



External Review of the Climate Parliament

Within the Framework of a Swiss Development Grant

– Final Report –

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Front and final page photo credit:

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Table of Content

Foreword	6
Acronyms	7
Executive Summary	9
1. Introduction.....	14
2. Impact: Has Climate Parliament contributed to real-world change?	17
3. Effectiveness: Does the Climate Parliament’s Theory of Change hold up in practice?	22
4. Efficiency: Room for improvement?	27
5. Sustainability: Best practices in parliamentary strengthening	31
6. Global energy connections: It’s politics alright, but which kind?.....	36
7. Special topics: Foci, cross-fertilization and political risks	40
8. Conclusion and recommendations	43
Annex	47
A. Review questions	48
B. Case study: China.....	49
C. Case study: India	62
D. Case study: Morocco	79
E. Case study: Tanzania	90
F. Country case study selection.....	101
G. Key informants	106
H. Indicative outline for a country-level monitoring framework	109
References	110

Textboxes

Textbox 1. The OECD-DAC Evaluation Criteria 'Relevance'	14
Textbox 2. The Climate Parliament's monitoring and reporting system requires an upgrade	18
Textbox 3. Reflections on a key result of the Climate Parliament in India.....	21
Textbox 4. Outcome Mapping.....	25
Textbox 5. The reasons for the Climate Parliament's focus on large-scale renewable energy generation	28
Textbox 6. How far along are the energy transitions in China, India and Morocco?	28
Textbox 7. Parliamentary development assistance, the Climate Parliament and GLOBE International	32
Textbox 8. Global Energy Interconnection Development and Cooperation Organization (GEIDCO)	57
Textbox 9. India's persistent energy crisis	63
Textbox 10. UNDP Legislative Strengthening Program in Tanzania	93
Textbox 11. SDC's Transforming Tanzania's Charcoal Sector Project.....	96
Textbox 12. Mature networks, do not automatically imply active networks.....	101

Figures

Figure 1 SDC's policy options	13
Figure 2. Climate Parliament's expenditures in the four case study countries between 2013 and 2016	27
Figure 3. Decision-Tree - Options, arguments and choice-dependent recommendations	44
Figure 4. The share of renewable energy in total electricity generation capacity in China	50
Figure 5. The energy mix in electricity generation capacity in China in 2006 and 2015 ⁴⁹	50
Figure 6. The energy mix in electricity generation in China 2006 and 2015 (in TWh and percentages) ⁴⁹	51
Figure 7. CO ₂ emissions from fuel combustion in China	52
Figure 8. The Chinese electricity sector structure	59
Figure 9. Installed (renewable) electricity generation capacity in India (2008 – 2016).....	64
Figure 10. Electricity supply and demand in India (2008 – 2017).....	65
Figure 11. The share of renewable energy in total electricity generation capacity in India	67
Figure 12. The share of renewable energy in actual electricity generation in India ⁸⁴	67
Figure 13. The Indian energy mix in the years 2007, 2012 and 2016 (according to installed capacity) ⁸⁴	67
Figure 14. The renewable energy mix in 2008 and 2016 in India ⁸⁴	68
Figure 15. Changes in the legal and institutional framework triggered by the 2009 National Energy Strategy	82
Figure 16. Key statistics on Morocco's energy sector – energy mix, fuel imports and GHG emissions.....	84
Figure 17. Morocco's energy sector structure	88
Figure 18. The Tanzanian electricity sector structure	97
Figure 19. A categorization of the Climate Parliament's countries of operation along functional selection criteria	103

Tables

Table 1. Energy sectors in transition – an overview	17
Table 2. Selection of the Climate Parliament’s results in the four case study countries (as provided by the CP).....	20
Table 3. The Climate Parliament’s Theory of Change	23
Table 4. The Climate Parliament’s country-level implementation models	29
Table 5. Scoring the Climate Parliament on international best practices in parliamentary action	33
Table 6. The Climate Parliament’s Theory of Change for political action on the realization of a supergrid	37
Table 7. China’s 2020 targets for electricity generation from renewable energy	52
Table 8. China-specific Climate Parliament policy papers and knowledge products	60
Table 9. The Chinese Climate Parliament Network and Participants to International Hearings	61
Table 10. Chinese NPC Delegates who regularly participate in International Parliamentary Hearings	61
Table 11. Selected data on the Chinese Parliament and Climate Parliament Network.....	61
Table 12. Evolution of the energy sector policy and legal framework in India.	63
Table 13. Results from the Climate Parliament in India	70
Table 14. India-specific Climate Parliament products	76
Table 15. The Indian Climate Parliament Network.....	77
Table 16. Indian MPs regularly participating in CP international hearings	78
Table 17. Selected data on the Indian Climate Parliament Network.	78
Table 18. Overview of wind, solar and hydropower projects in operation or under development in Morocco	80
Table 19. Brief descriptions of the key laws informing the energy transition in Morocco.....	83
Table 20. Climate Parliament results in Morocco.....	86
Table 21. The Climate Parliament’s key counterparts and workshop participants	89
Table 22. Selected data on the Moroccan Parliament and Climate Parliament Network.....	89
Table 23. The evolution of Tanzania’s energy sector policy and legal framework	91
Table 24. Tanzania-specific Climate Parliament products.....	98
Table 25. The Tanzanian Climate Parliament Network (subgroup of TAPAFE).....	99
Table 26. Tanzanian MPs regularly participating to international parliamentary hearings	99
Table 27. Selected data on the Tanzanian Parliament and Climate Parliament Network.....	100
Table 28. Detailing the functional selection criteria for the country case studies	102
Table 29. Possible combinations of countries for the case studies and the reasons for and against their selection	104

Foreword

The Climate Parliament spent a considerable number of hours explaining me the work and functioning of their initiative and answering my queries. I thank Nick Dunlop, Sanjay Kumar, James Corré, Mukul Sharma, Sumedha Basu and Itishree Kanungo for their time and effort – in the knowledge that their inputs strengthened this review.

This review benefited from the insights and experiences of many individuals who had no (direct) stake in either the work of the Climate Parliament or the Swiss Organization for Development and Cooperation (SDC). They nonetheless shared with me their time and provided me with invaluable background on the context within which the Climate Parliament operates. I thank all for their contributions.

I also thank Reto Thönen and Antonia Sutter of SDC – my principal and peer reviewer respectively. They engaged themselves with the review, asked pertinent questions, provided critical feedback and involved their own principals at key stages of the review process. They enabled and encouraged this review to feed into SDC's internal deliberative and decision-making process *during* the review rather than just (as is all too ubiquitous) at the end.

A final thanks goes out to Ashwini Swain, Yanjia Wang, Mostafa Jamea and Stephen Kirama. They assisted me in compiling the necessary data on India, China, Morocco and Tanzania respectively. Their insights in the political economy of the energy sector in their respective countries made each invaluable for this review. Their good nature made my country missions a joy.

Whilst many have contributed to this review, this report presents my valuation of the findings. So as the adage goes: all errors and misinterpretations are mine and mine alone.

Graz, 28 July 2017
Geert Engelsman

Acronyms

AC	Alternating Current
ADA	Austrian Development Agency
ADB	Asian Development Bank
ADEREE	National Agency for Renewable Energy and Energy Efficiency in Morocco
AFD	French Development Agency
AMEE	Moroccan Agency for Energy Efficiency
ANRE	National Authority for Electricity Regulation in Morocco
CCM	Chama Cha Mapinduzi (political party Tanzania)
CO ₂	Carbon Dioxide
COP	Conference of the Parties to the United Nations Framework Convention on Climate Change
CP	Climate Parliament
CREIA	China Renewable Energy Industry Association
DC	Direct Current
DFID	United Kingdom Department for International Development
EIU	Economist Intelligence Unit
ESMAP	Energy Sector Management Assistance Program
EU	European Union
EWURA	Energy and Water Regulatory Authority
GDP	Gross Domestic Product
GEI	Global energy interconnections
GEIDCO	Global Energy Interconnections Development and Cooperation Organization
GGA	Green Grid Alliance
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GMBH
GLOBE	Global Legislators' Organization for a Balanced Environment
GW	Gigawatt
IDC	International Development Committee of the United Kingdom House of Commons
IEA	International Energy Agency
IPP	Independent Power Producer
IREDA	Indian Renewable Energy Development Agency
IRENA	International Renewable Energy Agency
KWh	Kilowatt-hour
MASEN	Moroccan Agency for Solar Energy (later renamed to Moroccan Agency for Sustainable Energy)

MLA	Member of Legislative Assembly (State-level parliament India)
MPs	Members of Parliament
MW	Megawatt
NCSC	National Centre of Climate Change Strategy (China)
NDRC	National Development and Reform Commission (China)
NEA	National Energy Administration (China)
NGO	Non-governmental organization
NORAD	Norwegian Agency for Development Cooperation
NPC	National People's Congress (China)
OECD-DAC	Organization for Economic Cooperation and Development / Development Assistance Committee
ONEE	National Office for Electricity and Potable Water in Morocco
OSCE	Organization for Security and Cooperation in Europe
PA	Parliamentary Action
PPP	Public Private Partnership
SAARC	South Asian Association for Regional Cooperation
SADC	Southern Africa Development Community
SAPP	Southern African Power Pool
SCO	Swiss Cooperation Office
SDC	Swiss Agency for Development and Cooperation
SIDA	Swedish International Development Cooperation Agency
TANESCO	Tanzania Electric Supply Company Limited
TAPAFE	Tanzanian Parliamentarians Friends of the Environment
TEDAP	Tanzania Energy Development and Access Expansion Program
VAT	Value-added Tax
UHVDC	Ultra-high Voltage Direct Current
UNDP	United Nation Development Program
UNFCCC	United Nations Framework Convention on Climate Change

Executive Summary

Introduction

1. The Swiss Agency for Development and Cooperation (SDC) funds the Climate Parliament. In the autumn of 2017, SDC decides whether to continue the financial support until 2021. This External Review of the Climate Parliament informs that decision. The review rests on (i) four country case studies – China, India, Morocco and Tanzania – which together represent the maximum variation in the Climate Parliament’s country portfolio in rationale, approach and performance; (ii) semi-structured interviews with SDC, the Climate Parliament and international experts; (iii) a review of program documentation; and (iv) a literature review on parliamentary action support and regional energy interconnections.

The evaluand and the financier

2. The Climate Parliament is a network and advocacy organization. It supports and connects parliamentarians around the world in their efforts to combat climate change. It advocates in particular large-scale renewable energy generation and a global green electricity grid. The Climate Parliament is, at any one time, active in 15 – 20 countries around the world and is 100% donor-funded.

3. SDC supports the Climate Parliament since November 2013: first, through the services of a Swiss expert in parliamentary action and renewable energy; then with a four-year CHF 2.66 million development grant. The underlying idea was *‘to support national legislative processes that aim at reducing CO₂ emissions at the country level’* as a complementary undertaking to the actions flowing from the UNFCCC agreements (SDC 2014). The Climate Parliament also offered SDC a platform to promote and disseminate, nationally and internationally, successful SDC-supported interventions.

Monitoring and Reporting

4. The Climate Parliament’s monitoring and reporting system is subpar. The last years, the Climate Parliament did not consistently gather data on key impact indicators or the context in which it operates. The narratives in the annual reports deal exclusively with the Climate Parliament’s activities and success stories. The Climate Parliament does not put its activities and success stories in perspective, i.e. in light of the overall changes which occur in its countries-of-operation and the efforts of other key stakeholders. Moreover, the Climate Parliament does not systematically verify the success stories it receives from its network or investigate the prevalence of alternative explanatory stories. As a result, the Climate Parliament’s formal reports to SDC present a picture which overstates the Climate Parliament’s role and achievements in its countries-of-operation.

Impact and effectiveness

5. The Climate Parliament has invoked real-world change, but not at the scale envisaged. The Climate Parliament was *‘to accelerate the development of the renewable energy sector in the target countries’* (Climate Parliament 2014c). Three of the four case study countries – China, India and Morocco – are in the midst of an energy transition. In all three countries, the transition is led by the executive branch of government and have, recently, received wind-in-the-back from the sharp drop in costs for solar and wind energy. National parliaments are, for most part, beholden to their government and play a limited role at best in initiating and shaping energy transitions.

6. The ongoing energy transitions in China, India and Morocco build on legislative, policy and regulatory frameworks which have evolved over a decade or more under the stewardship of the national governments. National Parliaments and the Climate Parliament have had little to no opportunity to initiate, develop and advocate favorable legislation in the case study countries and thereby accelerate the energy transitions. The prevalence of a comprehensive legislative, policy and regulatory framework for renewable energy and the subordinate role of parliaments in the political economy of the energy sector in the four case study countries meant that the central tenet of the Climate Parliament’s Theory of Change – the promotion and passage of legislation to accelerate the renewable energy sector – did not hold in the case study countries (and I have no evidence that this is different in the other countries-of-operation).

7. The Climate Parliament *has* facilitated change at a different scale. In the countries where the Climate Parliament has a (frequent) on-the-ground presence, it is able to create a vibrant network of parliamentarians, which accept the case for and recognize the potential of renewable energy in their country and become advocates for change in their own right. Moreover, the parliamentarians feel emboldened in their advocacy work through their participation in international parliamentary hearings organized by the Climate Parliament. Moreover and concretely, the Climate Parliament has facilitated in its countries-of-operation: increased budgetary allocations for renewable energy, reductions in fossil-fuel subsidies, VAT and import tariff exemptions for renewable energy equipment, and the piloting of renewable energy projects in the constituencies of parliamentarians.

8. It is possible that the Climate Parliament Secretariat and in-country parliamentarian networks exert *informal* influence on the energy policy in its countries-of-operation through their active engagement with the political leadership of these countries. The problem is that I do not know to what extent it successfully nudges political views, behavioral change and climate action as this is not consistently and systematically mapped by the Climate Parliament (and this review was not designed to fill this gap). By extension, I do not know and cannot assess how important the Climate Parliament's informal influence is.

Efficiency

9. A hard call on the Climate Parliament's efficiency is impossible to make. Parliamentary action is, on the one hand, a low-cost intervention. On the other hand, parliamentary action at best nudges countries towards energy transitions. How big a nudge, I do not know, which makes an overall judgment on the Climate Parliament's efficiency all but impossible to make. There is, in any case, room for improvement. The Climate Parliament can increase its potential parliamentary leverage through four interrelated actions and, in the process, increase its efficiency.

10. First, the Climate Parliament can target timelier and politically more intricate challenges than large-scale renewable energy generation. Second, it can focus on countries where the energy transitions have not yet taken off (such as Tanzania). Third, the Climate Parliament can concentrate its activities in fewer countries and ensure a (frequent) staff presence on-the-ground. Fourth, the Climate Parliament can strengthen its regional and in-country teams by adding deep energy sector / climate change expertise, which will allow the Climate Parliament to identify and address the politically more intricate energy sector / climate change challenges. All four actions will increase the Climate Parliament's performance while using the same amount of resources.

Sustainability

11. The sustainability of the Climate Parliament's results in China, India and Morocco are relative secure given the local political ownership of the energy transitions. The sustainability of *parliamentary action on climate change* in these (or other Climate Parliament) countries is less secure. The reason is that the Climate Parliament does not build up in-country capacity (either in- or outside parliaments) to take over if and when the Climate Parliament ceases to exist or reduces its presence. The Morocco and Tanzania case studies attest that parliamentary action by the Climate Parliament Network falters when the Climate Parliament Secretariat reduces its in-country efforts.

Best practices in parliamentary strengthening

12. The Climate Parliament displays a mixed track record in applying best practices in parliamentary strengthening work. The Climate Parliament is a politically astute and agile actor which (within the realm of renewable energy) is responsive to the (immediate) opportunities, needs and requests of parliamentarians. These characteristics make it a valued partner of parliamentarians. It engages local professionals as staff, experts or consultants. The Climate Parliament achieves gender-balance with the parliamentarians it works closest with and the Climate Parliament Networks have similar gender-ratios as the respective parliaments.

13. Discontinuity of funding prevents the Climate Parliament from long-term, well-resourced engagements in many of its countries-of-operation. The Climate Parliament enables South-South, peer-to-peer exchanges, but would do well to create cross-country parliamentarian networks within regions (as it is currently embarking on in East Africa). The Climate

Parliament fails to sustain its work and make itself obsolete by embedding its activities and approaches in wider governance reform, institutional capacity development, political party development, media development or donor coordination and building up in-country and parliamentary staff capacity to support parliamentary action.

Green Grid Alliance

14. The Climate Parliament is pursuing a Green Grid Alliance that is to bring about smart continental-scale electricity grids which supply all global electricity demand from renewable energy sources. The Alliance is to create cooperation within and between three groupings to realize such a green supergrid, namely: (i) governments, (ii) parliamentarians and (iii) 20 – 30 leading global companies, foundations, independent experts and NGOs. Inter- and intracontinental ultra-high voltage direct current (UHVDC) transmission lines are to allow global and regional energy interconnections and form the backbone of the future green supergrid.

15. At present, the advance of UHVDC transmission lines rests on economics: meeting high electricity demand in urban and industrial centers from geographies rich in (renewable) energy sources. For now, they are point-to-point lines within individual countries (Brazil, China, India, and the United States) or between countries of the European Union. Political decision-making at the highest levels is needed if the emergence of regional interconnections or supergrids are to be accelerated. History suggests that – even with high-level political agreement – the development of regional energy interconnections remains a long term evolutionary process as participating countries face up to and one-for-one address the practical challenges inherent to close political, economic and energy sector cooperation. The key informants of this review, including parliamentarians, were well aware of this fact, noting that it will take decades to come about (if at all). A core political impediment to cross-border energy interconnections is that many countries favor energy independence (something which many countries can achieve with renewable energy sources).

16. The Climate Parliament should set up a dedicated and distinct secretariat for the Green Grid Alliance to avoid conflicts-of-interest with its parliamentary action work. In the process, the Climate Parliament should also explicitly expand its mandate to deal with the executive branch of governments, as well as regional cooperation bodies. These regional cooperation bodies should be closely involved in any effort to promote and realize regional energy interconnections as these have the political mandate and the ability to negotiate and support regional energy sector integration efforts.

The Climate Parliament's responsiveness to SDC's policy priorities

17. The Climate Parliament has expanded its operations – through SDC's support – to China and Latin-America in line with SDC's stated priorities and the Climate Parliament's application for SDC funding. The Climate Parliament has not systematically, consistently or substantially addressed other core SDC interests and focus areas – such as distributed energy models to provide access to those people who are unlikely to be connected to the national grid, creating a level playing field for independent power producers or pushing legislative frameworks for solar home systems – despite the Climate Parliament's proposal to do so. The Climate Parliament has for most part focused on the promotion of large-scale renewables-based electricity generation.

Cross-fertilization between SDC and the Climate Parliament

18. The Climate Parliament was meant – inter alia – to offer SDC a platform to promote the replication of successful SDC-supported interventions at the national level and the dissemination of such best practices internationally. In practice, this platform was neither offered by the Climate Parliament nor demanded by SDC. Each case study offers starting points for cooperation (at least on paper). On the one hand, SDC and Climate Parliament should be trusted that they would have pursued these opportunities if and when they were realistic and mutually beneficial. On the other hand, a rather detached, arm's length cooperation between SDC and the Climate Parliament at the global and country level may have hindered true attempts to build on each other's work. If the Climate Parliament is to serve as platform for the dissemination and replication of successful SDC's development interventions, than this will have to be pursued and managed actively.

Political risks of parliamentary strengthening work

19. The Climate Parliament manages the political risk inherent in parliamentary strengthening work aptly and optimally. The risk that the Climate Parliament – and by extension SDC – is accused of political meddling can however never be eliminated and requires constant care and vigilance.

Conclusion

20. The Climate Parliament possesses convening power and is an able political activist which manages the political risks inherent in parliamentary action work deftly. It (likely) influences hundreds of parliamentarians and political leaders, contributing to an enabling political environment to address climate change. The Climate Parliament also helps approve higher budgets and adopt favorable fiscal incentives for renewable energy.

21. The prevalence of a comprehensive legislative framework for renewable energy in many countries and/or the subordinate role of parliaments in the political economy of the energy sector hinder the Climate Parliament in leaving legislative marks and truly shape energy transitions. This difficulty in realizing relevant legislative change – a central tenet of its own Theory of Change – is exacerbated by a too singular focus on large-scale renewable energy, an absence of deep energy sector experience amongst its staff, being active in too many countries and failing to apply its own preferential model of having (frequent) on-the-ground presence in its countries-of-operation. The Climate Parliament does not build in-country capacity to sustain parliamentary action on climate change when it reduces its activities or leaves a country. It has been unresponsive to SDC's stated thematic priorities for SDC's financial contribution to the Climate Parliament and wish for a cross-fertilization between the Climate Parliament's work and SDC's country programs. The Climate Parliament furthermore applies a subpar monitoring and reporting system.

22. The Climate Parliament's pursuit of a Green Grid Alliance is understandable from a *climate change perspective*. Global energy interconnections however create new energy dependencies which will likely form a *political impediment* to their realization. Whilst parliamentarians can at times nudge the idea forward, it are the political leaders from the executive branch who must make it happen by pursuing long-term international cooperation, not just on energy, but also on trade, investments and security. Regional cooperation bodies should be closely involved in any such efforts as these have the political mandate and the ability to negotiate and support regional energy sector integration efforts. The Climate Parliament should set up a dedicated and distinct secretariat for the Green Grid Alliance to avoid conflicts-of-interest with its parliamentary action work.

Recommendations

23. The core question of this Review is whether SDC should continue its financial support to the Climate Parliament for another four years. It is unfair to answer this question based on the overly ambitious and unrealistic original logical framework. The answer to this question therefore requires a value judgment – which in my humble opinion – only SDC can make (taking into account all opportunity costs). SDC has four courses of action to choose from (see Figure 1 – a more elaborate decision-tree is included in Chapter 8.2 on page 44).

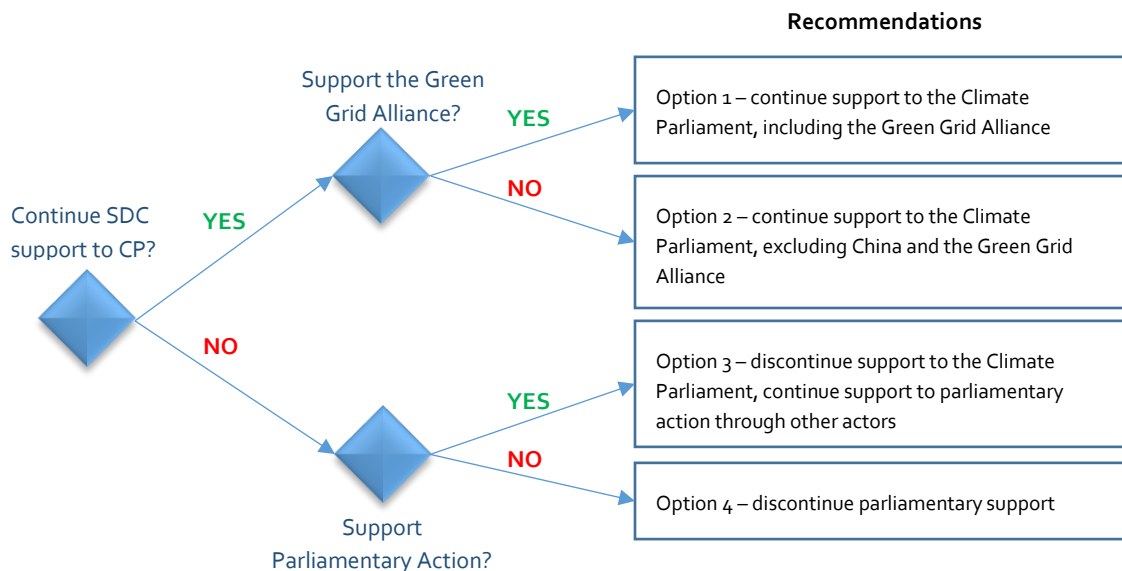
24. Based on the influence the Climate Parliament has in practice and the merit SDC attaches to this influence, SDC can decide to continue its funding with or without support to the Green Grid Alliance. In either case, SDC has to concentrate its support in 4-5 countries and demand:

- an in-country secretariat with evident energy sector and parliamentary action experience;
- country-level business strategies which address relevant and politically intricate climate challenges;
- a professional monitoring system which, amongst others, captures behavioral change amongst the political leadership in the executive and legislative branches of government;
- a formal SDC and Climate Parliament in-country cooperation.

25. I also recommend SDC to explore a Climate Parliament-UNDP-GIZ cooperation to build on complementary strength of these organizations: political activism, long-term parliamentary capacity development and deep energy sector and climate change knowledge respectively. Support to the Green Grid Alliance should go hand-in-hand with an extension of

the Climate Parliament’s remit to the executive branch of government and the cooperation with regional cooperation associations, as well as a demand for transparent accounting of funds and clear staff-mandates for in-country parliamentary action work and Green Grid Alliance support.

Figure 1 SDC’s policy options



26. Alternatively, SDC can decide to continue parliamentary strengthening assistance (because it helps nudge the political landscape toward climate friendly policies) albeit with other actors. This Review shows that there are ample actors active in this field. UNDP and GIZ are two obvious candidates. The expediency of working with any of the other actors requires further investigation.

27. Finally, SDC can abandon parliamentary strengthening work as parliaments principally do not shape energy transitions. This review’s findings would steer SDC’s Global Program Climate Change and Environment to addressing *missing links*, such as: promoting 100% electrification through distributed energy models (e.g. in India and Tanzania) or resolving the financially distressed electricity distribution sector in India. Alternatively or additionally, SDC could orient its support to countries which have not yet jumped on the bandwagon of the energy transition and climate change mitigation (such as Tanzania); deepen its support to challenging sectors such as the built-environment or (maritime and air) transportation; focus on biomass, geothermal and hydro technologies, which are currently being overshadowed by solar and wind; facilitate the formation of energy consumer cooperatives and the development of standardized power purchasing agreements with power producers; assisting utilities in transitioning from a fossil-fuel based economy into a renewable energy based economy; or developing operations and maintenance skills for small- and large scale renewable energy power generation plants. The options are endless.

1. Introduction

1.1 Purpose

28. Over the last 4 years, the Swiss Agency for Development and Cooperation (SDC) supported the Climate Parliament financially.¹ SDC decides in the autumn of 2017 whether to continue funding the Climate Parliament until 2021. SDC commissioned this review of the Climate Parliament to inform that decision.

1.2 Review questions

29. SDC formulated a comprehensive set of questions to guide this review (see Annex A). These questions revolve around (i) the extent to which the Climate Parliament has contributed to real-world change; (ii) the validity of the Climate Parliament's Theory of Change; (iii) the efficiency and sustainability of the Climate Parliament's work; (iv) the relative performance of the Climate Parliament vis-à-vis best practice in parliamentary action support; (v) the relevance of the Climate Parliament's Green Grid Alliance; (vi) the in-country cooperation between SDC and the Climate Parliament; and (vii) the political risks involved in parliamentary strengthening programs. Items (i) – (iii) collectively cover the OECD-DAC evaluation criteria: impact, effectiveness, efficiency and sustainability. Textbox 1 explains the coverage of the final OECD-DAC evaluation criteria *relevance*.

Textbox 1. The OECD-DAC Evaluation Criteria 'Relevance'.

The OECD-DAC defines relevance as '*the extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor*' (OECD n.d.). Such relevance is well-established for development cooperation's support to renewable energy in developing countries, including pertaining to parliamentary strengthening work (Particip GmbH 2014). During the inception phase of this review, SDC decided to, a priori, accept the relevance of the Climate Parliament's work.

The OECD-DAC also suggests (under the relevance heading) to ascertain '*whether the Program's activities and outputs are consistent with the overall goal of the support*'. This question is often answered by stating whether the activities and outputs *could* result in the attainment of the overall goal (i.e. in theory). This review allowed us to test whether the Program *has* contributed to the attainment of the overall objectives (i.e. in practice). This part of the 'relevance criteria' is covered by our validation of the Climate Parliament's Theory of Change in Chapter 3.

1.3 Data collection

30. This review builds on four sets of data. Four country case studies – China, India, Morocco and Tanzania – illustrate the country operations of the Climate Parliament (see Annex B to E). The four countries were selected because they represent '*deviant*' cases, representing the '*maximum variation*' in the Climate Parliament's country portfolio (M. Q. Patton 2002). India was considered the flagship program of the Climate Parliament, both in approach and results. Morocco and Tanzania represented least and medium successful countries of operation. China was selected for two reasons: (i) to study the role of the Climate Parliament in an autocratic regime with a subordinate role of parliament; and (ii) to assess its importance for the Climate Parliament's Green Grid Alliance initiative. More on the country selection for the case studies is included in Annex F.

31. The country case studies rests on document reviews, quantitative data collection and semi-structured interviews with in-country Climate Parliament staff, government officials, development organization representatives and independent experts. A full list of key informants is included in Annex G. Each case study describes (i) the evolution of the energy sector; (ii) the role of parliament in general and in the energy sector specifically; (iii) the Climate Parliament's

¹ Funding was provided under the Global Programme for Climate Change and Environment (GPCCE).

network, secretariat, activities and results; (iv) actual and envisaged regional energy interconnections and cross-border trade; and (v) the in-country cooperation between SDC and the Climate Parliament. Each case study concludes with summative statements on the key review questions.

32. The four case studies were supplemented by (i) semi-structured interviews with the management and program officer of SDC, the global leadership team of the Climate Parliament and international experts on parliamentary action support; (ii) a review of program documentation; and (iii) a literature review on parliamentary action and regional energy interconnections.

1.4 The evaluand

33. The Climate Parliament supports and connects parliamentarians around the world in their efforts to combat climate change.² Within the broad topic of climate change, the Climate Parliament focuses – to a large extent – on the promotion of large-scale renewable energy generation. In addition, it is gathering political support for the establishment of a Green Grid Alliance which is to push for the realization of global energy interconnections and smart grids (which the Climate Parliament sees as an enabler for a 100% renewable energy future).

34. In its countries-of-operation, the Climate Parliament creates informal parliamentary networks, which it (i) informs about climate change and the ways to address it; and (ii) motivates and supports to take parliamentary action.³ These so-called Climate Parliament Networks are non-partisan and seek to cover the full spectrum of political parties present in parliament. The Climate Parliament assists these networks through either an in-country secretariat (New Delhi), a country director (Beijing) or a regional director (Africa & the Middle-East and Latin-America). Global management rests with a small, mostly London-area-based team.⁴

35. The Climate Parliament staff supports the Climate Parliament Networks in several ways – it:

- organizes in-country workshops to inform the network members on key challenges and potential policy actions;
- explores opportunities for parliamentary action, conducts research, prepares policy option papers and commissions think-tanks and consultancies to prepare targeted knowledge products;
- drafts parliamentary questions, motions, and legislative texts (amendments and full bills) for the perusal of the network members in committee meetings or plenary sessions of their parliament;
- assists network members in arranging, preparing and conducting meetings with government officials and leading energy sector experts; and,
- organizes – circa semi-annually – international parliamentary hearings in which it invites parliamentarians from the region or globally as well as international experts on climate change and energy transitions.

36. The Climate Parliament is decidedly pro-active: it identifies leading parliamentarians and politicians to further its cause in its countries-of-operation and supplies them with support and advice on how to promote large-scale renewable energy generation or global energy interconnections. The Climate Parliament acts both as a network and advocacy organization.

37. The Climate Parliament is hundred percent donor-funded. The last four years, the Climate Parliament has received support from: Europe Aid, the British High Commission, the Danish Foreign Ministry, GIZ, NORAD and the Wallace Global Fund. Most donors provide funding for a limited time-period with money often earmarked for particular countries or regions. SDC supports the Climate Parliament since 2013.

² The Climate Parliament is UK-registered charity. It evolved from the E-Parliament, which provided parliamentarians around the world with a virtual network to connect, collaborate and access best practice policies. The E-Parliament also supported joint calls for action. It concentrated on (i) freedom of speech, (ii) demilitarization of space; and (iii) climate change. The E-Parliament leadership decided in 2009 to focus exclusively on climate change because of the urgency of the problem and it was easier to mobilize parliamentarians and funding around a single-issue.

³ It suggests the Climate Parliament Network members to consider the Climate Parliament staff 'as their secretariat'.

⁴ The Climate Parliament does not have a permanent office. Staff predominantly communicate electronically, although in practice they often meet.

1.5 SDC's intentions and foci

38. In November 2013, SDC provided the Climate Parliament the services of the Swiss-consultant Rudolf Rechsteiner. Mr. Rechsteiner has a unique profile in that he is a former member of the Swiss Parliament, a current member of the Parliament of Kanton Basel-Stadt, and he works (both nationally and internationally) as an energy sector specialist. Until spring 2015, he provided support to the Climate Parliament Networks in Bangladesh, Jordan, Tanzania and Tunisia.

39. SDC subsequently approved in June 2014 a four-year credit to the Climate Parliament worth CHF 2.8 million⁵. Through this support line, SDC aimed to support international efforts to mitigate climate change complementary to the efforts undertaken under the UNFCCC agreements. The specific objective was *'to support national legislative processes that aim at reducing CO₂ emissions at the country level'*. The envisaged long-term impacts of the support were improved air quality and human health, reduced agricultural losses, and local job creation. (SDC 2014)

40. Importantly, SDC sought – through its engagement with the Climate Parliament – to create a multiplier effect for its own in-country operations by *'feeding SDC's project experiences into the Climate Parliament's work and harnessing them for global policy influencing'* (SDC 2014). SDC's financial support was in principle not earmarked and the Climate Parliament could use the funds flexible. SDC did express a preference (and argued in favor of) geographies in alignment with GPCCE's priorities (China, India and the Andean countries) and topics (energy access for households, incentives for renewable energy generation, creating a level playing field for independent power producers, promotion of distributed energy models, and pushing for legislative frameworks for solar home systems).

1.6 Reading guide

41. The main report answers succinctly the core review questions. The detailed country case studies, included in Annex B to E, substantiate these answers. Chapter 2 discusses the Climate Parliament's contribution to the energy transitions in China, India and Morocco. Chapter 3 builds on this discussion and tests the validity of the Climate Parliament's Theory of Change. Chapter 4 subsequently reflects on the Climate Parliament's strategic focus and implementation modalities. Chapter 5 deals with the sustainability of the Climate Parliament's work and scores the Climate Parliament on best practices in parliamentary strengthening. Collectively, Chapters 2 to 5 cover the OECD-DAC evaluation criteria: impact, effectiveness, efficiency and sustainability. Chapter 6 subsequently debates the relevance of the Green Grid Alliance and Chapter 7 addresses SDC's priorities for the Climate Parliament, the in-country cooperation between SDC and the Climate Parliament, as well as the political risks involved in parliamentary strengthening work. Chapter 8 concludes and offers SDC alternative courses of action to choose from – each substantiated with arguments for and against that course of action.

42. Finally, the pronoun 'I' refers to the principal reviewer and author of this report: Geert Engelsman. The pronoun 'we' refers to the principal reviewer and his in-country collaborators Ashwini Swain, Yanjia Wang, Mostafa Jamea and Stephen Kirama. The 'Climate Parliament' refers to the organizational whole, i.e. the global management team, the regional directors, the in-country secretariats and parliamentary networks, its strategies and activities. When referring to a component part of the Climate Parliament, e.g. the global management team or an in-country Climate Parliament Network, I state so explicitly. The support to the Climate Parliament was provided and managed by the Global Programme Climate Change and the Environment (GPCCE), which constitutes a distinct division within SDC. I use in this report the shorter, better known acronym SDC to refer to GPCCE.

