

# **Research program**

**24 March 2012**



CDM Policy Dialogue

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## **Introduction**

This research program sets out the research activities proposed to be carried out under the CDM Policy Dialogue. The research program is intended to generate information and input to the Policy Dialogue, in addition to the discussions and stakeholder interactions that the high-level Panel has decided to engage in.

This version of the CDM Policy Dialogue research program is based on several inputs:

1. Decisions taken by the high-level Panel at its first meeting (Bonn 14-15 February 2012) regarding the focus of the research.
2. Three initial draft research briefs (29-02-2012), prepared on basis of the discussions in the Panel
3. Comments to the research briefs provided by Panel members and their advisers.
4. A revised structure of research questions, proposed by the secretariat on request of the Research Working Group (07-03-2012).
5. Further directions from the Research Working Group (12-03-2012) regarding the focus and proposed structure of the final research program.
6. Comments by Panel members and advisers on the revised structure of questions and on the directions provided by the Research Working Group (15-03-2012).

In preparing this version of the research program, emphasis has been put on developing a concise program that responds to the needs of the Panel to receive information timely and in a format that allows for considered deliberations and analysis by the Panel. This implies that the format of the output will be produced either as neutral analysis of facts, or as representative options that the Panel can consider. A third aspect of the program has been to define research activities and methodologies that can realistically be carried out within the time frame and budget of the Policy Dialogue. The fourth aspect taken into account is the need for balance between on one hand the independence of the Panel, and on the other hand resources available for conducting the research, consisting of the time of Senior Expert Advisers (SEA), external expertise and secretariat staff. This is reflected in an effort to use secretariat staff and SEAs as much as possible while restricting the involvement of secretariat staff to research activities involving factual data gathering and analysis.

## **Background**

The high-level Panel of the CDM Policy Dialogue was established in late 2011 by the CDM Executive Board to carry out the Policy Dialogue as a high-level independent process, to take stock of lessons learned in CDM, resulting in recommendations on how to best position CDM for a continued strong role in the post-2012 carbon markets. The mandate for the Panel is wide-ranging, allowing the Panel to decide itself what issues and aspects of CDM it wishes to consider, and what methods to use to address them. The recommendations are to be presented to the 69<sup>th</sup> meeting of the CDM Executive Board in September 2012, and will also be made publicly available. The recommendations are expected to influence the future design and operation of the CDM, as well as other new market based mechanisms.

The high-level Panel convened for the first time on 14-15 February 2012 in Bonn, Germany. At this meeting, the Panel adopted the approach that the Panel will follow to allow it to generate the report and recommendations as expected. The three main elements of this approach consist of a research program (herein presented), a stakeholder engagement plan, and a process for drafting the final report. The research program was set to address three specific aspects of the CDM: 1) Impact of the CDM, 2) Governance and efficiency of the CDM, and 3) Future context of the CDM. In addition, one of the panel members were invited to develop a supporting analysis of how the conditions for CDM have evolved since the inception of the CDM.

Given the compressed nature of the Panel's deliberations, it was also decided that research should be commissioned to fill the Panel's two primary needs: i) to assist with the preparation of the Panel's report through the contribution of impartial and informed background and analysis, and ii) to develop a broad range of concrete options and solutions for the Panel to consider at its meetings.

This research program describes in more detail the research areas, proposed methodologies and proposed resources allocation to implement the program.

## **Approach**

The rationale and expectations of the CDM Policy Dialogue research program have been outline above. This section addresses the proposed approach for how to meet these expectations within time and resources available.

It is understood that research and stakeholder interactions are closely linked in the Policy Dialogue. While the schedule for individual face-to-face stakeholder meetings is not identified in this program, but is developed separately, various modes of communication with stakeholders (calls for input, interviews, surveys, meetings) are here indicated as research activities. Research may also include reviews of existing studies and reports, as well as new analysis of existing data, or modeling of trends into the future under different scenarios. The research will in some cases result in objective data, and in other cases in summaries of views or options. In the latter case, the output will be presented to the Panel as a range of options and solutions.

Among the many research questions proposed in previous documents (refer to introduction above), it is clear that there is a need to limit the number of issues that the research seeks to address, and that research questions therefore need to be linked and prioritized. The following approach has been adopted to this end when preparing this research program:

For each of the previously identified research questions, the following criteria need to apply, to allow the research question to be included in the research program:

- *The question has been identified in the submission to the Call for Input as a priority issue for the Policy Dialogue to address, or has been highlighted by Panel members as an important issue to address.*
- *The question fits within one of the three research areas decided by the Panel (Impact, Governance, Context).*

- *Researching the question is likely to result in information that the Panel needs to develop recommendations.*
- *Researching the question is likely to generate information that is reliable, either based on verifiable facts, or on clearly defined assumptions.*
- *The research can be conducted within a reasonable time frame and budget (reasonable is here seen as the percentage of the overall research budget available)*

In addition to this “litmus test” of the questions, the overall research program has also been developed with an eye to ensure that the accumulated output from the research questions, in combination with stakeholder interactions, allows the Panel to meet its mandate, i.e. to recommend how the CDM can best be positioned and made “fit for future” in post-2012 markets.

