	Last Name	Institution
Gilberto	Arias	Independent
Andrzej	Kraszewski	Warsaw University of Technology
Clare	Sierawski	US Trade and Development Agency
Pierre	Cannet	WWF France
Hans	van der Loo	Independent
Timur	Gül	IEA
Ruta	Bubniene	UNFCCC
Tomasz	Chruszczow	Polish Ministry of Environment
Robert	Jeszke	KOBiZE
Daria	Kulczycka	Polish Confederation Lewiatan
Maciej	Burny	PKEE (Polish Electricity Association)

Annex 3: Minutes

Wednesday, 25 April

INTERNAL PROJECT MEETING

1. Welcome Session

- Lola from IDDRI welcomed the participants and introduced the objectives of the meeting. She explained the completing of the deliverables required by the EC. She also mentioned the need to weave the project narratives together to create evidence-based stories that are useful for policymakers for current climate policies
- Maciej from WISE Europa provided a short introduction to the current context and the consortium
- Marta from IDDRI gave an overview of tasks and deliverables (table produced by IDDRI)

2. Project Progress Update

i. Overview of WP2 (Marta Torres-Gunfaus, IDDRI)

- Task 2.1 has been collecting existing national (e.g. from DDPP project) and global scenarios. A database has been created and given to the European Commission (submitted on October 2017). However, it is an evolving database that will have scenarios to be integrated over the course of the project
- Task 2.2 has been occupied with the formulation of transition narratives that make possible to build a common story across tasks and work packages. Final deliverable will only be available after this meeting, where it is expected to collect input from all researchers.
- Task 2.3 analyses the implications of 1.5C scenarios based on the IEA ETP scenario published in 2017. 3 scenarios chosen, they don't go beyond 2060 and do not include negative emissions. The SIAMESE model is used to downscale scenarios to a number of countries. The analysis will result in the evolution of technology pathways in each country – from fossil fuels to other options e.g. renewables, biomass, fossil fuel CCS. Preliminary results show a large diversity between countries. The 'well below 2 degrees in accelerated transformation' scenario shows that there is no place for fossil fuels with CCS. Have asked RIPPLES partners for help with downscaling. The analysis will be finalised after the project meeting, so encourage partners to provide feedback asap (since there has not a huge response so far) on the policy context
- Task 2.4 is to identify strategic variables, sectors and technologies to prioritise policies, incentives and investment using the 'decarbonisation wedges' approach (with Python programming language). The final document for this deliverable will be ready in July 2018. It includes national scenarios provided by RIPPLES country teams.

ii. Overview of WP3 (Gabriel Anandarajah, UCL)

- The work based on the modelling and quantitative analysis for the first set of scenarios (NDC/NDC+) will be available by the end of this year, and the analysis of other scenarios would mainly take place in 2019.

- The integration and logics of all the tools and processes was discussed at the workshop held in London in January 2018, and remains the same. Some adjustments with Task 3.4 have been made.
- WP3 will provide inputs into the narratives, together with WP2 and WP4 to create this common storyline.
- All milestones and deadlines have been met, and overview of upcoming milestones was shown.

iii. Overview of WP4 (Sebastian Oberthür, IES-VUB)

- The key guiding questions have been divided into 4 tasks
- Focus at the start of the WP has been on the broader climate regime rather than directly on the Paris Agreement. The subsequent report for this work (task 4.1) was published in Sep 2017, including the first policy brief of the project
- Interim results:
 - The research took a sectoral approach and identified sectoral systems (not sectors specifically), a methodology/approach not really established when we think about governance.
 - The work identified 14 systems, some of which are overlapping, and analysed the barriers that existed and the needs of each system
 - Using this sectoral approach for analysis, five key governance functions were identified and attempted to rate the need/demand in each sectoral system in respect to the five governance functions
- Deliverable 4.2 – have selected seven of the 14 systems for more detailed analysis and mapped the broader international/transnational landscape (including gaps/room for improvement). For the internal review process, the WP would like someone from WP3, which would be useful for deliverable 4.2 review
- Deliverable 4.3 report is due in August 2019 – decarbonisation clubs will be discussed on day 2 of the Warsaw meeting
- Deliverable 4.4 – report in August 2019 – concrete evidence on how governance links to domestic barriers in a select number of case study countries. This will build off of WP2 and 3 work
- Would like to explore the dissemination and publication plans for the 4.2 report (May 2018)

i. Discussion

- How can we connect the WPs and build a common story? The deliverables are there but they rely on the researcher contributions to help create the story and piece it together. The common story is important for project outreach options (will be discussed on day 2)
- Identify your main results from your WP, how can this connect to other WPs and what would you like from the other WPs – moments in the agenda where we can discuss these overlaps – particularly the roundtables

3. Breakout Sessions

i. WP4

D4.2 update

- What can the EU / Member states do? Use a bottom-up approach.
- What needs to be done and what is the role of the EU in order to get the Member states getting it done?
- WI is behind on timetable for transport due to unforeseen sickness
- Transport:
 - Sector needs substantial elevated work – many countries have made little way in impacting their emissions from this sector
 - There is some movement towards a decarbonisation target for this sector but implementation remains to be seen
 - Need to track where money is being invested into unsustainable transport and try to shift these funds to more sustainable options
 - There is a lot of money is flowing into transport but not into the right options e.g. building roads creates more options for cars and more emissions
 - There are a plethora of institutions that exist in this sector. Many focus on knowledge and learning, some push for decarbonisation target (approximately 5-6), a number are also pushing for electric vehicles and/or pushing for phase-out traditional vehicles
 - A lot of work by the governance institutions that comes from the IMO, ICAO etc. is not sufficient
- Need to think systematically about the UNFCCC: what they could [and should] do (and not just to focus on the EU). The UNFCCC is not the right place to set up these sectoral divisions but it may be a place where these visions are collected, taken note of, endorsed, to include as an annex to the PA etc.
- An internal review of D4.2 will be done by May 14th 2018. On May 10th, UEA should receive all draft input for combining work of 4.1 and 4.2
- Special issue in Climate Policy on WP4 could be one of the possible ways of engagement or a volume with Cambridge University Press