⁵ This is US\$ 2.9 million at the current exchange rate (June 2017).

2. Impact: Has Climate Parliament contributed to real-world change?

2.1 Introduction

43. The short answer to the question in the chapter heading is: yes, but not at the scale imagined. The OECD-DAC defines impact as *'the positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended'*. Impact differs from effectiveness. Impact concerns changes in key *'social, economic, environmental and other development indicators'*, which occur – in time – due to a development intervention. Effectiveness deals with more immediate outcomes: the achievement of an intervention's direct objectives. (OECD n.d.)

44. The envisaged impact of the Climate Parliament's work under Swiss funding can be gleaned from the Logical Framework included in its funding application to SDC:

'To accelerate the development of the renewable energy sector in the target countries. This is expected to lead to increased access to modern energy services, as well as prevention of greenhouse gas emissions that would have been produced had the development objective been achieved by means of conventional (fossil fuel-based) generation. Improved energy security for target countries, including reduced vulnerability to energy price volatility. (Climate Parliament 2014c)

45. The Logical Framework includes three impact indicators against which to measure success: (i) installed or approved electricity generation capacity from renewable energy sources; (ii) settlements/households with access to electricity or other modern energy services for the first time since the start of the project; and (iii) energy security measured by the fuel imports relative to GDP per capita. With these three impact indicators, the Climate Parliament has set itself an ambitious benchmark. The Climate Parliament currently questions the wisdom of it having done so; a point to which we will return in the next chapter. For now, we stick to this benchmark and look into the changes which occurred on the impact variables in the four case study countries and the extent to which the Climate Parliament has contributed to these changes.

2.2 Countries in transition

46. Three out of the four case study countries – China, India and Morocco – appear in the midst of an *Energiewende*. This can be distilled from the actual changes in the renewable-based electricity generation (capacity) and the ambitious policy targets set by their respective governments. Detailed figures and descriptions are included in the country case studies (see Annex B - E). Table 1 provides a brief overview.

Table 1. Energy sectors in transition – an overview

China				
The share of renewables in electricity generation capacity	2006	21%	2015	32%
The share of renewables in total electricity generation	2006	14%	2015	23%
Current level and target for renewable electricity generation capacity	2015	492 GW	2020	675 GW
India				
The share of renewables in electricity generation capacity	2008	8%	2016	14%
The share of renewables in total electricity generation	2008	5.6%	2016	5.6% ⁶
Current level and target for renewable electricity generation capacity	2016	43 GW	2022	175 GW
Morocco				
The share of renewables in electricity generation capacity	2006	34%	2016	33% ⁶
The share of renewables in total electricity generation	2006	9%	2015	15%
Current level and target for renewable electricity generation capacity	2016	2.8 GW	2020	6 GW

⁶ The constant share of renewables in total electricity generation in India, despite the increase in its share in terms of generation capacity, is for most part explained by a limited offtake of renewables by electricity distribution companies as these have already contracted for higher amount of conventional power than their existing demand (Swain 2017). In Morocco, the opposite trend can be observed. The share of renewables in generation capacity has remained stable, whereas the share in actual electricity generation has increased by 6 percentage points.

47. The three countries also made great strides over the last decade in providing access to electricity. China and Morocco basically reached 100% electrification rates in 2015 and 2016 respectively. India's electrification rate increased from 67% in 2011 to an estimated 85% in 2016. We only have data for China and Morocco on fuel imports as percentage of nominal GDP. In both countries, the share of fuel imports to nominal GDP roughly halved between 2006 and 2016.

48. The fourth case study country (Tanzania) is a bit of an outlier. Significant strides have been made in small and micro-scale renewable energy generation with 22 MW of electricity generation capacity developed over the last 10 years (which represents 1.6% of total electricity generation capacity). A further 75 MW of small and micro-scale renewable energy generation capacity is under development. The development of large scale renewable energy projects is not taking off. Moreover, the government has modest ambitions with only 3% of future electricity needs to be met with renewable energy⁷ despite that '*Tanzania is endowed with abundant high-quality renewable energy sources*' (African Development Bank Group 2015).

2.3 The Climate Parliament's contribution to the energy transitions

49. With three out of four case study countries being amidst an energy transition and having significantly improved their electrification rates, the question is: to what extent has the Climate Parliament contributed to these developments? This question cannot be answered directly as the Climate Parliament – despite its wish to do so – cannot invoke these changes in and by itself. We have to infer the Climate Parliament's contribution by assessing (i) the direct changes it has triggered; (ii) the contextual factors that could have reasonable and significantly contributed to the results; and (iii) whether the assumptions underlying its Theory of Change hold up in practice⁸.

50. The Climate Parliament's annual reports provide an unsystematic, anecdotal and non-critical account of the Climate Parliament's work and results (see Textbox 2). We developed the country case studies to provide a credible and systematic evidence-base for the analysis. As noted in Chapter 1, the case studies describe the evolution of the energy sector, the role of the national parliament within the political economy of the energy sector and the work of the Climate Parliament.

Textbox 2. The Climate Parliament's monitoring and reporting system requires an upgrade

The Climate Parliament's global management team holds weekly or biweekly conference calls with its regional or country directors. For India, this call includes both the country director and the senior policy advisor. During these calls, the regional/country directors report on their work and share, when applicable, success stories. The work activities and stories are captured by the Climate Parliament's editor and included in a narrative in the annual reports. The annual reports constitute the Climate Parliament's primary means to formally report on its activities and achievements to SDC. This – in effect – constitutes the Climate Parliament's monitoring and reporting system.

The success stories included in the annual reports can emanate from a single source. The Climate Parliament does not systematically verify the success stories it receives from its network or investigate the prevalence of alternative explanatory stories for the changes that occur in a country. The Climate Parliament does not gather data on key impact indicators or the context in which it operates. The narratives in the annual reports deal almost exclusively with the Climate Parliament's activities and achievements. The Climate Parliament does not put its activities and success stories in perspective, i.e. in light of the overall changes which occur in its countries-of-operation and the efforts of other key stakeholders. As a result, the Climate Parliament-focused observations in the annual reports, present – individually and collectively – a picture which overstates the Climate Parliament's achievements. A concrete example of this is included in Textbox 3.

⁷ Large scale hydropower is not classified as a renewable energy source in Tanzania (arguable because of the environmental damage involved in their realization). The country's 6 medium to large-scale hydropower plants all date from before the year 2000.

⁸ In evaluation theory, this approach is referred to as Contribution Analysis. (Mayne 2008)

51. From the case studies, the following picture emerges. The energy transitions in China, India and Morocco are led by the executive branch of government and have, recently, received wind-in-the-back from the sharp drop in the costs of solar and wind generated electricity. The role of parliaments have been limited at best.

52. The government stewardship stems from multiple and interrelated sources, including (i) visionary leadership from the head of government; (ii) a political drive to limit foreign energy dependency; (iii) public opinion favoring climate change action by government; (iv) international pressure from the UNFCCC Conference of Parties⁹; (v) a need to meet rapidly growing electricity demands or respond to an acute energy crisis; (vi) the manufacturing and engineering services opportunities arising from a rapidly growing renewables industry; and (vii) the opportunity for least-cost electricity generation due to the previously mentioned drop in prices for solar and wind generated electricity. This drop in costs for solar and wind generated electricity is attributed to rapid technological developments, economies-of-scale associated with the large-scale renewable energy power plants being realized globally, and the use of auctions to allot concessions to private sector power producers.

53. National parliaments play a limited role at best. This is evidenced by the fact that the policy targets for renewable energy and legislation which supports the power generation projects to meet these targets are (with few exceptions) initiated, developed and set by the national governments (even when the legislatures finally approve the associated bills). In India, targets have been set by the Singh and Modi government (for a complex of reasons in line with the previous paragraph) and the energy transition rests on over 25 years of sector reforms. In Morocco, the royal palace initiated the country's embrace of renewable energy and the national government shaped the requisite legal, policy and institutional framework for it. In China, the renewable energy law emerged from the National People's Congress, but actions from the executive branch truly put China on course of an energy transition. National parliaments are for most part beholden to their government – they play a subordinated role within the political economy in general and the energy sector in particular.¹⁰

54. As a result, the Climate Parliament has had little to no opportunity to initiate, develop and set favorable legislation for the renewable energy sector (the linking pin in the Climate Parliament's Theory of Change). In China, India and Morocco (and Tanzania as well), the policy directives and legislation which undergird the current energy transition were set before the Climate Parliament's entry into the country. Well-developed existing legislative frameworks have pretty much precluded the Climate Parliament leaving legislative marks in its countries of operation. By extension, the Climate Parliament has also not facilitated in the case study countries a more conducive environment for private sector provision and financing of renewable energy and a more level playing field for distributed energy generation – two of SDC's foci for its financial support to the Climate Parliament.

2.4 The contributions the Climate Parliament has made

55. The Climate Parliament has contributed to real-world changes at a different scale. In the four case study countries, the Climate Parliament has facilitated, amongst others, increased budgetary allocations for renewable energy, cutting fossil-fuel subsidies, exempting renewable energy equipment from VAT and import tariffs, and piloting renewable energy projects within the constituency of parliamentarians (see Table 2). Full lists of results, as provided by the Climate Parliament, are include in the country case studies in the back of this report.

⁹ Including the Paris Agreement on climate change adopted by the 21st Conference of Parties in 2015.

¹⁰ This finding is supported by the meta-study of the International Development Commission of the House of Commons which states that parliaments 'are often unable or unwilling to counter powerful executives' (House of Commons IDC 2015).

Table 2. Selection of the Climate Parliament's results in the four case study countries (as provided by the CP)

India
<ul style="list-style-type: none"> - Doubling of the 2020 renewable energy target from 6% - 15% of electricity¹¹ - Reintroduction of a generation-based incentive for wind power with funding of US\$ 130 million - Launch of \$157 million in tax-free bonds for renewable energy - Revision in the functioning of the National Clean Energy Fund (including greater fund allocation to renewables) - Increase in the Ministry of New and Renewable Energy's budget from US\$200 million in 2013 to US\$ 1.2 billion in 2016 (See Textbox 3 on the next page for some reflections on this result) - Adoption and implementation of a Net-metering Policy in Odisha State - Increase of the target for solar-based electricity from 2000 MW to 6000 MW in Karnataka State - Introduction of a VAT exemption for solar panels and solar inverters in Karnataka State - Development of a solar cart to provide electricity during disasters
China¹²
<ul style="list-style-type: none"> - Submission of a draft Renewable Energy Law to the Environmental Protection and Natural Resources Committee of the National People's Congress
Morocco
<ul style="list-style-type: none"> - Reduced VAT on solar panels and other imported renewable energy equipment from 20% to 13% - Exoneration of import tariffs on solar PV equipment and renewable mini-grids components - Cut existing fossil fuel subsidies to thermal power plants and redirected the savings to a scheme to support the poor to pay their electricity bills
Tanzania
<ul style="list-style-type: none"> - VAT exemption on solar products in the VAT Bill 2014 - Increased allocation of the Rural Electrification Agency's Budget for renewable energy projects - Piloting of solar water pumps in one Climate Parliament Network member's constituency;

Source: Climate Parliament

2.5 Conclusion

56. The Climate Parliament's monitoring and reporting system provides an unsystematic, anecdotal and non-critical account of the Climate Parliament's work and generally oversells the Climate Parliament's achievements. The Climate Parliament sought to accelerate the development of the renewable energy sector in its countries-of-operation. Three of the four case study countries appear to be going through an energy sector transition in favor of renewable energy sources. These transitions are led by the respective national governments. National parliaments and the Climate Parliament play a limited role at best.

57. There is one, potentially important, caveat in this chapter's line of argumentation. As far as changes that have occurred after the Climate Parliament's entry into a country, the Climate Parliament could have had an informal influence on leaders within the national government – through its advocacy – which helped *grease the wheels of change*. I address this caveat in the next chapter when I put the Climate Parliament's Theory of Change to the test.

¹¹ This target has in the meantime been superseded by the new target of 40% of electricity generation capacity, which was set by the Modi government in 2014.

¹² The Climate Parliament has only been active in China since ca. 2½ years and focused – in contrast to the other countries – on legislative initiatives. Within this time-period and within the context of China's political economy, facilitating the tabling of a draft law to the National People's Congress already constitutes a success.

Textbox 3. Reflections on a key result of the Climate Parliament in India

The Climate Parliament's 2016 Operational Report lists as 'some of the key things [the Climate Parliament] is achieving' amongst others:

'An additional \$1 billion a year in India. *The recently-retired head of India's Ministry of New and Renewable Energy (MNRE) has told us that the increase in the Ministry's budget over the last three years from US\$200 million to \$1.2 billion annually would not have been possible without the support of the Climate Parliament India group. The strong support for increased funding which we generated in Parliament gave MNRE the political backing it needed in discussions with the Finance Ministry, he says.'* (Heading emphasis in original, Climate Parliament 2017)

This quote is, first-and-foremost, an example of the Climate Parliament's donor reporting style and system (as reflected on in Textbox 2). The Climate Parliament elevates a field observation – which emanates from a single-source and had, at the time, not been verified – to a success story which, in its presentation, suggests that the Climate Parliament was critical, if not responsible, for a billion dollar increase in the Ministry of New and Renewable Energy (MNRE) budget. The occurrence and benefits of the Climate Parliament Network's advocacy, reflected in above quoted text passage, are undoubtedly true. Moreover, the Climate Parliament's advocacy might well have *greased the wheels* of the negotiations between the MNRE and the Ministry of Finance. But it is something altogether different to suggest, as is done through the above quoted text passage, that the Climate Parliament has raised 'an additional \$1 billion a year in India' for the MNRE. The latter is not corroborated by the facts.

First, the Modi government raised the target for renewable energy almost five-fold. A concomitant increase in the budget for renewable energy is not out-of-the-ordinary and, in the end, results from *the confluence of factors* influencing the energy transition in India (as discussed in this chapter and in Annex C). The National Parliament and the Climate Parliament Network have played a supporting role at best in this confluence of factors.

Second, the budget for the Ministry of New and Renewable Energy amounted to US\$ 749 million in 2016 (Indian Ministry of Finance 2017a). When asked about the gap in the figures, the Climate Parliament noted that the US\$1.2 billion includes expenditures on renewable energy funded by so-called internal and external budgetary resources (such as profits, equity and loans) raised by Public Sector Enterprises (e.g. the Indian Renewable Energy Development Agency). When including these expenditures, actual expenditures on renewable energy rise to approximately US\$2 billion in 2016. Inclusion of the expenditures funded by the internal and external budgetary resources therefore, in-and-by-itself, does not substantiate the Climate Parliament's assertion of 'an additional \$1 billion a year', and a total annual budget of US\$1.2 billion, for the MNRE. A gap in figures remains. An additional problem with the inclusion of the expenditures on renewables funded by the internal and external budgetary resources is that these expenditures are made by Public Sector Enterprises (i.e. not the MNRE) and that they constitute mostly loan-financed capital investments which will be based on discretionary investment decisions for which the Climate Parliament cannot automatically claim credit.

The supposedly \$1 billion increase is also to be seen in light of an earlier Climate Parliament Network achievement. The Indian Parliament's Estimates Committee recommended the government in 2011, upon initiative of the Climate Parliament Network, to allocate 1% of the Union Budget to the MNRE. The Singh government accepted this recommendation, but it was only the Modi government who is said to have implemented it. In 2016 however, the actual share of the Ministry of New and Renewable Energy's Budget was 0.25% of the tax-funded Union Budget (Indian Ministry of Finance 2017a, 2017b). Even when we include the expenditures funded through the internal and external budgetary resources, the expenditures on renewables as percentage of the combined budget remains below 0.7%.

I deduct from these reflections that the Climate Parliament's 'an additional US\$ 1 billion a year in India'-statement has not been verified by the Climate Parliament before inclusion in the Annual Report and cannot be traced or replicated through our own independent research.

3. Effectiveness: Does the Climate Parliament's Theory of Change hold up in practice?

3.1 Introduction

58. The Climate Parliament operates under a set of assumptions on how to accelerate the energy transition in its countries-of-operation through parliamentary action. These assumptions – which rest on experience and convictions – form the Climate Parliament's Theory of Change and encompass the causal mechanisms which need to function for the Climate Parliament to be effective, i.e. attain its envisaged outcomes (Morra Imas en Rist 2009, M. Q. Patton 2002, 2012, OECD n.d.). The Climate Parliament's Theory of Change exists implicitly: it has not been spelled out. At the review's outset, I have reconstructed the Theory of Change (see Table 3 on the next page), thereby creating a point of reference to understand how parliamentary action can support the development of the renewable energy sector and what the assumed critical success factors are.¹³ I have subsequently used the country case studies to validate this Theory of Change¹⁴. This chapter summarizes the results by answering the classic evaluation question: *'what works, what doesn't and why'* in the Climate Parliament's Theory of Change? I subsequently come back to the point made in the previous chapter that the Climate Parliament has set the bar very high for itself in its funding application to SDC.

3.2 What works?

59. In the countries where the Climate Parliament has a (frequent) on-the-ground presence, it is able to create a vibrant network of parliamentarians.¹⁵ Through active engagement by the Climate Parliament staff, network members increasingly accept the (environmental and economic) case for and recognize the potential of renewable energy in their country and become advocates for change in their own right. The Climate Parliament thus attains the first outcome specified in its Logical Framework: *'increased awareness among legislators in target countries about the threat of climate change and the potential benefits of renewable energy, as well as increased political will to act on these issues'* (Climate Parliament 2014c).

60. The network members highly appreciate participation in international parliamentary hearings for the exposure this gives them to state-of-the-art knowledge, peers and international technical experts and organizations. Through the international parliamentary meetings, they feel empowered to take action at home; confirming the Climate Parliament's suggested 'Network Effect'. The interviews with the parliamentarians confirm that the Climate Parliament is an excellent 'convener' of stakeholders.

61. With support from the Climate Parliament, the network members take discretionary actions to promote the use of renewable energy in their countries. As shown in Chapter 2, these actions revolve around: increasing budgetary allocations for renewable energy (through which the Climate Parliament contributes to one of its outcome areas), cutting fossil-fuel subsidies, VAT and import tariff reductions/exemptions for renewable energy, and renewable energy projects in parliamentary constituencies.

¹³ The methodological approach for reconstructing the theory of change is based on (Leeuw 2003) and (Morra Imas en Rist 2009). In short, we have *detailed* the logical framework. This concerns explicating *why* the causal linkages in the logical framework take place. It requires completing the *'if-then'* statements by answering the 'because' part of the argument, resulting in *'if-then-because'* statements. I reconstructed the Theory based on (i) the review's Terms of Reference (SDC 2016); (ii) Climate Parliament documentation (Climate Parliament 2014a, 2014d, 2015b); and (iii) interviews with the Climate Parliament's senior management, the Swiss consultant to the Climate Parliament and the GPCCE program manager.

¹⁴ The Theory of Change is not static, but evolves over time based on new insights and experiences. This review was not interested in testing the validity of the original theory of change (i.e. the theory held at the program outset). Instead, we were interested to test the currently held theory and determine the extent to which it holds in practice and provides a fair representation of the Climate Parliament's effectiveness.

¹⁵ Implicit in this statement, but explicitly expressed by the parliamentarians is that these networks are valued by the parliamentarians for the informal exchange and knowledge acquisition that they allow.

Table 3. The Climate Parliament's Theory of Change

If-then-because statements – explaining the logic / behavior	Critical system features:
<p>- If the Climate Parliament can reach, inform and support a small group of parliamentarians, then these parliamentarians will initiate, advocate, facilitate and draft favorable legislation, because they:</p> <ul style="list-style-type: none"> - focus on real and present local challenges, whose resolution will have wide-spread impact on development (not only the energy sector); - grasp the urgent need to address climate change and want to 'Do good'; - accept the case for and recognize the potential of renewable energy in their country; - recognize the economics behind promoting renewable energy (which – as of late – can constitute the least cost electricity generation option); - feel empowered to take targeted action because they are part of an international network of conspirators (what CP calls 'the Network Effect', which 'releases energy'); - effectively receive an opportunity to become more visible and relevant (to their colleagues, constituency and country challenges). 	<ul style="list-style-type: none"> - Room to maneuver for individual parliamentarians to take action (amongst others dependent on party discipline) - Parliamentary constituents face an electricity shortage
<p>- If favorable legislation is drafted, then the Climate Parliament's parliamentary network will be able to negotiate the legislation's passage through parliament; because the network:</p> <ul style="list-style-type: none"> - includes powerful opinion leaders (e.g. chairman of the standing committee on energy, environment or finance) from the whole range of political parties, which hold influence over fellow parliamentarians and have the ear of influential government representatives; - takes a leading role in formulating targets and drafting policies and legislation; - actively lobbies decision-makers to adopt and resource climate change legislation; - expands the network effect (indirectly) to include in-country stakeholders and make them feel part of a global community; - maintains strong linkages with key government agencies. 	<ul style="list-style-type: none"> - Prevailing shortages in electricity supply, resulting in frequent brown- and blackouts (i.e. there is an immediate political and economic need for additional energy generation capacity) - Excessive air pollution in politically important constituencies
<p>- If favorable legislation is passed, then the legislation will be operationalized and implemented by the executive (ministry of energy) and implementing agencies (e.g. energy regulator); because these agents:</p> <ul style="list-style-type: none"> - have been convinced – through active lobbying – by the Climate Parliament (parliamentarians) of the need of an <i>Energiewende</i>; - are empowered by the legislation to promote the renewable energy agenda; - are required or have the opportunity to take follow-up action, including implementing a renewable energy program <p>and the Climate Parliament network participants have the information access to actively monitor the legislation's implementation, as well as the incentive and power to effectively hold the government to account because:</p> <ul style="list-style-type: none"> - the members receive continued support from the Climate Parliament on monitoring the status of the energy sector and implementation of the renewable energy policies; - it creates new opportunities for parliamentarians to be visible and relevant (to their colleagues, constituency and country challenges); - the network includes powerful opinion leaders who hold sway over colleague parliamentarians and leading government officials. 	<ul style="list-style-type: none"> - Absence of strong political and economic interests against the transformation of the energy sector - Prevailing budget constraints, in part due to prevailing energy subsidies - Executive branch has the capacity or the support from developing agencies to design and implement regulations, programs and/or projects
<p>- If favorable legislation exists, then the absolute and relative amount of renewable energy generation will go up, providing more energy access and security and reducing (relative) greenhouse gas emissions because:</p> <ul style="list-style-type: none"> - investments in renewable energy are technologically and financially feasible without government support; - public and private entities will start investing in and operating renewable energy plants or businesses. 	<ul style="list-style-type: none"> - Investors' confidence in the government's long-term commitment to the <i>Energiewende</i> as well as the prevailing rule of law - Investor's ability to mitigate political risks (e.g. through risk mitigation instruments of development finance institutions)

62. Again with active support from the Climate Parliament, network members also address renewable energy challenges by raising questions in Parliament, commenting on the governments' budget proposals during the parliamentary budget sessions, and actively lobbying ministers on for example renewable energy targets or cross-border energy interconnections. The Climate Parliament offers parliamentarians an opportunity to become more visible and relevant to their colleagues and constituency. In Odisha, India, the Climate Parliament has also contributed to the development of a solar cart to provide electricity to areas struck by natural or man-made disasters.

3.3 What doesn't work?

63. The central tenet of the Climate Parliament's Theory of Change is that the parliamentarian's engagement with the renewable energy sector and climate change – an engagement which, as I have just argued, does occur – these parliamentarians will advocate, initiate, facilitate and draft favorable legislation to accelerate the adoption of renewable energy. In India, the Climate Parliament is preparing a draft renewable energy law at national level and in Odisha State. It has also contributed in Odisha State to the adoption of a net-metering policy. In China, the Climate Parliament has proposed a revised renewable energy law and a first-ever climate change mitigation and adaptation law.

64. The ongoing energy sector transitions in China, India and Morocco are however undergirded by a comprehensive legislative and policy framework which has been in the making for at least a decade (and in the case of India over 25 years). Even in Tanzania, where the renewable energy sector has not yet taken off, large parts of the legislative and policy framework are in place (even when the political commitment fails to act on this framework)¹⁶. Moreover, as argued in Chapter 2, the legislative prerogative, although formally with parliament, rests in practice with the executive branch in the sense that it is the national government which typically initiates and leads the development of new legislation, policies and institutional frameworks in the energy sector. In the four case study countries – and I have no reasons to believe it is different in the other countries¹⁷ based on a review of the Climate Parliament's annual reports – the Climate Parliament does not attain the third envisaged outcome as specified in its Logical Framework: *'target countries' legal, policy and regulatory framework for the promotion of energy access and the exploitation of renewable energy resources become increasingly coherent and effective*^{18, 19}.

65. In the absence of proposed legislation, the central tenet of the Climate Parliament's Theory of Change fails in practice. This does not mean that the Climate Parliament does not exert influence; just that its own Theory of Change does not work. The next section will address how the Climate Parliament may well have influence on the renewable energy agenda in their countries of operation.

66. We conclude with a last comment on the Theory of Change. The Theory proclaims that the Climate Parliament Network members will have the information access to actively monitor the implementation of legislation, as well as the incentive and power to effectively hold the government to account. In practice, Climate Parliament Network members depend heavily on the Climate Parliament for information provision, which raises questions about the sustainability of the Climate Parliament's work. An issue, we will address in Chapter 5. Moreover, most parliaments fail the instruments to effectively hold the government to account. This even holds true in such a vibrant parliamentary democracy as India, where Climate Parliament Network members were unable to enforce a ruling by the Lower House's powerful Estimates

¹⁶ The Climate Parliament's assertion that *'robust and appropriate policy frameworks governing the use and development of national renewable energy resources are often lacking'* (Climate Parliament 2014a) did not hold up in the four case study countries.

¹⁷ A partial exception is Tunisia where the Climate Parliament has contributed to the inclusion of a climate change mitigation and adaptation clause in the country's Constitution. This constitutional article has however not yet been fully translated into a comprehensive legislative and policy framework.

¹⁸ A notable (and in many ways surprising) future exception may prove China, which is the only case study country where the Climate Parliament has proposed substantive legislation on renewable energy and climate change. At the same time, it is probably the one country which least needs the Climate Parliament's support to initiate, formulate, pass and implement such laws given the available expertise in-country.

¹⁹ Especially in India, the Climate Parliament has contributed to the second component of this outcome criteria, namely: *'Increased allocations for renewable energy in government and/or regional budgets'*. These additional allocations remain, for most part, modest compared to the fiscal obligations which stem from the legislative and policy framework developed over the last 25 years.

Committee that the government should allocate 1% of its budget to renewable energy – a ruling which was accepted in 2011 by the Singh government, but only implemented by the Modi government in 2014.

3.4 Nudging change

67. As already suggested in Chapter 2.1, the Climate Parliament was highly ambitious in its goal-setting under the SDC financial support line. Given the political economy in the case study countries, as well as the historic evolution of the legislative, policy and institutional framework of the energy sector in these countries, the Climate Parliament could hardly be expected to clear the bar it set for itself and through legislation accelerate the energy transitions. However, the Climate Parliament exerts influence on parliamentarians and especially in India, and to some extent in Tanzania, these parliamentarians²⁰ do engage with and possible influence ministers, members of their political parties and colleague-parliamentarians.²¹ Sometimes, these parliamentarians also become minister. Over time, their engagement and advocacy could change prevailing opinions and behavior spurring a noticeable change in a government's stance on climate change and renewable energy.²²

68. The problem is that *we do not know* if and to what extent this wider-spread change in awareness, opinions and behavior occurs. The Climate Parliament does not assess the behavioral change it invokes – there is neither a baseline on attitudes amongst parliamentarians and government officials towards climate change and renewable energy in each country-of-operation, nor a periodic assessment of changes to these attitudes. The Climate Parliament could consider adopting an alternative results framework, which focusses on changing and measuring attitudes and behavior instead of outcomes and impacts which it cannot – or only very difficultly – influence. This alternative results framework is called 'Output Mapping' and is briefly introduced in Textbox 4.

Textbox 4. Outcome Mapping

Outcome Mapping has been developed by Terry Smutylo, Sarah Earl and Fred Carden of the International Development Research Centre in Ottawa, Canada. Their starting point was that the attribution of impacts is *'problematic because the complexity and fluidity of development processes mean that achieving such impacts requires the involvement of a variety of actors, often over a considerable period of time. When large-scale change – or impact – manifests itself, it is often the product of a confluence of events over which no single agency has control or can realistically claim credit for'*. They devised outcome mapping to shift focus away from impacts and on to outcomes.

Their outcomes are however defined differently than is normally done within Logical Frameworks. Outcome Mapping *'focusses on changes in behavior, relationships, activities and actions of the boundary partners'* (emphasis added). Boundary partners are individuals or groups of individuals with whom a program interacts and with whom the program anticipates opportunities for influence. In the case of the Climate Parliament, these would be the parliamentarians. Outcome mapping subsequently constitutes a planning, monitoring and assessment tool to determine whether the boundary partners *'use' the acquired tools, skills, knowledge and insights and 'change their behavior'*. In contrast to the Logical Framework methodology, Outcome Mapping focusses much more attitudinal and behavioral change, which it assumes is a precursor of impact or *'significant and lasting change in the well-being of large numbers of intended beneficiaries'*.

Source: (Earl, Carden en Smutylo 2001)

²⁰ Whilst not per se *'opinion leaders'*, the Climate Parliament Networks includes parliamentarians with significant political standing in-country and within their political parties, who are also members of either the standing committees on finance, energy or the environment.

²¹ This appears to be less the case in the more autocratic regimes of China and Morocco.

²² This reminds me of the beautiful quote: *'never doubt that a small group of committed citizens can change the world. Indeed, it's the only thing that ever has.'* This quote is attributed to Margaret Mead. (Scharmer and Kaufer 2013)

69. The adoption of this alternative framework will still pose a considerable *attribution* challenge as the attitudes and behavior of parliamentarians will be influenced by many factors (especially on such a globally hot topic as climate change) and in particular by their constituents²³. Moreover, when addressing national attitudes and behaviors the question is whether it makes sense to focus on parliamentarians or whether the Climate Parliament should explicitly broaden its advocacy to executive branch politicians (which it in many cases already does anyway), political parties and the media.

3.5 Conclusion

70. The Climate Parliament is an able convener of parliamentarians and – with sufficient on-the-ground-presence – capable to create a vibrant in-country network of parliamentarians, which take targeted and discretionary actions on renewable energy relevant topics. The political economy in the case study countries – with its dominance of the executive branch of government and the prevalence of well-developed legislative, policy and regulatory frameworks – did not allow the Climate Parliament to leave a legislative or policy mark which accelerated the energy transitions in the countries. At the same time, the Climate Parliament (Network) possibly influences attitudes and behavior of colleague-parliamentarians and ministers which could have a positive long-term effect on the energy transitions. The problem is that the Climate Parliament does not systematically assess and monitor such attitudinal and behavioral change. This review was not designed to rectify this information gap. We therefore *do not know* to what extent and how important the Climate Parliament's informal influence is.

²³ As renowned Harvard economics professor, Gregory Mankiw, aptly states in the documentary *Before the Flood*: politicians are '*followers*' who '*react*' on the interests and attitudes of their constituents.

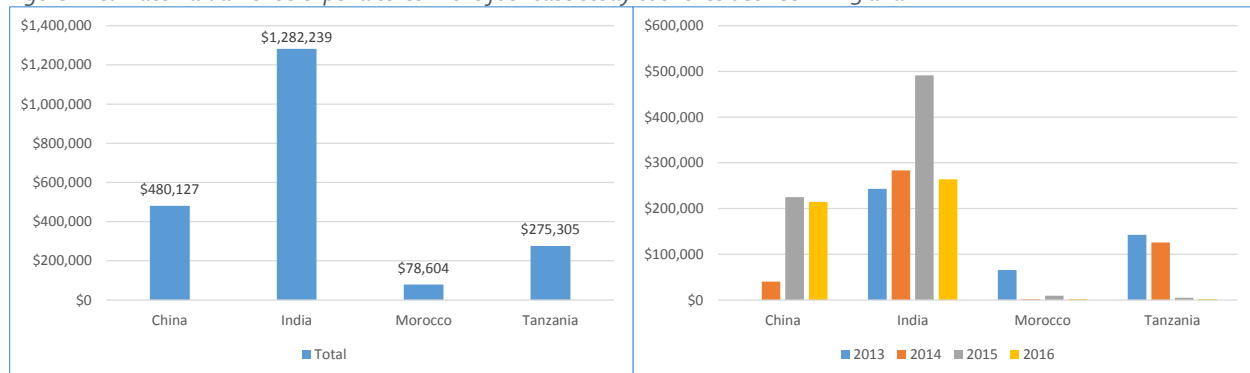
4. Efficiency: Room for improvement?

4.1 Introduction

71. Efficiency 'measures the outputs – qualitative and quantitative – in relation to the inputs'. It assesses 'the extent to which aid uses the least costly resources possible ... to achieve the desired results' (OECD n.d.). Efficiency is notoriously difficult to measure – nonetheless so for parliamentary action programs. Parliamentary action is, on the one hand, a 'low-cost intervention' (House of Commons IDC 2015): it involves mostly staff time, event costs, and travel expenditures for parliamentarians, as well as communication and marketing outlays. Figure 1 shows the total and annual expenditures of the Climate Parliament in the four case study countries. (Please note that these sums concern total Climate Parliament expenditures, i.e. funded by the total amount of donations it receives and not just SDC monies.) The annual and total sums involved in the four countries of operation are indeed modest.

72. On the other hand, as argued in the previous chapter, parliamentary action at best nudges countries towards accelerating the development of the renewable energy sector and it is (in most cases) impossible to attribute success with any precision to the parliamentary action. The ongoing energy transitions in China, India and Morocco are due to a confluence of developments with national governments rather than parliaments in the central coordinating and leadership role. As a result, it is difficult if not impossible to ascertain with any amount of precision whether investing in the Climate Parliament is an efficient enterprise. This chapter will not try to answer this question. Instead, it focusses on whether the Climate Parliament could have used its resources more efficiently. This is, in a way, an unfair question: there is always room for improvement. But there is some evidence to suggest that in the case of the Climate Parliament there is more room than necessary.

Figure 2. Climate Parliament's expenditures in the four case study countries between 2013 and 2016²⁴



4.2 Focus and selectivity

73. The Climate Parliament is highly selective in the topics it covers. It has deliberately chosen to focus its efforts on the promotion of large-scale renewable energy generation and via this route contribute to mitigating climate change (see Textbox 5 on the reasons for the Climate Parliament's focus and selectivity).

²⁴ Concerns total Climate Parliament expenditures funded by all donors combined, i.e. not just SDC monies. Source: Climate Parliament

Textbox 5. The reasons for the Climate Parliament's focus on large-scale renewable energy generation

The reason provided by the Climate Parliament for focusing on large-scale renewable energy generation is two-fold. First, capacity. As a small organization with limited staff resources, it has to choose and be selective. Second, accessibility and marketability. Large-scale renewable energy generation is easier to sell to parliamentarians (because of these two characteristics) than, example given, sector reform (which is more complicated intellectually and politically). I suspect there is a third reason at play, namely the Climate Parliament's own comfort with the topic. The Climate Parliament does not have international or national staff with deep energy sector experience (of the kind acquired when working 15 years or more in the sector). This lack of expertise and experience probably also prevents the Climate Parliament from picking up more intricate challenges. The Climate Parliament retorts on this point that the parliamentarians would not be interested in or have the capacity or time to act on more intricate challenges. This is undoubtedly true for some parliamentarians, but not for all. I met highly capable Climate Parliament Network members during this review, who are perfectly capable and – when convinced – will take the time to tackle complex challenges.