## **Research areas**

In this section the three defined research areas, and the proposed research activities within each area, are elaborated, as is the supporting analysis paper. The background and rationale for each question which has been described in earlier papers are here only summarized so as to keep the program concise. In each area a number of questions for the Panel are defined. Under each question the supporting research questions, methodologies and proposed researcher are defined, in the following format:

### **X. Question that the Panel may want to make a recommendation about**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
Research that can be conducted to provide relevant information to the Panel	Description of HOW the research can be generated	Indication of who will carry out the research

### **Impact of the CDM**

Research in this area reviews the basic purpose and rationale for CDM to exist in the first place, as defined by the Kyoto Protocol:

1. To assist Annex I countries to achieve their mitigation targets (by making available cost effective mitigation opportunities in non-Annex I countries).
2. To support sustainable development in non-Annex I countries.

It also addresses other aspects that have emerged as relevant impact aspects of CDM, such as energy security, regional distribution, technology transfer and private sector investments.

The Impact research area is focused on the intention and actual impact of CDM, and the findings concern whether CDM has fulfilled the role it was intended to have and if this role can be strengthened.

In this area, the Panel may wish to make recommendations about the following eight issues, each of them attracting much attention in the public debate.

### 1. Should the CDM contribute to net mitigation of greenhouse gas emissions?

Research questions	Methodology	Owners
What is the expected net emissions impact of the CDM?	Factual study: CERs issued; CERs projected; used CERs (and where); cancelled/unused CERs. Incl regional breakdown	[a] with support from secretariat
	Analysis: non-additional but credited mitigation; additional but non-credited mitigation; mitigation achieved post-crediting period.	[a]
What options exist to improve the net emissions impact of the CDM? What are their respective strengths/weaknesses?	Summary of options: (a) standardized baselines; (b) discount factors; (c) conservative assumptions, including the length of crediting periods.	Secretariat

### 2. Does the CDM allow annex I parties to increase their mitigation ambition by reducing mitigation costs?

Research questions	Methodology	Owners
What has been the CDM's impact on minimizing costs to date?	Factual study.	[b]
What impact has the availability of the CDM had on current mitigation ambition among parties?	Analytical paper based on a survey of national governments and stakeholder consultations.	Lead Researcher

### 3. Has the CDM contributed to sustainable development? Should it?

Research questions	Methodology	Owners
How is a CDM project's contribution to sustainable development currently assessed?	Factual outline of current requirements and procedures, including overview of definitions of sustainable development.	Secretariat
What criteria do host countries currently use to determine whether a CDM project contributes to its sustainable development?	Survey of national governments; third-party assessment, stakeholder consultations.	SEA
What concerns have been raised about the sustainable development impact of the CDM? How could these be addressed?	Call for inputs; stakeholder consultation; synthesis.	SEA
What evidence is there that indicates contribution to sustainable development from CDM projects	Summary and analysis of project outcomes to gauge whether CDM advances or detracts from sustainable development. In the interests of pragmatism, this will require a definition of sustainable development, with caveats that it is a contested concept.	[c]

### 4. Is the contribution of CDM to increased energy security in developing countries a significant factor to consider in future operations of CDM?

Research questions	Methodology	Owners
What has been the impact of CDM projects on the share of renewable energy sources and on improved demand side energy efficiency at national levels?	Review and summary of existing research.	Lead Researcher
What are the views on the inclusion of large scale hydro power plants in the CDM?	Review and summary of existing research. Stakeholder consultations.	SEA

### 5. To what extent does CDM contribute to technology transfer?

Research questions	Methodology	Owners
What are the observed levels of technology transfer in CDM? Can any trends be identified with regard to technology or region?	Analytical study	[c]

### 6. To what extent does CDM leverage new and additional financing for mitigation?

Research questions	Methodology	Owners
What are the total and marginal investments that have been leveraged in CDM projects	CDM investment analysis	[b]
What are the trends in terms of CDM investments and investments from other sources in different types of CDM projects? Are any project types more successful in attracting private sector investments?	CDM investment analysis	[b]
What are the key barriers to investment?	Call for inputs; stakeholder consultation; synthesis.	Lead Researcher

### 7. Should the CDM aim at increasing the regional distribution of projects and mitigation activities? If so, how?

Research questions	Methodology	Owners
What is the current regional distribution of projects and mitigation activities?	Factual study.	Secretariat
What factors influence CDM implementation in particular countries, and constrain CDM investments in particular regions and LDCs?	Analytical paper based on existing research, stakeholder consultations.	Lead Researcher

### 8. To what extent has the lack of standardized baselines and accounting for suppressed demand resulted in distortions in the CDM mechanism?