Task 4.3

Full details of task 4.3 discussed later (see also separate minutes for this agenda item, by WI/VUB-IES)

Task 4.4 (UCT)

- The Chinese team are not present and have had very little response via email to queries about their work. Following the loss of the India team, it is also looking likely that this deliverable will

receive little from China, as they appear not interested in doing analysis of Chinese politics and sharing this with the project

- A chat with Brazil team shows that they are interested in using a bottom-up approach, in order to look at 'nuts and bolts' of domestic political implementation
- Britta will write on international governance and will help work with linking D4.4. to D4.3
- In July 2018 there will be a rough draft results on what the issues of the local politics are for implementation
- Incentives of non-compliance, sanctions, club incentives, strategic advantages to industries that might be relevant, linking international public goods, avoid the costs of regime change and free-riding
- State relations will be at the core e.g. in Brazil. Country analysis is based on policy- what it is and should be. It is not focused on NDCs and global-level policy, but focus more on what is actually happening in general policy in each country
- For example, South Africa not interested in specific climate policy, so nothing has yet been explored.
- We then look at political risk from not implementing certain policy, for example in South Africa where there were downgrading elements in the electricity sector
- The challenge will be to translate this into the overarching 'top-down' approach of the project/WP
- The 2-3 country analyses will all look quite different but will try to align them to one concept and structure, so that we can understand the overall picture
- This could provide basis for where international institutions could help remove some of these policy barriers
- For sectors, can we say anything for the barriers in the sectors in these countries, what is the story we can tell, and what are the expectations of countries for this research to feed into their sectors in order to help overcome barriers and allow for mainstreaming
- The strength of analysis might identify that a sector approach may not help and so may have to look at something else
- South Africa examples:
 - Transformations in a complex: Constructive mining, coal mining, extracting, electricity
 - Transition 1: Establishing the complex
 - Transition 2: Democratic transformation
 - Transition 3: Try to implement (but failed) and transition into a different sector
 - Transition 4: Climate policy and try to partially implement but creates a swing-back
 - Explore links to international level
- Brazil:
 - Want to find a synergy with WP4.4 and 3.5 (technological leadership). However, 3.5 only focuses on successful cases so the team will look at success of wind energy in Brazil

- Power sector reform in Brazil in early 2000s and the new one under discussion (although far from implementation) – focus it down for the role and room of wind energy here
- Cannot discuss success and barriers of wind energy without looking at the neighbouring elements e.g. what favours wind energy is the barriers that large power plants have been facing, such as delays on licensing, conflicts with indigenous populations in the Amazon, corruption indicated in large hydropower plant projects etc. which creates a good case
- Would not exclude extractive processes
- Focus on the barriers to decarbonisation as they stand now

i. WP3

- Each Task leader gave a presentation of preliminary results in order to create a group discussion on potential common points, and interesting insights to further discuss with WP4, and/or in a policy brief format.
- The sector-based approach of the project is good, not just because it facilitates connections between WP3-WP4 but because the main differences between 2C and 1.5C scenarios can be found in 5 sectors.
- A specific discussion took place around the concept of ‘clubs’, and how task 3.3 can inform different configurations. Finance scenarios (different subsidised finance structures: public/int donors, preferential lending, etc) will be run in TIAM and MEWA. Wise points out the importance of the financial constraints and financial flows in the macro-economic results. This will be key to answer ‘who pays for’ the transition.
- For task 3.2, the team urged to agree on a carbon budget for a 1.5C scenario to have sufficient time to model the 1.5C family of scenarios by the deadline. There is choice to be made for deliverables approaching: deliver now without the 1.5scenarios (which have not been publicly available until recently) or to postpone the submission to include them. Every team will assess depending on resources etc with IDDRI. Any delay needs to be discussed with the Project Officer at the EC.
- CGEs models are stopping in 2050, but how do we make sure that the 2050 time horizon is not constraining the picture of the long term transition?
- Task 3.4 will focus on inequalities. The E3ME model will probably not be used, but rather an alternative method. Case studies at national-level will be implemented; some countries that are considered for this are UK, France, Poland, India, Costa Rica. A milestone for this work is approaching.
- We have to look at synergies with COACH H2020 project, which looks at socio-economic implications of climate impacts. Maybe there are options for a joint brief. Michiel has the contacts.
- How are demand-side measures integrated into the narratives? This will be reflected in the development of the 1.5 family of scenarios.

- Task 3.5 will result on which technologies need to be deployed and where. A policy-paper could be developed on this. The RIPPLES added value is the combination of technology-investment-governance.
- How much do we need to integrate CCS into our work on learning curves and innovation. CCS-related data is poor.
- A number of ideas emerged, which were compiled as input for the second day afternoon session.

STAKEHOLDER MEETING [DAY 1]

Andrzej from Climate Strategies opened the Stakeholder Meeting, welcoming the RIPPLES Advisory Board Members and various stakeholders and going through the meeting programme.

1. Policy Expectations

i. Update on the EC Strategic Objectives (Olivia Gippner, DG Clima, European Commission)

- How will transparency rules be created in a post-Paris world? Need to create a system for countries to hold each other accountable
- Currently a five year cycle where ambition is assessed and will look into the future at what ambition expectations there are, stocktaking emissions etc.
- Upcoming dates: 2018 Talanoa Dialogue and the 2023 global stocktake
- The Talanoa Dialogue wants non-state actors' input and relevant research to be included. In the run up to COP24, input by RIPPLES into the process is appreciated
- The focus for 2018 is on Talanoa Dialogue with many events being flagged under this topic. This will not just be about informing the UNFCCC process, but also formulation of NDCs and long-term strategies for implementing them under national priorities. Different country experts will be key in this
- Different outputs from the deliverables should weave together the policy implications that are being discussed at this meeting with consortium, the advisory board and external stakeholders.
- Olivia encourages the RIPPLES team to share the plans for submissions under the Talanoa Dialogue.

ii. Setting the Scene: Where does the Global Community Stand? (Teresa Ribera, IDDRI)

- The consortium reflects the complexity and the challenges of this field: Voices expressing potential solutions to these problem and the potential options on offer
- Q1: What does Paris mean?
 - It is an official response to global challenges and an opportunity to mainstream climate action
 - It has sent a clear message to many players, but how will they help put this in place?