74. The energy transitions in China, India and Morocco are now well under way (see Textbox 6 for a brief reflection on how far along). There is little the Climate Parliament can do in these countries on the promotion of large-scale renewable energy but to maintain pressure on their governments to follow through on their commitments. This raises the question whether it is time for the Climate Parliament to *move on*. The country case studies and the literature suggest two ways it could do so.

75. First, the Climate Parliament could pick up other challenges. In India, the electricity distribution sector is about to be bailed out again (after previous bail outs in 1991 and 2001). The vicious circle of underfunding, underinvestment and underperformance in which the distribution sector finds itself sips away much needed resources to improve service delivery and reach 100% electrification in the country. China is just now starting to seriously address urban air pollution and devise comprehensive plans to combat climate change. And Morocco has testy political relations with its neighbors preventing a grid interconnection at scale in Northern Africa.

76. The Renewables Global Futures Report of REN21 (2017), which is based on a canvas of 114 energy sector experts around the world, also highlights areas which require due attention, for example the role of utilities in energy transitions as these can obstruct energy transitions but can potentially also enable transitions by embracing distributed energy models. The report also points towards the need to: develop adequate local operations and maintenance skills for small- and large scale renewable energy power generation plants; take head-on challenging sectors such as the built-environment or (maritime and air) transportation; or give due attention biomass, geothermal and hydro technologies, which are currently overshadowed by solar and wind. There is also the possibility to facilitate the connection of groups of energy consumers with renewable energy providers by enabling the formation of cooperatives and the development of standardized power purchasing agreements (REN21 2017, The Economist 2017b).

Textbox 6. How far along are the energy transitions in China, India and Morocco?

The question is whether the energy transitions in China, India and Morocco have reached or are passed the so-called '*tipping point*', i.e. the point of no return (Gladwell 2000). They probably are. The political momentum, environmental need, the ever-falling costs of renewables, and the economic opportunities it entails make it likely that the energy transitions underway will persevere. But this is not yet a given. The case studies in the back of this report show that all three countries still rely for the far majority of their energy supply on fossil fuels. A reversal in political attitudes or public opinion to climate change can, for now, still quite easily stop or reverse the energy transitions in these countries.

77. Second, it could focus on countries where the energy transitions have not yet taken off (such as Tanzania). Many of these countries will provide difficult working environment – as there will be political-economic reasons why the energy transitions in these countries have not progressed – but they also offer the opportunities embedded in the Climate Parliament’s Theory of Change. A strengthened Climate Parliament Network in Tanzania could remove political obstacles for the large-scale renewable energy projects in the pipeline from going forward.

78. This brings me to another point: the Climate Parliament is active in too many countries. The Climate Parliament lists in its latest Operational Report (2017) 19 countries in which the Climate Parliament is active (albeit to varying degrees). This spreads the Climate Parliament’s staff and monetary resources thinly and makes that the Climate Parliament is unable to pursue its preferred implementation model, namely of having an in-country secretariat which provides day-to-day support to the Climate Parliament Network. In the next section, I will reflect in more detail on the alternative implementation models in use by the Climate Parliament and argue for the Climate Parliament to make an explicit distinction between countries in which it provides parliamentary support and countries from which it only invites parliamentarians to its international parliamentary hearings. Like most of us, the Climate Parliament cannot serve everybody.

4.3 Choosing one’s religion

79. The last four years, the Climate Parliament utilized five distinct implementation models at the country level. Table 4 summarizes these five distinct organizational models.

Table 4. The Climate Parliament’s country-level implementation models

Implementation model	Description	Countries
1. In-country secretariat	In India, the Climate Parliament has a 6-person strong secretariat, including a country director, senior policy advisor, a media and administrative coordinator, a researcher and two state coordinators.	India
2. Country Director	In Beijing, the Climate Parliament has an individual country director who coordinates in-country activities, supports parliamentarians, and leads targeted advocacy projects.	China (previously also Morocco)
3. Regional Director	Most Climate Parliament Networks receive support from an individual regional director. This support is provided telephonically, electronically and on-the-ground (on a fly-in/fly-out basis).	Bangladesh, Africa, Middle-East and Latin-America
4. Arm’s length support	Because there are limits to the geographical spread of regional directors, it is the global secretariat (based in the United Kingdom and New Delhi) which fills the gaps. They provide mostly telephonic and electronic support to parliamentarians and ensure that the parliamentarians from these underserved countries remain invited to the international parliamentary hearings.	Parts of Africa (Tanzania, Uganda, Morocco)
5. Swiss consultant	As noted in the introductory chapter, SDC provided the Climate Parliament for circa 18 months with the services of Rudolf Rechsteiner, who is a former national parliamentarian, a current state-level parliamentarian and a renewable energy sector specialist. Mr. Rechsteiner’s joint efforts with the Climate Parliament’s Regional Director for Africa and the Middle-East were well-appreciated by the Climate Parliament and parliamentarians and showed that parliamentary action can (in principle) be supported by a well-qualified team on a fly-in/fly-out basis.	Bangladesh, Jordan, Tanzania, Tunisia

80. The Climate Parliament favors the India and China model, i.e. having an in-country secretariat or country director. As the country case studies confirm, this allows for the best, hand's on support to the Climate Parliament Networks. It also provides better results: India and China record more substantive outcomes than Morocco and Tanzania (as shown in Table 2 on page 20). Fly-in/fly-out support can function as proven by the Climate Parliament's cooperation with Rudolf Rechsteiner (in particular in Tunisia, where this collaboration supported a constitutional amendment on climate change). The least effective are the regional directors and the arm's length support from London and New Delhi (as evidenced by the limited results in Morocco and Tanzania). This is well-known to the Climate Parliament. So why don't they confess and deliberately and consistently follow one of the proven models?

81. The Climate Parliament could not answer this question over and above mentioning that resources are scarce. The latter is of course true, but that doesn't withhold one from making (tough) choices and concentrating one's efforts on the number of countries that one's resources can support, i.e. significantly reduce the number of countries in which the Climate Parliament is active on-the-ground. Such an approach implies that the Climate Parliament will be less able to be responsive to some donor (and parliamentarian) requests. At the same time, increased effectiveness in the countries where it is active will strengthen its cards to successfully mobilize donor funding and ensure a long-term engagement (which – as we will see in the next chapter – is a key success factor for parliamentary strengthening work).

4.4 Conclusion

82. A hard call on the Climate Parliament's efficiency is impossible to make. Parliamentary action is, on the one hand, a low-cost intervention. On the other hand, parliamentary action at best nudges countries towards energy transitions. How big a nudge, I do not know, which makes an overall judgment on the Climate Parliament's efficiency all but impossible to make. There is however clearly room for improvement. The Climate Parliament can increase its potential parliamentary leverage through four interrelated actions and, in the process, increase its efficiency.

83. First, the Climate Parliament can target timelier and politically more intricate challenges than large-scale renewable energy generation. Second, it can focus on countries where the energy transitions have not yet taken off (such as Tanzania). Third, the Climate Parliament can concentrate its activities in fewer countries and ensure a (frequent) staff presence on-the-ground. Fourth, the Climate Parliament can strengthen its regional and in-country teams by adding deep energy sector / climate change expertise or utilize more consistently consultants of the caliber Rudolf Rechsteiner²⁵, which will allow the Climate Parliament to identify and address the politically more intricate energy sector / climate change challenges. All four actions will increase the Climate Parliament's performance while using the same amount of resources.

²⁵ Rudolf Rechsteiner's background is quite unique and probably difficult to find. Mr. Rechsteiner however also did not work alone but in tandem with the Climate Parliament's Regional Director for Africa and the Middle-East. The challenge for the Climate Parliament would be to recreate effective tandems combining parliamentary action and energy sector expertise.

5. Sustainability: Best practices in parliamentary strengthening

5.1 Introduction

84. This chapter discusses the sustainability of the Climate Parliament's work and uses the findings as a stepping stone to benchmark the Climate Parliament against international best practices in parliamentary strengthening.

5.2 Sustainability

85. The OECD-DAC defines sustainability as *'the extent to which the benefits of a program continue after donor funding ceases'* (OECD n.d.). In case of the Climate Parliament, there are two dimensions to this: (i) the sustainability of results; and (ii) the sustainability of parliamentary action. The sustainability of results (e.g. enhanced budget allocations to renewable energy) depends on the adherence of state actors to previous agreements, budgets and laws. As argued in Textbox 6, this is likely to be the case in China, India and Morocco. The energy transitions in these countries are well underway and unlikely to be reversed given the current political momentum, environmental needs, the ever-falling costs of renewables, and the economic opportunities inherent to the energy transitions.

86. The sustainability of parliamentary action is less secure. Of the four case study countries, only India and Tanzania have Climate Parliament Networks, which are large and vibrant enough to withstand parliamentary elections and the concomitant change in parliamentarians (as both networks have proven during the last elections). More worrisome is that the Climate Parliament does not build up in-country arrangements (either in- or outside parliaments) to take over if and when the Climate Parliament ceases to exist (i.e. donor funding dries up). This runs counter to international best practices, which advocates building the capacity of parliamentary staff side-by-side of support provided to parliamentarians. The literature points to parliamentary staff as being the institution which can secure sustainability of action.

87. The Climate Parliament has no intention of quitting and – given the political prominence of climate change – it should be able to secure funding for the foreseeable future. The Climate Parliament can however not be active everywhere (as argued in the previous chapter). In some countries, the Climate Parliament will need to pass the baton to in-country actors to secure continued parliamentary action on climate change mitigation and adaptation. For now, the case studies of Morocco and Tanzania attest that parliamentary action falters or is significantly reduced in size and scope when the Climate Parliament reduces its in-country efforts.

5.3 Scoring the Climate Parliament on international best practices in parliamentary strengthening

88. Parliamentary strengthening is an established and well-funded field within development cooperation (see Textbox 7). There also exists a rich body of literature on it. Four recent reports provide a useful meta-perspective²⁶. They show *'a clear and remarkably consistent set of lessons and recommendations about how external parliamentary development actors can improve their assistance'* (Menocal en O'Neill 2012). I list these best practices in Table 5 and score the Climate Parliament on them using a streetlight approach: *green* that the Climate follows this practice, *orange* for partially following this practice and *red* for not following this practice.

²⁶ These reports originate from the International Development Committee of the House of Commons in the United Kingdom (House of Commons IDC 2015), the London-based think-tank Overseas Development Institute (Menocal en O'Neill 2012), and the Berlin-based NGO Democracy Reporting International (Democracy Reporting International 2015) and the Inter-Parliamentary Union (IPU 2014).

Textbox 7. Parliamentary development assistance, the Climate Parliament and GLOBE International

The International Development Committee of the House of Commons in the United Kingdom estimated that circa US\$380 million is spent annually on parliamentary strengthening work. The biggest funding and implementation agency is UNDP, which spent in 2012 US\$ 127 million on parliamentary strengthening work in 68 countries. Other large donors are DFID (ca. US\$ 40 million in 2015) and the European Commission (ca. US\$ 12 million annually). Many actors are however active in this space. Apart from the three abovementioned organizations, these include among others:

- Donor agencies: Australia (DFAT), Norway (MFA), Swiss Federal Department of Foreign Affairs (Division for Human Security), SIDA, USAID.
- Multilateral organizations: NATO, OSCE, World Bank Institute, IRENA.
- Parliaments: European Union, France, Germany, Switzerland, United Kingdom, US Congress.
- Political parties: Westminster Foundation for Democracy, Netherlands Institute for Multi-party Democracy
- International parliamentary networks: Inter-Parliamentary Union, Association of European Parliamentarians with Africa, Commonwealth and Francophone Associations,
- NGO's: Parliamentary Centre (Canada), Democracy Reporting International.
- Academia: International Professional Development Program for Parliamentary Staff (State University of New York, the World Bank and Parliamentary Centre)

The literature identifies two archetypes of parliamentary strengthening: (i) general institution building; and (ii) an issue-based approach. Typical work under the first archetype is: parliamentary induction programs for freshly elected parliamentarians; refining or expanding core parliamentary processes, planning and management; implementing information and knowledge management systems; strengthening parliamentary oversight; support parliamentarians to work with the executive branch, the judicial branch, civil society or interest groups; and increase women's political participation and women's role in parliament. Under an issues-based approach, parliamentarians and development partners pursue a specific agenda (as the Climate Parliament does) and support focuses on promoting specific sector reforms through the relevant parliamentary committees.

Most parliamentary strengthening programs take a three-fold approach: (i) an individual approach: enhancing the capacities of individual parliamentarians and staff members; (ii) an institutional approach: strengthening particular institutions under the umbrella of parliament, e.g. standing committees or legislative departments; and (iii) a network approach: connecting like-minded parliamentarians at the regional and global level.















Most actors involved in parliamentary strengthening focus on general institution building (i.e. archetype 1). Some venture out from this archetype to provide targeted support to parliamentary committees, including pursuing targeted legislative action for sector reforms. The UNDP, OSCE, DFID and Parliamentary Centre are examples. From these examples, only UNDP covers the energy sector and climate change and runs a joint-program on this with the Climate Parliament in West-Africa. Few actors take purely an issue-based approach like the Climate Parliament. Examples are:

- International Republican Institute: values-based approach
- NATO Parliamentary Assembly: security issues
- World Bank Institute: financial management and budgetary oversight
- Global Organization for Parliamentarians against Corruption: anti-corruption
- Women in Parliament: energy, technology, economic empowerment, health and peace building
- Global Legislators Organization for a Balanced Environment (GLOBE International): environment

In short, the Climate Parliament inhabits a unique position. Only Globe International occupies the same space. The two do meet in the field, but in practice do not (or hardly) compete with each other. The in-country parliamentary networks of the Climate Parliament and Globe International generally overlap, i.e. parliamentarians participate in both, and they both provide the same type of practical, day-to-day parliamentary support and organize international parliamentary hearings. They cover however different topics, namely renewable energy (Climate Parliament) and climate change, ecosystem services, forestry, natural capital and the SDGs (GLOBE). The Climate Parliament staff is more agenda-setting and activist, identifying opportunities and initiating action. In GLOBE, it is the board of the parliamentary network, i.e. MPs, who set the agenda and how take their cue from the UNFCCC processes.

Source: own research plus Menocal en O'Neill 2012, House of Commons IDC 2015, Democracy Reporting International 2015

Table 5. Scoring the Climate Parliament on international best practices in parliamentary action

Best Practice	Climate Parliament
1. Act politically astute – bring political awareness to the design and execution of programs	
2. Act in a strictly non-partisan way	
3. Operate gender sensitive	
4. Utilize locally and regionally available expertise	
5. Respond quickly and flexibly when opportunities for support arise	
6. Engage with parliaments long-term, i.e. for a 10 – 20 year period	
7. Stability of funding	
8. Build on parliament’s own reform efforts, needs and capacity – operate demand-driven	
9. South-south exchange between parliamentarians more important than North-South exchange	
10. Include parliamentary staff as key stakeholder and build parliamentary capacity to manage change and renewal processes – safeguard for sustainability	
11. Place parliamentary strengthening programs in wider efforts to improve governance	
12. Include support to political parties	
13. Work in parallel with the media	
14. Ensure donor coordination and collaboration	

Source: (IPU 2014, Menocal en O’Neill 2012, House of Commons IDC 2015, Democracy Reporting International 2015)

89. The Climate Parliament staff demonstrate political awareness and sensitivity to the often precarious balance of power within parliaments and between the executive and legislative branch of government.²⁷ In the four case study countries, they consistently pursued the political possible rather than the environmental ideal, created cross-party networks²⁸ and acted in a strictly non-partisan way. The Climate Parliament staff move competently and astutely within the political arena.

90. The Climate Parliament operates gender-neutral. It pretty much achieves gender-balance with the parliamentarians it works closest with (including those invited to international parliamentary hearings). Women participate in all Steering Groups and the overall country networks have a female participation in line with the female representation in the respective parliaments. The Climate Parliament utilizes local expertise in three important ways, namely through: (i) the recruitment of local staff (in India and China) or regional experts to act as regional director (Africa and Latin-America); (ii) commissioning the preparation of local knowledge products to local consultancies (as in the case of the abovementioned Local Area Development Toolkit); and (iii) involving local experts in in-country parliamentary workshops.

²⁷ This came to the fore in my interviews with Climate Parliament staff and was confirmed by parliamentarians (of all stripes) in the case study countries.

²⁸ The Climate Parliament Networks in India, Morocco and Tanzania included representatives from the ruling part, main opposition party and smaller political parties.

91. The Climate Parliament shows a mixed track record on some of the other best practices in parliamentary strengthening. The Climate Parliament is an agile organization. Staff stay in regular (sometimes near daily) contact with lead parliamentarians and respond quickly to requests for support in drafting positions or parliamentary questions. They also support parliamentarians where opportunities arise (e.g. in preparing legislative decisions on VAT exemptions on renewable energy equipment) or where there is a need for targeted support (e.g. the Local Area Development Toolkit on renewable energy in India). At the same time, the Climate Parliament's singular focus on renewable energy prevented it from picking up climate-related opportunities – like for example addressing unsustainable charcoal production and deforestation in Tanzania which had (and has) the interest of both the local Climate Parliament Network and the SCO.

92. Only in India has the Climate Parliament been able to consistently secure funding. As a result, it has been active in India continuously since 2009 and steadily grown its in-country presence to a now six-person secretariat. India is however the exception. In Africa and the Middle-East, the Climate Parliament had at times to divert its staff resources to new countries and regions depending on the available funding²⁹, leaving some of the initial recipients of the Climate Parliament's support behind. The Climate Parliament's engagement in China and Latin-America rests for an important part on the SDC funding.³⁰ In case SDC stops or earmarks its support, this could have repercussions for the Climate Parliament's activities in China and Latin-America. This lack of stable and long-term credit lines negatively effects the Climate Parliament's ability to perform. Both the Climate Parliament and its donors would do well to devise ways to insert more stability in the funding and enabling long-term engagements in individual countries.

93. The Climate Parliament organizes regional parliamentary workshops³¹ and encourages South-South, peer-to-peer exchange during the international parliamentary hearings. All parliamentarians interviewed considered these valuable meetings. The African parliamentarians did note that the discussed approaches to address climate change in these international hearings were often '*beyond our grasp*'. They called to supplement these international or regional hearings with cross-country Climate Parliament Networks to identify and exchange on approaches to climate change which could work and are timely within their countries. Some initial effort on this is underway in East-Africa (specifically between Tanzania and Uganda) supported by an informal cooperation between the Climate Parliament and GIZ.

94. As noted in the previous section, the Climate Parliament does not build up in-country arrangements (either in- or outside parliaments) to sustain parliamentary action on climate change without the Climate Parliament. The Climate Parliament does not built parliamentary staff capacity. Moreover, the case studies highlight that the Climate Parliament does not place its activities in a wider context or broader efforts of governance reform, political party development, media development or donor coordination. The Climate Parliament staff effectively limit their role in-country to supporting the Climate Parliament Networks and driving its own strategic agenda forward.³² This is in a way a surprising finding for a *network organization* like the Climate Parliament. The effectiveness of its international parliamentary hearings rests on the Climate Parliament's convening power, i.e. ability to bring together parliamentarians, government officials and international experts. In its countries-of-operation, the Climate Parliament fails to assert itself in the same manner.

²⁹ The Climate Parliament implemented jointly with UNDP the Parliamentary Action on Renewable Energy Program (funded primarily by the European Union with some additional support from GIZ and the Danish Ministry of Foreign Affairs). The Program ran for three-years (from 2012 – 2014) and covered 10 countries across Africa, the Arab States and South-Asia (Particip GmbH 2014). In the subsequent years, the European Commission recruited the Climate Parliament (again with the UNDP) to implement a similar program in West-Africa. Effectively, this diverted the Climate Parliament's scarce resources from countries like Jordan, Morocco, Tunisia and Tanzania to Cote d'Ivoire, Benin and Senegal (Climate Parliament 2017).

³⁰ The SDC credit to the Climate Parliament deliberately covered a four-year period and includes an option for a four-year extension. SDC thus provided the Climate Parliament at least stable funding for four years, which was and is longer than the Climate Parliament receives from its other donors. Still, the four-year extension is subject to a renewed approval by SDC (which will – in part – be informed by this Review).

³¹ The regional parliamentary hearings have mostly a continental reach, i.e. Asia or Africa.

³² Whilst the Climate Parliament works together with other organizations in-country to execute parts of its programs, the Climate Parliament does not participate in the regular development partner groups or coordinates its activities with key development partners. Whilst working with the media may contain political risks which the Climate Parliament may be wary of taking up, the Climate Parliament is politically savvy enough to walk this fine line (for example by providing media content in the form of documentaries).

5.4 Conclusion

95. The Climate Parliament is a politically astute actor which (within the realm of renewable energy) is responsive to the needs and requests of parliamentarians. These characteristics make it a valued partner of parliamentarians. Discontinuity of funding prevents the Climate Parliament from long-term, well-resourced engagements in many of its countries-of-operation. Moreover, the Climate Parliament fails to sustain its work and make itself obsolete by embedding its activities and approaches in wider governance reform and building up in-country and parliamentary staff capacity to support parliamentary action.

6. Global energy connections: It's politics alright, but which kind?

6.1 Introduction

96. The Climate Parliament holds a vision: to power the globe for 100% through renewable energy. It foresees utility-scale power plants in resource rich geographies – in deserts to capture solar energy, on sea shores to utilize the wind and in the mountains for hydropower – and to connect these power plants with electricity consumers around the world through long-distance Ultra High Voltage Direct Current (UHVDC) transmission lines. The Climate Parliament argues that the Paris Accord is not enough to address climate change, that time is up for half-measures, and *'we have to build ourselves out of the problem'* (with these utility-scale renewable energy power plants and global energy interconnections).

97. The Climate Parliament is not the only one who propagates a 100% renewable energy future.³³ It is one organization, which is taking *action* to bring it about. The Climate Parliament is vigorously pursuing a Green Grid Alliance (GGA). This Alliance is to bring *'smart continental-scale electricity grids'* about, to deliver, reliably, all global electricity needs through renewable energy sources.³⁴ The Climate Parliament argues that *'only legislators, ministers and heads of government can make sure that the new infrastructure is built in time'*. It is thus creating (i) an alliance of governments; (ii) a network of legislators; and (iii) an advisory groups of 20 – 30 global companies, foundations, independent experts and NGO's to mobilize support and bring its vision about. This alliance, network and group jointly is to constitute the Green Grid Alliance. (Climate Parliament 2016c)

98. The Climate Parliament currently seeks the support of 20 governments from the global South to formally launch the Green Grid Alliance. To that end, it has actively lobbied legislators, ministers and heads-of-state around the world. So far, 19 countries have expressed, informally, their interest to participate: Argentina, Bangladesh, Brazil, Chile, China, Costa Rica, Dominican Republic, Ethiopia, Jordan, Indonesia, Mexico, Mongolia, Morocco, Peru, Samoa, Senegal, Tanzania, Tunisia and Uganda. The Climate Parliament intends to formally launch the initiative in 2017. (Climate Parliament 2017). This chapter reflects on the Climate Parliament's initiative.

6.2 An emerging reality

99. China has realized a number of UHVDC transmission lines and aims to have 23 such lines by 2030. The United States is building an UHVDC lines from the infamous Oklahoma Panhandle to Tennessee. UHVDC lines are also under construction in India and Brazil (The Economist 2017a)³⁵. In Europe, high-voltage direct current lines are connecting the Netherlands and Norway, Denmark and Norway, and Britain and France. In all above examples, the UHVDC lines connect energy rich geographies with large consumption conglomerates. Their realization are driven *'by the real needs of grid operators'* (The Economist 2017a).

100. For now, the UHVDC lines are all point-to-point links. New technology is needed for a true UHVDC grid, including *'special circuit breakers to isolate faulty cables and new switch gear to manage flows of current'* (The Economist 2017a). The Swiss multi-national ABB (ASEA Brown Boveri) has developed a new switch that allows for mashing. These switches and the so-called thyristers – the direct current equivalents of transformers – remain very expensive for now. General expectations nonetheless are that the emergence of a true UHVDC grid is only a matter of time. Such a grid is not by definition *green*. This depends on the electricity which feeds into it and all countries, first-and-foremost China, are a long

³³ Two-thirds of the 114 experts interviewed for the Renewables Global Futures Report of REN21 (2017) considered a 100% renewable energy future by 2050 realistic and feasible. The interview results display however a strong regional divergence. Neither in Africa, nor in Latin-America did experts deem a 100% renewable energy economy by 2050 feasible.

³⁴ The Green Grid Alliance aims at three levels of grid infrastructure: (i) intercontinental transmission lines; (ii) national smart grids; and (iii) micro-grids at the village level. The focus in the Climate Parliament's communication lies however on the intercontinental transmission lines and creating global energy interconnections.

³⁵ These UHVDC transmission lines vary in capacity and lengths. In the examples given capacity varies from 4GW to 12 GW and a length from 1100 km to 3500 km.

way from being 100% renewable powered. The extent to which global energy interconnections can enable greenhouse gas emission reductions will be a function of the renewable energy generation plants connected to it.

6.3 A view from the field

101. Our key informants, including the parliamentarians, in the four case study countries welcome the idea of global energy interconnections. Most (if not all) informants considered it an opportunity for their country to export electricity.³⁶ On the one hand, this is a logical position given that all four case study countries have abundant renewable energy sources to export. On the other hand, not *all* countries can export their electricity.³⁷ More important however is the field observation that all countries favor energy independence. This sentiment was especially strongly voiced in India and Tanzania. '*Outsourcing electricity generation to a neighbor is to invest huge trust in that neighbor's political stability and good faith*' (The Economist 2017a). Few informants appeared to be willing to extend this trust to their neighbors.

102. Some international experts question the economics behind UHVDC lines given the investment and transmission costs involved and coupled with falling renewable energy generation costs making '*local renewable energy generation more cost-competitive than importing renewable energy*'. Finally, all key informants agreed that the realization of intercontinental energy connections constitutes a long-term endeavor or, as one parliamentarian succinctly put it '*it won't happen in my life-time*' (and this person had ample of time left).

6.4 Two political perspectives

103. The emergence of UHVDC lines is driven thus far by economics. To bring about a zero-carbon grid – as envisaged by the Climate Parliament – more is needed and politics come into play: a political decision is to be made (in many countries) that a 'supergrid' is called for and worth the investments. The Climate Parliament seeks to trigger such political decisions by framing climate change as *a clear and present danger* and the supergrid as '*an essential part of [the world's] response*' (Climate Parliament 2016c). It is convinced that only politicians can bring the supergrid about. Table 6 depicts how the Climate Parliament wants to trigger political action – in short: through advocacy, network effects and showcasing leading examples.

Table 6. The Climate Parliament's Theory of Change for political action on the realization of a supergrid

1.	Educate political decision-makers to make them see the danger of climate change and the opportunity of global energy interconnections.
2.	Present actionable proposals to decision-makers as this will make them more likely to act.
3.	Built political networks as politicians are more likely to act when they feel part of a global group that can really make a difference. (This is the Climate Parliament's ' <i>Network Effect</i> ' that I also discussed in Chapter 3)
4.	Showcase examples and make sure that politicians around the world are aware of the successes that are achieved in leading countries under the motto that <i>success breeds success</i> .
5.	Generate pressure for action by mobilizing parliaments as governments are prone to pay more attention to issues deemed important by their parliaments.
6.	Educate and mobilize citizens because they elect their politicians, who in turn want to service their constituents.

Source: (Climate Parliament 2016c)

104. At the same time, there is a long history in and a rich body of literature on regional grid integration. This literature also suggests that regional grid integration is first-and-foremost a political endeavor, but one of an altogether different nature than envisaged by the Climate Parliament. It highlights a long-term process – spanning 20 years and more – of

³⁶ In the case of China and India, it was also seen as an opportunity to export technologies and engineering services.

³⁷ This emerged especially in Eastern Africa, where countries like Ethiopia, Rwanda, Tanzania and Zambia all want to export their renewable-energy-based electricity to the neighboring countries.

ever increasing grid integration which is firmly embedded in wider efforts to cooperate politically and on trade. And even then, actual electricity trade remains limited³⁸.

105. Cross-border electricity trade mostly starts between two countries based on bilateral agreements and cooperation between the energy sector regulators. As bilateral trade increases, third countries join (again based on bilateral agreements). As these multilateral arrangements prove stable and beneficial, participating countries create regional institutions after which they slowly move to creating competitive real-time regional power markets and auctions, which require *'well-functioning regional institutions for effectively managing more integrated systems'*³⁹ (Toman and Timilsina 2016, ESMAP 2010). Pre-conditions for such an evolution are: (i) a broader commitment to free trade (i.e. over and above the electricity markets); (ii) a price differential between the trading countries; (iii) an export price, which is lower than the willingness to pay for electricity by the consumers in the import countries⁴⁰; and (iv) adequate transmission capacity to enable trade and (later) expanded trade under spot markets⁴¹ (Oseni and Pollit 2016).

106. *'The main challenge is the degree of willingness of sovereign countries to agree on common rules with working enforcement mechanisms, including mechanisms for ensuring that contracts for cross-border trade are honored'* (Toman and Timilsina 2016). It is for this reason that most regional energy sector integration initiatives are embedded in wider regional cooperation efforts led by regional cooperation bodies (such as the European Union or the Southern Africa Development Community) and supported by international organizations (mostly the multilateral development banks) *'Creating new institutions with no basis in existing cooperative arrangements [between countries] are unlikely to succeed, as is trying to force a level of permanence and control exceeding that in other existing [political and economic] arrangements [between the countries involved]'* (ESMAP 2010).⁴²

107. In summary, this section has highlighted two alternative political perspectives. The Climate Parliament sees politics as the wedge, which can trigger action and realize global energy interconnections. The literature confirms the primacy of politics but sees political cooperation as a slowly emerging phenomenon and regional energy sector integration as taking decades to come about. High-level political agreements may speed up the political cooperation process. The common challenges of regional grid integration must however still be faced.⁴³ As national interests will vary in how best to address these challenges, there is little to indicate that the actual process of regional grid integration can be sped up all that much. In other words, global energy interconnections remain a long-term challenge to realize.

6.5 GEIDCO

108. The Chinese government is a leading advocate of global energy interconnections. President Xi proposed at the United Nations General Assembly in September 2015 *'establishing global energy interconnections to facilitate efforts to meet the global power demand with clean and green alternatives'* (GEIDCO 2016a). Through the State Grid, the Chinese Government has supported the establishment of the Global Energy Interconnection Development and Cooperation

³⁸ Most electricity trade takes place in Nord Pool and Southern African Power Pool (SAPP). Nord Pool comprises 18 countries in the European Union and the SAPP covers 12 countries in South and Eastern Africa (Oseni and Pollit 2016). Total cross-border trade (i.e. imports plus exports) as percentage of total electricity consumption is estimated for 2012 at 28% for Nord Pool and 21% for SAPP. A somewhat outdated World Bank Study estimated a maximum of 14% net imports – which was realized in South East Europe in 2005 (ESMAP 2010). Total global exports of electricity was around 3% of total production in 2012 (Oseni and Pollit 2016).

³⁹ Including the harmonization of rules, protocols for grid management and a fair and non-discriminatory transmission charge regime.

⁴⁰ This is a frequent bottleneck in countries where electricity prices are subsidized by the government.

⁴¹ A key challenge as *'regional power integration investments plans are seldom implemented'* (ESMAP 2010)

⁴² The Climate Parliament has also argued that global energy interconnections will contribute to peace. This section suggests that the causality runs the other way around, namely that long-term peace and good political relations will foster increased cooperation, including on energy issues.

⁴³ Key challenges are difficulties in (i) aligning national and regional investment decisions; (ii) overcoming differences in the regulatory environment between countries (including tariffs, sector structure and reform processes); (iii) absence of pre-existing and functioning regional cooperation bodies; (iv) dearth of financing; (v) differences in political regimes; (vi) overcoming concerns about national sovereignty and energy dependency; and (vii) mitigating significant political risks (i.e. countries abandoning previous commitments) (ESMAP 2010).

Organization (GEIDCO). GEIDCO was incorporated in Beijing in 2016 and the Climate Parliament is one of 17 Council Members (the organization's equivalent to a board of directors).

109. GEIDCO strives to be an *international organization* which fosters the development of global energy interconnections. Given its constitutional make-up, it is questionable to what extent GEIDCO can perform this role. GEIDCO is registered as a non-governmental and non-profit organization, is practically set-up as a research and advisory outfit with (currently) 120 staff members, and functions as a business association with currently 265 member organizations comprising industry associations, research institutes, universities, utilities, manufacturers, engineering and consulting companies and financial institutions. GEIDCO lacks the multilateral character of for example development banks to act neutrally and facilitate political agreements. Moreover, GEIDCO links itself explicitly in its promotion material to China's foreign policy: '*we will strive to establish Global Energy Interconnections to implement [the Chinese Government's policy] Two Replace, One Restore and One Increase*' (GEIDCO sd).

110. The Green Grid Alliance of the Climate Parliament can in principle complement GEIDCO as it offers the political mandate which GEIDCO fails. On the other hand, GEIDCO presents a potential conflict of interest to the Climate Parliament and the Green Grid Alliance if and when it functions in practice as an extension of China's foreign policy (which could – at times – be at odds with the policies of other governments supporting the Climate Parliament or the Green Grid Alliance) or as promotor of Chinese businesses (to the detriment of, example given, Swiss businesses).

6.6 The role of the Climate Parliament

111. The Climate Parliament is conceptualized as a network of parliamentarians to combat climate change. Parliamentarians will – at certain times – have a role to play in pushing the idea of global energy interconnections and supergrids, either by mobilizing and maintaining political support or passing necessary legislation. The lead effort will however be exerted by national governments. The Climate Parliament knows this and has directed much of its advocacy work to convincing heads-of-state and ministers of energy on the need for and benefit of the Green Grid Alliance.

112. The Climate Parliament sees itself as the future secretariat of the Alliance (Climate Parliament 2016c). The question is whether the Climate Parliament is the right actor to perform this role. I carefully make a distinction on this point between the *leadership* and the *organization*. If the global management team of the Climate Parliament is able to pull off the Green Grid Alliance, it may well support its actual work. The Climate Parliament as an organization is however first-and-foremost the said network of parliamentarians, which in practice will have only a limited, time-bound role to play in promoting and developing global energy interconnections. This raises the question whether the Climate Parliament should explicitly extend its remit or set-up a parallel organization to function as secretariat of the Green Grid Alliance. The second option – the creation of a dedicated and distinct secretariat for the Green Grid Alliance – is most transparent and reduces political risks (i.e. any accusations of political meddling in a country's sovereign affairs through the Climate Parliament's parliamentary work).