Research questions	Methodology	Owners
To what extent has suppressed demand for energy and other services as a result of poverty, lack of infrastructure or natural resources been recognized as a means of carbon accounting and operationalised as a source of future avoided emissions?	Summary of existing research	Lead Researcher
To what extent have standardized and other default baseline emissions levels become standard practice in CDM?	Factual study.	Lead Researcher
Are suppressed demand and standardized baselines pertinent issues for the future of CDM, what are the implications if these are taken into account, and how should CDM procedures be reformed in this regard?	Analytical paper based on existing research, stakeholder consultations.	Lead Researcher

**Summary of demand for research on Impact:**

<b>Owner</b>	<b>Research tasks</b>	<b>Type of work</b>	<b>Duration &amp; work months (w/m)</b>
<b>Lead Researcher</b>	Overall coordination and preparation of consolidated report and options for recommendations to the Panel.	Coordination and drafting.	1 w/m
	Study of impact of CDM on mitigation ambition by Annex I parties	Summary of existing research and input from stakeholder meetings.	1 w/m
	Study of CDM impact on the share of renewable energy sources and energy efficiency	Summary of existing research	1 w/m
	Identification of factors influencing CDM implementation in particular countries?	Summary of existing research and input from stakeholder meetings.	1 w/m
	Key barriers to investments in CDM	Summary of existing research + stakeholder meetings	0,5 w/m
	Review of practice and approach to standardized baselines and suppressed demand	Summary of existing research and analysis	0,5 w/m
<b>External experts</b> [a]	Analysis of CER issued under different assumptions	Analytical study, including scenarios for different assumptions on additionality	1,5 w/m
[b]	Cost and investment study including investment costs, leverage of additional financing, and reduced costs of mitigation	Statistical analysis of investment and cost data for CDM costs and comparable mitigation costs in Annex I countries	3 w/m
[c]	Study of CDM contribution to sustainable development, and study of technology transfer under CDM	Update of UNFCCC SD benefits report	3 w/m
<b>Secretariat</b>	Analysis of CER issued under different assumptions	Supply statistical data	0,5 w/m
	Summary of options to improve net mitigation impact of CDM, including pros & cons.	Summary of proposals	0,5 w/m
	Summary of current requirements to define sustainable development in CDM projects	Factual description	N/A
	Regional distribution of CDM projects	Factual description	N/A
<b>SEAs</b>	Criteria used by DNAs for sustainable development in CDM	Survey + stakeholder meetings	1 w/m
	Summary of concerns regarding sustainable development impact of the CDM	Call for input + stakeholder meetings	1 w/m
	Views on the inclusion of large scale hydro power plants in the CDM?	Summary of existing research	1 w/m



## **Governance and Efficiency**

This research area deals with issues related to how the CDM is set up and is operating, including the role of different CDM bodies and the efficiency of processes. The answers to these questions will provide insights into the potential to improve efficiency in the mechanism, thereby reducing transaction costs, which is a frequently quoted reason for why projects and countries do not participate in the CDM. At the same time these questions may also serve to clarify if efficiency can be improved without reducing the integrity of the mechanism, which by many is seen as a key advantage of the CDM.

In this area, the Panel may wish to make recommendations about the following six issues:

### **9. Can the project cycle be further streamlined to improve efficiency and reduce costs? How can it be done?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
What are the steps in the project cycle?	Factual outline.	Secretariat
How can the project cycle be streamlined without sacrificing environmental integrity?	Analytical paper based on existing research, stakeholder consultations.	Lead Researcher

### **10. Should the current validation/verification model be reformed? If so, how?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
What is the current role of DOEs, and how are they currently hired and paid?	Factual outline of current requirements and procedures.	Secretariat
What concerns have been raised about the current process? In particular, what constraints exist on the ability of DOEs to discharge their functions effectively?	Call for inputs; stakeholder consultation; synthesis.	Lead Researcher
Are the accreditation procedures and requirements for DoEs appropriate? Are there regional imbalances in accredited DOEs? If so, what are the reasons? What are the remedies?	Call for inputs; factual analysis; stakeholder consultation; synthesis.	Lead Researcher
How could the current model of verification be improved to become more efficient without reducing trust in CER's? Is there current duplication of effort in the system between the DOE's and the EB?	Analytical paper based on existing research and discussions, highlighting advantages and drawbacks of different proposed measures	Lead Researcher

### **11. Should the methods for determining additionality be changed? If so, How?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
How often is (failing) additionality the reason for rejections of projects? What is the percentage of projects rejected due to technology and financial additionality respectively? Are there regional trends or technology trends among rejected projects?	Analysis of documentation of decisions to reject projects.	[d]
What concerns exist about the additionality of certain CDM projects / project types (e.g. E+/E-)? Are these being successfully addressed?	Summary of existing research, including call for inputs and stakeholder consultation.	[d]

**12. Should the EB be professionalized in terms of composition and conduct? If so, how?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
What is the current system for nominating EB members and alternates, and what rules govern their conduct	Factual outline of current system and rules.	Secretariat
What criteria have national governments used to appoint EB members and alternates?	Survey of national governments; assessment of claims.	SEA
What are the major criticisms of the EB as a body, including the system to nominate members, the members roles and conduct, and the impact of having the EB as a part-time body?	Call for inputs; stakeholder consultation; synthesis.	SEA
What measures have been proposed to address any weaknesses in the current set-up of the EB, and what are the advantages/disadvantages of the proposed measures	Summary of papers and public discussions.	SEA