- There is also a different way to understand the future in cooperative ways. It all represents an opportunity that we must not take for granted
- Trust, confidence, excitement – there many positive things for the first time. 2015 meant the global community was responding to challenges in a positive manner
- Key words – implementation, instructing how to implement and provide a new opportunity to test what this means
- Q2: What does the global community need to do?
 - Understand, overcome and provide options for these obstacles in order to survive
 - Build, develop and strengthen the system to increase our capacity to survive
 - In the mainstream world, make use of the opportunity that the Talanoa Dialogue provides and end this process by the end of 2018
 - Main challenge: Identifying the gaps and outlining how to bridge the gaps. Transitions and acceptance of where we want to be need to take place. This applies to governance, decarbonisation goals and the instruments we need to put in place (socio-political, regulation, economic etc.)
- From a group like this, we can expect that the complicated exercise will show and test the main pillars with external groups (so long as there is sound ground to test the solutions and actions), as well as identify and map any bottle-necks and bridges to the future
- There is also lots of good news to stress and underline:
 - The willingness from many players;
 - Some technical solutions that will help the complete exercise we need to put in place;
 - An increased understanding from instrumental communities (e.g. financial/investment, technological) in what it means to learn and develop their own strategy and share into the bigger picture (although we need to clarify what they expect from this process);
 - This project: it is helping to connect the dots to the responses of governance to the tools that we need to develop. We should expect to engage with the external communities via policy dialogues, which will allow us to explore how they react to our main first findings on these questions
- We have identified a good opportunity for the UNFCCC context to share potential findings and we do have time (though not much) to work on this

iii. How to Support Future European Policy (Lola Vallejo, IDDRI)

- Take a broad view of decarbonisation and radicalisation, interrogating the 2 and 1.5 degree targets and then scale to country level, which is useful for implementation
- Must ask countries to have a plan for 2050, with short term goals of 2020 and 2030. However, this may be difficult for countries who may not have the analytical power, but we have to opportunity to help

- Also using a sectoral lens (with the work that WP3 and 4 are undertaking) we can assess what decarbonisation looks like in a few sectors and how adequate the governance is within these sectors. We can then suggest how they could be more effective for impact on decarbonisation
- This bridge is key to explore and it may be useful to have a brief on international transport or energy, highlighting the barriers to the current government system. At the country level, we could explain what the comparative advantages are for certain technologies
- All the work of the project has the potential to inform actual NDCs and/or long-term strategies, including strengthening governance in certain sectors
- We need to decide the best way to feed into what EU countries are doing; looking at how the discussion should be structured around key indicators, questions, and targets. From this, we can land on certain results and/or assumptions
- RIPPLES will be a success if among all the wealth of info we produce, we have some priorities emerge for the next 2-5 years at the international or specific country-level case study analysis
- Now is the time to discuss what is feasible, and where best to go with all this wealth of information

iv. Comment: Ruta Bubniene (Advisory Board Member - *substitute*)

- What does the global community need? A key word is “adequacy”, as the current governance may have a structure but may not be adequate for the required transformation
- Implementation via the existing structure could still be used if still feasible. The UNFCCC has a lot of bodies that took a long time to establish and a wealth of methodologies
- Strengthening and compliance: How to link these two concepts through discussions on Article 15 and Transparency Process
- Synergies across sectors and across mitigation and adaptation need to be more harmonised and integrated. E.g. for sectors, more effective policies that can join together across sectors
- Visibility: How do we make the research results available and visible to public and policy makers? How do we communicate so they are heard and taken into account?
- Champions e.g. cities, policies, case studies (such as the electric vehicles case in Norway), how do we replicate these winning case studies elsewhere?
- Integration is still a big challenge for how to connect up key stakeholder groups e.g. investors
- There is a challenge of the coordination of efforts, what is done needs strengthening e.g. UNDP, GCF, IEA. There are lots of initiatives but they do not always work together so we could be losing a lot of opportunity for many useful synergies

v. Comment: Clare Sierwaski (Advisory Board Member)

- Securing the PA took a lot of effort; it is not a perfect outcome but is what we have. There are no other outcomes expected any time soon so delivering we need to show that:
 - The PA is leading to action and implementation
 - The PA leading to further ambition and the system can lead to further ambition

- This project should help to deliver further on these two points by taking all of this information and translating it into meaningful recommendations that can support the PA goals
- This is not an easy task. Translating research into actionable, policy-based solutions is a difficult challenge but it is something we can achieve
- The first policy brief touched on sectoral and governance structures, we could take any piece of that and take time to turn into a policy recommendation - but what does it mean in practical terms?
- There are many opportunities leading up to 2020 to target the sharing of this information
- The sectoral and governance work first needs refining but it is possible for recommendations

2. Roundtable 1: Institutions and Governance

The presentations begin with the case study on international transport, followed up with the example of the finance sector, and finish on a recap on the particular tasks that WP4 is looking at. Last Hilton presents the ideas under 4.4

i. International governance landscape, sectoral perspective & the role of the EU (Tim Rayner, UEA)

- Current work focuses on mapping the adequacy of international governance landscape for particular sectors. It is building up an extensive database for 14 sectors with the criteria for populating the database with institutions which need to be either international or transnational
- The first take on which institutions are more active on governing these sectors e.g. the power sector is a much higher than energy-intensive industry.
- Seven sectoral systems are focused on as we want to avoid as much overlap as possible between systems and also identify the role of the EU and its institutions
- The analysis steps have identified barriers toward decarbonisation
- We detail what specifically is required under the five governance functions and what features are looked for
- We map across all the functions and work out which institutions are doing what sort of functions (for example of shipping and aviation, this includes some private governance initiatives as well as the public ones). This has allowed for identifying gaps e.g. for R&D, there is little institutional activity
- Orchestration: initiating/guiding/broadening action and governance by non-state actors. This idea is not well explored in the academic or EU policy literature
- There is an issue of not forgetting coordination from bodies such as the UNFCCC, how to include sectors not traditionally part of the UNFCCC and include them in stocktaking / “ratcheting up” and addressing the gaps with rules on externalities. This could also address the earlier issue of R&D