6.7 Conclusion

113. Point-to-point UHVDC transmissions lines are a reality. Europe is a leading candidate for the emergence of a transnational supergrid – a network of UHVDC lines connecting multiple countries – as it can build on an existing institutional framework of political and energy sector cooperation. Such institutional frameworks are more fragile in most other parts of the world. For now, the advance of UHVDC transmission lines rests on economics: meeting high electricity demand from resource rich geographies. Political decision-making at the highest levels is needed if the emergence of (regional) supergrids is to be accelerated. The realization of regional (or global) energy interconnections will remain a long term evolutionary process – even with the highest political support – as participating countries face up to and one-for-one address the practical challenges inherent in close political, economic and energy sector cooperation. This reality by no means implies that one should not try. History suggests to closely involve regional, multilateral coordination bodies as these have the political mandate and the ability to negotiate and support regional energy sector integration efforts. The Climate Parliament should set up a dedicated and distinct secretariat for the Green Grid Alliance to avoid conflicts-of-interest with its parliamentary action work.

7. Special topics: Foci, cross-fertilization and political risks

114. This chapter addresses three particular concerns of SDC's Global Program Climate Change and Environment, namely (i) its foci for the Climate Parliament; (ii) the in-country cooperation between SDC and the Climate Parliament; and (iii) the political risks inherent to parliamentary action work.

7.1 SDC's priority interventions for the Climate Parliament

115. SDC's financial support was in principle not earmarked and the Climate Parliament could use the funds flexible. SDC did express a preference (and argued in favor of) geographies in alignment with GPCCE's priorities (China, India and the Andean countries) and topics (energy access for households, incentives for renewable energy generation⁴⁴, creating a level playing field for independent power producers, promotion of distributed energy models, and pushing for legislative frameworks for solar home systems). SDC felt that the Climate Parliament's proposal included the space and the intent to pick up these priority interventions. The Climate Parliament's application for SDC funding states:

"The project will focus on the generation and transmission of renewable energy in a wide range of contexts, from large-scale solar power stations or wind farms, to small-scale biogas digesters which can turn agricultural waste into cooking gas for a single household. It will focus on long-distance, cross-border grid connections linking as many people as possible to areas where renewable energy is most abundant, as well as on village mini-grids enabling communities that are far from the national grid to harness local solar, wind, small hydro, biomass or whatever other renewable resources are available locally. The project will involve working with MPs in a number of target countries. These will include several countries where the Climate Parliament is already established ... The project will also expand the Climate Parliament's work into two new areas: China in East Asia, and Bolivia, Chile, Ecuador and Peru in Latin America." (Climate Parliament 2014a)

116. The Climate Parliament has expanded its operations – through SDC's support – to China and Latin-America in line with SDC's wish and the Climate Parliament's proposal. Thematically, the Climate Parliament focused the last years on renewable-based large scale electricity generation and cross-border electricity interconnections (see Textbox 5 on page 28 for the explanation). The Climate Parliament's thematic focus and above quote then bears the question to what extent the Climate Parliament has followed-up in the last years on its intent to address small-scale, distributed energy challenges.

117. In March 2017, the Climate Parliament India published a brochure on small-scale renewable energy technologies which can be deployed in the constituencies of parliamentarians. With this brochure, the Climate Parliament responded directly to a question from its network members on how to effectively use their so-called Local Development Funds for the promotion of renewable energy. Partly in parallel, partly as a follow-up, the Climate Parliament currently supports several MPs with the implementation of constituency-level, pilot-type renewable energy initiatives (covering solar water pumps, solar villages and bio gasifiers). In the Indian State of Odisha, the Climate Parliament has contributed to the adoption of a net-metering policy and the development of a solar cart which can provide electricity in disaster-stricken areas. In Tanzania, the Climate Parliament supports a leading network MP to pilot in his constituency the use of solar water pumps for irrigation purposes.

118. The Climate Parliament can refer to examples of small-scale renewable energy generation oriented support, but on the whole and especially vis-à-vis the distributed energy challenges facing countries like India and Tanzania (with significant parts of the populations lacking electricity access) they remain few. Moreover, the Climate Parliament's frequent approach to small-scale renewable energy, namely to work through its network members in the members' constituencies using parliamentarian (raised) funds is questionable from a good governance and inclusive growth

⁴⁴ SDC recognizes that the sharp drop in costs for solar and wind-generated electricity in recent years has made it less necessary to incentivize renewable-based electricity uptake (at least for large-scale solar and wind).

perspective. It would be better for the executive branch of government – whether at the local, state or central level – to lead these efforts and ensure access for all. I conclude that the Climate Parliament did not systematically and consistently address distributed energy challenges, including energy access, which formed a core SDC interest, despite its proposal to do so. In that regard, SDC has been sold short.

7.2 Has cross-fertilization taken place between SDC country operations and the Climate Parliament's work?

119. SDC's support to the Climate Parliament was meant to offer SDC – inter alia – a platform to promote the replication of successful SDC-supported interventions at the national level and the dissemination of such best practices internationally (SDC 2014). In practice, this platform was neither offered nor demanded. The SCO staff and the in-country GPCCE program officers like the Climate Parliament's concept and generally speak favorable of the initiative. They note cordial relations with the Climate Parliament global and in-country staff and a free, albeit irregular, exchange of information. Most were unaware of the intention or possibility to work with the Climate Parliament to promote SDC's in-country activities. The Climate Parliament did not ask or offer its services.

120. Each case study offers starting points for cooperation. Perhaps none of them easy to pursue, but starting points nonetheless. The Climate Parliament Network in Tanzania has a strong interest in addressing the unsustainable charcoal production and the associated deforestation in the country. The SCO in Tanzania is running a successful project on transforming the Tanzania's charcoal sector. The SCO in Morocco works on media diversification. International best practices suggest to include media work in parliamentary strengthening efforts⁴⁵. China faces severe urban air pollution and is working on provincial level climate change action plans – areas that fall within both the Climate Parliament's remit and GPCCE's work program⁴⁶. The same holds true in India concerning distributed energy models.

121. I have two readings why active in-country cooperation between the Climate Parliament and SDC has not materialized. There is probably truth in both. First, in light of the *unaware* (SCO), the *single-minded* (Climate Parliament) and the *arm's length manager* (GPCCE Bern) the idea of in-country cooperation probably simply fell by the way-side. Second, the interest and project-portfolio of the SCOs and the Climate Parliament are simply too disparate to enable easy and productive cooperation. The SCOs and the Climate Parliament employ professional and experienced staff, who can be trusted to pursue an opportunity when they see one. Thus whilst starting points may be there on paper, they may not represent – for a myriad of reasons – true cooperation potential. If the Climate Parliament is to serve as platform for the dissemination and replication of successful SDC's development interventions, than this will have to be pursued *actively*.

7.3 Is the Climate Parliament's work perceived as political meddling?

122. SDC is an implementing agency of the Swiss Federal Department of Foreign Affairs. It does not hold a political mandate, i.e. it is not at liberty to formulate and take a political stance on its own. Traditionally, SDC cooperates with the executive branches of government in its partner countries whereby most contacts are with career civil servants. Through its support to the Climate Parliament, SDC works – albeit indirectly – with politicians. This exposes SDC to the critique that it is interfering with a country's internal political affairs, which – in the absence of a political mandate – poses an internal political risk.

123. This risk is explicitly acknowledged by the Climate Parliament and addressed – in words and deeds – by behaving apolitical. One of the founding principles of the Climate Parliament is that it offers a *cross-party* platform for dialogue and action. The country case studies show that the Climate Parliament is true to its word on this: the parliamentary networks in India, Morocco and Tanzania all cover the full spectrum of political parties. China is – in the absence of a multi-party

⁴⁵ There is a potential tension between media work and acting politically astute (and reducing the risks of political fall-outs). It is therefore unlikely that media work can effectively complement parliamentary action in all countries. The Climate Parliament is an apt political operator and can be trusted to make such calls wisely.

⁴⁶ The Climate Parliament is promoting a Climate Change Law at the national level in China.

political system – an exception. But even in China, the Climate Parliament exerts every effort to work with all stakeholders concerned (including those with competing stakes in the ongoing energy transition).

124. Importantly, none of the interviewees raised the notion that the Climate Parliament interferes with internal political affairs. When asked about it, interviewees generally dismissed the risk – it was considered to be a non-issue. In China, the cooperation with the Climate Parliament was framed in its traditional foreign policy jargon of being of '*mutual benefit*'. This finding speaks well for the Climate Parliament and shows that they are able to maintain the fine balance between acting a-politically and seeking to influence a country's energy policies.

125. This finding does not mean that the risk for the Climate Parliament of being accused of political meddling no longer exists. It does. It is inherent to the Climate Parliament's field of operation, namely parliaments. It can raise it troubling head at any one time and, in the process, call SDC to account. Our finding only says that the Climate Parliament manages this risk deftly – a strong feat of all its staff operating in the front lines.

7.4 Conclusion

126. The Climate Parliament has expanded its operations – through SDC's support – to China and Latin-America in line with SDC's wish and the Climate Parliament's application for SDC funding. The Climate Parliament has however not systematically, consistently or substantially addressed other core SDC interests and focus areas – such as distributed energy models to provide access to those people who are unlikely to be connected to the national grid, creating a level playing field for independent power producers or pushing legislative frameworks for solar home systems – despite the Climate Parliament's proposal to do so. In-country cooperation between SDC and the Climate Parliament has not materialized due to a lack of effort and easy-to-grasp opportunities. Any future cross-fertilization between SDC and the Climate Parliament will need to be actively pursued and managed. The Climate Parliament manages the political risk of its work aptly and optimally. The political risks of parliamentary action can however never be eliminated.

8. Conclusion and recommendations

8.1 Conclusion

127. The Climate Parliament possesses *convening power* – able to bring together parliamentarians, government officials and technical experts in global, regional and national parliamentary hearings. The Climate Parliament is an *able political activist*, reaching out to parliamentarians and government officials to let them see the threat posed by climate change and convince them to take action. The Climate Parliament is appreciated for taking these roles by many stakeholders. In the process, it nudged parliaments to approve higher budgets and adopt favorable fiscal incentives for renewable energy.

128. These virtues of the Climate Parliament are constrained by six flaws in its business model. First, the Climate Parliament's Theory of Change does not hold up in practice. Parliaments do not possess the leadership in policy-setting and legislation attributed to them by the Climate Parliament. Second, the Climate Parliament's focus on large-scale renewable energy generation places it in an overcrowded policy space. Third, Climate Parliament staff do not possess deep energy sector experience. Fourth, the Climate Parliament spreads its resources too thinly – covering too many countries with too little staff – and fails to consistently implement its own preferred business model of having on-the-ground presence in its countries-of-operations (as it has in China and India) or, alternatively, serving its networks with an outstanding team of legislative and energy sector specialists. Fifth, the Climate Parliament does not build in-country capacity to sustain parliamentary action on climate change in its absence. Sixth, the Climate Parliament's monitoring and reporting system is subpar and unbalanced.

129. On balance, the Climate Parliament influences the behavior of several hundreds of people (mostly parliamentarians, but also government officials). Within the wider international and in-country debates on climate change (induced by natural disasters, international research, UNFCCC negotiations, individual leaders, and other advocacy groups), the Climate Parliament contributes to a more wide-spread awareness of climate change and the need for action. Neither the Climate Parliament, nor this review have assessed the reach of this influence. This impact is, in the words of one well-placed independent informant, '*not to be underestimated*' given the Climate Parliament global activism over the last 8 years. The Climate Parliament played however a limited role at best in the emerging energy transitions in China, India and Morocco and has been unable to tap the potential for such a transition in Tanzania.

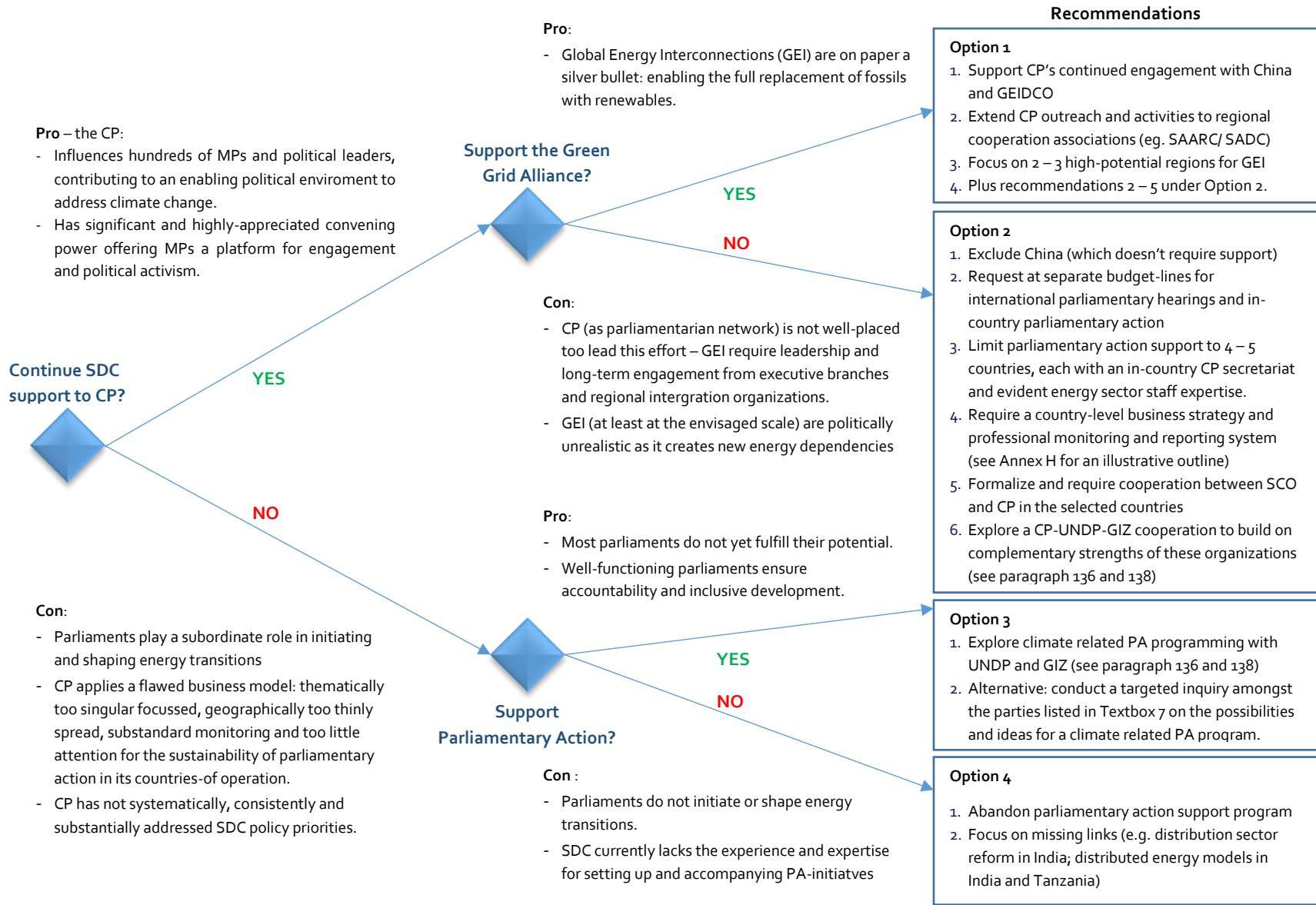
130. The Climate Parliament's pursuit of a Green Grid Alliance is understandable from a *climate change perspective*. Global energy interconnections create new energy independencies which will likely form a *political impediment* to their realization at the envisaged scale. Whilst parliamentarians can nudge the idea forward, it are the political leaders from the executive branch who must make it happen by pursuing long-term international cooperation, not just on energy, but also on trade, investments and security. Regional cooperation bodies should be closely involved in any efforts as these have the political mandate to negotiate and support regional energy sector integration. The Climate Parliament should set up a distinct secretariat for the Green Grid Alliance to avoid conflicts-of-interest with its parliamentary action work.

131. The Climate Parliament did not systematically and consistently address distributed energy challenges – a core SDC interest. The Climate Parliament's singular focus and limited on-the-ground presence, combined with the absence of a formal requisite for cooperation with the SDC country offices prevented a cross-fertilization between the Climate Parliament and SDC. The Climate Parliament manages the political risk inherent in parliamentary strengthening work deftly. The risk of a political fall-out due to presumed meddling in a country's internal political affairs will always remain.

8.2 Decision-tree and choice-dependent recommendations

132. The core question of this review is whether SDC should continue its financial support to the Climate Parliament for another four years. As evaluator, I should in principle answer this question, but I won't. The reason is that the answer requires a weighing of the pros and cons of continued support to the Climate Parliament without a credible normative framework – the original logical framework puts the bar too high for the Climate Parliament. The answer to this question constitutes a value judgment – which in my humble opinion – only SDC can make. I can lay out the choices, the arguments and choice-dependent recommendations. Figure 3 presents the decision-tree, which SDC can use to make the call.

Figure 3. Decision-Tree - Options, arguments and choice-dependent recommendations



8.3 Further reflections on the choice-dependent recommendations

Option 1 – continue support, including for the Green Grid Alliance

133. In its pursuit of the Green Grid Alliance, the Climate Parliament has effectively extended its remit to the executive branch of government as it has actively lobbied heads-of-state and parliamentarians to take a leadership role in forging a global energy transition. The Climate Parliament intends to become the secretariat of the Alliance, which implies (i) continued engagement with the executive branches of government; and (ii) additional work load. These implications require a rethink of the Climate Parliament's organizational set-up, required funding and staff levels, and its financial accounting to ensure (i) sufficient resourcing of both the Alliance activities and the in-country parliamentary action support; (ii) transparency and clarity in the utilization of donor funds and staff resources; and (iii) mitigate political risks (i.e. prevent accusations of political meddling). In this option, it makes sense for the Climate Parliament to continue its engagement with China. For two reasons. First, China has the resources and intention to play a leadership role in realizing global energy interconnections. Second, the Climate Parliament can, with its political mandate, complement GEIDCO which does not have such a mandate.

Option 2 – continue support to the Climate Parliament, excluding China and the Green Grid Alliance

134. Through this option, SDC would support the Climate Parliament in its original remit: providing support to parliamentarians to combat climate change. It would – at least for a period of four years – provide the Climate Parliament again with a stable funding line. In this option, it makes sense to (i) focus the Climate Parliament's work in countries with emerging energy transitions (like India) on the missing links, such as energy access and the financially distressed electricity distribution sector; (ii) reorient the Climate Parliament to countries which have not yet jumped on the bandwagon of the energy transition (such as Tanzania); and (iii) discontinue support to China given that it has the expertise and resources to manage its own affairs.

135. The Climate Parliament will likely continue its engagement with China with or without SDC (given China's importance for the Green Grid Alliance). This implies that if SDC chooses this option, than it is all the more important that the Climate Parliament can (as suggested under option 1) provide clarity and transparency in the use of SDC's financial support.

136. The UNDP considers its collaboration with the Climate Parliament a win-win situation: the two organizations complement each other and cover for each other's weaknesses, thus providing an attractive offer for supporting country parliaments. In my recommended three-partner UNDP-CP-GIZ model:

- UNDP provides institutional credibility, high-level political access, on-the-ground presence, parliamentary institution building and a logical, project management type of approach to the work;
- The Climate Parliament brings political activism, convening power and informality; and
- GIZ inserts deep energy sector know-how.

Intermezzo on options 1 and 2

Figure 3 includes practical and actionable recommendations for option 1 and 2, especially concerning the Climate Parliament's parliamentary strengthening work. These recommendations intend to foster the Climate Parliament's current strengths, whilst addressing the flaws in its business approach. The question is how prescriptive SDC can be. People and organizations can only – and rightly so – be steered so much without negatively affecting their inner drivers (which are a *condition sine qua non* for any successful organization). I thus recommend SDC and the Climate Parliament to engage in an open and honest exchange about how best to operationalize, balance and secure the collective set of practical recommendations provided in Figure 3.

Option 3 – discontinue support to the Climate Parliament, continue support to parliamentary action

137. This review concludes that, overall, parliaments play a limited role in initiating and shaping energy transitions. Having said that, well-functioning parliaments are essential for *'making states function for their citizens'* (House of Commons IDC 2015). And *'190 out of 193 countries have some form of representative assembly accounting for 46,000 representatives'* (idem). The Busan Partnership for Effective Development Co-operation states *'Parliaments and local governments play critical roles in linking citizens with governments and in ensuring broad-based and democratic ownership of countries' development agendas. [The signatories] will accelerate and deepen the implementation of existing commitments to strengthen the role of parliaments in the oversight of development processes'* (OECD 2011). Moreover, parliamentarians in many countries do engage in and help shape – in their own small way – the debate and actions on energy transitions.

138. SDC could decide to explore cooperation with other parliamentary development actors. The UNDP and GIZ spring to the fore because of their strengths: building in-country capacity (UNDP), in-depth energy sector knowledge (GIZ), and long-term presence (both). Both will be less politically activist, agile and informal than the Climate Parliament, but if the support is concentrated in a handful of countries, both will guarantee deep political and sector engagement. GIZ may also prove more receptive to and able to work with successful SDC interventions in the selected countries and thus foster a cross-fertilization between the SDC country programming and the parliamentary action work.

139. Alternatively, SDC could conduct an art feasibility study for cooperation with other parliamentary strengthening outfits (of which there are many, see Textbox 7 on page 32).

Option 4 – discontinuing parliamentary support

140. This option comes into play when SDC decides that the relationship between parliamentary action and energy transitions and climate change action is too thin for its own taste. In principle, SDC will then simply revert to its other ongoing programs and strategic priorities under the Global Programme Climate Change and Environment. This review's findings would steer SDC to addressing missing links, such as: promoting 100% electrification through distributed energy models (e.g. in India and Tanzania); resolving the financially distressed electricity distribution sector in India; assisting utilities in transitioning from a fossil-fuel based economy into a renewable energy based economy; or developing operations and maintenance skills for small- and large scale renewable energy power generation plants. Alternatively or additionally, SDC could orient its support to countries which have not yet jumped on the bandwagon of the energy transition and climate change mitigation (such as Tanzania), deepen its support to challenging sectors such as the built-environment or (maritime and air) transportation or focus on biomass, geothermal and hydro technologies, which are currently overshadowed by solar and wind. Yet another possibility is to facilitate the connection of groups of energy consumers with renewable energy providers by enabling the formation of cooperatives and the development of standardized power purchasing agreements. The possibilities are limitless.

Annex

A. Review questions

Chapter 2 Impact

What have been the real world changes in the Climate Parliament's countries of operation in (i) energy mix, access and security; (ii) greenhouse gas emission levels; and (iii) energy policy, laws, regulations and public budget? Do these countries show a more conducive environment for private sector provision and financing of renewable energy and a more level playing field for distributed energy generation? What are the major factors influencing the achievement or non-achievement of the envisaged impacts? Did the activities and outputs of the Climate Parliament contribute to impact achievement?

Chapter 3 Effectiveness & Theory of Change

To what extent are the assumptions underlying the Climate Parliament's Theory of Change plausible and uncontested? To what extent do parliamentarians in these countries show increased capacity to initiate, lead and follow-through on energy sector renewal? Is there evidence that the assumed changes in behavior, decisions and actions have actually occurred in practice? Have the envisaged support strategies and activities been implemented? Have the envisaged results been achieved. What other contextual factors could have reasonably and significantly contributed to the results?

Chapter 4 Efficiency

To what extent did the Climate Parliament respond to and address GPCCE's foci for the financial support? Are good experiences in parliamentary action transferred to other countries and with what subsequent results? How effective and efficient was the role of the Swiss Consultant?

Chapter 5 Sustainability & Best practices in parliamentary strengthening

To what extent will the benefits of the Program continue after the donor funding ceases? What factors contribute to sustainability? To what extent are these 'sustainability factors' present in the recipient countries? What are the major influences contributing the presence (or absence) of these 'sustainability factors'. How does the Climate Parliament compare to other parliamentary action initiatives?

Chapter 6 Global energy interconnections & the Green Grid Alliance

To what extent can (support to) supranational transmission infrastructure (as envisaged by, amongst others, the Global Green Grid Alliance) promote renewable energy production, reduce greenhouse gas emissions and secure regional peace? What is the evidence-base? To what extent is there a demand for it and is its realization both institutionally and politically feasible? To what extent are legislators in general and the Climate Parliament specifically best positioned and equipped to promote such cross-country infrastructure? What explains the Climate Parliament's interest in this topic? What are the opportunity costs for the Climate Parliament? How do these types of infrastructure and initiatives serve GPCCE's envisaged impacts? What is GPCCE's best contribution? And as to the Global Green Grid Alliance: who's involved, how is it constituted and governed, what are its objectives, and within what timeframe?

Chapter 7 Cross-fertilization and political risk

Has a cross-fertilization taken place between the Climate Parliament's and GPCCE's work in those countries where both are active? Is the Climate Parliament's work in the recipient countries perceived as political meddling?

Chapter 8 Conclusions & Recommendations

What is the overall assessment of the Climate Parliament's work? To what extent does the Climate Parliament deliver on GPCCE's objectives? Did the Climate Parliament bring enough to GPCCE: where the results sufficient given the costs (also vis-à-vis GPCCE's other approaches to climate change mitigation and adaptation)? Is it worthwhile for GPCCE to continue its support to the Climate Parliament? If yes, how could GPCCE best orient its support to maximize impact? If not, what is the next best opportunity to promote renewable energy generation and increase energy access? What is the future role of the Climate Parliament in a rapidly transforming renewable energy sector?

B. Case study: China

141. This annex presents the key findings from our research on the Climate Parliament's work in China. The findings stem from a document review, quantitative data collection and key informant interviews in Beijing. The following topics are covered:

- the (renewable) energy sector;
- the role of the national parliament;
- the Climate Parliament;
- global energy interconnections; and
- the cross-fertilization between SDC's country operations and the Climate Parliament's work.

The annex concludes with summative statements on the key evaluation criteria and a series of figures and tables on the Chinese (renewable) energy sector and the Climate Parliament's work in-country. All findings stem from multiple sources, unless explicitly stated otherwise.

B.1. The Energy Sector

The 2005 Renewable Energy Law and the emerging political buy-in into renewables

142. In the early 2000s, Chinese government institutions started looking into international experiences with renewable energy, as well as researching the potential for renewable energy at home. The subsequent policy and research reports generated debate, but industry expectations and political buy-in for an energy transition remained low. A first turning point came in 2005 with the adoption of the Renewable Energy Law. This Law was initiated by the Environmental Protection and Natural Resources Committee of the National People's Congress and passed relatively easy through the legislative process. Because expectations for renewable energy were low, the Law was not contested.

143. The Renewable Energy Law required, amongst others, the compulsory offtake of electricity from renewable energy power plants by the State Grid and the Southern Grid (the two monopolistic government-owned transmission companies⁴⁷). It also introduced a feed-in-tariff mechanism. An amendment to the Law in 2009 introduced a surcharge on the electricity retail tariff to subsidize the higher costs of renewable energy generated electricity. The amendment also required the Government to identify the share of renewable energy in total electricity generation in its development planning such as 'national power generation 5-year-planning'.

144. The second turning point came in the wake of the 2007/2008 global financial crisis when the global demand for renewable energy supplies and products fell off; forcing the government to step in and 'save' the domestic renewable energy manufacturing industry by boosting domestic demand through government investments. Moreover, China became a net importer of natural gas in 2007 (Zhu 2016) – exacerbating its dependency on foreign energy supplies.⁴⁸

145. The third and thus far final turning point forms the leadership of the Xi government, which has come to fully embrace the need for a domestic energy transition and talks about the need for an '*energy revolution*'. The key drivers behind the current push for renewable energy and energy efficiency are (i) rampant air pollution in the main urban centers; (ii) the price competitiveness of solar and wind energy; (iii) the industry's potential to boost domestic economic development and job creation; (iv) the strive for renewed energy independence; and (v) international pressure on China to reduce CO₂ emissions.

146. The strong growth in renewable energy over the last decade (see next section) has exposed problems with the Renewable Energy Law which require address, most notably: (i) the undercapitalization of the Renewable Energy Fund

⁴⁷ The two transmission companies operate in two distinct geographies.

⁴⁸ China was already a net importer of oil since 1993 (Zhu 2016). In addition to importing oil and gas, China also started importing coal in 2009 (Zhu 2016). The reasons for importing coal were however different. Whereas gas and oil were imported to meet domestic demand and a shortage of domestic supply, China started importing coal because (at the time) imported coal was cheaper than domestic coal.

and the concomitant need to review the subsidy/pricing scheme for renewables; and (ii) the need for a better planning of new capacity and the harmonization of plans between state and provincial level. Any modification of the Renewable Energy Law is however unlikely to sail through the legislative process as easily as in 2005. Any changes are likely to be contested by the conventional energy sector as renewables are now seen to stand in direct competition with coal. This is all the more so now that the coal industry faces significant overcapacity. The political leadership is likely to tread carefully and seek to prevent major job reductions in the coal industry (as these would form a potential source of social unrest).

Electricity generation and energy mix

147. Between 2006 and 2015, the electricity generation capacity increased by 150% from 624 GW to 1,525 GW. Within the same time span, electricity generation capacity from renewable sources increased 300% from 132 GW to 492 GW. As a result, the share of renewable energy generation capacity increased from 21% in 2006 to 32% in 2015 (see Figure 4). Figure 5 shows the energy mix in electricity generation capacity in 2006 and 2015. In 2016, electricity generation capacity from wind and solar increased a further 12% and 84% respectively compared to 2015.

Figure 4. The share of renewable energy in total electricity generation capacity in China⁴⁹

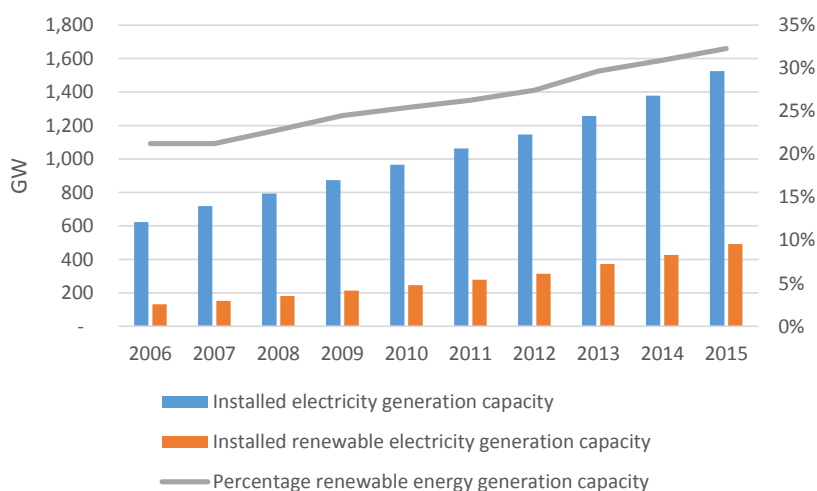
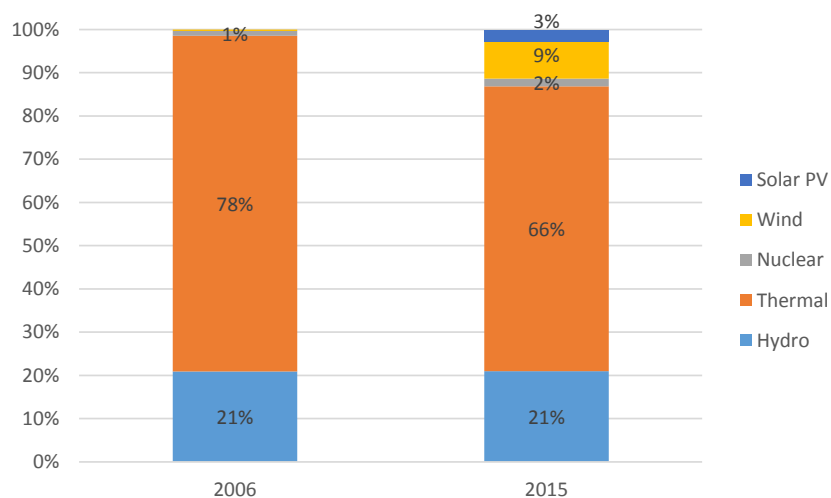


Figure 5. The energy mix in electricity generation capacity in China in 2006 and 2015⁴⁹



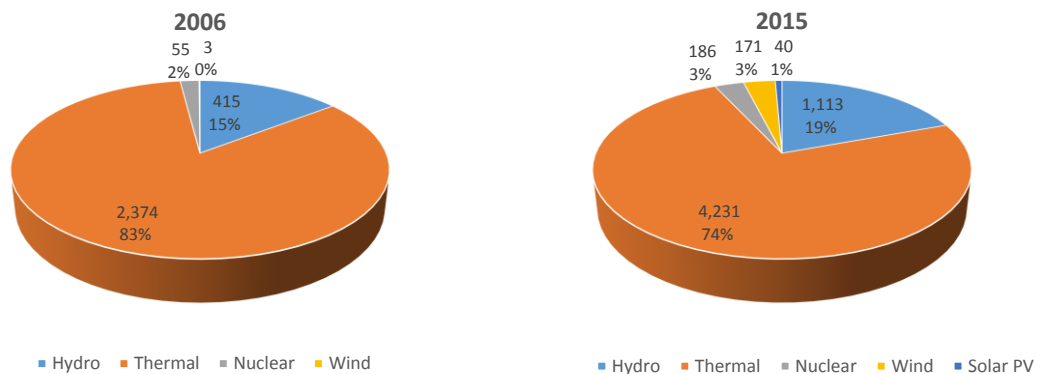
⁴⁹ Source: China Electric Power Yearbook 2007-2014 and China Electric Power Sector Development Report 2016

148. In the same period of analysis, i.e. between 2006 and 2015, China doubled its actual annual electricity generation. The share of electricity generation stemming from renewable energy sources increased from 14% in 2006 to 23% in 2015. The share of renewable energy electricity generation lags behind the share of renewables in generation capacity for three reasons: (i) local governments paid more attention to building new power generation capacity to meet the generation targets in the five-year national development plans than on actually operating and managing the new capacity⁵⁰; (ii) renewable energy power plants have lower plant load factors than conventional power plants; and (iii) electricity generation from renewable energy sources is actively curtailed by the government.

149. The reasons for the curtailment are: (i) current overcapacity in electricity generation, i.e. supply exceeds actual demand; (ii) undercapitalization of the Renewable Development Fund (which subsidizes renewable energy generated power); and (iii) a grid expansion which has not been able to keep up with the expansion of renewable energy power plants either in terms of capacity (i.e. the grid cannot absorb the loads produced by the new renewable energy power plants) or geographical reach (the location of the major wind and solar power plants in the west of China require new long-distance transmission lines).

150. The rising share of renewables in total electricity generation stems from increased generation capacity in hydro, wind and solar. Between 2006 and 2015, electricity generation from hydro more than doubled. Within the same time-frame, electricity generation from wind increased 65-fold (and 85-fold when 2016 is included). Electricity generation from solar PV started in 2012 and the electricity generation increased 18-fold by 2016. Figure 6 shows the energy mix in electricity generation in 2006 and 2015 (both in volume and percentages).

Figure 6. The energy mix in electricity generation in China 2006 and 2015 (in TWh and percentages)⁴⁹



The only way is up

151. The 13th Five-Year Plan for the Energy Sector (2017) sets specific targets for each type of renewable energy. For the first time, the Plan includes targets for both electricity generation capacity and actual generation. These figures show that China intends to more than double its electricity generation from wind and triple its electricity generation from solar PV. To achieve these targets, the National Energy Administration intends to invest around US\$360 billion by 2020. Solar will receive ca. US\$ 145 billion, wind ca. US\$ 100 billion, hydro ca. US\$ 70 billion, and tidal and geothermal ca. US\$ 45 billion (The Guardian 2017).