**13. How should the major points of dispute regarding the registration/issuance appeals process be resolved?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
What are the major points of dispute delaying the adoption of an appeals process for registration and issuance decisions (e.g. scope of review)?	Factual outline of the points of dispute in the textual proposal currently under consideration by Parties.	Secretariat
What resolution would best satisfy the principles of fundamental justice, including consideration of who should be able to appeal and on what grounds?	Legal analysis.	[e]

**14. Should the current requirements for stakeholder consultation be strengthened? If so, how?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
What are the current requirements for stakeholder consultation?	Factual outline of current requirements and procedures.	Secretariat
What concerns have been raised about current stakeholder consultation processes and outcomes (in particular for projects that have subsequently attracted criticism)?	Call for inputs; stakeholder consultation; synthesis.	Lead Researcher
	For impugned projects, comparison of PDD claims versus subsequent findings.	[d]

***Summary of demand for research on Governance:***

<b>Owner</b>	<b>Research tasks</b>	<b>Type of work</b>	<b>Duration &amp; work months (w/m)</b>
<b>Lead Researcher</b>	Overall coordination and preparation of consolidated report and options for recommendations to the Panel.	Coordination and drafting.	1 w/m
	Analysis of options for streamlining CDM project cycle	Analytical paper based on existing research, stakeholder consultations.	0,5 w/m

<b>Owner</b>	<b>Research tasks</b>	<b>Type of work</b>	<b>Duration &amp; work months (w/m)</b>
	Study on concerns about, and opportunities for, improving validation and verification procedure, including the role of DOEs	Analytical paper based on existing research and stakeholder consultations	1 w/m
	Review and analysis of concerns about current stakeholder consultation processes and outcomes	Summary of discussions and deliberations	1 w/m
<b>External experts</b> [d]	Review of research and discussions regarding additionality of projects, including factual data compilation about performance of selected criticized projects	Summary of existing research, including call for inputs and stakeholder consultation.	1 w/m
[e]	Summary of concerns that have been raised about current stakeholder consultation processes and outcomes	Summary of research, complemented with analysis of PDD claims vs. subsequent findings	1 w/m
[f]	Legal analysis of options for an appeals system	Legal analysis	0,5 w/m
<b>Secretariat</b>	Description of steps in the CDM project cycle	Factual description	0,2 w/m
	Description of role of DOE	Factual description	0,2 w/m
	Description of current system for nominating EB members and alternates, and what rules govern their conduct	Factual description	0,2 w/m
	Summary of major points of dispute delaying the adoption of an appeals process for registration and issuance decisions (e.g. scope of review)?	Factual summary of points of dispute in the textual proposal currently under consideration by Parties	1 w/m
<b>SEAs</b>	Report on criteria that national governments use to appoint EB members and alternates?	Survey	1 w/m
	Summary of major criticisms of the EB as a body, including the system to nominate members, the members roles and conduct, and the impact of having the EB as a part-time body?	Call for input + stakeholder consultations	1 w/m
	Summary of measures have been proposed to address any weaknesses in the current set-up of the EB, and what are the advantages/disadvantages of the proposed measures	Synthesis of existing research + stakeholder consultations/Call for input	1 w/m

### **Future context of the CDM**

This research area focuses on the role of the CDM in a future climate regime. Assuming that the impact and the governance of the CDM itself can be addressed, in what context will the CDM then operate? This research area is essential to identify

what issues need to be addressed in different scenarios if CDM is to remain a viable part of the future climate change mitigation regime.

Due to its focus on the future, where many important factors are today still unknown, this research will in many cases need to make assumptions about future developments, and reflect these as different potential scenarios. Furthermore, the supporting analysis paper (below) will provide further important background, against which the future context can be better assessed by the Panel.

The Context research area is in particular important for parties to the convention, who are now developing a new market based mechanism (decided at COP17), as well as a framework that may support recognition under UNFCCC of nationally/regionally developed mechanisms and markets.

In this area, the Panel may wish to make recommendations about the following seven issues:

**15. What should be the role of the CDM under each of the plausible future scenarios for the international carbon market?**

Research questions	Methodology	Owners
How might national targets (with commitment to purchase credits to offset excess emissions) influence demand in the periods 2012-2015, 2015-2020 and beyond 2020? What is the estimated demand (for CER or other offset units outside UNFCCC) under plausible scenarios? What other factors are likely to influence the demand-supply situation in future markets?	Analytical paper	[g]
What are the views of stakeholders regarding the future role of CDM	Stakeholder interaction	SEA

**16. In light of the emergence of other carbon mechanisms, what is the CDM's comparative advantage? What role, if any, should CDM play in improving standards for carbon mechanisms around the world?**