- EU recommendations: Historically in the transport sector the EU has taken a leadership role that has prompted action on the global level. What influence could the EU have on other bodies/institutions e.g. the IMO?

ii. Example of the financial sector (Bianka Kretschmer, Climate Analytics)

- Role of finance and the PA, there is a clear objective to making all finance flows consistent with low emissions pathways. There is a clear signal towards the finance sector to align investments to well below 2 degrees and 1.5 degrees pathways
- The task at hand is to translate what this means and what “*ripple effect*” might take place
- We can treat finance in several ways:
 - Cross-cutting – plays a role in all sectors but treated as a separate sector that needs decarbonising
 - Beyond its own sector – acts as a low carbon mechanism for other sectors, which creates a need for a broader financial system reform
- Reforming is not a new insight. Since Paris, a number of studies and enquires that point to this need to address the current barriers e.g. “*Short-term-ism*” for profit maximisation that create long term climate risks tend not to be incorporated
- A key issue is how financial sector investment can support the needed transformation. For the five governance functions, the demands are very high.
- If there are clear signals in the other sectors e.g. coal phase out targets, phase of combustion engines – this would send a signal to the required finance flows
- Need to set norms and benchmark metrics for how to move away from those non Paris-compatible investments. Setting carbon prices would also be a strong signal
- There are growing momentums and growing divestment movements such as the Green Climate Fund but also the broader financial landscape (e.g. the World Bank is no longer financing upstream oil and gas)
- However there is a lack of coherent, systemic approaches for moving away from high carbon investments
- The G20 has some financial stability. There are rules for how to report on climate risks across portfolios and how they intend to align long term investment strategies with climate scenarios. However, what has been done so far is not enough for global investment
- There is a need more focus on the “brown side” of investment going forward
- Tim Rayner: Electricity is the sector with the most governance instances to meet demand, others are lagging behind.

iii. Challenges from a national perspective [South Africa] (Hilton Trollip, UCT)

- Brazil, China and South Africa are the countries being covered under this task (4.4)
- The big picture will eventually hit the ground as companies are continuing to invest in e.g. big new power stations or coal mines

- These investment processes are what need to happen to transitions in countries (specifically here for developing countries)
- You can have clear state strategies (e.g. climate action plans) and national structures, but these institutions are only as good as their management and enforcement.
- What does this look like in developing countries? Often it is only included via traditional economies e.g. coal mining, as it is easier to make money using political connections via coal mines than via electricity auctions
- Looking at peer reviewed literature in these countries, there is little literature on transitions in these countries. International literature calls for more in-depth study of these transitions but often it isn't happening, has gotten stuck or going is backwards
- Why? It is not popular to study these politics, as they are not going to get money for studying from the government or industry in these countries
- This study is looking at the few, recent transitions within the politics. Some results:
 - Looking at the nuts and bolts at implementing transitions is like “opening a can of worms”
 - We are doing it because want we transitions to start in South Africa
 - By identifying the issues, they can feed into what international governance wants and identify how international governance might help
 - By looking at disclosure of finance risk e.g. of a coal mine in Africa, it might make it more difficult for this to happen
 - The general thinking in international literature found instances of holding back of advancing transitions
- The next step will be to take this analysis and feed into the big picture

iv. Comment: Gilberto Arias (Advisory Board Member)

- The concept of politics of implementation is an issue everywhere, particularly for island governments E.g. the Dominican Republic subsidised electricity generation approx. \$1 billion per year as they don't have the capacity to implement its own generation. We have to co-opt these interests.
- Do we want more regulations? Is this what the public wants? In the finance sector, there is resistance to creating more regulations and they will react more to changing investment than more regulations
- The cost of governance and how complex each sector is e.g. for aviation there is only approximately six manufacturers but compared to shipping, they have thousands of manufacturers. How to deal with a global price/cost of this?
- Cycles: there is a need to capture public opinion and often in certain areas, public opinion is moving faster than policy. We should identify the co-benefits so that the entrenched interest has a direction to go in. Without this, will be very expensive to regulate these sectors

v. Comment: Pierre Cannet (Advisory Board Member)

- Ambition and implementation are issues that need to be addressed. We see this in the presentations made. On top of the fora already listed, what new structures are being developed to address ambition and implementation?
- Sectoral work is also being done in inter-fora spaces (e.g. the 1.5 summit held in Paris in 2017)
- There are new commitments being made and new initiatives being established. How does it add to implementation and ambition, and how do we track this?
- There is growing momentum but remains unclear how this will be institutionalised and how transparency will look. We also need to figure out how to include industry ambition for these two points
- This year, we should be able to get EU ambition on the table without the European Parliament, which has been a key institution for Europe to open the discussion
- What are these hooks and governance groups that may impact/implement the NDCs and targets?

vi. Discussion

- Clare Sierwaski:
 - Can any more be done with the mapping out actors in each sectors e.g. any recommendations for them?
 - For the IMO, idea of highlighting them as an orchestrator case study is a good idea - demonstrating how they can use this role, coordinate with UNFCCC, EU, EC and other bodies for progress being made. It would lead to a lot of interesting work and potential action
 - Finance needs more policy and regulatory action. Some policy recommendations should come out of this e.g. phasing out public finance for coal/other high carbon finance and sectors and learn more about what we need to do under the financial sector
 - The work in South Africa and the mapping its politics shows many developing countries lack a rigorous mapping of what needs they need for implementation, and how can we share and replicate this strategy across developing countries. For example, a short guide could create the right political conditions within a developing countries
- Timur Gül:
 - Steps forward are shown when comparing the mapping activity. Can we conclude something from the governance structures identified?
 - Cross-ministry/agency structures is striking e.g. connecting up energy and environment ministries is a greater leap required in order to bridge gaps within governments and so better coordination is required
 - Finance: there are scenarios requested of the IEA and lots of different finance initiatives. There is still a huge degree of work that needs to be done and coordinating efforts is a huge challenge ahead
- Hans van der Loo:

- Developing strategies are not difficult but the implementation is. A transition strategy is needed.
- “Be careful of what you measure, as you might get it” in the context that regulation can give investment certainty, so long as there is consistency in the implementation of the regulation by e.g. governments
- The Integrated Reporting Institute (IRI) create a dashboard of what is going on around the globe and try to create one picture
- How best to satisfy the needs of representation of EU Members within the EU without compromising on certain issues
- Sebastian Oberthür:
 - Could identify what could grow and complement each other to create a diverse picture across sectoral system. Is there a way of grouping across sectors?
 - There is added value of the sectoral perspective. From the power sector perspective, what else do we need? What initiatives are being done and what is missing? Perhaps something is needed to bridge the gap
 - The commission is thinking about what we need but it needs to be done in a systematic way so there may be need for some internal restructuring. There will be repercussions if this idea is taken seriously
 - What role could the UNFCCC take in coordinating this?
 - There is a natural tendency to think about building up investment for renewables, and solutions and targets. Sometimes there needs to be attention on moving away from high carbon with a target set. This links to the social and political issues
- Marta Torres-Gunfaus: How different would the picture look if the database included institutions that don't specifically mention climate but do have roles and mention areas of moving towards decarbonisation? It would quintuple the investments needs in order to complete this type of analysis and so there are some that unfortunately haven't been captured
- Clare Sierwaski: What are the highest impact areas to focus on for mitigation? For sectors, for wedges, for finance etc. and can this be easily identified? We could then connect to the relevant institutions to figure out solutions and push agenda in key forums
- Hilton: Looking back on the biggest institutional impact on South Africa in environmental and climate policy, they will be the ratings companies as they have changed the trajectory of policies
- What international institutions are also the main barriers? Talking to outside experts also to review the work being done, hopefully will identify if anything has been overlooked

vii. Concluding Remarks

- There is a lot of interest in the work that is emerging and already some recommendations geared to the overview of different sectors
- The main message shows that there is an appetite for explicit policy recommendations and who should be a key audience for this. This needs to be reflected in the outreach of the project

- Priority areas for impact: Work has been systematic in an academic way to give legitimacy for providing opportunity for identifying impact areas, sectors and recommendations. We can go deeper now to priority areas

3. Roundtable 2: Technology Development

i. The Importance of Technology Learning (Silvana Mima, CNRS)

- This is exploring aspects of deploying clean technologies across sectors. There is an increased level of complexity which identified new questions that cannot calculate the impact e.g. more R&D may not have more results
- The process is complex; there are many factors, actors, scenarios, and the pathways change with learning, prices of materials etc. Do we factor in more variables to include this complexity? There is also the issue of trying to find the accurate data
- Past experience show learning paths are not the same everywhere. Doubling capacities can impact the investment costs, creating different rates of learning
- Given the complexity, the project has different ways to try and address this, using the different combined approaches
- Different possibilities to analyse, play with different parameters and also different environmental situations e.g. test different clean technologies as to whether or not to any more R&D or higher R&D. We analyse how the learning curves change and its impact on the mix of different technologies
- If we find a solution, we cannot implement the changes right away and this needs to be taken into account
- Try to understand the factor in the “breakthroughs” in learning curves e.g. alleviate/decrease the floor cost can translate a kind of breakthrough in technologies –asbreaks the limit from the engineers who said the costs cannot go past a certain level
- Low energy intensity environment – need to understand what the new learning is in this new space

ii. Countries Comparative Advantages to Deploy Low-Carbon Technologies (Georg Zachmann, Bruegel)

- Innovation is important for decarbonisation. Is it best to go for a broad portfolio of options and don't think of a breakthrough, or focus down on a small few technologies and hope for a breakthrough for technology for decarbonisation
- Not all countries are strong in all technologies, as certain countries are stronger in some technologies than others. This could build national strength towards global decarbonisation
- Need to assess potential through a number of avenues that we have e.g. Germany is strong in research in electric vehicles, where as China is strong in PV solar. This creates regional clusters and powerhouses

- Can look into specialisation in nearby technologies e.g. where a country is strong in one technology and close to a country that is strong in a technology you desire, it will strengthen the process to decarbonisation e.g. Germany semiconductors, where they didn't have the technology
- Technology links can also be created through various channels e.g. via universities
- Take the linkages found empirically, so in regions where electric vehicles are strong, usually then this makes the region good in patenting part of the technologies and could assist with what other countries could do in the future
- The research used a regression model for predicting a country's potential strengths in the future for approximately 35 countries. If more than 0.5, it means the country is more specialised in the technology than the average, less than 0.5 means that they are less specialised
- There is a need for low carbon technology to get us beyond 2 degrees, a need for specialisation so that countries can play to their strength. We can present a first way that this specialisation can go, and then there is a need for more regional targeting.

iii. The Specific Case for Wind Energy in Brazil (Carolina Grottera, COPPETEC)

- Brazil is advanced in biofuels but there is still room for advanced biofuels e.g. sugarcane, other raw materials
- This started with feed-in tariffs for wind energy and some other sources. It seemed high for its price but they have achieved its goal of installing wind capacity
- During the 2008/09 financial crisis, traditional countries that had been demanding equipment for materials were now demanding less. This created excess in materials and resources in China that landed in Brazil
- The Brazilian government also created auctions for wind energy, which was the beginning of power sector bids under the power sector reform
- Brazil's national development bank organised special financing schemes for energy sources, providing companies the possibility to get favourable conditions, and so created needs to comply to a certain standards for wind energy
- Brazil's wind potential grew from 104 GW (2001) to 500 GW wind potential (2016) for on-shore wind. They increased the size of turbines so capacity grew from 20% to >40%, which is higher than the global average
- For the future prospects for wind energy, Brazil must rely on national development bank conditions for financing. They plan to not finance coal projects any further and people saw this as positive for wind energy. Unfortunately the bank has stepped back which displays some vested interests
- Success will depend on financing conditions and auctioning conditions, investment in labour, research
- Aspects that favour wind energy: Large hydropower is facing a variety of issues due high transmission costs, delays on environmental licensing, and conflicts with indigenous

communities (who generally think that these large projects has huge corruption in Brazil e.g. the Belo Monte Dam)

- Brazil also has large offshore potential and estimates x12 higher than on-shore wind. Here, we can see synergies where gas plants are being decommissioned so should investments should be made in offshore projects now
- Marta: Technology development critical for RIPPLES as it is input into all WPs

iv. Comment: Timur Gül (Advisory Board Member)