⁵⁰ All national development 5-year plans prior to the 13th 5-year-plan only set renewable power generation capacity targets, not generation targets.

Table 7. China's 2020 targets for electricity generation from renewable energy

	Capacity (MW)		Generation (GWh)	
	2015	2020	2015	2020
Hydro	319.540	340.000	1.112.700	1.250.000
Wind	130.750	210.000	185.600	420.000
Solar PV	42.180	105.000	39.500	124.500
Solar Thermal	1.378	5.000	?	20.000
Biomass	10.318	15.000	?	90.000

Source: China Electric Power Yearbook 2007-2014, China Electric Power Sector Development Report 2016, 13th Five-Year Plan for the Energy Sector, Renewable Energy Data Manual 2016.

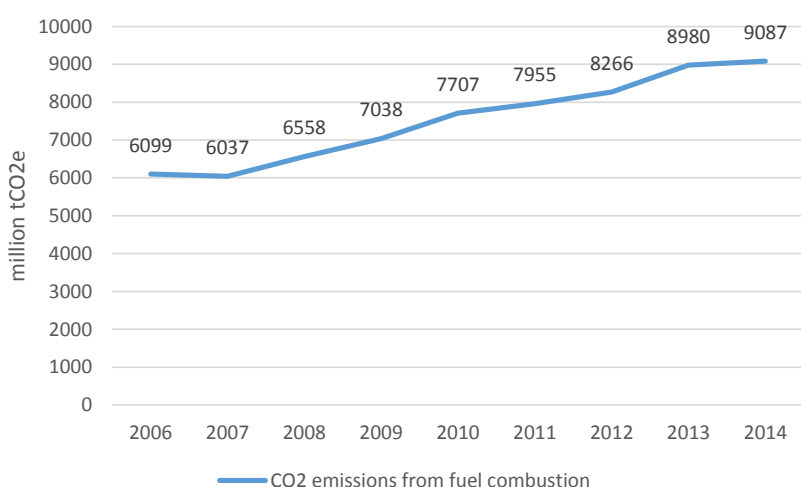
Full electrification

152. According to the National Energy Administration, China is 100% electrified since 2015.⁵¹

Greenhouse gas emissions

153. The International Energy Agency publishes annual estimates of greenhouse gas emissions from fuel combustion for around 140 countries. Figure 7 shows the estimated CO₂ emissions from fuel combustion in China.

Figure 7. CO₂ emissions from fuel combustion in China⁵²



B.2. The Role of National Parliament

154. The 12th National People's Congress (NPC) counts 2987 delegates and constitutes the largest parliamentary assembly in the world. One part of the delegates is selected through a multi-tiered representative electoral system (called direct elections). The other part of delegates is selected by the Standing Committee of the NPC (called indirect election). Among the 2987 delegates, 1042 delegates are leaders of the Communist Party and National Administration. Delegates are allowed two five-year terms. Delegates do not have parliamentary staff, whilst parliamentary committees do.

155. The current President Xi Jinping wants 'to make the legislative more powerful in policy making' and has ensured that more 'grassroots organizations'⁵³ are represented in Congress rather than only (quasi) government organizations. The transition to a stronger parliamentary system is however slow and, for now, China does not have a parliamentary tradition

⁵¹ http://www.nea.gov.cn/2015-12/24/c_134948340.htm and http://www.nea.gov.cn/2013-12/12/c_132960884.htm.

⁵² IEA CO₂ Emissions from Fuel Combustion (2011, 2014, 2016)

⁵³ Examples given were labor union, immigration workers', civil society and hospital representatives.

similar to Western European democracies in which parliaments hold the government to account. There remains a close link between the executive and legislative branch with parliamentary committees normally being chaired by government officials. Most new policies and legislation – especially those which are politically contested – are initiated, formulated and implemented by the State Council. *‘Overt dissent occasionally surfaces at the annual plenary sessions of the National People’s Congress, but the political outcome always favors the Chinese Communist Party line’.*⁵⁴

156. Despite the relative weak position of the National People’s Congress, legislation can be proposed and drafted by the National People’s Congress – with the 2005 Renewable Energy Law being a case in point (which was initiated and drafted by the Environmental Protection and Natural Resources Committee of the NPC)⁵⁵. The National People’s Congress has the capacity to draft laws. For example, the Environmental Protection and Natural Resources Committee of the NPC has a legislative department with 20 staff members.

B.3. Climate Parliament in China

The Climate Parliament Network

157. *‘The structure of Chinese politics precludes the formation of a formal Climate Parliament chapter of legislators in the National People’s Congress’* (Climate Parliament 2015b). The Climate Parliament has thus set up an informal network of 6 delegates. Except one (the representative of Hong Kong), all are chief executive officers of solar PV and wind turbine manufacturing companies and power generation plants. These representatives cum business executives have been selected for their *‘will and impact on the sustainable development of the energy sector’*. The Climate Parliament has limited engagement with these 5 representatives as none are based in Beijing. The Climate Parliament communicates with them mostly through their staff.

158. The Climate Parliament has developed a close working relationship with the Hong Kong representative Choy Soyuk, who has been an NPC representative since 2008 and whose main political platform is environmental protection. She assisted the Climate Parliament in organizing the international parliamentary hearing in Shanghai in 2014 and recommended Danna Geng to the Climate Parliament for the position of China Director.

159. The Climate Parliament notes that *‘given China’s unique political system, the key policymakers within the NPC and our key contacts are often members of the NPC’s secretariat, rather than voting members of the Congress....these policymakers ... have often joined our delegations and meetings rather than the voting members’*.

160. Over and above the network of parliamentarians, the Climate Parliament has established an informal *‘advisory group’* of government officials and related organizations from the National People’s Congress, the National Development and Reform Commission, the National Energy Administration, National Centre of Climate Change Strategy, State Grid, as well as experts from government research institutions and renewable energy industry representatives (Climate Parliament 2015b). As Chinese government officials are not allowed to take up external advisory roles, this *‘advisory group’* explicitly functions as an informal network. The Climate Parliament has facilitated the participation of network members in key industry and sector events in China (Climate Parliament 2016a).

The Climate Parliament’s work on renewable energy and climate change in China

161. **Draft Renewable Energy Law.** Choy Soyuk has arranged and submitted (with 30 co-signatures) a newly revised Renewable Energy Law to the Environmental Protection and Natural Resources Committee of the NPC (during the 2017 spring session of the NPC). The 30 co-signatures are fellow representatives in the Hong Kong constituency within the NPC. The NPC regulations stipulate that a draft law supported by 30+ NPC representatives has to be put on the agenda

⁵⁴ <http://country.eiu.com/article.aspx?articleid=2015361185&Country=China&topic=Summary&subtopic=Political+forces+at+a+glance>

⁵⁵ As noted in section A.1, the NPC could in part take the lead on the Renewable Energy Law because it was not contested: *‘no one was paying attention – renewable energy was not expected to become a major force in the energy sector’*.

of the responsible NPC Committee for discussion. Moreover, the chief sponsor of the bill – in this instance delegate Choy Soyuk – has to be included in all subsequent consultations on the bill.

162. The Legislative Department of the Environmental Protection and Natural Resources Committee (with 20 staff members) is responsible for formulating a formal draft bill for discussion and approval by the Committee and subsequently the full NPC (if the Committee decides to move forward on the issue). In the process, the Legislative Department conducts its own consultations and research and takes suggestions from other stakeholders (including other draft bills submitted by other entities) into account. The Climate Parliament supported bill is one (albeit potentially an important) input in this legislative process. The Legislative Department has included the treatment of the Renewable Energy Law in the work plan of the Environmental Protection and Natural Resources Committee for the 13th session of the National People's Congress (which starts in 2018).

163. This revised Renewable Energy Law submitted by Choy Soyuk had been initiated, researched and drafted by the China Director of the Climate Parliament.⁵⁶ She worked closely with the China Renewable Energy Industry Association and organized inputs from national technical experts of universities, think tanks and government agencies.⁵⁷ The Climate Parliament's work entailed: (i) reviewing international renewable energy legislation; (ii) researching the implementation of the prevailing renewable energy law at the provincial level (through multiple workshops); (iii) developing an argumentation why the current renewable law had to be revised; and (iv) formulating the draft bill.

164. **Draft Climate Change Law.** The Climate Parliament and the China Renewable Energy Industry Association – in cooperation with the National Centre of Climate Change Strategy, a government entity under the National Energy Administration – have researched and drafted a Climate Change Law (again with inputs from national technical experts of universities, think tanks and government agencies). The Climate Parliament and China Renewable Energy Industry Association have submitted this draft law to the National Reform and Development Commission (NDRC) – the responsible government agency within the executive branch. The NDRC will take the Climate Parliament's sponsored bill on climate change as one input in its own legislative process. At the time of writing, it is unclear how the NDRC will move forward on this bill.⁵⁸ A climate change law has been in the making for quite some years – the Swiss Cooperation Office (SCO) provided technical assistance to the NDRC on the law in 2013.⁵⁹ A bill has never been formally submitted to the NPC for approval.

165. **Renewable energy targets.** At the time of the preparation of the 13th Five-Year Plan for the Energy Sector, the China Director also worked with China Renewable Energy Industry Association to raise the targets for the contribution of solar and wind power to the overall electricity generation capacity. The Climate Parliament proposed to have 150 GW of solar PV and 250 GW of wind power by 2020 against originally envisaged targets of 100 GW and 200 GW for solar and wind power respectively. The 13th Five-Year Plan for the Energy Sector ultimately included the targets of 105 GW solar PV and 210 GW wind power (see Table 7). It is difficult to say what the Climate Parliament's contribution has been to this (limited) increase in the targets for solar and wind power generation capacity as *'many players contributed to the 13th Five-Year Plan'*.

166. **Study tours.** The Climate Parliament has arranged two study tours to the United Kingdom for (i) legislative staff of the National People's Congress; and (ii) policy makers of the National Reform and Development Commission and the

⁵⁶ Through her previous engagement with the China Renewable Energy Industry Association, the Climate Parliament's China Director knew the industry's concerns with the current renewable energy legislation, namely: (i) the curtailment of energy production, which prevents the full purchase of electricity mandated by the Renewable Energy Law; (ii) undercapitalization of the Renewable Energy Fund and the concomitant need to review the subsidy/pricing scheme for renewables; (iii) need for a better planning of new capacity and the harmonization of plans between state and provincial level; and (iv) the need to include biomass and hydro sector provisions into the law.

⁵⁷ The technical experts of universities, think tanks and government agencies usually contribute to the research of new laws through parallel processes as they receive multiple sources of funding for the same research project.

⁵⁸ According to the NDRC, a draft law currently lies with the Legislative Department of the State Council.

⁵⁹ In 2012, the SCO mandated 13 university professors to draft a climate change law (that China does not have to date), which was subsequently shared with the National Development and Reform Commission (NDRC, the responsible government entity).

National Centre of Climate Change Strategy. The National Reform and Development Commission conducts study tours from its regular budgetary resources. Recent study tours have been conducted to France and Mexico.

Climate Parliament Secretariat

167. Since December 2014, Danna Geng is the Climate Parliament's China Country Director. Ms. Geng currently holds office in the China Renewable Energy Industry Association (CREIA)⁶⁰, where she worked until her transfer to the Climate Parliament.⁶¹ For most part of the last two years however, she worked from the offices of the National Centre of Climate Change Strategy (NCSC).⁶² Both CREIA and NCSC are important collaborators of the Climate Parliament both in the resources and the network that they provide the Climate Parliament.

Political meddling

168. Government officials did not perceive the Climate Parliament's work as political meddling. They consider it simply as the 'transfer of knowledge' for 'mutual benefit'.

Results

169. The Climate Parliament Secretariat and Network have submitted a draft Renewable Energy Law to the Environmental Protection and Natural Resources Committee of the National People's Congress. The draft law has been submitted by 30 legislators thereby automatically triggering a formal legislative process. This is in and by itself a success (even if the ultimate outcome in terms of content and actual adoption of a new renewable energy law is unknown and dependent on a multitude of factors).

170. The Climate Parliament has asserted itself as a credible partner to strategically important organizations within the Chinese policy space such as the National Reform and Development Commission, the National Centre of Climate Change Strategy, the China Renewable Energy Industry Association, a handful of legislators in the National People's Congress, the Legislative Department of the Environmental Protection and Natural Resources Committee of the National People's Congress, and the Global Energy Interconnection Development and Cooperation Organization, amongst others.⁶³ The Climate Parliament is one of 17 council members of the Global Energy Interconnection Development and Cooperation Organization (more on this organization in Section B.4).

The future role of the Climate Parliament

171. With a strengthened National People's Congress, the Climate Parliament could in theory increasingly perform its core roles of parliamentary support, capacity building and network convener. Thematically, attention could shift from the electricity generation sector towards addressing the transmission bottlenecks in absorbing the renewable energy generated electricity, as well as supporting provincial governments with the development and implementation of climate change action plans. In practice, Chinese closed political system will prevent the Climate Parliament from taking up the role and position of influence it has for example acquired in India. Moreover, it is questionable whether China needs the Climate Parliament support given that it is richly endowed with capital, capacity and experience.

B.4. Global energy interconnections

172. A core strategic focus of the Climate Parliament is intercontinental energy interconnections. For that, they work on a Green Grid Alliance (see main report). Given that China has to be part of any durable solution to climate change⁶⁴ and

⁶⁰ CREIA is a semi-government organization with a formal reporting line to the National Energy Administration.

⁶¹ Ms. Geng still holds the nominal (non-remunerated) position of Assistant to the President of CREIA.

⁶² The Chairman of the NCSC was President of CREIA at the time of Ms. Geng's employment there.

⁶³ Interviewees welcomed the study tours organized and paid for by the Climate Parliament. Due to internal budgetary rules, they cannot (or only to a limited extent) organize such study tours themselves.

⁶⁴ 'As the world's largest energy consumer (23% of global energy consumption), largest energy producer (19% of global energy supply) and largest oil importer and carbon dioxide (CO₂) emitter in 2014, China lies at the center of the world's energy issues.' (Zhu 2016)

its own proposals on energy interconnectivity⁶⁵, the Climate Parliament consciously sought engagement with China and built a strategic partnership with the National Centre of Climate Change Strategy and the China Renewable Energy Industry Association (Climate Parliament 2015a).

173. A leading force within China on global energy interconnectivity is the former Chairman of China's State Grid, Mr. Zhenya Liu, who – jointly with former US Minister of Energy, Professor Steven Chu – initiated the Global Energy Interconnection Development and Cooperation Organization (GEIDCO – see Textbox 8). Through its active engagement with these leading actors and its contribution to the policy discourse in China on energy interconnectivity, the Climate Parliament was included as one of 17 Council Members⁶⁶ of GEIDCO.

174. China itself is currently grid connected – through 'normal' transmission lines – to Russia, Kazakhstan and the countries in South-East Asia. Domestically, China is building by 2030 twenty-three point-to-point Ultra High Voltage Direct Current (UHVDC) transmission lines, including for example the 6400 MW (800,000 volt) UHVDC line between Xiangjiabandan and Shanghai (completed in 2010) or the 12,000 MW (1.1. million volt) Changi - Guquan link running 3,400 kilometer which is under construction (The Economist 2017a). The actual and planned UHVDC lines only partly transmit electricity generated from renewable energy sources as some are connected to coal-fired power plants. In March 2016, State Grid of China 'signed a MoU with the Russian firm Rosetti, a Japanese one Softbank and a Korean one KEPCO agreeing on the long term development of an Asian supergrid designed to move electricity from wind-swept Siberia to Seoul' (The Economist 2017a).

175. China's interest in regional and global energy interconnections lies in the opportunity it provides for exporting electricity and boosting the domestic electricity transmission industry.

B.5. Cross-fertilization between SDC's and the Climate Parliament's work

176. The SCO in Beijing entered the working relationship with the Climate Parliament '*convinced about the relevance of [the Climate Parliament] initiative*'. The SCO and the Climate Parliament's management team meet roughly once per year, at which time they '*share information*'. From these meetings and discussions, no concrete cooperation emerged – for several (interrelated) reasons. First, relevant work for the Climate Parliament within the SCO GPCCE program had been completed prior to the Climate Parliament's engagement in China (see below). Second, the SCO's (planned) budget has over the last three years been subject to a series of budget cuts, which limited its ability to pick up or formulate new projects.⁶⁷ Third, the SCO experienced the Climate Parliament as working in another '*stratosphere*', i.e. the SCO and the Climate Parliament were thought to work at very different levels of government and ambition. Fourth, the Climate Parliament generally presented new ideas and refrained from asking advice from the SCO.

177. As noted, the SCO conducted some work with direct relevance to the Climate Parliament just prior to the Climate Parliament's entry in China. In 2012, the SCO mandated 13 university professors to draft a climate change law (that China does not have to date), which was subsequently shared with the National Development and Reform Commission (NDRC, the responsible government entity). The SCO also offered the Ministry of Environmental Protection technical assistance (by way of a Swiss consultant sharing the Swiss experience) on the third revision of the Air Quality Prevention and Control Law and contributed to the National Strategy for Climate Change Adaptation which was prepared by NDRC. The current GPCCE work program focusses on (i) the development of clean air action plans at the provincial and municipal level; (ii) technical assistance to municipalities on 'low carbon cities'; (iii) contributing to a national strategy for climate change adaptation and piloting adaptation action plans at the provincial level; and (iv) integrated water management.

⁶⁵ President Xi Jinping has called for '*open global energy markets with orderly competition and efficient supervision*' (Zhu 2016), as well as '*a global energy network to facilitate efforts to meet global power demand with clean and green alternatives*' (GEIDCO 2016a). Premier Li has referred to these proposals as leading towards an 'Energy Internet'.

⁶⁶ The Council functions as a board of directors.

⁶⁷ In practice, the SCO GPCCE programs remained stable around CHF 6.5 million per year between 2012 and 2016. The budget cuts have been targeted to anticipated or planned expansions to the program budget.

Textbox 8. Global Energy Interconnection Development and Cooperation Organization (GEIDCO)

GEIDCO is 'a new body convened by the State Grid Corporation of China' (Climate Parliament 2016a). It was incorporated in Beijing in March 2016. GEIDCO promotes 'a globally interconnected, strong and smart grid with ultra-high voltage power grid as the backbone' (GEIDCO sd) with the purpose 'to meet the global power demand with clean and green alternatives' (GEIDCO 2016a). GEIDCO aspires to become 'a leading organization with great voice and influence ... and create a platform for win-win cooperation on global energy for sustainable development ... [GEIDCO] shall join together and facilitate efforts to develop global energy interconnection ... especially through ... research, key technology innovations and key project implementation.'" (GEIDCO sd).

GEIDCO strives to be an international institute, is registered as a non-governmental and non-profit organization, is practically set-up as a research and advisory outfit with (currently) 120 staff members, and functions as an association with currently 265 member organizations comprising industry associations, research institutes, universities, utilities, manufacturers, engineering and consulting companies and financial institutions. Non-profit organizations (including the Climate Parliament) enjoy a free membership; international members pay an annual membership fee of US\$30,000, and Chinese companies pay annually between US\$ 15,000 (small companies) and US\$ 120,000 (council members).

GEIDCO pursues a roadmap containing three phases: (i) until 2020, promote regional grid interconnection; (ii) until 2030, promote intracontinental grid interconnections; and (iii) until 2050, promote transcontinental grid interconnections (GEIDCO 2016a). GEIDCO's research covers (i) the distribution, generation potential and utilization rate of renewable resources; (ii) national policies and interconnection plans; (iii) grid and transmission technologies; (iv) interconnection projects; and (v) standard setting (GEIDCO 2017).

For now, GEIDCO has signed a memorandum of understanding with State Grid, Softbank, KEPCO and Rosetti on the development of the North-East Asia Interconnection (also mentioned above). In this partnership, GEIDCO acts as convener, provides research, assists in the design and planning of the project, and gives technical support. The four partners pay for GEIDCO's services. GEIDCO has also signed a memorandum of understanding with (i) UNESCAP to develop a comprehensive interconnection plan for South-East Asia; and (ii) Bloomberg Energy to research renewable energy potential globally. Other projects or MoUs are in the pipeline.

In its presentation material (GEIDCO 2016a) and in the White Paper on Global Energy Interconnections (GEIDCO sd), GEIDCO is linked to President Xi's proposal at the United Nations General Assembly in September 2015 for 'establishing global energy interconnections to facilitate efforts to meet the global power demand with clean and green alternatives' and China's Two Replace, One Restore and One Increase Policy: 'we will strive to establish Global Energy Interconnections to implement Two Replace, One Restore and One Increase'.

B.6. Concluding observations

178. Real-world impact. The Climate Parliament has not (yet) made a measurable impact in China (which given the Climate Parliament's relative short engagement with China is logical). Still, the Climate Parliament has been able to position itself within the policy-making space and assert itself as a credible partner to the National Reform and Development Commission, the National Centre of Climate Change Strategy, the China Renewable Energy Industry Association, a handful of legislators in the National People's Congress, the Legislative Department of the Environmental Protection and Natural Resources Committee of the National People's Congress, and the Global Energy Interconnection Development and Cooperation Organization, amongst others. As such, the Climate Parliament is able to insert ideas into Chinese policy debates and potentially nudge attitudes and behavior of policy makers.

179. Theory of Change. The National People's Congress has more body and is a more logical recipient of Climate Parliament support than expected beforehand. The Renewable Energy Law of 2005 was initiated and drafted by the Environmental Protection and Natural Resources Committee of the National People's Congress. The Congress is also said to have become more inclusive – with more grassroots organizations represented – and more powerful under President Xi's leadership. Having said that, the Climate Parliament's role and influence is restricted. The Climate Parliament support

will be limited to researching and sharing international examples, organizing study tours and submitting proposals alongside other think tanks, research institutions and development partners. The Legislative Department of the Environmental Protection and Natural Resources Committee is not receptive to support in the legislative process, which they take on themselves. The Legislative Department has the means, capacity, experience and culture to initiate, research, draft and negotiate legislation. In the process, the Climate Parliament's work is merged with many other inputs. Moreover, the role of the National People's Congress within the Chinese political system remains weak. We have no evidence that the Climate Parliament Network includes political opinion leaders. Against this background, normal bilateral political relationships between China and Western European countries (in which experiences are exchanged) appear to make more sense than development cooperation and parliamentary strengthening work.

180. **Efficiency.** The Climate Parliament's work in China represents the Climate Parliament's most focused, strategic and legislation-oriented program of the four case-study countries. The last two-and-half-years, the China Country Director picked up two '*projects*' – on renewable energy and climate change respectively – where new or amended legislation could facilitate the national energy transition and (provincial-level) climate change action. In addition, the Climate Parliament formed a strategic partnership with the National Centre of Climate Change Strategy and the China Renewable Energy Industry Association to engage with the Chinese government on the promotion and realization of a global green grid.⁶⁸ This effectively three-pronged work program allows for an efficient use of resources by the Climate Parliament. The Climate Parliament's focused approach in China is made possible, if not induced, by the fact that the National People's Congress meets twice per year only and the Climate Parliament Network members require much less to no daily support on parliamentary work (like for example in India).

181. **Sustainability.** The Climate Parliament's work in China is advocacy-based: it seeks to influence the renewable energy and climate change legislation in the country and include China in its Green Grid Alliance. The Climate Parliament does not build capacity of legislators or parliamentary staff to sustain work on these themes beyond the Climate Parliament's engagement. The Climate Parliament's informal parliamentary network includes 6 delegates. Hong Kong delegate Choy Soyuk, with whom the Climate Parliament has developed the most intense working relationship is in her second and last parliamentary term (as the NPC's statutes do not allow for a third term). Choy Soyuk's departure could endanger the Climate Parliament's influence, follow-up or success with its draft renewable energy law.

182. **Global energy interconnections.** Given the Climate Parliament's ambition to set up a Green Grid Alliance, the Climate Parliament's engagement with China in general and GEIDCO in particular makes sense.⁶⁹ The question is whether GEIDCO can assert itself as an independent international organization that can effectively facilitate the development of regional and global energy interconnections or will de facto be an instrument of Chinese foreign policy and present the Climate Parliament (and by extension its donors) with potential conflicts of interests⁷⁰. The second question is whether GEIDCO will have sufficient political cloud to engage with the politics inherent in regional grid integrations and cross-border electricity trade; as a quasi-business association the answer to this question is likely to be no. The Climate Parliament can fill part of this gap in that it can mobilize parliamentarians to exert political pressure. However, most of the challenges for realizing regional grid interconnections and cross-border trade regimes fall on the executive branches of government. For the Climate Parliament, this is where the Green Grid Alliance comes into play. More on this in the main report.

183. **Cross-fertilization.** Over and above the fact that no cross-fertilization or concrete cooperation has taken place between the SCO and the Climate Parliament, it appears that neither side has made serious efforts to that end. The SCO's work on the Climate Change Law and the Air Quality Prevention and Control Law had direct relevance and could have

⁶⁸ Effectively, the Climate Parliament thought to link – for mutual benefit – the Chinese Government's idea of an Energy Internet with the Climate Parliament's intent to build a Green Grid Alliance.

⁶⁹ The main report discusses whether it makes sense for the Climate Parliament to pursue global energy interconnections.

⁷⁰ Example given on the type of conflict of interest that can arise: State Grid, which founded GEIDCO, intends to build ultra-high voltage direct current lines globally and will be in direct competition with Western-European companies to obtain such contracts.

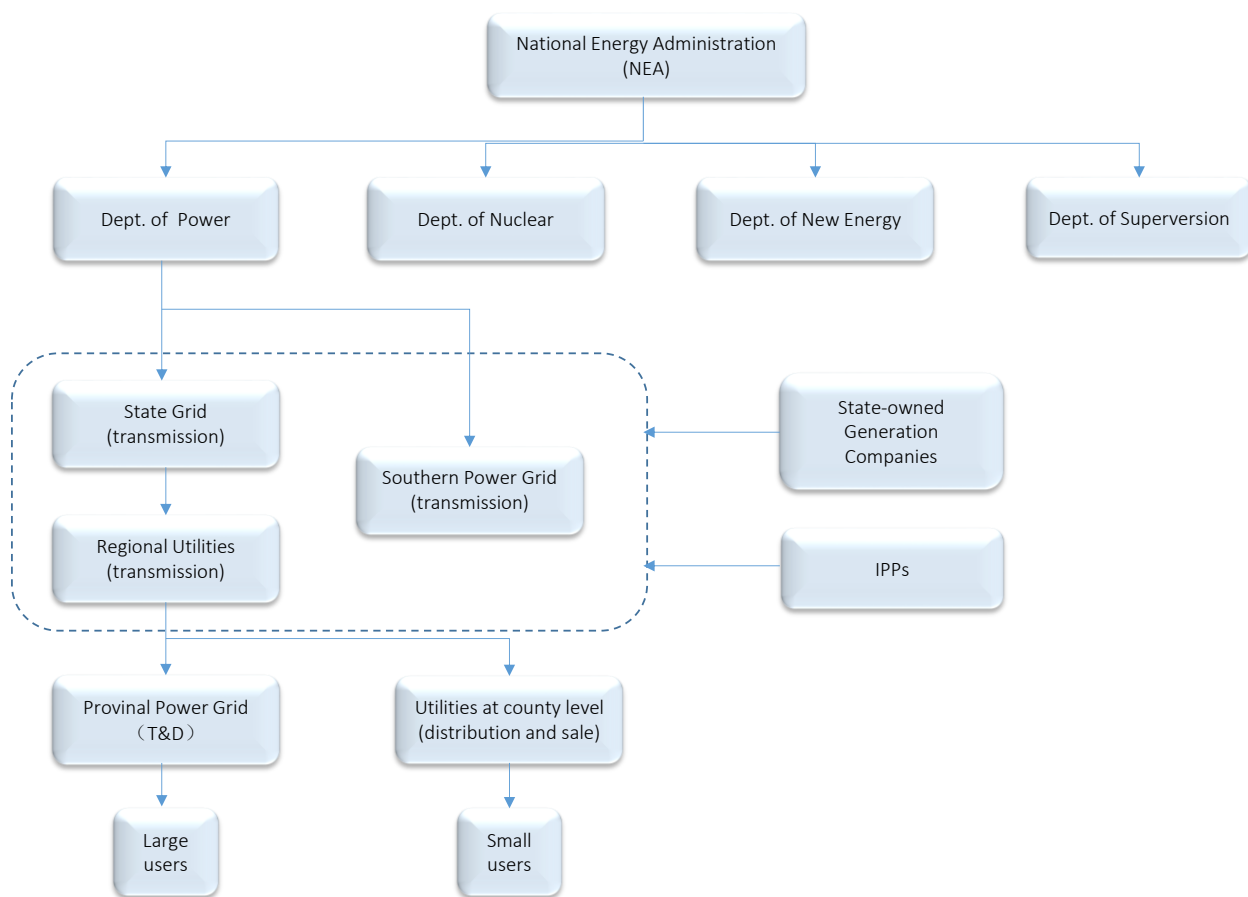
offered a feeding ground for the Climate Parliament’s work. The same applies for the SCO’s work on promoting low carbon cities and piloting climate change action plans at the provincial level, especially now that the Chinese government has embraced the renewable energy agenda and the Climate Parliament can refocus its efforts on accelerating the ‘Energiewende’ and / or addressing the risks of climate change through other interventions.

B.7. Facts and figures

This chapter includes facts and figures on:

1. the electricity sector structure;
2. country-specific Climate Parliament products
3. the Climate Parliament Network and participants to International hearings
4. selected data on the Chinese Parliament and Climate Parliament Network.

Figure 8. The Chinese electricity sector structure⁷¹



⁷¹ Source: www.nea.gov.cn; www.sgcc.com.cn

Table 8. China-specific Climate Parliament policy papers and knowledge products

#	Name	Description of content or change
1	Suggestions for promoting transformation to low-carbon energy	<p><i>Description of content or change</i></p> <p>(1) Great determination for energy transformation as well as relevant market signals should be conveyed.</p> <p>(2) Launch of a cross-regional pilot study on energy supply and demand coordination.</p> <p>(3) Speeding up the development of power transmission channels in renewable energy bases.</p>
2	Suggestions for improving mechanisms concerning renewable energy subsidies	<p>Issues:</p> <p>(1) With the existing level of additional fees for renewable energy power, we can hardly achieve renewable energy development targets during 13th FYP period.</p> <p>(2) The management mechanism concerning renewable energy subsidies further deteriorated the current situation.</p> <p>(3) The cumbersome procedures of application and approval concerning renewable energy subsidies extended the circle of receiving subsidies.</p> <p>Suggestions:</p> <p>(1) Additional fees for renewable energy should be raised and levied in full amount.</p> <p>(2) The time limit of subsidies should be adjusted.</p> <p>(3) The management mechanism concerning subsidies should be adjusted.</p> <p>(4) The levying and allotting procedures of subsidies should be simplified.</p>
3	Suggestions for accelerating the construction of legal systems concerning climate change	<p>Tackling climate change is in urgent need of a legal obligation on the part of the state, in order to underpin the policy framework:</p> <p>(1) Enhancing top-level design of national systems requires a legal basis.</p> <p>(2) Conducting trial implementation of local systems requires legal support.</p> <p>(3) Strengthening responsibilities of enterprises to control emissions of greenhouse gases requires legal grounds.</p> <p>(4) Promoting public participation into the battle against climate change requires legal norms.</p> <p>Suggestions: The legislative progress should be accelerated to build a complete legal system concerning climate change.</p>

Target 1 per country

Source: Climate Parliament

Table 9. The Chinese Climate Parliament Network and Participants to International Hearings

#	Name	m/f	polity
1	JIN Baofang	M	National People's Congress
2	ZHANG Chuanwei	M	National People's Congress
3	WU Gang	M	National People's Congress
4	CHEN Kangping	M	National People's Congress
5	LIU Hanyuan	M	National People's Congress
6	CHOY Soyuk	F	National People's Congress
7	ZHU Gongshan	M	Chinese People's Political Consultative Conference

Table 10. Chinese NPC Delegates who regularly participate in International Parliamentary Hearings

#	Name	m/f	Polity
1	CHOY Soyuk	F	National People's Congress

Table 11. Selected data on the Chinese Parliament and Climate Parliament Network.

Number of members in the Climate Parliament's Network		#	7
	Target	#	10
Number of female members in the Climate Parliament's Network		#	1
Number of Steering Committee members in the Climate Parliament's Network		#	7
	Target	#	5
Number of female Steering Committee members		#	1
	Target	#	2
National People's Congress		#	7
Climate Parliament Network Members		#	2987
Total number of Parliamentarians		%	0.2%
	Members of the active parliamentarians as percentage of total parliamentarians	%	0.2%
	Target	%	5%
The number of meetings of the in-country CP network		Ave. #/year	1
The number of in-country (parliamentary) workshops on climate change and renewable energy organized by CP*		#	1 - 3
	Target	#	2

* The Climate Parliament Secretariat does not organize regular workshops/meetings for its Network members. They do try to gather the delegates of the National People's Congress once per year (at the fringes of the parliamentary sessions). In addition, the Climate Parliament organizes or supports workshops at key domestic or international events in China (at which they invite their Network). We have inserted a ball-mark figure.

C. Case study: India

184. This annex presents the key findings from our research on the Climate Parliament's work in India. The findings stem from a document review, quantitative data collection and key informant interviews in New Delhi and Bhubaneswar (Odisha). The following topics are covered:

- the (renewable) energy sector;
- the role of the national parliament;
- the Climate Parliament's work;
- regional electricity trade; and
- the cross-fertilization between SDC's country operations and the Climate Parliament's work.

The annex concludes with summative statements on the key evaluation criteria and a series of figures and tables on India's (renewable) energy sector and the Climate Parliament's work in-country. All findings stem from multiple sources, unless explicitly stated otherwise.