Research questions	Methodology	Owners
What other mechanisms (e.g. voluntary, domestic, bilateral, UNFCCC) currently exist or are in incipient stages of development? How large are they? What has been their development trajectory?	Factual description of major existing and emerging mechanisms	[g]
How are these mechanisms likely to develop? Does this depend to any extent on the performance of the CDM?	Analysis of existing research complemented with stakeholder discussions	[g]
What is the CDM's comparative advantage amongst the proliferation of mechanisms, and how might the CDM complement or contribute to emerging mechanisms?	Analytical paper.	[g]

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
Should the CDM attempt to function as a standard setter for these other mechanisms? If so, how? What are the advantages and disadvantages of these options?	Analytical paper	[g]
In light of this potential role as standard setter, how should the role and functioning of the EB, secretariat, and DOEs be modified?	Analytical paper	[g]

**17. In light of the emergence of new carbon markets outside of the UNFCCC and EU ETS what role, if any, should CDM play in directly issuing credits to these markets?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
In what markets are CER recognized as offsets and in what markets are CER not recognized as offsets? What is the rationale for allowing/not allowing CER into these markets?	Review of CER access to existing and emerging markets, based on existing descriptions complemented with interviews/stakeholder meetings	[g]
How are these mechanisms likely to develop? Does this depend to any extent on the performance of the CDM?	Analytical paper	[g]
What would be the value for the Convention and the CDM to allow the use CER in these markets? What are the advantages and disadvantages of these options?	Analytical paper based on existing research and stakeholder interactions	Lead Researcher
Should the role and functioning of the EB, secretariat, and DOEs be modified to better serve the use of CER in other markets? If so, how?	Analytical paper based on existing research and stakeholder interactions	Lead Researcher

**18. Without prejudging global negotiations, how could CDM promote useful learning-by-doing on REDD+?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
What is the current status of REDD+ (current and potential supply of credits, current demand for credits, current acceptance in markets, integrity of emissions reductions)?	Factual review.	[h]
How would including REDD+ in CDM affect the CDM market? How would including REDD+ in CDM affect REDD+?	Analytical paper.	[h]
What are the options of incorporating REDD+ in CDM so as to build learning-by-doing? What are the advantages and disadvantages of these options?	Analytical and options paper	[h]

**19. Without prejudging global negotiations, how could CDM promote learning-by-doing on sectoral mitigation?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
What is the current status of sectoral offsetting programs around the world, including expectations from CDM stakeholders regarding the new market based mechanism defined at COP17?	Factual review of published research and other available information.	Lead Researcher
What would be the likely effect on CDM markets of allowing crediting of sectoral mitigation programs under CDM?	Analytical paper.	Lead Researcher
What are the practical requirements to enable sectoral crediting in the CDM?	Analytical and options paper	Lead Researcher

**20. Should project-by-project offset generation, as currently carried out in the CDM, remain part of the future climate mitigation architecture?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
Based on the impact of the CDM and the most plausible scenarios for future carbon markets, and development of new mechanisms (questions above) , what is the likely role and impact of project based CDM beyond the second commitment period?	Analysis of potential contribution of project based CDM to the objectives of the Convention.	Lead Researcher
Are there sectors, or regions where project based CDM is more suitable as an offset generator, than other types of mechanisms?	Analytical paper.	Lead Researcher

**21. Should the CDM remain embedded in the United Nations / UNFCCC? If so, who should operate it?**

<b>Research questions</b>	<b>Methodology</b>	<b>Owners</b>
What functions are currently performed by the United Nations / UNFCCC?	Factual review.	SEA
Does the UNFCCC secretariat discharge its functions effectively?	Survey of EB members/alternates and ex-members/alternates; survey of stakeholders; synthesis.	SEA
What are the advantage and disadvantages of operating the CDM under the United Nations / UNFCCC?	Analytical paper.	SEA

***Summary of demand for research on Context:***

<b>Owner</b>	<b>Research tasks</b>	<b>Type of work</b>	<b>Duration &amp; work months (w/m)</b>
<b>Lead Researcher</b>	Overall coordination and preparation of consolidated report and options for recommendations to the Panel.	Coordination and drafting.	1 w/m
	Review of the value for the Convention and the CDM to allow the use CER in new and emerging markets? What are the advantages and disadvantages of these options?	Analytical study	1 w/m

<b>Owner</b>	<b>Research tasks</b>	<b>Type of work</b>	<b>Duration &amp; work months (w/m)</b>
	Identify need for institutional reform in the CDM so as to facilitate access of CER to new and emerging markets.	Analytical study	1 w/m
	Review of current status and potential implications of sectoral crediting inside and outside CDM, including identification of practical requirements to enable sectoral crediting in CDM	Summary of existing research + analysis	1 w/m
	Analysis of the role of project based CDM beyond the second commitment period, including review of the need for this type of mechanisms in specific sectors/regions	Compilation of existing data and research	1 w/m
<b>External experts</b> [g]	Analysis of other mechanisms in relation to the CDM, and estimate of future relation between these mechanisms and the CDM.	Comparative analysis, including summary of existing research and input from stakeholder consultations	1,5 w/m
[g]	Analysis of access of CER to markets and conditions for CER to be used in those markets		1 w/m
[g]	Impact on demand-supply in future carbon markets from national targets and other factors	Summary of existing research and estimates.	1 w/m
[g]	Analysis of the potential of the CDM to act as a standard setter, including potential requirements to modify the institutional set-up of the CDM.	Analysis of how CDM has influenced standards in existing mechanisms, and of key conditions for CDM to act as a standard setter for market based mechanisms	3 w/m
[h]	Study of REDD+ in relation to CDM	Summary of existing research	0,5 w/m
<b>Secretariat</b>	-	-	-
<b>SEAs</b>	Summary of stakeholder views on future of CDM	Call for input and stakeholder interaction	1/4 - 15/6 1 w/m
	Review of role of the UNFCCC secretariat in CDM	Factual review, stakeholder interactions, synthesis	2 w/m