- Low carbon pathways workshops talk about what the consumer will look like in 2050 and it is important to think along these lines
- Speaking to decision-makers and policymakers, they need to be on board with the long term ambition and they want to see options they can grasp. This is where this research is very important and useful
- Learning is a very complex item, the two-factor learning curve used is very difficult. Would learning clusters be useful? Complexity when it comes to learning is not always best and not always worth the effort
- Flow learning is good to understand innovation and is helpful for learning curves. Engineering views are often based of what we know today, not what we know in the future, and playing with these parameters are very useful
- Reflection on costs may not be the main parameter if countries do decide to ratchet up ambition, so what is it that brings the cost down earlier? Cumulative capacity building and installation does bring down the costs but what are the other external factors?
- For example, in Germany, it is useful to look not only at positive narrative and their advantages, but also the negative one e.g. Germany is based on mechanical/combustion engines and China will not be advancing in that space which will eventually put Germany at a disadvantage
- Do all countries need to do everything or do they need to focus? In pathways, everyone shouldn't do everything but also should be predetermined as to where they focus
- For the storyline: what have we learned through past experiences? What is the opportunity space? E.g. In China's 2025 initiative, there is a clear opportunity space for clean transport, so we need to look at how to build the opportunity space and how significant this will be
- Georg: Institutional issues may hold back certain technologies and should be further looked into. Exports have been looked into for technological advantages and this narrative needs strengthening. Industrial policy is an area where the public intervention analysis is not yet complete. We need to also look at what horizontal policy interventions are helpful for picking "winners" and identify the messages in this space

v. Comment: Hans van der Loo (Advisory Board Member)

- An event (Reimagine Europa) quoted that you need to "*understand the future better by looking back*", meaning that you need a lot of systemic thinking

- This area is a huge blind-spot among policy makers and researchers
- Batteries, supercharge construction etc. needs massive amounts of copper. Learning curves do go down over time but not for the extractive industry, they actually they go up
- The challenge for society will be “*low energy intensity*”. We will need efficiency gains to fight density loss. It’s not presence of material but also the density of available material
- Your scenarios need 3 criteria: Internally consistent, Realistic, and to have a plausible link between the scenario in the future and the present
- In practical terms, policy must be physically possible as physics will always outweigh policy and research
- Raw materials is an exception to the traditional cost curves
- Massive offshoring of emission in the EU to China, so have we really reduced emissions? There has been some decoupling of emissions but there is a need for real carbon statistics
- Germany is a technological powerhouse due to networks but China has boomed due to low compliance costs. Why is energy so cheap in China? Because it is dirty
- The biggest blind-spot is storage, and its capacity and performance is not the same

vi. Discussion

- Andrzej Kraszewski:
 - It is not politicians that need influencing, as they change regularly through elections and are only doing what is good for a four year perspective. We need to act on the people as they create demand on politics. This is not just how it works in Poland but all over the world
 - It is a cycle: You act a bit on society and create a little bit of demand, this creates a little bit of fulfilment and so on around the circle, building up the required change
- Britta Rennkamp:
 - For the renewable energy programme in South Africa 5 years ago, we studied the local content requirements and Brazilian programme. We were not just looking into introducing and diffusing technology, but how to make the programme work. Policy creates a provision of people to activate the use of this technology. It is also important what people think of the technology.
- Gilberto Arias: Elements of innovation will unlock new developments e.g. virtual power plants are made possible with battery technology

STAKEHOLDER MEETING [DAY 2]

1. Policy impact and Outreach Strategy

Alexandra Carr (Climate Strategies) gives a presentation on the status of the Outreach Plan, and puts forward two questions to trigger the discussion about the policy windows and key topics for RIPPLES policy briefs and dialogues.

i. Discussion

- Claire Sierawski:

- Consider whether it is relevant/possible to use the same materials at different gatherings
- Global climate summit/climate week – good opportunities to exploit
- Sectoral focus might be an interesting angle / IMO case study
- Solutions focused work – make sure to present concrete solutions
- Pierre Cannet:
 - Make sure to assess what impact consortium wants to have and on which stakeholders/ use different fora to reach different audiences
 - Select what hooks you might want to use – e.g. publication of the Decarbonisation Roadmap, Clean Energy Package – might be good opportunities to exploit and link with the outcomes of Ripples
 - IPCC report might be a good opportunity to discuss work on implementation and future outlooks
 - Worth making a structure: who, what audience, what information, what angle
- Sebastian Oberthür:
 - Reassess how climate governance is being understood, sectoral perspective
 - Might be worth considering not to target particular groups/ large audiences, but to engage more with stakeholders in the form of bilateral meetings, more targeted approach – EC representatives/ UNFCCC secretariat
- Andrzej Kraszewski:
 - Commenting on CEE context
 - Polish situation is specific in the context of current politics, socio-economic situation – must be careful, when translating the global context in to the local actions
- Daria Kulczycka:
 - Local issues are prioritised
 - Lewiatan and COP: business becomes an important part of the dialogue – trade unions, different actors are given a chance to present their perspective, hence Lewiatan is even more involved in COP activities
 - Council on the social dialogue
- Ruta Bubniene:
 - UNFCCC – happy to facilitate the dissemination process; target audience and message/narrative have to be determined
 - IMO – challenging topic for stakeholders, actionable recommendations would be of interest – outreach potential
 - Secretariat is open for suggestions that would show opportunities to exploit synergies/ interlinkages
- Aleksander Śniegocki:
 - Increasing ambition and gaining consensus on the European level
 - How increasing ambitions can be done in consistent way internally
 - Whether the same processes should be revisited or new themes for discussion should be investigated/ discussion on other areas of the EU climate policy that are not playing a key role as of yet (e.g. finance etc.)
- Claire Sierawski:

- Ambition and implementation// three areas seem to be the most important based on discussions:
 - Ambition – sectoral analysis would be a good and fairly new approach / with e.g. of IMO case study
 - Finance – impact of eliminating fossil fuels, public and private finance
 - Implementation – South Africa as a case study, guide to / politics of implementation
- Sebastian Oberthur:
 - Sectoral approach – how could Europe contribute by pushing XYZ initiatives
 - Wary, all dissemination work can't be focused on WP4
- Pierre Cannet:
 - Just transition – socio/economic aspects should be stressed especially in the context of COP being held in PL
 - Models/numbers on Just Transition – would be an added value
- Lukas Hermwille: How many policy briefs need to be published within Ripples: it is not specified, but better less and have time to communicate
- Marta Torres-Gunfaus:
 - Just transition per se is not a strength of RIPPLES, but the industrial side of it would be more applicable and could provide additional angle (+ Cambridge University could provide additional insights)
 - How JT is applicable for the Governance WP and how we can link the work with the CEE focus?
- Sebastian Oberthür: Work has an international focus and thus can be translated into the regional/national perspective, however the national perspective itself is out of scope
- Gabriel Anandarajah:
 - CEE focus can be easily integrated in the work on the energy sector
 - Modelling financial flows/frictions also gives a perspective on developing countries
- Silvana Mima:
 - Energy Security is an important part of modelling exercise, however results are not offering specific answers
 - Would be important to look at the decarbonisation process from the sectoral point of view rather than at the traditional electricity dimension // sectoral sustainable development
- Claire Sierawski:
 - 1.5 report is coming up – might be a good moment to offer insights on sectoral solutions
 - JT – given that just transition is not the main focus of Ripples, might not be the best idea to push forward in this direction
- Hilton Trollip:
 - National level focus – translating national scenarios into action
 - Policy brief has to speak to national level and has to offer specific solutions
 - Need to go away from vague, broad claims to more specific arguments
- Pierre Cannet

- EC – stakeholders lack information on what current actions mean – especially on the most recent pledges and new developments
- To show that realising the ambition is feasible without that much effort
- Andrzej Blachowicz:
 - Objective analytical assessment can be done on current actions – showing feasibility of implementation
- Claire Sierawski:
 - Need to show linkages between pledges and strategies
 - Sectoral work allows also to bring other (not yet exploited) stakeholders, business, could be helpful in building dialogue between governments + industry
- Marta: Does the modelling exercise address recent policies?
 - Could but these are not yet being addressed
 - Models on SA have been updated and involve new policies
 - Ambition / implementation – showing a case study
- Ruta Bubniene: UN High level forum on accelerating SDG 7 – could be provide guidance on what is pertinent (15 policy briefs)
- Marta
 - It seems the Policy Dialogue should be moved closer to COP in Poland
 - Among others the focus will be placed on the CEE aspect and how different areas of climate policy can be addressed – specifically the measures/ dimensions of the EU climate policy action that are not being currently addressed or a main focus of EU

2. Project Narratives: First session

i. Introduction of the role of narratives (Henri Waisman, IDDRI)

- In RIPPLES we are bound to specific tasks and deliverables, but no in-depth harmonisation across them all exist. Still, in this highly competitive bidding process, we won because the group (in its diversity) was the best place to provide direct policy relevant messages to the international climate policy for 2018/2019 landscape
- This consortium is trying to bring experts from different fields who can bring socio-economic analysis, plus the political and governance aspects of the transition (if we manage to tell a consistent story of the transition)
- Policy briefs will provide the messaging from cross-cutting analysis and the narrative needs to support this
- What are the common narratives? There may be different interpretations
- Not expected to provide different deliverables but cross-cutting through them to bring together insights from different parts of the project
- Approach: not to change the details but get the teams developing their work while keeping in mind the narratives we would like to support and how their work can fit into the narrative. Need to also make best of what has already been produced
- Agree upfront the nature of the policy questions we want to address

ii. Connecting quantitative and legal aspects of narratives (Michiel Schaeffer, Climate Analytics)

- Well below 2 degrees suggests they want to go beyond a 66% chance, so how to deal with this?
- There are continuing needs for the EU to align narratives and discussion with other countries. Need to look at articles 2 and 4 of the PA
- We have artificially distinguished between two targets. There are converging views from both sides so we may need to frame it differently and not make the two targets separate – pursuing current efforts and well below 2C, working on the PA as one target/goal

iii. Discussion

- Wolfgang: For WP4 is difficult to implement narratives if they require distinct recommendations for different levels of ambition. Our assessment looks at ways to generally increase ambition. Also important to note that international governance links with aggregated targets, but not with policies and measures.
- Hilton: Perhaps we just have to ask ourselves specific questions, ie what does it mean for governance to phase out coal by 2030?
- Grubb: When we talk different levels of ambition, we must include resource transfers too (to address the equity dimension)
- Clare Sierwaski: Should identify high impact efforts that are sectorally based. Identify the efforts, highlight what governance is needed and move the dial on ambition. We are often describing similar things but just in different narratives, so we need try to connect these messages for coordinated narrative – no need to focus on ‘what does it mean below2 vs 1.5C’.
- Lola: For the narrative, there are different ways of “*cutting the cake*”. We are just trying to rephrase the same work that we have discussed earlier. Having the same discussion through different lens for higher policy impact
- Emerging narrative themes:
 - How do we increase ambition in the short term (and how do we do better)?
 - What are the cross-cutting sectors/actors?
 - How much do we need to get to and how do we put it in practice through governance systems?
 - What are the co-benefits?
 - What are the needs from finance?
- Lukas: The ‘adequacy’ language should be included in the narratives, as it has been the focus of RPPLES. We are looking at two dimensions of adequacy: effectiveness and normative.
- Sebastian: We seem to need a lot of CO2 removal which hasn’t been look at much. What are the implications of this for governance? Do we need to focus on CCS?