C.1. The Energy Sector

The national legislative and policy framework

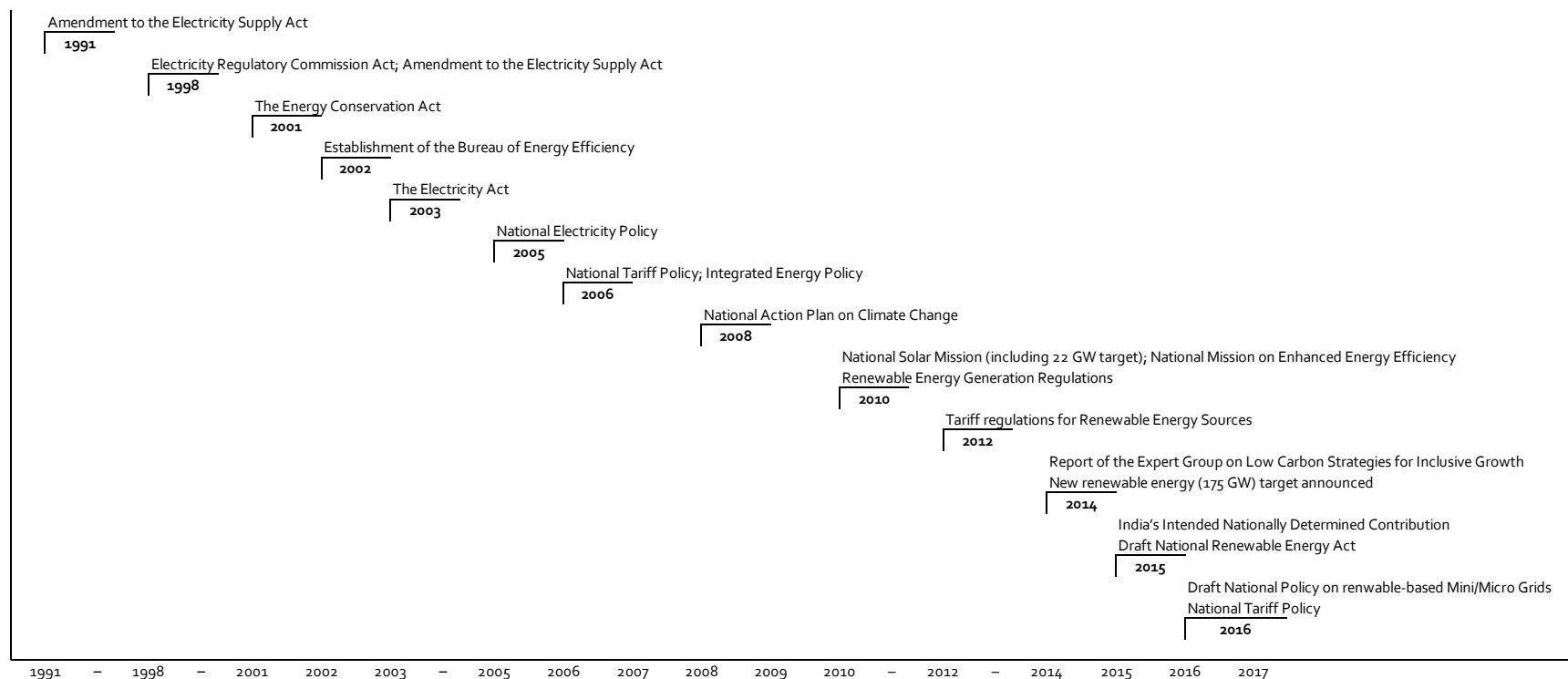
185. In 1991 and 2001, India experienced acute energy crises (see Textbox 9). In both instances, the Indian Government responded with new legislation, followed in later years by subsequent policy reforms. Table 12 on the next page lists the major laws and policies that have been adopted for the energy sector over the last 25+ years.

186. The current structure and functioning of the Indian energy sector have been shaped by the 1991 Amendment to the Electricity Supply Act, the 1998 Electricity Regulatory Commission Act, and the new Electricity Act in 2003. The 1991 Amendment opened the electricity sector to private sector participation in electricity generation: from then on, private independent power producers could enter into long-term power purchasing agreements with distribution companies. The Amendment also paved the way for Feed-in-Tariff Guidelines (issued in 1993). The 1998 Act created the Central Electricity Regulatory Commission and thereby an independent guardian of the electricity and pricing system.

187. The 2003 Electricity Act opened the electricity sector further, introducing amongst others (Pargal and Banerjee 2014):

- open access to transmission and distribution infrastructure, permitting multiple distribution licensees and introducing power trading. Together, these measures created an active power exchanges providing choice to power procurers and end-users for sourcing their electricity;
- encouraging private sector entry into generation and transmission through regulatory improvements and favorable tariff and tax regimes;
- mandating unbundling of State Electricity Boards and corporatization of resulting entities;
- introducing smart transmission tariffs to relieve network congestion.

Table 12. Evolution of the energy sector policy and legal framework in India.



Source: Interviews, Pargal en Banerjee 2014, Central Electricity Regulatory Commission (http://www.cercind.gov.in/updated_consolidated_reg1.html)

Textbox 9. India's persistent energy crisis

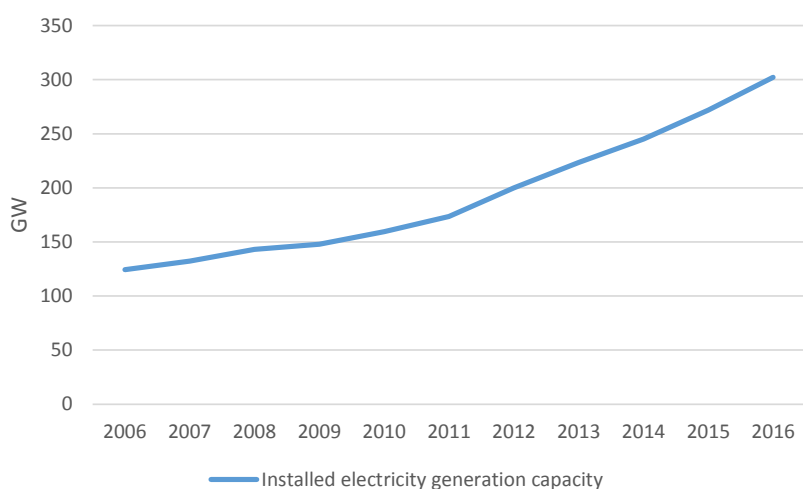
India's energy sector problems emerged in earnest in the late 1980s. The problems concerned (i) a shortage of generation capacity and (ii) the bankruptcy of the distribution sector. The problems peaked in 1991 and 2001, when the Indian power sector faced financial losses of US\$ 0.85 billion (0.7% of GDP) and US\$ 8.5 billion (ca. 1.8% of GDP) respectively. These losses were due to a combination of underpricing, under collection and underinvestment in infrastructure. In 1991, the cost-recovery rate was 79%, transmission and distribution losses amounted to 23% and the plant load factor stood at 54%. This led to an energy deficit of 7.7% (and at peak times of 18.8%). (Pargal en Banerjee 2014). The generation shortage has now been addressed (as shown in the next subsection). However, the distribution sector has remained financially distressed and is again on the verge of bankruptcy – a renewed bailout package is under preparation.

188. Subsidiary policies to the 2003 Electricity Act have laid the groundwork for multi-year tariff frameworks and competitive bulk procurement of power including a move from negotiated agreements (with a guaranteed rates of return for IPPs) to market-driven competitive procurement. In 2010, India shifted for independent power producers from a feed-in-tariff policy to a reverse auction mechanism and viability gap funding for renewable energy sources.⁷²

State of the sector

189. The installed generation capacity has increased more than fourfold since 1991 (from 70 GW in 1992 to 302 GW in 2016).⁷³ The bulk of this increase has been realized over the last 10 years (see Figure 9). This sharp rise in generation capacity and concomitant increase in actual generation provides India with an electricity surplus since last year (see Figure 10)⁷⁴. Until 2012, India still faced an electricity supply deficit of 10% (Pargal and Banerjee 2014). The number of Indians with access to electricity has also risen sharply.

Figure 9. Installed (renewable) electricity generation capacity in India (2008 – 2016)⁷⁵



190. Despite this turnaround, challenges persist. Roughly 200 million Indians (or 15% of the population) remain without access to electricity. Moreover, distribution, in particular the state-owned distribution companies and retail pricing, have not seen the same reform efforts (or reform efforts have not been pursued with the same rigor) as in generation and transmission. Many state-level utilities continue to perform weakly, operationally and financially, thereby posing a continuous drag and (financial) risk on the overall performance of the sector. Power sector reform is complicated by the fact that the energy sector is a 'concurrent subject', which means that responsibilities are divided between the central and state governments.

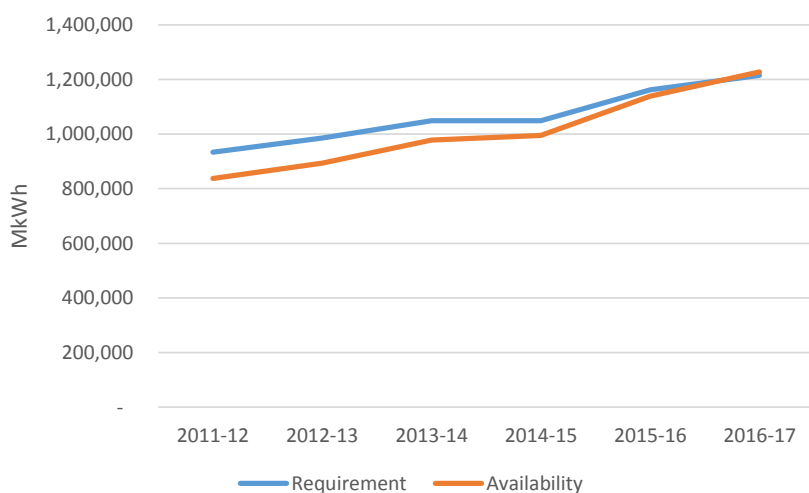
⁷² Source: Interviews and (Pargal and Banerjee 2014)

⁷³ Source: (Pargal and Banerjee 2014), http://cea.nic.in/reports/others/planning/pdm/growth_2016.pdf, http://www.cea.nic.in/reports/monthly/installedcapacity/2017/installed_capacity-03.pdf

⁷⁴ Beginning in 2012-13, individual Indian states started to move into a surplus scenario.

⁷⁵ Source: http://cea.nic.in/reports/others/planning/pdm/growth_2016.pdf

Figure 10. Electricity supply and demand in India (2008 – 2017)⁷⁶



Renewable energy

191. India has a long and rich history in renewable energy. The national government created a Department of Non-conventional Energy Sources in 1982, which was upgraded to a full Ministry of New and Renewable Energy in 1987. In 1991 and 2001, the Indian Government set in motion (in response to the acute energy crises) legislative, policy and fiscal reforms, which – both directly and indirectly – proved beneficial for the uptake of renewable energy generation and grid-integration.

192. Initial efforts of the Ministry were directed towards researching and pilot testing new technologies (mostly in solar, wind and biogas). From early on, financing was seen as a key constraint to commercializing renewable energy technologies. In 1987, the Indian Renewable Energy Development Agency (IREDA) was set up to address this financing constraint. The World Bank extended a line of credit to IREDA between 1993 and 1998 for the commercialization of wind energy and solar PV.

193. In the 1990's, private investors started putting up wind mills to benefit from cost-covering feed-in-tariffs and favorable tax provisions (including accelerated depreciation rates, tax credits and a 10-year tax holiday on earnings). This continued into the 2000s, when two to three Gigawatt of wind generation capacity was added each year.

194. The 2003 Electricity Act required state regulators to set Minimum Procurement Obligations of renewable energy for electricity distribution companies. In 2008, the Indian government adopted the National Action Plan on Climate Change presumably to show the outside world – in the context of the UNFCCC negotiations – that India was serious about addressing climate change. This National Action Plan included 8 'missions', including for solar and energy efficiency. In 2010, the Solar Mission set the target of 20 GW of grid-connected and 2 GW of off-grid solar generated electricity capacity for 2022.

195. In 2011, the Indian government introduced competitive bidding (through reverse auctions) for large-scale renewable energy concessions. Tariffs were set in long-term power purchase agreements. The Indian government provided (i) viability gap funding to close the gap between the bid and the retail tariff⁷⁷; investment-ready land (including transmission lines to evacuate the electricity), and state guarantees on the concessional financing of the multilateral and bilateral development banks (mostly ADB, KfW and the World Bank). The price of wind and solar PV generated electricity has since

⁷⁶ Source: Central Electricity Authority. Load Generation Balance Reports (2011, 2012, 2013, 2014, 2015, 2016)..

⁷⁷ The first MW-size solar power plant in 2010/2011 received a feed-in-tariff of 27.3 US¢/KWh. 7.8 US¢/KWh were paid for through the retail tariff. The remaining, close to 20 US¢/KWh were covered by the Indian Government

come down tremendously; so much, that in the latest concession agreements the Indian government no longer needed to provide viability gap funding. In India, wind and solar PV generated electricity has reached parity with thermal-generated electricity.⁷⁸ The drop in price is attributed to the technological developments, the application of reverse auctions, and the scale of the concessions.

196. The scale of the investments in renewable energy is in no small measure due to the new government of prime-minister Modi, which in 2014 set a new target for renewable energy generation capacity of 175 GW by 2022. In the following year, in its Intended Nationally Determined Contribution to climate change mitigation, India pledged to achieve 40% of overall electricity generation capacity from non-fossil fuel sources by 2030. The 175 GW entails 100 GW of solar power, 60 GW of wind power, 10 GW of biogas, and 5 GW of small-scale hydro. The adoption of the new, ambitious target is attributed to prime-minister Modi himself, who is said to have a genuine concern about climate change and be convinced about the potential of renewable energy, and who has realized a 130 MW solar PV park in his state of Gujarat as early as 2007 (when he was Chief Minister of the State). Moreover, Modi's government was classified as 'aspirational', going beyond 'business as usual' and seeking 'transformational change'⁷⁹. Modi was also supported in his decision by an UNDP project which has mapped the resource potential of India: 745 GW of solar, 100 GW of wind, 50 GW of micro-hydro and 17 GW of Biomass⁸⁰. Solar PV electricity generation capacity is currently increasing rapidly. Between February 2016 and March 2017, overall solar PV capacity increased from 3 GW to 10 GW⁸¹.

197. The Indian government has invested heavily in renewable energy (by means of favorable tax incentives, long-term commitments for viability gap funding, the provision of state guarantees on financing, investments in investment-ready land, electricity evacuation infrastructure, and high-voltage transmission infrastructure). These investments have been financed through general tax revenues, transmission charges and a dedicated coal-cess. The latter flows into the National Clean Energy Fund. The coal-cess has been increased from 50 INR to 200 INR per ton of coal by the previous Singh government and subsequently doubled to 400 INR per ton of coal by the Modi Government.

198. Over and above the thermal power plants currently under construction (15 GW), the Indian government does not foresee new thermal generation capacity for the next 10 years. Despite India's embrace of renewable energy, its greenhouse gas emissions are estimated to rise by 90% over current emission levels until 2030 (The Economist 2016).

Energy mix

199. Despite India's long history with renewable energy, its share in total installed electricity generation capacity has remained modest until the first decade of the millennium. It is only the last 10 years that a substantial increase in renewable energy generation capacity can be seen (see Figure 11). In 2016, renewable energy electricity generation capacity was close to 43 GW or 14% of total electricity generation capacity. The contribution of renewable energy to actual electricity generation remains modest and hovers around 6% of total electricity generation (see Figure 12).⁸² This is, for most part, explained by a limited offtake of renewables by electricity distribution companies as these have already contracted for higher amount of conventional power than their existing demand (Swain 2017) and, possible, for a minor part, by falling average plant load factors of renewable energy plants as the renewable energy mix tilts away from wind and towards solar energy sources, with the latter having on average lower plant load factors than wind power plants in India.⁸³ Figure 13 shows the Indian energy mix according to energy sources (in terms of installed capacity). Figure 14 presents the renewable energy mix. Solar generated electricity has risen from near zero in 2010 to close to 7 GW in 2016.

⁷⁸ The state-owned Solar Energy Corporation has recently tendered 1 GW of wind energy (through 4 wind parks in different states) for 5.1 US¢/KWh. Similarly, a 750 MW solar PC park in Madra Pradesh has been tendered for US¢4.6/KWh.

⁷⁹ The long-established Planning Commission has been renamed into the National Institution for Transforming India.

⁸⁰ Source, interview with UNDP.

⁸¹ Source: Interview with the Central Electricity Authority

⁸² The Central Electricity Authority could not tell us on the spot why the share of renewable energy in actual electricity generation fell in 2016.

⁸³ While conventional thermal plants have a PLF between 70-80% of the installed capacity, renewable energy plants generally have a much lower PLF. In India, the PLF for wind plants are said to be around 20%, whereas the PLF of solar plants are around 15%. Renewable energy plants

Figure 11. The share of renewable energy in total electricity generation capacity in India⁸⁴

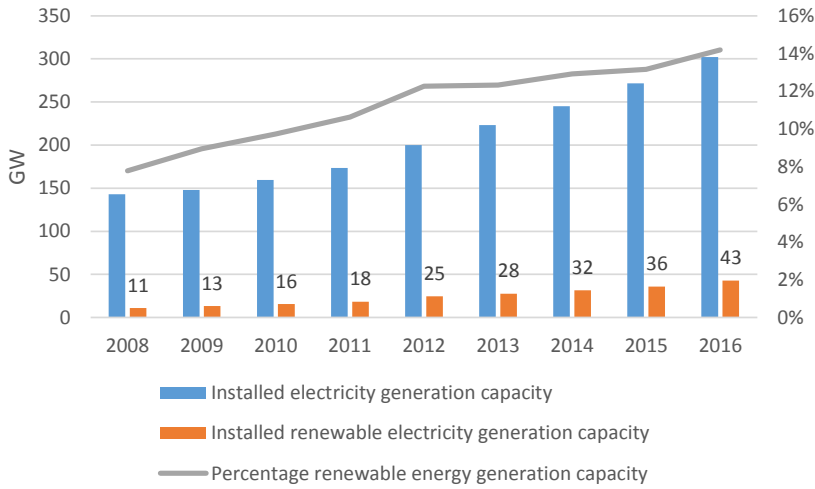


Figure 12. The share of renewable energy in actual electricity generation in India⁸⁴

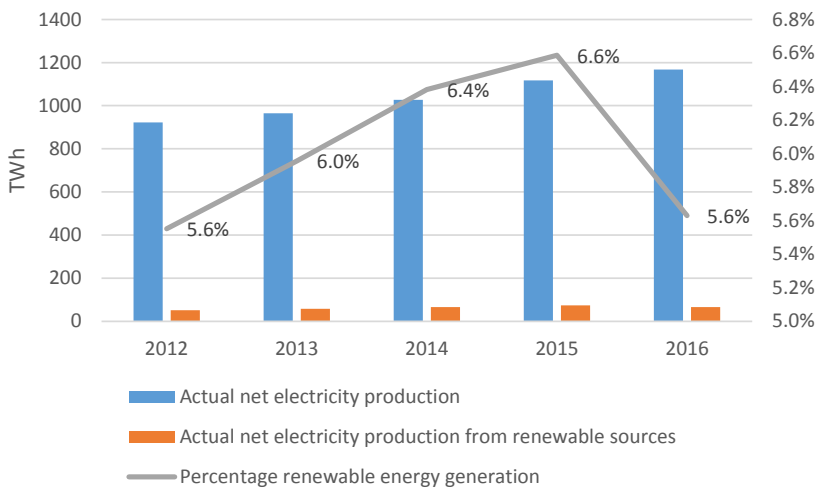
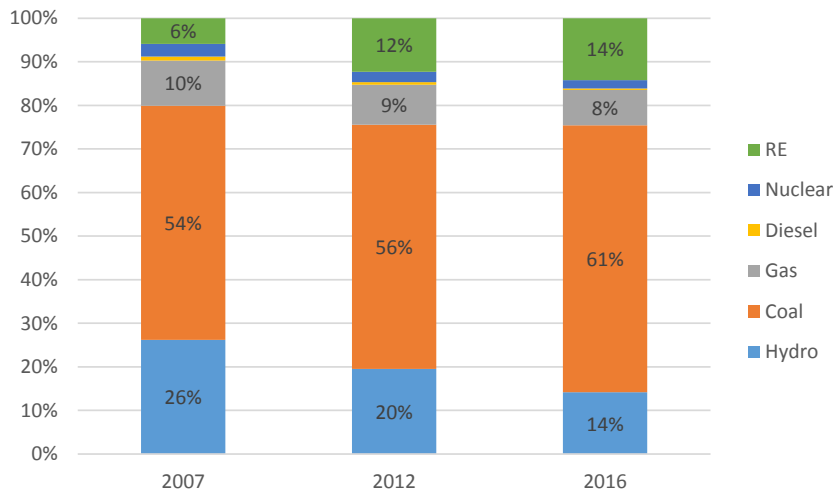


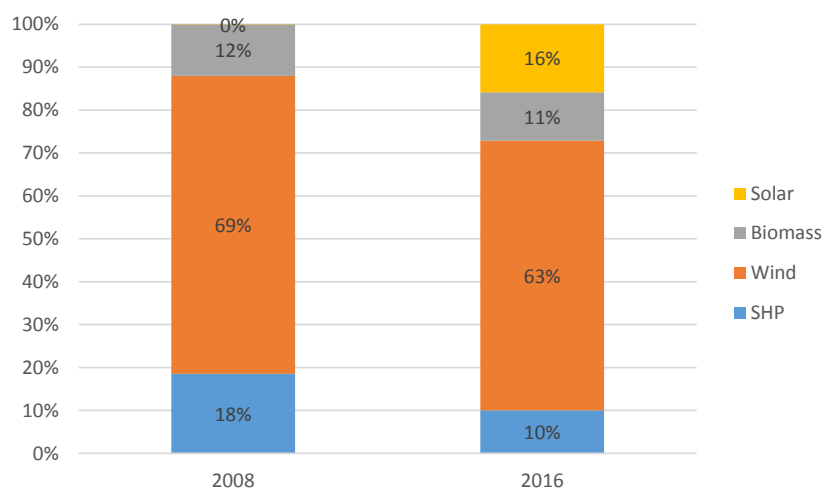
Figure 13. The Indian energy mix in the years 2007, 2012 and 2016 (according to installed capacity)⁸⁴



in India have generally lower PLTs than other geographies, owing to adverse climatic conditions (like dust content in air reducing solar radiation and unfavorable wind patterns).

⁸⁴ Source: Central Electricity Authority. http://cea.nic.in/reports/others/planning/pdm/growth_2016.pdf

Figure 14. The renewable energy mix in 2008 and 2016 in India⁸⁴



C.2. The Role of National Parliament

200. India has a vibrant political arena with – at least over the last 20 years – changing majorities in parliament. As a bicameral parliamentary democracy, government is formed by the political party (or alliance) which holds a majority in the Lower House. *'The council of ministers [is] chosen from elected members of parliament'*⁸⁵. There is thus a close link between the executive and legislative branch of government in India.

201. Members of Parliament (MPs), especially those with a strong position within their own political party, can influence government policy. They can do so at any stage in the policy formulation process. They can initiate or shape a policy, either informally (through one-on-one or political party discussions with a responsible minister) or formally (through the relevant parliamentary committees). Despite MPs potential influence, strong intra-party discipline puts a check on MPs' freedom of action. New ideas (also when originating from individual MPs) are normally voiced by the political leadership of the political party (and the government if the political party in question holds power).

202. The lower house has two standing committees which are enshrined in the Indian constitution: the Estimates (= Budget) Committee and the Public Accounts Committee. Both enjoy *'absolute independence'* from the executive and *'no government wants to vote against [either] committee'*.

203. The Climate Parliament Network in India's Parliament has pro-actively taken strong positions on renewable energy issues. Early on, in the years 2010 to 2012, this was strongly driven by a desire to make India energy independent (i.e. less dependent on imported fossil fuels). Since, concerns about climate change have come more to the fore, partly driven by public opinion: out-of-the-ordinary droughts and floods (both in terms of when they occur and their intensity) and concomitant crop damages has raised concerns amongst the rural population about the effects of climate change and let them demand action by their political representatives.

204. Outside of Parliament, it is the executive branch which is seen as leading the national climate change agenda based on a variety of motives, including genuine concerns about climate change, contributing to the international efforts to address climate change, ensuring energy independence for India, increasing access to energy, and promoting Indian business and economic development.

⁸⁵ Economist Intelligence Unit:

<http://country.eiu.com/article.aspx?articleid=1014542285&Country=India&topic=Summary&subtopic=Political+forces+at+a+glance>

C.3. Climate Parliament

The Climate Parliament Network

205. In India, the Climate Parliament operates at the national and state level. At the national level, the Climate Parliament Network encompasses close to 50 MPs from the Lower and Upper House. Eleven different political parties are represented in the Climate Parliament Network (see also Table 17 on page 78). It is a vibrant network with good attendance at individual meetings. Leading network MPs are members of the parliamentary Estimates Committee and the Energy Committee. A couple of network MPs have also become minister (both in the current and former cabinet) providing the network an easy point of entry and influence in the Council of Ministers. MPs also openly speak of being part of the Climate Parliament, i.e. the Climate Parliament is a recognized entity.

206. With five members, female representation in the national network appears low, but with 10% is actually quite close to the combined average of 11.5% in the Lower and Upper House. The low percentage of women in the network is recognized both by the Steering Committee and the Secretariat. The reason is arguably the low interest many female MPs express in the parliamentary work in general and climate change issues specifically as they fill their position more out of (family) obligation than from their own volition⁸⁶.

207. In Odisha State, the network encompasses around 70 members of the Legislative Assembly (MLAs) and a core group of 22 MLAs. The core group meets roughly every six weeks.

208. The Climate Parliament Network at the national and state level includes (at least) three different types of MPs:

1. Early activist – MPs who early on (and before becoming MP) recognized the threat of climate change, promoted action to address it and actively shaped public opinion about climate change and the need for more renewable energy generation capacity.
2. Professionals – (Highly) competent MPs who have come to underwrite the need for climate change action based on the logic of the argument presented to them (both in the international discourse on climate change, as well as directly through Climate Parliament organized discussions).
3. Followers – MPs who respond to the national political discourse and the demands of their constituents.

209. MPs are elected in single-representative constituencies; they thus need to serve their electorate to be re-elected. In this sense it is fortunate that the public opinion in India has over the 5 years been favorably disposed towards climate change action making a pro-active stance on climate change politically salient.

210. MPs have at their disposal so-called Local Area Development Funds (ca. 750,000 US\$ per year). They use these funds to finance concrete projects within their constituencies (effectively taking up an executive role, over and above their legislative role). These projects range from solar PV water pump initiative, the development of a model solar village to the introduction of bio gasifiers at scale within a constituency.⁸⁷

Climate Parliament Secretariat support

211. The Climate Parliament Secretariat in India, which constitutes the South Asia Team of the Climate Parliament (covering both India and Bangladesh), consists of 6 professionals: one director, one policy coordinator, one media and administrative coordinator, a researcher and two state coordinators. All telework from home. The Delhi team has a daily call at 11:00 AM to discuss current business and which allows them to coordinate rapid responses to any queries from MPs. The director and policy coordinator hold weekly calls with the two state coordinators. The senior team members

⁸⁶ The example given is that many female representatives take over from their husband when these are (temporarily) unable to fulfil the mandate. This suggests that despite the fact that India has an 'entrenched democracy' (Source: footnote 85), its political system also has a strong patrimonial element.

⁸⁷ The Local Development Funds enable, on the one hand, close relationships between parliamentarians and their constituents. On the other hand, the funds can be misused for buying votes. From a development and inclusive growth perspective, it would be better if such renewable energy projects would be led by the national or state governments and, after piloting, be offered to all constituencies within a state.

had strong advocacy credentials but limited experience in the Indian energy sector prior to their engagement with the Climate Parliament.

212. The Secretariat closely follows the political debate and maintains active contact with the network of parliamentarians, both listening to MPs and MLAs and lobbying them to seize new opportunities to promote the renewable energy agenda. The Secretariat engages with the executive branch (both at the ministerial and civil service level) to identify 'current' issues to which it can link its renewable energy agenda. The Secretariat pro-actively provides MPs with parliamentary questions, speaking notes, policy briefs and letters⁸⁸ to relevant ministers (especially before and during the Budget Session). The Secretariat proactively advocates its agenda. At the national level, the Secretariat also commissions research institutes, think tanks and consultancies to prepare new knowledge products.

213. The Climate Parliament's work is focused on renewable energy generation. This singular focus is both strategic and resource driven. Renewable energy generation provides an attractive point of entry with MPs (because it concerns a relative straightforward topic as well as physical investment). Renewable energy also provides a manageable scope of work for the Secretariat given the limited staff and financial resources available. The Secretariat has moved its attention over the years from advocating national target setting and concomitant budgetary allocations to state-level support (undergirded by two state-level Climate Parliament directors) and assisting national MPs with ideas on how to utilize their Local Area Development Funds.

214. The Climate Parliament's latest knowledge product is a brochure on small-scale renewable energy technologies, which can be deployed in the constituencies of the MPs: the so-called Local Area Development Toolkit. With this toolkit, the Secretariat responded to a direct request from many network MPs on how they could take practical action on renewable energy within their constituencies. The toolkit has been directly funded by the British High Commission.

Results

215. In its own account, the Climate Parliament has significantly contributed to the policy developments listed in Table 13.

Table 13. Results from the Climate Parliament in India

National level

- Doubling of the 2020 renewable energy target from 6% - 15% of electricity⁸⁹
- Reintroduction of a generation-based incentive for wind power with funding of US\$ 130 million
- Launch of \$157 million in tax-free bonds for renewable energy
- Revision in the functioning of the National Clean Energy Fund (including greater fund allocation to the Ministry of New and Renewable Energy, increase in frequency of fund allocations to renewable energy projects, and doubling of the coal-cess to INR 400/ton in the Union Budget of 2016-17.
- Increase in the budget for the Ministry of New and Renewable Energy from US\$200 million in 2013 to US\$ 1.2 billion in 2016.
- Preparation of a draft Renewable Energy Act (including provisions of regular allocations from the National Clean Energy Fund to National Renewable Energy Fund and the provision of a uniform Renewable Energy Purchase Obligation for distribution companies).
- Classification of renewable energy projects as corporate social responsibility initiatives under the Companies Act 2013.

Odisha State

- Development of a new renewable energy policy by the state government (in progress)
- Adoption and implementation of a Net-metering Policy

⁸⁸ Letters are generally written by Climate Parliament Staff and signed and submitted by MPs and MLAs.

⁸⁹ This target has in the meantime been superseded by the new target of 40% of electricity generation capacity, which was set by the Modi government in 2014.

- Renewable energy provisions in the State Budget (including allocations of INR 500 million (ca. US\$ 7.7 million) to the Renewable Energy Development Fund; INR 200 million (ca. US\$ 3 million) for rooftop solar PV projects on government buildings and drinking water projects, and INR 500 million for the Disaster Resilient Power Distribution System.
- Development of a solar cart to provide electricity during disasters (see also Table 14) .
- A target of 3 GW of renewable energy generation capacity by 2022.

Karnataka State

- Increase of the target for solar-based electricity from 2000 MW to 6000 MW (Karnataka Solar Policy)
- Introduction of a VAT exemption for solar panels and solar inverters
- Introduction of a single window clearance mechanism for renewable energy projects (Karnataka Renewable Energy Policy, Draft)

Source: (Climate Parliament 2014a, 2014b, 2015, 2016a) (2016b)

Sustainability

216. Parliamentary elections see on average a 50% change in MPs. This was also true for the last elections in 2014, which amongst others saw the convener of the Climate Parliament Network lose his parliamentary seat. The leadership of the network was taken over by other active members and new members were recruited amongst the new MPs. The size and vibrancy of the network has sustained the network into the new legislature period.

217. The MPs (and other interviewees) were critical about building staff capacity within Parliament to take over the Climate Parliament's role in the future. This was considered neither realistic nor opportune. Staff capacity within Parliament is limited. MPs have an administrative assistant and some MPs make use of trainees to do basic research.⁹⁰ There is currently no intent to expand staff capacity. Moreover, many parliamentary committees are bogged down by politics and complicated – some said 'archaic' – procedural arrangements. These committees do not present the same level of opportunity for informal and cross-party discourse as the Climate Parliament events do.

218. The Climate Parliament Secretariat is currently not working on a replacement model for its current donor-funded implementation model. The Climate Parliament sees itself as additional even if staff capacity is built within Parliament. This additionality lies in (i) its international convening power; and (ii) its advocacy role.

Appreciation and the future of the Climate Parliament

219. The Climate Parliament is highly appreciated by the MPs (i) as a platform for discourse between MPs of different political affiliation, as well as with (national and international) sector specialists; (ii) for the practical support provided by the Secretariat in preparing parliamentary sessions; and (iii) the exposure to global developments in renewable energy through the international parliamentary hearings. The Climate Parliament is seen as a platform where informal consensus can be reached about a course of action, which can then be taken up in the formal parliamentary system. The MPs see a continued role in the future for the Climate Parliament in the same way it is currently playing. Some interviewees argued for widening the Climate Parliament Network's remit to include for example biodiversity, energy access, public transportation or climate change adaptation. Other stakeholders also considered the Climate Parliament a valuable force in the Indian political discourse and lauded its political neutrality and inclusiveness.

⁹⁰ These trainees are offered for one-year terms by the Parliamentary Research Support Group. New organizations are also emerging which provide legislative assistants (such as the Swantini Initiative named SPARC Associates - <http://www.sparc.swaniti.com/sparc-associate/>)

Globe International

220. Many of the Climate Parliament Network members are also part of the legislator's network Globe International. Globe International has adopted a broader agenda than the Climate Parliament, namely environmental protection and climate change. The Globe network is supported by a single individual, the Globe India Country Director.

C.4. Regional Electricity Trade

221. When asked for, the MPs expressed support for cross-border electricity trade and the development of a global green grid. Electricity trade with Nepal and Bhutan (which produce a surplus of hydropower) is to balance India's intermittent solar power generated electricity and contribute to India's energy security. Further regional trade and a global green grid were welcomed as an opportunity to export electricity, interconnection know-how and construction services. The global green grid was not seen as something which would happen anytime soon, but which merits support nonetheless. One MP stressed that going global and local should go hand in hand and thus stressed the need for developing local green grids as well (which is also advocated by the Climate Parliament, but on which it has taken little action in India).

222. Other interviewees noted that power trade is currently and will likely in the near future remain limited to Bhutan, Nepal and Bangladesh (with the latter having natural gas reserves). This electricity trade is governed by bilateral agreements. Trade with neighboring Pakistan and China (both large-scale electricity producers and consumers) is hampered by tense geopolitical relations and a lack of interconnections. The continued political feud between India and Pakistan also hampers the functioning of the South Asian Association for Regional Cooperation (SAARC) and thus prevents it from playing a coordination role in the energy sector. This is deemed an important impediment as increased regional electricity trade is more a political than a technical challenge. Some interviewees noted that energy independence is politically important for India (and that domestic renewable energy based electricity generation can provide this independence).

C.5. Cross-fertilization between SDC and the Climate Parliament

SDC's GPCCE India program – a brief overview

223. SDC invests roughly CHF 4.5 million annually in climate change mitigation programs. The thematic foci are on:

- energy efficiency for small-scale industries (including replacing fossil fuels with renewable energy sources);
- energy efficiency and low carbon strategies for the built environment;
- promoting small-scale renewable energy power plants in rural areas (as part of the rural electrification);
- technology and market development of biomass-based gasifiers;
- renewable energy resource mapping, analysis and monitoring (implemented by Prayas Energy Group)
- policy research on distributed renewable energy generation models (implemented by Shakti Energy Foundation).

The last two analytical program components were identified jointly with the National Institute for Transforming India (NITI Aayog) and the Ministry of New and Renewable Energy.

224. SDC's GPCCE India invests roughly CHF 3 million annually in climate change adaptation programs, focused mainly on water security, food security and disaster risk management. The adaptation program is oriented towards mountain and semi-dry areas of India. Thematic foci are on:

- development of state action plans on climate change adaptation;
- development of risk transfer systems (including community-based insurance schemes);
- awareness raising amongst the state legislatures and through a media campaign amongst the general public;
- training of media on climate change risks and adaptation possibilities;
- facilitating the exchange of know-how and experiences between states.

Cooperation between SDC and the Climate Parliament

225. SDC and the Climate Parliament Secretariat in India maintain cordial relations. There are no regular meetings. Instead, SDC and the Climate Parliament staff meet at events. Dr. Shirish Sinha, Deputy Head of the Swiss Cooperation Office, is always invited to the Climate Parliament's network events and occasionally invited to participate in workshops as technical expert. At times, the Climate Parliament makes specific inquiries into SDC projects. Shirish does not receive feedback on follow-up actions taken by the Climate Parliament on the network events, workshops or the information which Shirish shares. The SDC-funded (policy) research reports by the Prayas Energy Group and the Shakti Foundation are in the public domain and can be freely used by the Climate Parliament. SDC does not know whether the Climate Parliament has used these reports.