### **Supporting analysis:**

The Panel agreed that the three research areas above, should be supplemented by an analytical study of how the conditions for CDM have changed since the adoption of CDM in 1997.

Following the same format as for the research areas, the following research questions are expected to be addressed as part of preparing this paper

## 22. How has the world has changed since Kyoto (1997)?

Research questions	Methodology	Owners
How has the global emissions profile changed since 1997? Net and per capita emissions for Annex I and non Annex I countries, observed and projected rate of change in emissions, based on economic models.	Compilation of existing data from national reports and UNFCCC databases, and existing research	Secretariat
Climate impact scenarios for projected emission levels	IPCC reports, UNEP Gap report, and other relevant research	Panel member/SEA
Emerging policy context, with focus on new instruments and tools under UNFCCC decided at COP15-COP17 (NAMA, Green Climate Fund, New market based mechanism, PoA etc).	Summary of decisions	Secretariat
Analysis of new and emerging carbon markets, including analysis of differences and similarities with CDM, potential overlaps and synergies	Covered by research questions 14-16	
Changes in national emission targets since 1997	Summary of existing communications	SEA
Changes in per capita income and annual GDP since 1997, for developed countries and developing countries compared to net and per capita emissions. Estimates on future per-capita and annual GDP, as above.	Compilation of existing research	Panel member/SEA

### *Summary of research demand for research on Impact:*

Owner	Research tasks	Type of work	Duration & work months (w/m)
Panel member / SEA	Overall coordination and preparation of paper	Coordination and drafting.	1 w/m
	- Summary of national emission targets - Comparison of emission trajectories with warming scenarios - Economic data and analysis	Factual summary of existing information and analysis of future trajectories	1 w/m
Secretariat	- Compilation of emission data - Summary of policy context COP15-COP17	Factual summary reports of existing information	1 w/m



## **Output**

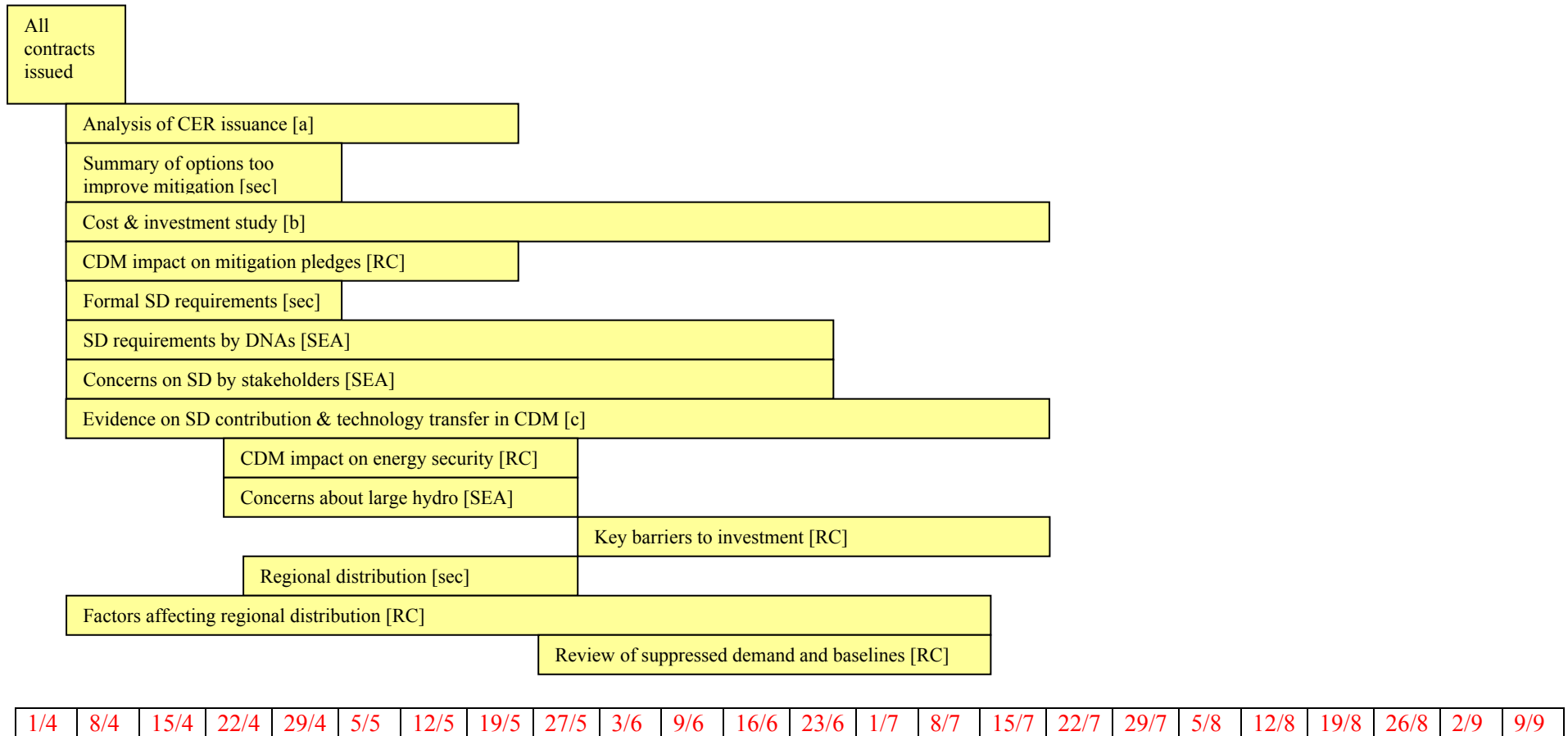
Within each research area (Impact, Governance, Context) a research status report will be produced in time for the second Panel meeting (30-31 May). The research status report will, for each research question within the research area, present preliminary or final findings and, where research findings are not in the form of objective conclusions, present findings as a range of options for the Panel to consider. The objective of the research status reports is to allow the panel to start consider the potential recommendations for each research questions.