3. Project Narratives: Second session

**i. Defining a second family of narratives on different levels of climate ambition/action
(Michael Grubb, UCL)**

- Appointing this consortium was controversial and risky in the work it wanted to achieve
- This presentation emerged across a few discussions, it has not been part of the research consortium at all yet. It is introducing the discussion to both consortium and Advisory Board.
- This presentation and discussion may not advise the research today, so we need to make sure that in response to this, we hear mainly from the Advisory Board member and the consortium to listen (as the consortium can discuss at later opportunities)
- What is the structure for thinking about different levels on ambition? Ambition is different than will.
- Multi/pluri-lateral arrangement – located within the context of the PA. If you read the PA text, it seems to encourage to move from NDC ambition towards to 1.5 degree aims
- So how can countries move towards the PA goals, moving from a loose coalition framing to “cooperation”. International relation scholars draw a clear difference between the two. Cooperation is clear and has distinctive rules between the actors that are working together
- To have a structured 2nd narrative, there needs to be progressive multilateral arrangements. It can no longer be built on words and theories, more substance emerging (e.g. from the greenWIN project)
- We assume that existing governance structures are not that well aligned
- “Credible clubs”, we don’t need enduring participation from the US and we need to it be able to resist US exceptionalism. We can see this emerging from non-state actors in the US e.g. the Californian government
- World Bank’s Carbon Pricing Leadership Coalition (CPLC) – no movement towards cooperation yet
- RIPPLES should be inspired by (but not constrained by) the greenWIN analysis – the dynamics may not all be useful and/or applicable
- For the 2nd narrative, we would like to answer... why does it make sense to be the early mover, why won’t you lose out being the first mover and what are the benefits you will gain?
- It is time to rephrase the quantitative view of emissions levels that have tangible implications
- What are the pieces from each of the WP that can inform the configuration of ‘clubs’? For WP4, we ask ourselves: sector-level vs nat-level; what kind of governance arrangements; a Club without Washington?; multi-level governance?. For WP3, my question is whether can we structure the models according to regions/countries in coalition arrangements?

ii. Discussion

- Pierre Cannet:
 - The value of a narrative that highlights the role of non-state actors e.g. the soft powers of these coalitions although they are not yet institutionalised (e.g. GCAS). There are a lot of

other initiatives that have great momentum behind them that can also be mentioned in this presentation: The Paris process on mobility, women's business etc.

- Stakeholders involved tend to focus on parties and countries in this presentation, but there are others – e.g. other US stakeholders who can bring important elements to the process. They are stakeholder driven but not necessarily party driven
- Messages are adapted and translated at the regional and domestic level via decarbonisation roadmaps, quick wins, carbon pricing etc. This then build a bottom-up approach
- How can we use the narrative to assess what we already have from these commitments and initiatives from wider stakeholders?
- Andrzej Kraszewski:
 - The research group and Advisory Board are more optimistic than the wider stakeholder group
 - How can we transfer targets to the society and what is the outcome of international efforts to find agreements. Free-riders take this for granted this and Poland will be the first
 - If we cannot transfer knowledge to the citizen, we will achieve nothing. We should address how we will make this possible. The media is very important in this as they are often independent of politicians and we should work with the media in the regions to transfer this knowledge
 - Take a sectoral approach mixed with regional approach. Regions suffer the paradigm of competition which must be overcome. This can also be done through the governments
 - Coalition and cooperation is required. We have to address the problem of competition and then decide how we can move from coalition to cooperation
 - Is it true that NDCs can rely on the call from the PA on e.g. tech development?
- Clare Sierwaski:
 - Both regional and sectoral approaches can make a lot of sense depending on the area you are focusing on. Coalitions can make sense and be impactful
 - Need to have something substantial under coalitions, which is why sectoral approach and sectorally-based actions have impact and create a new coalition of actors
 - E.g. The Climate and Clean Air Coalition grew from 10 to 50+ countries. It is an interesting case study as started with a small sectoral focus but was not impactful as it didn't have the best or most impactful actors in those sectors. You need the content of the coalition and the right players to make an impact
 - There will always be unequal ambition which creates different dynamics e.g. renewables shows where implementation overtakes ambition. You should focus on these case studies and how can we create this ambition in other spaces, fields, and sectors
 - We can't spend all efforts winning over Poland as this may decrease ambition in the long-run. So how do we show Poland that they will be left behind if they don't get on board. This is perhaps a controversial approach but more impactful in the long-run
 - Move away from the term 'clubs' to "*climate collaborative operatives*"

- Gilberto Arias:
 - Do you want to be a winner or a loser under the PA?
 - So many initiatives have sprung up all over the map on climate action, mainly since Lima
 - A lot is going on in many areas and there is now more money outside the UNFCCC than inside. We should look at how the world is moving and how we can benefit from this. Sectoral 'clubs' can then work on the governance of these.
 - One popular concept to be careful of is carbon pricing
 - The Pacific Alliance has started carbon pricing among themselves. It is not going to be compatible as the countries will focus on different sources that will have different impacts, so they need to factor in regional dimensions into these "*clubs*" or "*collaborations*"
 - The politics of coalitions: What are their rules and how to they play in?
 - Can we have a "*one planet*" cooperative arrangement?
- Gabriel: modelers could look at clubs made around sectors (steel sector, RE, etc)
- Sebastian: the set of narratives around clubs fits well with WP4 – it is actually what we call 'polycentric approach'

INTERNAL PROJECT MEETING

1. Conclusions and Next Steps (Marta Torres-Gunfaus, IDDRI)

- A sectoral lens has added value and benefits across all WPs
- How to connect the global with local when we don't have all models for all teams/case studies, but we can assess the geo-political stance and use key messages. What's our entry point to inform the EU 2050 Roadmap? And what are the timing implications for this?
- How much do we want to engage with non-governmental initiatives?
- The insights from political economy analysis also add value in RIPPLES – it is not just a developing countries issue, but applies in CEE and many countries in the North struggling with implementation
- Policy briefs draft list:
 - Macro-economic implications of low-carbon technologies and industrial policy development
 - Finance and investment
 - Implications for ambitious climate policy action and enabling condition (i.e. governance) – sectoral level
 - EU as an orchestrator – which sectors and why?
 - Addressing political economy barriers to increase ambition in developing countries + the EU
- WP5 will come up with a portfolio of policy briefs to be discussed and will contact the research teams on the themes
- Mid-way reporting is coming



- The project also needs to think about a proposal for Talanoa Dialogue input
- Policy Dialogue 1 – potentially for November or December but will be very difficult to engage with Polish stakeholders due to COP24 being in Poland. Perhaps January or February may be more feasible, but this will be discussed at a later date.
- A side-event at COP24 will be convened in any case