226. There have been some practical discussions on how to feed SDC project experiences (with co-generation plants in Karnataka and biomass in Odisha) into the Climate Parliament's work. There was also one-time support to SDC by the Climate Parliament to identify a site for a biomass power plant in Odisha. SDC sees possibilities for the Climate Parliament to insert into the political discourse a SDC-funded report currently being prepared on distributed renewable energy models⁹¹.

C.6. Concluding observations

227. **Real-world impact and attribution.** The envisaged impact of the Climate Parliament's work is to '*accelerate the development of the renewable energy sector in the target countries*' (Climate Parliament 2014c). This impact has occurred: the share of renewable energy in installed electricity generation capacity has doubled between 2009 and 2017. But to what extent can this change be attributed to the Climate Parliament Network? This question cannot be answered precisely and entails a judgment call. There have been important external drivers, including (i) international pressure to address climate change (with India being the third largest emitter of greenhouse gas emissions), (ii) executive branch leadership by the Singh government (with the solar mission) and, in full throttle, by the Modi government (with the 175 GW of renewable energy power target); (iii) a public opinion which accepted the risk of climate change and called on the political leaders for action; and (iv) a sharp drop in the costs of solar and wind generated electricity in the last two years (due to rapid technological developments, realization of large-scale solar and wind power plants, and the application of reverse auctions to solicit the lowest possible prices). The rise in renewables also rests on 25-years of power sector reform and favorable fiscal and tariff-setting regimes. None of the results of the Climate Parliament Network are transformational in nature or can be solely attributed to the Climate Parliament Network's work. My best judgment therefore is that the Climate Parliament (Network) has not led the charge in the development of the renewable energy sector, but helped grease the wheels of change, which is in and by itself important.

228. **Theory of Change.** The Climate Parliament has reached and influenced a good number of parliamentarians in India, helping them see (i) the real and present danger of climate change; (ii) the opportunity for political action; and (iii) the potential of renewable energy in the country. The Climate Parliament has empowered them through direct parliamentary support and the 'Network Effect' from participation in international parliamentary hearings. The Climate Parliament Network includes politically influential figures, who hold good relations with and actively lobby the executive branch. The network is strengthened by a favorable public opinion about climate change mitigation and adaptation action. Despite the fact that these critical elements in the Climate Parliament's Theory of Change apply in India, the Climate Parliament has only to a limited extent been able to initiate, advocate, facilitate and draft favorable legislation. The reason is probably three-fold. First, the legislative mandate (in terms of preparing new laws) lies for an important part with the executive branch; (ii) India has been reforming the energy sector since 1991, which meant that big pieces of the legislative puzzle

⁹¹ The UNDP noted that 25,000 villages in India will never be connected to the national grid. In Odisha, 42% of the population does not have access to electricity. According to the Odisha Renewable Energy Development Agency, Odisha has enough on-grid electricity generation capacity (based on 60/40 hydro and thermal power generation). What is needed are distributed electricity generation models.

were already in place before the Climate Parliament's entry; and (iii) the legislators have been overtaken by the executive branch in terms of ambition. Moreover, once legislation or policies have been accepted by the government, the Parliament is weak in ensuring their enforcement as illustrated by the budget allocations to the Ministry of New and Renewable Energy which lack behind previous agreements.

229. **Focus, efficiency and team composition.** Due to financial and staff constraints, the Climate Parliament in India (and elsewhere) focuses on the promotion of renewable energy based electricity generation and through this contributes to climate change mitigation efforts. In regard to India, the question is whether the Climate Parliament is not too rigid here. For multiple reasons. First, the Modi government has fully embraced renewable energy and is well under way to meet its ambitious targets. Second, serious problems remain in the distribution sector with many distribution companies still under significant financial stress due to an unfavorable tariff regime and bad governance. Third (and partly related to the previous point), 200 million Indians remain without access to electricity, part of which can only be electrified through distributed power generation models. Energy access is an impact target of the Climate Parliament (Climate Parliament 2014c) and distributed energy provision a strategic priority for SDC in its cooperation with the Climate Parliament. Fourth, the Climate Parliament Network encompasses some politically astute, well-educated and experienced professionals, who are capable to pursue other and more complicated challenges in the power sector. For these reasons, it would make sense for the Climate Parliament to widen its scope. The subsequent question is to what extent the Climate Parliament Secretariat is well-placed to do so. The team does not include a true and long-time energy sector specialist, which it probably needs if it is to identify and address more complicated challenges as the distribution sector and the successful implementation of distributed energy generation models. The additional value-added of recruiting an Indian energy sector specialist on the team would be that it would provide some leading MPs with an immediate sounding board to discuss intricacies of power sector reforms and models – something, which a few highly-qualified MPs could well benefit from and have a greater need for than support in preparing for parliamentary sessions or generic advocacy material.

230. **Focus II.** The Climate Parliament has commissioned an Indian consultancy firm to develop the Local Area Development Toolkit. This Toolkit offers an overview of possible renewable energy service technologies, which can be applied in the constituencies of MPs. The Toolkit has been developed in direct response to demands of MPs. This is good. The Toolkit nevertheless raises a question and a challenge for the Climate Parliament Secretariat. The question is whether the Climate Parliament should spend its scarce resources on creating such communication material. At face value, I would argue that there are other institutions – nationally (e.g. TERI) and internationally (e.g. IRENA) – better positioned and equipped to develop such material. Better to leave this task to them and use the Climate Parliament monies to perform its comparatively strong convening power role. The challenge for the Climate Parliament is to not be dragged into implementation issues at the constituency level. The Climate Parliament is not an implementation agency and should prevent being pushed into this role.

231. **Sustainability.** This evaluation criterion presents a bit of a conundrum. Literature on parliamentary action advocates building institutional and staff capacity within parliament, which could imply strengthening the functioning and support of for example the Standing Committee on Energy. In the case of India, the MPs are not in favor of this. They argue that the strength of the Climate Parliament lies in it being an external network, which allows free and informal exchange between MPs of different political affiliation. The procedurally-driven parliamentary committees could and would not provide the same platform. This begs the question how to ensure the sustainability of the Climate Parliament, assuming that the Climate Parliament cannot be funded by international donors in perpetuity. There is no clear answer to this question also because civil society is not yet strong enough to take over the role of the Climate Parliament (although it may in the future).

232. **Central versus State.** The Climate Parliament can be as effective and efficient at the state level as at the central level. This statement holds at least true in India which is a federal state with significant power devolved to the states and where the energy sector is a '*concurrent subject*' (with the central and state government both exercising responsibility for the sector).

233. **Grid interconnection.** Increased regional or intercontinental electricity trade is supported in India in principle. In practice, it is – over and above the mutual beneficial trade with friendly countries Bangladesh, Bhutan and Nepal – considered politically sensitive at best and a remote endeavor at worst. A precondition for takeoff is probably improved regional cooperation through for example the South Asian Association for Regional Cooperation, which can build mutual trust and reduce the current political imperative in India to make the country energy independent. On the other hand, as long as India can serve as exporter of solar energy, it will probably be on board of any initiative to increase regional and intercontinental electricity trade.

234. **Cross-fertilization.** The Climate Parliament and SDC India partly have different foci. Having said that, the original intent of the global cooperation between the Climate Parliament and SDC has been to cross-fertilize the two programs and promote distributed renewable energy models (for which there is a need in for example Odisha State – one of the Climate Parliament's 'states of operation'). Moreover, there is a strong case for the Climate Parliament to diversify and address other (more complex) challenges facing the electricity sector in India. From this perspective, there would be points-of-entry in the work of the Climate Parliament and SDC for mutual cooperation. What has probably lacked is commitment, a structural dialogue, staff capacity and (possibly) flexibility. In summary, there is ad-hoc, opportunity-based cooperation, but no concerted effort is made to seek a structured cross-fertilization between SDC's and the Climate Parliament's work.

C.7. Facts and figures

235. This chapter includes facts and figures on:

- country-specific Climate Parliament products
- the Climate Parliament Network and participants to International hearings
- Selected data on the Indian Parliament and Climate Parliament Network.

Table 14. India-specific Climate Parliament products⁹²

Policy option papers			
#	Name	Description of content or change	Source
	Re-energizing India (2014)	Policy, Regulatory and Financial Initiatives to augment renewable energy deployment in India	Climate Parliament: Annual Report 2014
	Expert reports (2015)	Describes how to increase renewables in the states Karnataka, Odisha, Maharashtra	Climate Parliament: Annual Report 2015
	Climate change and energy policies of UK and India(2015)	Overview of climate change and energy policies of UK and India	Climate Parliament: Annual Report 2015
	Potential opportunities of UK and India on low carbon development(2016)	Overview energy policies and decentralised energy markets in UK and India	Climate Parliament: Annual Report 2016
	Outcomes of COP 21(2016)	Key features of Paris Agreement, implications for India, Barriers and Opportunities	Climate Parliament: Annual Report 2015
	Clean Energy Access Mission Paper	Provides the details of a proposed Clean Energy Access Mission.	
	Case study based policy brief for case studies on renewable energy technologies in association with REEEP	Case Studies for decentralised renewable energy technologies for constituency level	Climate Parliament: Annual Report 2015
		<i>Target</i>	<i>1 per country</i>
Knowledge products			
#	Name	Description of content or change	Source
	Guidelines for a model renewable energy policy in Indian States(2014)		Climate Parliament
	Promoting low carbon growth through Renewables(2015)	Description of renewable energy technologies and case studies for a low carbon economic growth	Climate Parliament: Annual Report 2015
	Local Area Development: A low carbon Approach(2016)	A primer for legislators on local area development through low carbon approach	Climate Parliament: Annual Report 2016
	Renewable energy toolkit for local area development by Legislators(2017)	A comprehensive overview for legislators to implement renewable energy technologies.	Climate Parliament: Annual Report 2016
		<i>Target</i>	<i>1 per country</i>
Other products			
#	Name	Description of content or change	Source
	Soura Ratha	A solar cart (or solar micro-truck) delivering solar power (developed in collaboration with Practical Action, the Odisha Renewable Energy Agency and Odisha State Disaster Management Agency)	Climate Parliament: Annual Report 2016

⁹² The Climate Parliament produces – in the course of its advocacy work – a multitude of policy briefs, ministerial letters and parliamentarian questions over and above the products listed in this table..

Table 15. The Indian Climate Parliament Network

#	Name	m/f	party	Parliamentary term (#)
1	Rajeev Gowda	M	INC	1-RS
2	Hon'ble Minister - Rajiv Pratap Rudy	M	BJP	3-LS/2-RS
3	Dr Sanjay Jaiswal	M	BJP	2-LS
4	Ajay Sancheti	M	BJP	1-RS
5	Vandana Chavan	F	NCP	1-RS
6	Prahlad Joshi	M	BJP	3-LS
7	Nagendra Pradhan	M	BJD	1-LS
8	Vincent Pala	M	INC	2-LS
9	Rajani Patil	F	INC	1-RS/1-LS
10	P D Rai	M	Sikkim Democratic Front	2-LS
11	Shiv Kumar Udasi	M	BJP	2-LS
12	Ali Anwar Ansari	M	Janata Dal (United)	2-RS
13	P. Govardhan Reddy	M	INC	1-RS
16	R. Dhruvanarayana	M	INC	2-LS
18	Kakoli Gosh Dastidar	F	All India Trinamool Congress	2-LS
19	Prasanna Kumar Patsani	M	BJD	5-LS
21	Rajeev Shukla	M	INC	3-RS
22	Kamlesh Paswan	M	BJP	2-LS
23	Anurag Singh Thakkur	M	BJP	3-LS
24	Ranjib Biswal	M	INC	1-RS/2-LS
25	Vivek Gupta	M	All India Trinamool Congress	1-RS
26	Dr Tapas Kumar Mandal	M	All India Trinamool Congress	1-LS
27	Gopal Shetty	M	BJP	1-LS
28	Kapil Patil	M	BJP	1-LS
29	Bhatruhari Mahtab	M	BJD	5-LS
30	Om Birla	M	BJP	1-LS
31	Sanjay Ramchandra Patil	M	BJP	1-LS
32	Sunil Kumar Mondal	M	All India Trinamool Congress	1-LS
33	Jitender Chaudhary	M	Communist Party of India (Marxist)	1-LS
34	Ram Mohan Naidu	M	Telugu Desam Party	1-LS
35	Jaydev Gala	M	Telugu Desam Party	1-LS
36	Parvesh Verma	M	BJP	1-LS
38	Ananga Singh Deo	M	BJD	1-RS
39	Dr Prabhas Ku Singh	M	BJD	1-LS
40	Arka Kehsari Deo	M	BJD	1-LS
41	Ananda Bhaskar Rapolu	M	INC	1-RS
42	Neeraj Shekhar	M	Samajwadi Party	1-RS/2-LS
43	Midhun Reddy	M	YSR CONGRESS PARTY	1-LS
44	Prasanna Acharya	M	BJD	1-RS/2-LS
45	Kalikesh Singh Deo	M	BJD	2-LS
46	Gaurav Gogoi	M	INC	1-LS
47	Supriya Sule	F	Nationalist Congress Party	2-LS/1-RS
48	Conrad Sangma	M	National Peoples Party	1-LS
49	Ms Riti Pathak	F	BJP	1-LS

Table 16. Indian MPs regularly participating in CP international hearings

#	Name	m/f	party	Parliamentary term (#)
1	Dr Sanjay Jaiswal	M	BJP	2-LS
2	Ms Vandana Chavan	F	NCP	1-RS
3	Mr Kalikesh Singh Deo	M	BJD	2-LS
4	Mr Vincent Pala	M	INC	2-LS
5	Ms Rajani Patil	F	INC	1-LS/1-RS
6	Mr Conrad Sangma	M	National Peoples Party	1-LS
7	Mr Midhun Reddy	M	YSR CONGRESS PARTY	1-LS
8	Mr Ananda Bhaskar	M	INC	1-RS
9	Mr Kamlesh Paswan	M	BJP	2-LS
10	Mr Prahlad Joshi	M	BJP	3-LS
11	Ms Riti Pathak	F	BJP	1-LS
12	Ms Kakoli Ghosh	F	All India Trinamool Congress	2-LS
13	Mr Neeraj Shekhar	M	Samajwadi Party	2-LS/1-RS
14	Mr Arka Kesri Deo	M	BJD	1-LS
15	Mr Nagendra Pradhan	M	BJD	1-LS

Table 17. Selected data on the Indian Climate Parliament Network.

Number of members in the Climate Parliament's Network	#	49
	Target	10
Number of female members in the Climate Parliament's Network	#	5
Number of Steering Committee members in the Climate Parliament's Network	#	15
	Target	5
Number of female Steering Committee members	#	5
	Target	2
Lower house (Lok Sabha)		
Climate Parliament Network Members	#	36
Total number of Parliamentarians	#	545
<i>Members of the active parliamentarians as percentage of total parliamentarians</i>	%	7%
	Target	5%
Upper house (Rajya Sabha)		
Climate Parliament Network Members	#	13
Total number of Parliamentarians	#	250
<i>Members of the active parliamentarians as percentage of total parliamentarians</i>	%	5%
The number of meetings of the in-country CP network	Ave. #/year	3 at the centre, 2 in the states
The number of in-country parliamentary workshops on climate change and renewable energy organized by CP	#	3-5
	Target	2

D. Case study: Morocco

236. This annex presents the key findings from our research on the Climate Parliament's work in Morocco. The findings stem from a document review, quantitative data collection and key informant interviews in Rabat and Casablanca. The following topics are covered:

- the (renewable) energy sector;
- the role of the national parliament;
- the Climate Parliament;
- cross-border electricity connections; and
- the cross-fertilization between SDC's country operations and the Climate Parliament's work.

The annex concludes with summative statements on some of the key evaluation criteria and a series of figures and tables on the Moroccan (renewable) energy sector and the Climate Parliament's work in-country. All findings stem from multiple sources, unless explicitly stated otherwise.

D.1. The Energy Sector

Morocco's embrace of renewable energy

237. The national government committed itself to renewable energy in 2009. A new National Energy Strategy proclaimed that – by 2020 – 42% of total installed electricity generation capacity would come from renewable energy sources. The Strategy targeted a total of 6 GW of installed electricity generation capacity. Solar, wind and hydro were each to contribute 2 GW, representing an investment sum of US\$ 13 billion (World Futures Council 2015). The new, renewables-based electricity generation was to be procured from private power producers. Table 18 shows that Morocco is more-or-less on-target when considering both renewable energy projects in operation or under development. An updated National Energy Strategy – released in December 2015 prior to the COP 21 in Paris – raised the overall target for installed electricity generation capacity from renewable resources to 52% by 2030.

238. There were both push and pull factors behind the government's energy target. The strongest push factor came from Morocco's oil dependency.⁹³ The proverbial straw that broke the camel's back was the record oil prices in 2008 which pushed the fuel imports as percentage of GDP to above 10%. The government was however quick to realize the potential of renewable energy generation. Morocco is richly endowed with solar, wind and hydro power resources.⁹⁴ Moreover, early adoption coupled with a partial in-country sourcing of manufacturing products and engineering services would boost the economy⁹⁵. Finally, Morocco needed to increase its energy generation capacity to meet growing demand from a sustained industrial expansion (including a fast growing automobile industry).

⁹³ In 2013, 96% of primary energy demand was met through imported fuels. Petroleum imports accounted for 20% of total imports and 50% of the current trade deficit. Energy subsidies totaled 3.6% of GDP. Seventy percent of electricity demand growth since 2002 had been covered with fossil fuels and 18% through electricity imports from Spain. (World Bank 2015)

⁹⁴ The World Futures Council estimates the potential electricity generation from solar and wind at 25 GW (World Futures Council 2015).

⁹⁵ The Moroccan government created a solar cluster for Moroccan businesses. It also required insourcing in the construction of new renewable energy power plants. Example given: 35% of the capital expenditures for the solar parks Noor O 2 and 3 had to be sourced from within Morocco.

Table 18. Overview of wind, solar and hydropower projects in operation or under development in Morocco⁹⁶

Windpower				Hydropower				Solarpower			
Name	MW	Province	Status	Name	MW	Province	Status	Name	MW	Province	Status
Akhefnir 1	100	Tan-Tan	Operational	Afourer	94	Azilal	Operational	Noor Argana Boumalen	n.d	Boumalen	Under development
Akhefnir 2	100	Tantan	Under construction	Ahmed El Hansali	92	Kasbat Tadla	Operational	Noor Argana Errahmana	n.d	Errahamna	Under development
Boujdour	100	Boujdour	Under development	Al Massira	128	Settat	Operational	Noor Argana Tensift	n.d	Marrakesh	Under development
Essaouira	60	Essaouira	Operational	Allal El Fassi	240	Sefrou	Operational	Noor Atlas Ain Beni Mathar	n.d	Ain Beni Metthar	Under development
Fouma Alouad	50	Laayoune	Operational	Al wahda	240	Ouezzane	Operational	Noor Atlas Bouanane	n.d	Bouanane	Under development
Jbel Alhadid	200	Essaouira	Under development	Bine el Ouidane	135	Beni Mellal	Operational	Noor Atlas Boudnib	n.d	Boudnib	Under development
Khalladi	120	Tanger	Under construction	Boutferda	12	Beni Mellal	Under development	Noor Atlas Bouizakarne	n.d	Bouizakarne	Under development
Koudia Baida	300	Tetouan	Under development	Tillouguite I	12	Azilal	Under development	Noor Atlas Enjil	n.d	Enjil	Under development
Lafarge	32	Tetouan	Operational	Tillouguite II	12	Azilal	Under development	Noor Atlas Outat El Haj	n.d	Outat El Haj	Under development
Midelt	150	Midelt	Under development	El Menzel	125	Sefrou	Under development	Noor Atlas Tantan	n.d	Tantan	Under development
Tanger I	140	Tanger	Operational	Hassan I	67.2	Demnate	Operational	Noor Atlas Tata	n.d	Tata	Under development
Tanger II	100	Tanger	Under development	Hassan II	11.7	Midelt	Operational	Noor Tafilalt - Erfut	25	Errachedia	Under construction
Ynna Bio Power	20	Essaouira	Operational	Idriss I	40	Taounate	Operational	Noor Tafilalt - Missouri	25	Missour	Under construction
Tarfaya	301	Tarfaya	Operational	Mdez El Menzel	170	Khmessiat	Under development	Noor Tafilalt - Zagora	25	Zagora	Under construction
Taza	150	Taza	Under development	Mohammed V	23	Zaio	Operational	NoorO I (CSP)	160	Ouarzazate	Under construction
Eolien Essaouira	50	Essaouira	Under development	Ouljet Essoultane	19	Khemissat	Operational	NoorO II (CSP)	200	Ouarzazate	Under construction
Tiskrad	300	Laayoune	Under development	Step Abdelmoumen	350	Taroudant	Under development	NoorO III (CSP)	150	Ouarzazate	Under construction
A.Torres	50	Tetouan	Operational	Step Afourer	464	Afourer	Operational	NoorO IV	70	Ouarzazate	Under development
	2,323			Tanafnit-El Borj	40	Khenifra	Operational	NoorB	20	Boujdour	Under development
				Mansour Dahbi	10	Ouarzazate	Operational	NoorL	80	Laayoune	Under development
				Daourat	17	Settat	Operational	NoorM (SCP and PV)	500	Midelt	Under development
				Lalla TAKERKOUST	12	Marrakesh	Operational	NoorT (SCP and PV)	500	Tata	Under development
				El Kansara	14	Sidi Slimane	Operational		1,755		
				Imfout	32	El Jadida	Operational				
				Moulay Youssef	24	Fes	Operational				
				Oued El Makhazine	36	Kenitra	Operational				
				Imezedilfane	63	Khenifra	Under development				
				Taskdert	38	Khenifra	Under development				
				Tajemout	28	Fes	Under development				
				Mechra Sfa	30	Nador	Under development				
				Tarmast	14	Azilal	Under development				
				Asfalou	20	Taounate	Operational				
				Sidi Said Maachou	20.8	El Jadida	Operational				
					2,634						

⁹⁶ List compiled by El Mostafa Jamea – the national consultant for this country case study.

New policy and institutional framework

239. The 2009 National Energy Strategy triggered a series of new laws which changed the institutional framework of the energy sector. Figure 15 presents the key legislative changes on a time-line; Table 19 briefly describes the individual legislative initiatives. The new institutional framework is said to '*function*' and '*allow independent power producers to develop renewable energy projects*'. Noteworthy is how politically interwoven the (newly created) institutions are. For example, the Board of ONEE – the country's vertically integrated energy utility – is chaired by the Prime-Minister; the Board of MASEN – the Moroccan Agency for Sustainable Energy – is chaired by ONEE's CEO; both Boards count key ministers as members.

Fossil fuels – down but not out

240. Whilst setting the course for a greener economy, the National Energy Strategy and subsequent government decisions still included coal-fired power plants to meet the growing energy demand and ensure a sufficient reserve margin. In 2016, the government also announced an ambitious strategy for liquefied natural gas (LNG), including US\$ 4.6 billion of investments in new port infrastructure and new combined-cycle gas power plants.⁹⁷ The current coal-based and the expanding gas-based power generation capacity directly serve the electricity needs of Morocco, as well as balance the volatile nature of renewable energy sources. Despite continued support for conventional energy, the Moroccan government has reduced the subsidies on gasoline, diesel and fuel used for electricity generation between 2011 and 2014 (World Futures Council 2015). In 2014, the government decided to cease subsidies to most petroleum products and was intent to remove subsidies for fuel used by ONEE for electricity generation by 2018 (World Bank 2015)⁹⁸.

The energy sector in figures

241. Figure 16 on the next page captures the energy mix, greenhouse gas emissions and fuel imports as share of GDP over the last 10 years. The installed electricity generation capacity from fossil fuels and renewable energy sources have kept pace with each other, leaving the share of renewable energy generation capacity relative constant at around 33% of total installed capacity. The share of renewable energy in actual electricity generation has varied over the last 10 years, strongly influenced by the coming online of new generation facilities. The trend is nonetheless upwards with 15% of electricity now stemming from renewables (compared to 9% in 2006). Expectations are that the share of electricity generation from renewables will increase in the next years when current projects under development by MASEN will become operational.

242. The increased use of renewable energy for electricity generation shows in the downward trend of the greenhouse gas emissions factor. According to MASEN, Morocco will avoid at least 9.3 million tons of CO emissions by 2020 by switching to renewable energy sources for its electricity generation. The fall in fuel imports is (for now) partly due to the increase in renewable-based electricity generation and mostly due to falling oil prices. Renewables-based electricity generation has reached cost-parity with fossil fuel-based electricity generation according to MASEN. Ballpark figures for electricity generation costs are US¢ 8 for gas, US¢ 5-6 for coal, US¢ 14 for oil, US¢ 4-5 solar PV and US¢ 3-6 for wind⁹⁹.

Energy efficiency

243. The 2009 National Energy Strategy also set out to reduce energy demand by 12% in 2020 and 20% in 2030. In 2013, ADEREE (the National Agency for Renewable Energy and Energy Efficiency in Morocco) conducted a baseline study on energy efficiency and market consultations with 5 key sectors (transport, building, agriculture, industry and public lighting). Based on this, ADEREE developed a list of 125 energy efficiency measures, 42% of which require legislative decisions (for example in setting mandatory energy audits or thermal regulations for certain industries).¹⁰⁰

⁹⁷ <http://www.leconomiste.com/article/977305-terminal-energetiqueca-s-accelere-sur-jorf>

⁹⁸ Fuel subsidies to ONEE totaled US\$ 624 million in 2013 (World Bank 2015).

⁹⁹ Latest bid for a 850 MW windfarm (5 locations) was US¢ 3.4/KWh. Siemens and Green Enel Power recently put in a winning bid US¢ 3/KWh.

¹⁰⁰ Source: AMEE

Figure 15. Changes in the legal and institutional framework triggered by the 2009 National Energy Strategy

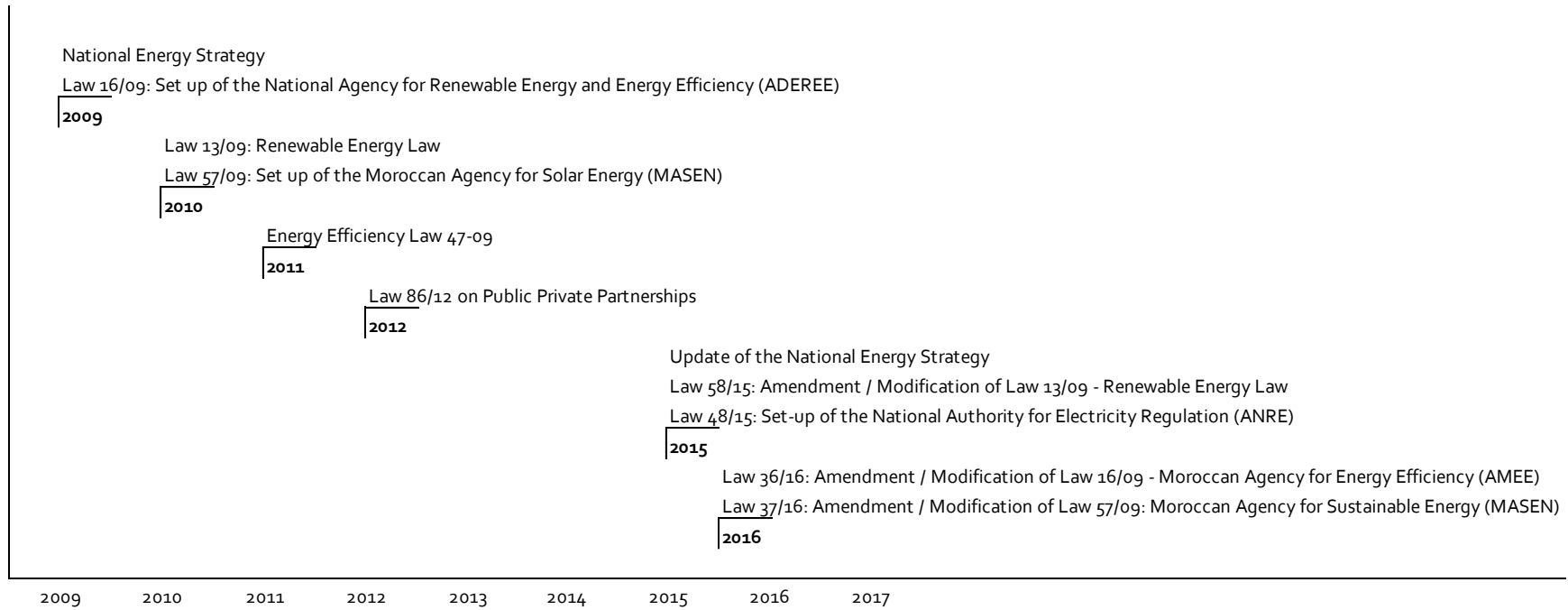
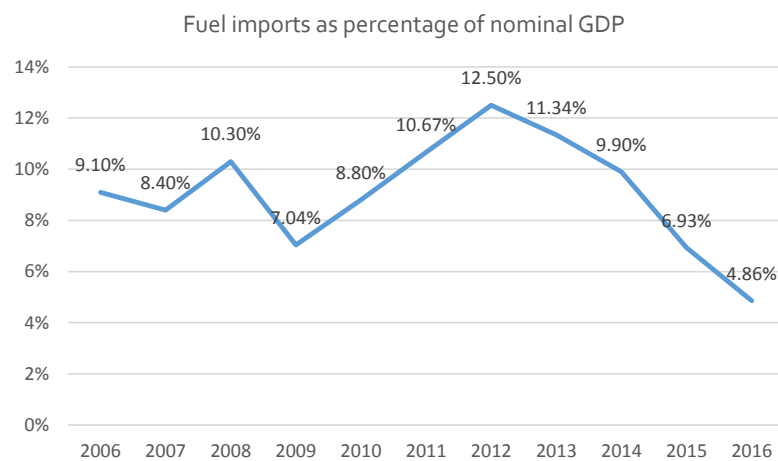
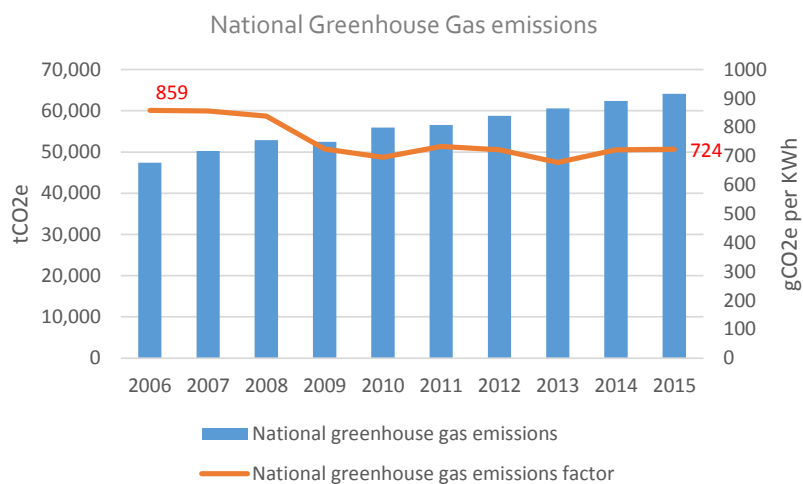
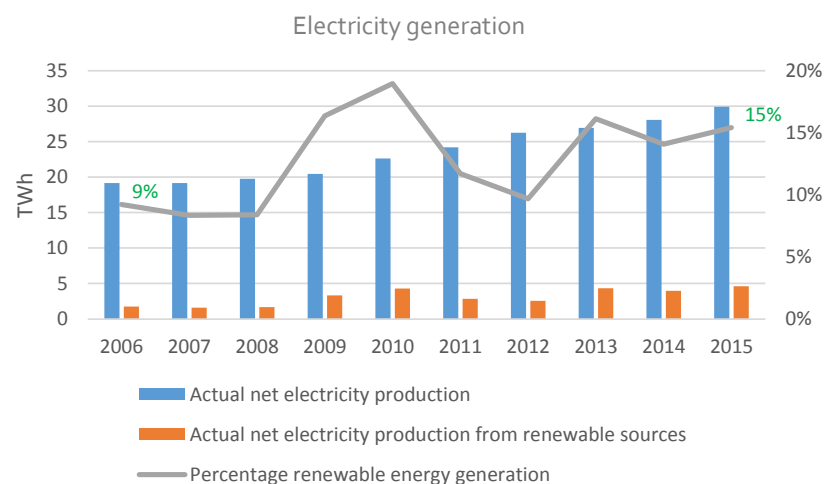
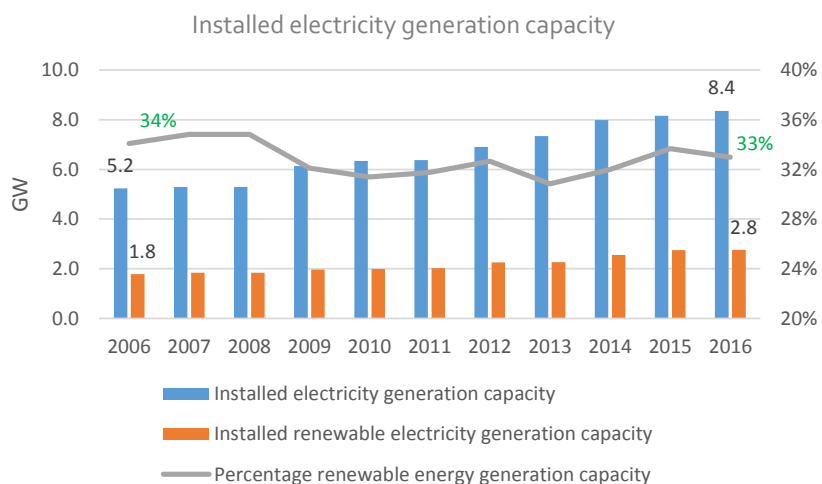


Table 19. Brief descriptions of the key laws informing the energy transition in Morocco

Laws	Description
Law 16/09: Set up of the National Agency for Renewable Energy and Energy Efficiency (ADEREE) - modified by Law 36/16 Moroccan Agency for Energy Efficiency (AMEE)	The mandate of ADEREE was to advise the Government on renewable energy and energy efficiency plans and programs, as well as to design and implement development programs that are related to renewable energies and energy efficiency. On September 2016, the Law 36-16 changed ADEREE to AMEE (Moroccan Agency for Energy Efficiency). AMEE's mission focuses on the development of a national energy efficiency plan, as well as sector and regional energy efficiency plans.
Renewable Energy Law 13/09 - modified by Law 58/15	The Law provides a general framework for renewable energy development and promotes power generation from renewable resources by public or private entities. For renewable energy projects with capacities between 2 and 50 MW, the promoter should get an authorization from the competent authorities. For renewable energy projects with capacities below 2 MW, the promoter should only notify the competent authorities on the development of the project. The Law authorizes private developers to enter into contracts with individual consumers or groups of consumers connected to the medium, high and very high voltage systems to supply them with electricity from renewable energy sources and lays out a Build-Own-Operate-mechanism. The Law sets a tenure of 20 years for wind energy, 25 years for solar energy and 30 years for hydropower projects. Renewable energy projects with a capacity above 50 MW are coordinated by MASEN (see Law 57/09 in the next table-row) and ONEE (the state-owned vertically integrated utility). The Law was modified by Law 58-15, which created an independent power regulator in Morocco and increased the hydropower capacities that are covered by the Renewable Energy Law from 12 MW to 30 MW. It also authorizes renewable energy promoters to get access to medium and low voltage transmission systems.
Law 57/09: Set up of the Moroccan Agency for Solar Energy (MASEN) - modified by Law 37/16	Law 57/09 establishes MASEN as a national body to implement and develop utility scale solar energy projects, to promote research, development and innovation related to the solar energy and to enable industrial integration. In December 2015, it was decided that MASEN takes the lead in coordinating the development of all renewable energy projects (i.e. wind, solar and hydropower projects). The acronym was changed from the Moroccan Agency for Solar Energy to the Moroccan Agency for Sustainable Energy. The extension of MASEN's mandate was put in the Law 37/16.
Energy Efficiency Law 47-09	This Law was adopted by the Government to increase energy efficiency and energy conservation through measures such as: using low consumption light bulbs mainly in residential and public streets lighting; thermal isolation mainly in industry and building; solar water heating systems mainly in the residential, public administration and building, as well as in the service sector.
Law 48/15: Set-up of National Authority for Electricity Regulation	Law 48/15 sets the rules and procedures for the regulation of the electricity sector and the creation of a National Authority for Electricity Regulation (ANRE). ANRE is to ensure that a free electricity market is guaranteed to operators.