The final report from each Lead Researcher is to be produced as a full options paper, presenting for each research question, objective findings and other input, captured as options for the Panel to consider. The final reports are to be delivered by 15 July.

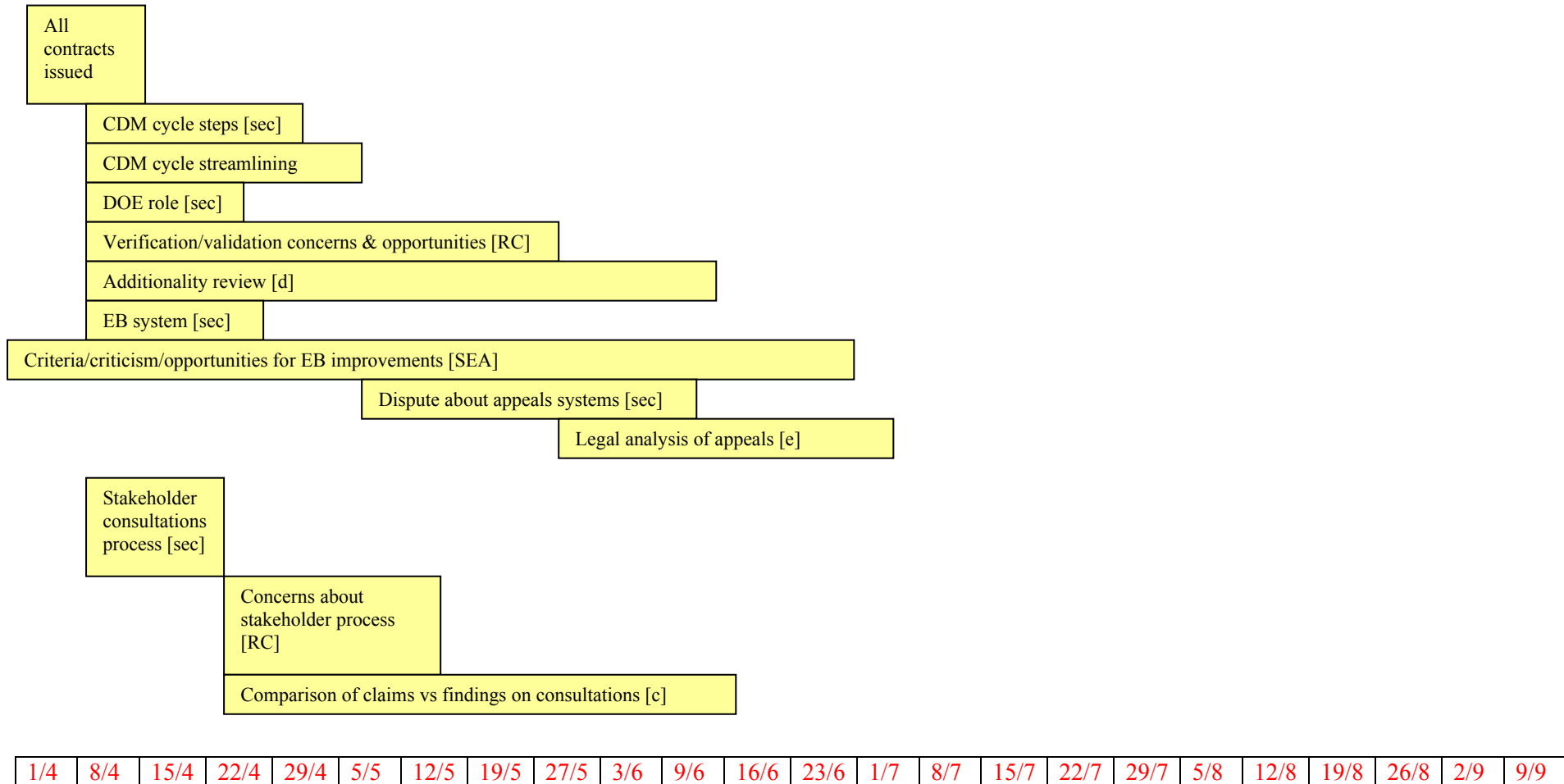
## **Implementation Plan**

The following pages depicts graphically the suggested implementation sequence of research activities in each area.

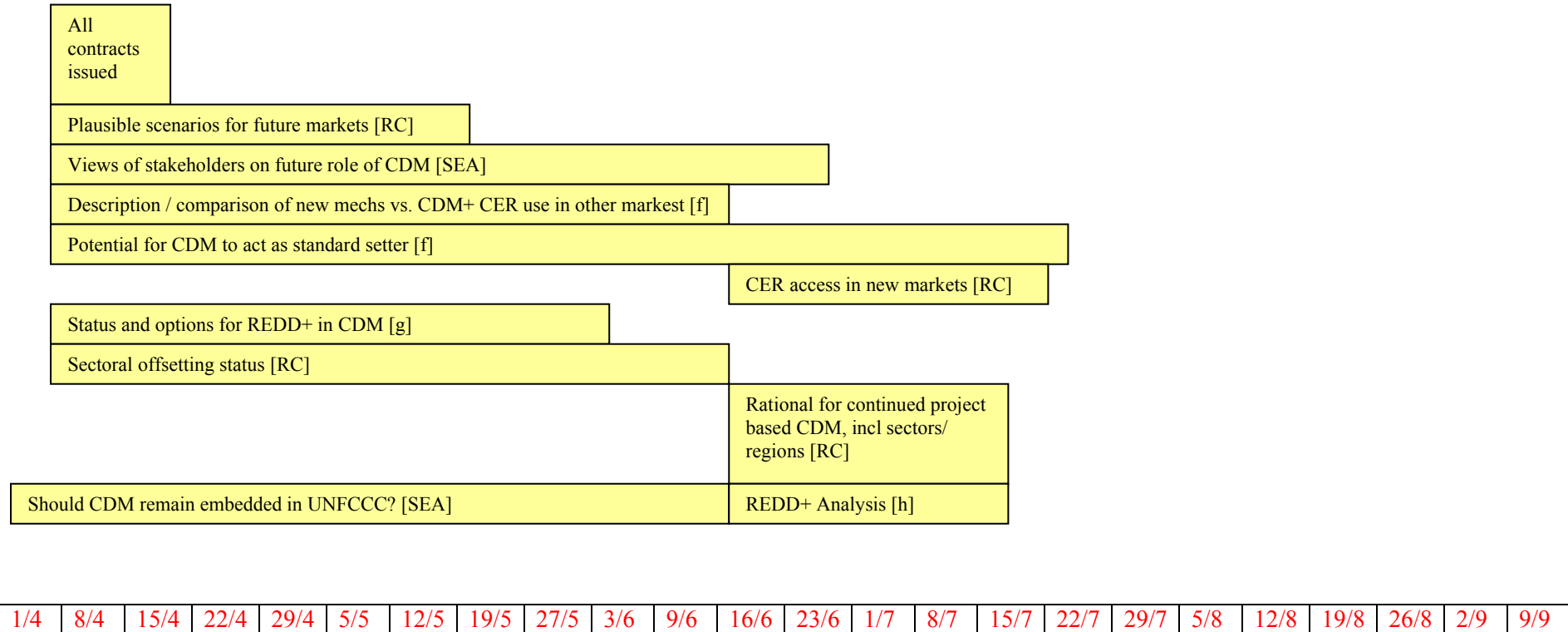
## Implementation plan for research on Impact



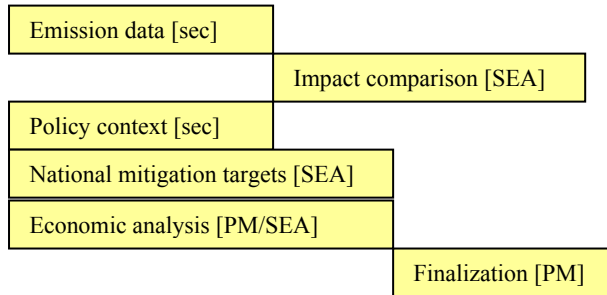
## Implementation plan for research on Governance



## Implementation plan for research on Context



### Implementation plan for research on supporting analysis



1/4	8/4	15/4	22/4	29/4	5/5	12/5	19/5	27/5	3/6	9/6	16/6	23/6	1/7	8/7	15/7	22/7	29/7	5/8	12/8	19/8	26/8	2/9	9/9
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