Figure 16. Key statistics on Morocco's energy sector – energy mix, fuel imports and GHG emissions¹⁰¹



¹⁰¹ Sources:

Energy mix: ONEE, Annual Key Electricity Figures and Annual Activity Reports; Office de changes (2016)

Fuel imports: El Mostafa Jamea (own calculations based on national accounts)

GHG emissions: El Mostafa Jamea (own calculations information source):

<http://perspective.usherbrooke.ca/bilan/servlet/BMTendanceStatPays?codeTheme=10&codeStat=EN.ATM.CO2E.KT&codePays=MAR&optionsPeriodes=Aucune&codeTheme2=10&codeStat2=x&codePays2=MAR&optionsDetPeriodes=avecNumeros&langue=fr>

D.2. The Role of National Parliament

244. Morocco is a constitutional monarchy whereby the King holds significant political power, including the right to dissolve the Parliament and rule by decree or the power to appoint ministers and leading technocrats.¹⁰² Morocco adopted a new constitution in July 2011 (in the wake of the Arab Spring) which devolved power from the King to elected officials and regional councils. The head of government is now selected from the political party that wins the parliamentary elections. The new constitution also provides Parliament in principle greater ability to set policy; in practice the balance of power remains tilted towards the executive branch of government and the royal palace. Whilst the role of Parliament is growing, it remains a 'reactive force' with limited capacity to fulfill its legislative, oversight and representation roles.

245. This distribution of power also shows in the energy sector where the energy transition has been initiated by the royal palace and all subsequent 'initiatives follow a top-down approach where decision making processes and investment projects are managed by the national government or government institutions' (World Futures Council 2015). The headway made thus far in greening the economy is on account of the national government, not parliament. Despite this, there are MPs who are 'green in their discourse' and able to critically review law texts and make suggestions for change¹⁰³. Moreover, the head of the parliamentary delegation to COP 22 in Marrakesh pushed with the International Parliamentary Union for a biannual conference of parliamentarians on the implementation of the Paris Agreement¹⁰⁴.

D.3. Climate Parliament

Secretariat

246. In 2013 and 2014, the Climate Parliament had a Regional Director, Dr. Mostafa El-Aouazi, who was based in and focused on Morocco. In 2015 and 2016, the Climate Parliament worked through a Regional Director, Mr. Dhamir Mannai, who was based in Tunis and whose time was mostly taken up by the Parliamentary Action on Climate Change Program in West Africa – an EU-funded program jointly implemented by the Climate Parliament with UNDP.

247. Morocco is an important country for the Climate Parliament's Green Grid Alliance. However, Morocco was on board early in 2015. By that time, the Climate Parliament also found that (i) the table was set in Morocco for the energy transition; and (ii) the parliamentarians in its network were not very responsive to the Climate Parliament's initiatives: 'they were comfortable with what the Government was doing'. In 2016, the Climate Parliament therefore solely prepared the international parliamentary hearing for the COP 22 in Marrakesh which it organized around its envisaged Green Grid Alliance. In the process, the Climate Parliament dealt directly with all Moroccan government institutions involved in the renewable energy sector and provided limited to no support to parliamentarians, nor maintained the Climate Parliament Network in country.¹⁰⁵ There have thus been few parliamentary support activities in Morocco over the last two years.

Network

248. The Climate Parliament's Annual Reports for 2014 and 2015 state that there is a 'well-established core cross-party group of 18 MPs' in Morocco. This was not confirmed by the interviews. Neither of the two Regional Directors was able to maintain an active and homogenous grouping which worked together and was consistently supported by the Climate Parliament. The membership and leadership of the Climate Parliament Network was perceived as fluid, and the parliamentary support absent¹⁰⁶. Although this experience has left a clear scar, the parliamentarians still spoke positively

¹⁰² Source: <http://country.eiu.com/Morocco>

¹⁰³ An example given of a parliamentary amendment was the ability of the private sector companies with own electricity generation facilities to feed in a surplus of electricity into the medium voltage transmission network of ONEE (Law 58/15).

¹⁰⁴ Source: Climate Parliament

¹⁰⁵ Source: Climate Parliament

¹⁰⁶ This contradicts the Climate Parliament's reporting. The annual reports refer to support on the section of state budget, advocacy for increased funding of renewable energy and the opening of the grid for (small-scale) IPP, strengthening parliamentary oversight of renewable energy projects and renewable energy generation capacity target achievement, and promoting green interconnections with Europe.

about the Climate Parliament in principle. For the parliamentarians, the benefit of engaging with the Climate Parliament lay in the international parliamentary hearings, which provide them a rich source of information and an international network.

Results

249. Table 20 lists the results of the Climate Parliament in Morocco. The list originates from the Climate Parliament.

Table 20. *Climate Parliament results in Morocco*¹⁰⁷

- Reduced VAT on solar panels and other imported renewable energy equipment from 20% to 13% (2013)
- Exoneration of import tariffs on solar PV equipment and renewable mini-grids components
- Cut existing fossil fuel subsidies to thermal power plants and redirected the savings to a scheme to support the poor to pay their electricity bills (2014)
- Amended the Environment Bill to expand the remit of the Economic and Social Council (a government advisory body) to cover the environment (2013)
- Two applied research projects in renewable energy, proposed by CP MPs, received funding from the Ministry of Energy
- Lobbying of Minister of Energy on resourcing of efforts of interconnection and inclusion of this as a priority agenda item for the 2016 COP 22 in Marrakesh.
- Inclusion of statutes on energy trading and infrastructure investments in bilateral accords between Morocco and other African countries

Source: Climate Parliament

The future role of the Climate Parliament

250. According to parliamentarians, any future engagement of the Climate Parliament in Morocco has to be based on a high quality cooperation between the MPs and the Climate Parliament, supported by an explicit and agreed upon Steering Group of MPs (which sets the agenda), and an in-country CP staff member who provides active parliamentary support.

D.4. Cross-border electricity trade

251. Morocco has met 18% of its growth in electricity demand since 2002 by importing electricity from Spain (World Bank 2015). Morocco is connected to Spain through two AC transmission lines with 700 MW capacity each; a third line of 700 MW capacity is planned. ONEE is the fourth largest operator on the Spanish power market. Morocco is also interconnected with Algeria through a 400 MW AC line. Electricity trade with neighboring countries is limited to balancing the grid and constrained by testy political relations and an ongoing geopolitical dispute over Western Sahara.

252. Morocco, including the Parliamentarians we spoke to, is keen to reverse the flow of electricity and become an exporter of renewable-based electricity. For that purpose, it has signed a Memorandum of Understanding with Germany, France and Spain to exploit the synergies between Morocco's renewable energy potential and the EU's energy transition. There is ongoing feasibility study on a 1000 MW interconnection between Morocco and Portugal. Morocco is also signatory to the African Renewable Energy Initiative which aims to 'add an additional 10 GW and 300 GW of renewable energy capacity to the African energy sector by 2020 and 2030'¹⁰⁸.

D.5. Cross-fertilization between SDC's and the Climate Parliament's work

253. The SCO in Morocco has a regional mandate, i.e. its covers both Morocco as well as its neighboring countries. Its work program has three pillars: (i) supporting democratic transitions and human rights in North-Africa, which includes a component on media diversification; (ii) promoting economic development which focusses on private sector development and climate change adaptation and mitigation (mostly integral water resource management and disaster risk reduction); and (iii) migration and protection.

¹⁰⁷ Source: (Climate Parliament 2014a, 2015, 2016, 2014b)

¹⁰⁸ <https://www.au.int/web/en/pressreleases/19462/cop21-launch-africa-renewable-energy-initiative>

254. In 2014 and 2015, there were regular meetings between the SCO and the two consecutive regional directors of the Climate Parliament, Dr. Mostafa El-Aouazi and Mr. Dhamir Mannai. These meetings were cordial and entailed the exchange of information. The SCO liked the idea of the Climate Parliament; they were *'not aware that they could bring issues up to the Climate Parliament'* and pursue a joint agenda. The SCO has not had contact with the Climate Parliament in 2016.

D.6. Concluding observations

255. **Real-world impact and the Theory of Change.** Parliament plays a subordinate role in Morocco's political economy. Most parliamentarians have limited experience in performing their legislative, oversight and representation roles. They also have no staff support. The Climate Parliament engaged with the Moroccan Parliament relatively briefly, with most efforts concentrated in the years 2013 and 2014. Even in these years, support to parliamentarians was sparse and delivered inconsistently. Moreover, the national government had in the previous years put in place a comprehensive legal and policy framework for the promotion of renewable energy. The Climate Parliament has therefore been unable to contribute substantially to the promotion of renewable energy in Morocco and its results are mostly confined to changes in the tax and fiscal treatment of renewable and conventional energy sources. All in all, Moroccan parliamentarians probably required more intensive support (individually and through their respective political parties), over a longer time-horizon and on a well-chosen set of topics where they could make a difference for the Theory of Change to hold up and the Climate Parliament to be effective.

256. **Cross-border electricity trade.** Morocco actively imports electricity from Spain and is keen to become an exporter of green energy to Europa (for which it signed a Memorandum of Understanding with Spain, France and Germany at the COP 22 in Marrakesh). Electricity interconnectivity and trade with neighboring African countries is hampered first-and-foremost by testy political relations and a geopolitical dispute over Western Sahara.

257. **Cross-fertilization.** In the time that the Climate Parliament was active in Morocco, it maintained good relations with the SCO. Neither the Climate Parliament, nor the SCO actively pursued cooperation. There is at face value little overlap between the strategic priorities of the Climate Parliament and the SCO. Nevertheless, research on parliamentary action suggests the importance of working with political parties and the media in parallel to supporting parliamentarians. This suggests that in practice cooperation possibilities were present, given that the SCO worked on media diversification.

D.7. Facts and figures

258. This chapter includes facts and figures on:

- the electricity sector structure;
- the Climate Parliament Network;
- selected data on the Moroccan Parliament and Climate Parliament Network.

Figure 17. Morocco's energy sector structure

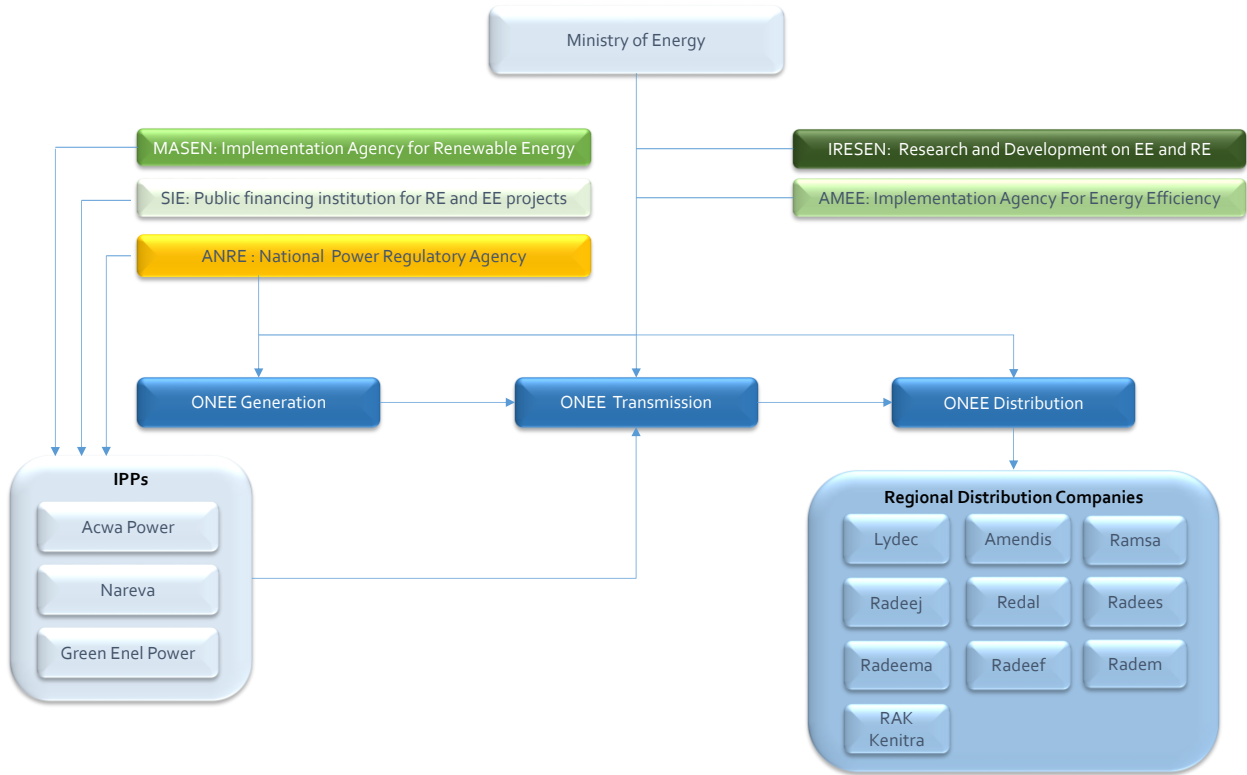


Table 21. The Climate Parliament's key counterparts and workshop participants

(Former) Steering Group Members and participants to international parliamentary hearings	M/F	Political affiliation	Workshop / event participants	M/F
Salima Faraji	F	PAM (Party of Authenticity and Modernity)	Nabila Benomar	F
Nabila Benomar	F	PAM (Party of Authenticity and Modernity)	Naima Benyahia	F
Zineb Kayouh	F	Party of Istiqlal	Ahmed Motassadeq	M
Rachid Hamouni	M	Socialist	Ahmed Touhami	M
Mohamed Rejdjali	M	PJD (Justice and Development Party)	Salima Faraji	F
		PAM (Party of Authenticity and Modernity)	Bouchra Malki	F
			Mohamed Boughlam	M
			Fouad Laghrib	M
			Jamal Stitou	M
			Fatiha Mouknii	F
			Adil Chikitou	M
			Fatima Kouima Mazi	F
			Aziz Dermoumi	M
			Dr Mohamed Rejdjali	M
			Rachid Hammouni	M
			Zineb Kayouh	F
			Moez Khammon	M
			Mohamed Najib Ammor	M
			Khadija Abladi	F
			Fouad Hajir	M
			Saadia Bahi	F

Table 22. Selected data on the Moroccan Parliament and Climate Parliament Network

Number of members in the Climate Parliament's Network	#	5
	Target	10
Number of female members in the Climate Parliament's Network	#	3
Number of Steering Committee members in the Climate Parliament's Network	#	5
	Target	5
Number of female Steering Committee members	#	3
	Target	2
Climate Parliament Network Members*	#	21
Total number of Parliamentarians (Lower House)	#	395
Members of the active parliamentarians as percentage of total parliamentarians	%	5%
	Target	5%

* According to the Climate Parliament. Key informants argued that there was no homogenous, functioning Network

The number of meetings of the in-country CP network	ave/year	0
The number of in-country parliamentary workshops on climate change and renewable energy organized by CP	2013 - 2014	1 per annum
	2015 - 2016	0
	Target	2

E. Case study: Tanzania

259. This annex presents the key findings from our research on the Climate Parliament's work in Tanzania. The findings stem from a document review, quantitative data collection and key informant interviews in Dar es Salaam and Dodoma. The following topics are covered:

- the (renewable) energy sector;
- the role of the national parliament;
- the Climate Parliament's work;
- cross-border grid interconnections; and
- the cross-fertilization between SDC's country operations and the Climate Parliament's work.

The annex concludes with summative statements on the key evaluation criteria and a series of figures and tables on the Tanzanian (renewable) energy sector and the Climate Parliament's work in-country. All findings stem from multiple sources, unless explicitly stated otherwise.

E.1. The Energy Sector

The policy and legal framework

260. The last 15 years have seen a slate of new laws and regulations which have been passed to modernize the energy sector (see Table 23).¹⁰⁹ The implementation of these laws and regulations has been mixed – a couple of examples:

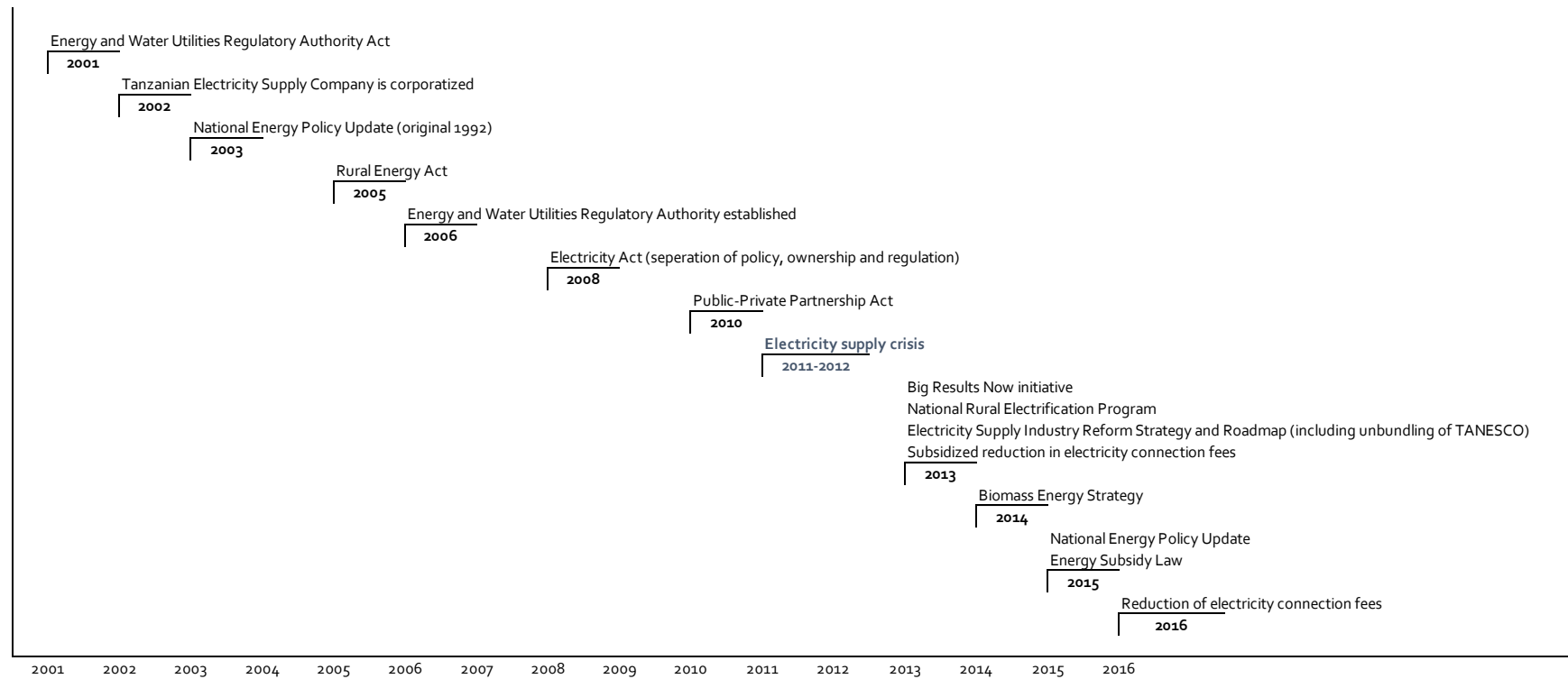
- The 2001 Energy and Water Utilities Regulatory Authority Act foresaw the establishment of an independent regulator, which was ultimately created in 2006. The Energy and Water Regulatory Authority (EWURA) has since established a regional reputation for competence and '*working by the book*'; only to have its authority undermined as recently as 1 January 2017 when the Minister of Energy (backed by the President) did not accept an 8.7% increase in the retail electricity tariff requested by TANESCO¹¹⁰. The Minister appointed a new Board to TANESCO and ordered TANESCO not to implement the tariff increase.
- TANESCO was corporatized in 2002. The Electricity Supply Industry Reform Strategy and Roadmap 2014-2025 foresaw the unbundling of the utility. No steps have been taken to this end since and there is little indication that TANESCO will be unbundled in the near future. TANESCO remains under continuous financial duress.
- In 1992, the Tanzanian Government lifted the monopoly held by TANESCO in power generation. Moreover, the 2008 Electricity Act allows for private sector led power generation. The 2010 Public Private Partnership Act provides a further legal basis for private sector involvement in the energy sector. The country's only two large-scale private sector power generation projects (SONGAS and IPDL) stem from before the 2008 Electricity Act and the 2010 PPP Act. There are a handful of large-scale private sector-led windfarms under development and a number of private sector-led renewable energy projects have been conceptualized, but progress in their development is slow at best and their realization is pending.

261. The interviewees explained the mixed results in the implementation of power sector reforms by erratic policy making fueled at least in part by an ambivalence (if not opposition) towards private sector involvement in the provision of utility services. Erratic policy making creates uncertainty among energy sector players and makes the (international) private sector hesitant to enter the energy sector. Despite this, the Economist Intelligence Unit (EIU February 2017) qualifies the energy sector as a key growth sector for Tanzania due to the forecasted rapid increase in demand for electricity and the concomitant investments needed to meet this demand.

¹⁰⁹ This section focuses (as in the other country case studies) on the electricity sector as the Climate Parliament concentrates of renewables-based electricity generation. In Tanzania, fuelwood and charcoal are however the primary energy source for 90% of Tanzanians. The Swiss Cooperation Office notes in this regard a discrepancy in Tanzania between the policy framework for modern and traditional energy sources.

¹¹⁰ The Tanzania Electric Supply Company Limited, which is Tanzania's sole, vertically integrated and state-owned power utility.

Table 23. The evolution of Tanzania's energy sector policy and legal framework



Source: (World Bank 2016, African Development Bank Group 2015)

The energy mix

262. According to EWURA, Tanzania currently has approximately 1400 MW of electricity generation capacity, consisting of 561 MW of large-scale hydropower, 600 MW of gas-powered electricity, and 8.7 MW of small-scale hydropower, with the remainder generated by heavy-fuel oil and coal. The Government foresees that '*future energy needs will be met by coal (41%), large-scale hydro (35%), oil and gas (21%) and renewable energy (3%)*' (African Development Bank Group 2015).

263. Large scale hydropower is not classified as a renewable energy source in Tanzania (arguable because of the environmental damage involved in their realization). The country's 6 medium to large-scale hydropower plants all date from before the year 2000. Even including large-scale hydropower, the (planned) share of renewable energy remains modest given that '*Tanzania is endowed with abundant high-quality renewable energy sources*' (African Development Bank Group 2015).

Large-scale renewable energy

264. The development of large-scale (renewable) energy generation projects has stalled. The Ministry of Energy and Minerals is currently developing a new procurement framework for large scale power generation projects under the 2016 Electricity Market Reorganization and Promotion of Competition Regulation (which itself falls under the 2008 Electricity Act). Besides the uncertain policy environment, a key bottleneck is the '*low*' electricity retail tariff of US¢8.

Small-scale renewable energy

265. Significant strides have been made in small-scale (<10MW) renewable energy generation, both on- and off-grid (including mini-grids). Under the World Bank's Tanzania Energy Development and Access Expansion Program (TEDAP) and later GIZ's Sustainable Energy Program over 22 MW of electricity generation capacity has been realized based mainly on small hydro and biomass, but also below 1 MW solar and wind generation plants. A further 75 MW is under development. The small-scale renewable energy sector has seen further support from the development organizations ADA, AFD, DFID and SIDA.

266. Small-scale renewable energy generation has been made possible through a purposefully designed regulatory framework for renewable energy power generation projects below 10 MW¹¹¹, including a standardized power purchase agreement between the power producer and either TANESCO (for the on-grid projects) or the local community (for the off- and mini-grid projects) and a technology specific feed-in-tariff (fixed for 20 years). This purposefully designed regulatory framework requires a competitive procurement process for wind and solar projects between 1 and 10 MW of power generation. No wind and solar projects of this size have been developed.

Natural Gas

267. The first natural gas discovery was made in 1974 on the SongoSongo Island, followed by a second discovery at the Mnazi Bay in 1982. Exploitation of both fields started in 2004 and 2006 respectively. Currently natural gas is used to generate thermal electricity for the national grid by independent power producers.

E.2. The Role of National Parliament

268. Parliamentary elections were held in October 2015, which resulted in a 70% turnover of MPs. The long-ruling Chama Cha Mapinduzi (CCM) maintained a strong hold on the Parliament with 70% of the seats. The 30% of the collective opposition was nonetheless observed to be an important step towards a functioning multi-party democracy. However, most development partners expressed concern about the political climate with the government reluctant to receive criticism and displaying repressive tendencies. The Parliament itself was labeled as '*competitive*' and '*volatile*'.

¹¹¹ This framework has been developed under the 2006 EWURA Act and the 2008 Electricity Act. No parliamentary approval was necessary.

269. Political power resides with the executive branch of government with the Parliament able to 'nudge' the government at best. Laws and policies are predefined before parliamentary consultations and hearings. Having said that, MPs can exert influence during the development stage of laws and policies when they have access to and the ear of the responsible minister, the permanent secretary of the responsible ministry, the Minister of Finance and leading civil servants in the budget department of the Ministry of Finance.

270. MPs have little speaking time during the Parliament's plenary sessions. During the 2 months budget session of Parliament this might not be more than four times 10 minutes. This means that when parliamentarians are allowed to speak, they focus on issues which are current to their constituents. This undermines concerted action by MPs on issues transcending constituency concerns. This is exacerbated by a lack of organization within the political parties, in the sense that the political parties do not have designated speakers for individual sectors or thematic areas.

271. The Parliament does not have the means to hold the executive branch to account. While Parliament organizes parliamentary hearings, ministers can ignore the Parliament's recommendations (or demands) without repercussions (if backed by the government). Development partners, government agencies and some parliamentarians perceived Parliament as reactive rather than proactive.

E.3. Climate Parliament in Tanzania

The Climate Parliament Network

272. Normally, the Climate Parliament Secretariat forms a distinct in-country network of parliamentarians with which it subsequently works. In Tanzania, the Climate Parliament Secretariat and interested parliamentarians decided instead to work through an existing caucus, namely TAPAFE (Tanzanian Parliamentarians Friends of the Environment). TAPAFE, set up in 2011, offered the Climate Parliament an existing cross-party platform of parliamentarians dedicated to environmental protection. The Climate Parliament was introduced to TAPAFE by the UNDP, which had (and has) a parliamentary strengthening program in Tanzania (see Textbox 10).

Textbox 10. UNDP Legislative Strengthening Program in Tanzania

The UNDP seeks to strengthen the institutional and individual parliamentarian's capacity to perform the core parliamentary functions of representation, law-making and oversight. It has for example set up a budget department within Parliament and trained parliamentarians on budgetary oversight. The Program is strategically managed by a Board of Directors consisting of the Speaker of Parliament and the UNDP Country Director. The Program is implemented by a Parliament clerk (operational manager), a three-person in-country UNDP team (technical advisors) and a team of clerks within the Parliament. A first-phase of the Program ran from 2011 to 2016 with a budget of US\$ 7.1 million. A second phase runs from 2016 – 2021 with a budget of US\$12.7 million. The Program includes targeted supported to parliamentarian committees and caucuses, including TAPAFE. UNDP will organize a workshop for TAPAFE on renewable energy during the upcoming budget session of Parliament.

273. TAPAFE contains 56 members (with full gender balance). The bulk are from the ruling party (in line with its majority in parliament). TAPAFE is managed by a steering group of 14 members. Cooperation between steering group members of the ruling and opposition parties appeared good. The steering group organizes 4 – 5 meetings per year with a participation rate of roughly 50%. TAPAFE is assigned one staff member by parliament, who functions as permanent secretary.

TAPAFE's voice

274. TAPAFE appears to be a well-recognized entity within Parliament. In contrast, the development partners (save UNDP) and the government agencies we spoke to did not know TAPAFE. This suggests that in policy discussions – in plenary sessions in Parliament, external workshops or in the media – member MPs do not speak on behalf of TAPAFE.

275. Development partners and government agencies alike did not perceive Parliament as a voice or advocate of renewable energy. MPs are concerned with rural electrification (independent of the power source). They also regularly raise the sustainability of TANESCO's financial situation and at times raise questions about delayed electricity generation projects (including some windfarms which are under development).

276. TAPAFE MPs have a common interest in environmental degradation, deforestation, shortages of power supply and (to some extent) renewable energy and climate change; they did not appear to have a common strategic agenda to address these issues.

Climate Parliament Secretariat support

277. At the outset, in 2013, the Climate Parliament Secretariat had a Regional Director for Sub-Saharan Africa based in South-Africa. He provided support to TAPAFE on a fly-in-fly-out basis. He conducted several workshops for MPs and assisted TAPAFE actively in drafting an article on environmental protection, which TAPAFE parliamentarians proposed and got included in the draft constitution in 2014¹¹². Since 2015, the Climate Parliament did not have a Regional Director for Sub-Saharan Africa anymore. The Climate Parliament Secretariat continued to invite one or two Tanzanian parliamentarians and (occasionally) the deputy Minister for Energy to its international hearings. Moreover, the Secretariat continued to provide telephonic support.

278. The international hearings were considered by the Tanzanian MPs eye-opening affairs as well as overwhelming events in the sense that the proposed options for renewable energy generation or solutions to climate change were often 'beyond immediate reach' for Tanzania. The hearings were nevertheless considered powerful networking events, linking the MPs to international players like IRENA, IEA, the World Future Council, etc. The idea to pilot solar water pumps stemmed from the international hearing in Morocco.

279. UNDP Tanzania considered (and considers) the Climate Parliament an important and valuable initiative, which complements its own work on parliamentary strengthening. It voiced criticism on the Climate Parliament's approach in Tanzania on the grounds that one cannot start an initiative with small seed money and based on single-activity planning (against a more strategic, long-term and on-the-ground involvement).

Results

280. A small core group of approximately four MPs within TAPAFE managed some concrete and tangible results with support from the Climate Parliament. These include:

- the inclusion of an article on environmental protection in the draft constitution (2014);
- a VAT exemption on solar products in the VAT Bill 2014;¹¹³
- a larger share of the Rural Electrification Agency's Budget as well as revenues from offshore gas industry to be devoted to renewable energy projects¹¹⁴;
- the piloting of solar water pumps to distribute water across a district;
- prevention of a cut in fuel duties which fund rural electrification;

¹¹² The draft constitution has till now not been submitted to Parliament for formal approval.

¹¹³ Implementation of the VAT exemption is still problematic as regional and district Tax Revenue Offices are at times unaware of it.

¹¹⁴ Only mentioned in (Climate Parliament 2014a) and not raised in the interviews.

- Tanzania signed the International Solar Alliance Agreement on 15 Nov 2016¹¹⁵

The future of the Climate Parliament in Tanzania

281. All MPs favored the continued involvement of the Climate Parliament in Tanzania. They looked for:

- continued capacity development (also to the newly elected MPs);
- permanent support from a Dodoma-based expert;
- setting up an East-African Climate Parliament group to identify and discuss locally feasible options and solutions; and,
- continued international networking.

E.4. Regional Grid Interconnections

282. Tanzania is realizing and planning four interconnection lines with its neighboring countries (Ministry of Energy and Minerals Tanzania 2016), namely:

- a 400 kV interconnector to Kenya, which is under construction and scheduled for operation in 2019;
- a 400 kV interconnector with Zambia, which is under preparation and scheduled for operation in 2020;
- a 220 kV interconnector with Uganda, which is in the planning stages and scheduled for operation in 2020; and
- a 400 kV interconnector with Mozambique, which is in the planning stage.

283. Moreover, Tanzania is planning (i) a 90 MW hydropower plant with Burundi and Rwanda at the Rusomo border; and (ii) a 360 MW hydropower plant with Malawi at the Songwe border. In both cases the national grids of the countries involved will be connected through a 220 kV transmission line. (Ministry of Energy and Minerals Tanzania 2016).

284. Tanzania is part of the East-African Power Pool and the South-African Power Pool. An independent regulatory board has been established for the East-African Power Pool. The regulatory rules for cross-border electricity trade are currently being developed. According to the independent regulator in Tanzania, EWURA, no national-level regulation will be necessary.

285. A recurrent theme in the interviews was that '*all countries in the region want to export electricity*' (something which clearly is not possible). At present, few (if any) of the countries have excess capacity. All countries have ambitious plan to increase national power generation. Ethiopia for one is working on a 6000 MW hydropower plant (to which Tanzania is planned to be connected through Kenya¹¹⁶). The favorable reading of the grid interconnections was that it would allow for sourcing the cheapest electricity and balancing fluctuation in renewable energy generation. The interconnections could however also lead to political and economic stress when, example given, the gas plants in Tanzania become superfluous if Tanzania imports large quantities of hydropower-generated electricity from Ethiopia. Having said that, the current interconnection lines are not made to import (or export) large quantities of electricity.

¹¹⁵ The Climate Parliament facilitated discussions between Tanzanian delegation headed by Minister (Environment) and the Interim Secretariat of ISA at the Climate Parliament event in Marrakesh (Nov. 2016)

¹¹⁶ Apart from relatively low capacity cross-border interconnection lines, the weak link might actually prove to be the Kenyan grid which may not be able to move large amounts of electricity from Ethiopia to Tanzania.

E.5. Cross-fertilization between SDC and the Climate Parliament

286. SDC is running a project on transforming the Tanzanian charcoal sector since 2011. 'Ninety percent of Tanzanians use wood fuels as their primary source of energy ... tree harvesting is practiced in an unsustainable and inefficient way, causing devastating effects to the environment' (SDC 2015). Unsustainable charcoal production and the associated deforestation was also expressed to be a key priority of TAPAFE as well as several of the MPs interviewed.

Textbox 11. SDC's Transforming Tanzania's Charcoal Sector Project

The project introduced a market system based on Tanzanian forest law that allows villages to effectively market products directly from their village forests and collect revenues for local development as an incentive for sustainable management of their village forests. A 25-year rotational harvesting system was introduced in designated forest units for charcoal, which allows regeneration in the 24 years after harvest. The project also introduced improved kilns for more efficient and high quality charcoal production and advocates a sustainable charcoal production at the local and national level. Source: (SDC 2015)

287. The Tanzania Forest Conservation Group, which implements SDC's project on charcoal, presented the project (results) to the Parliamentary Committee on Natural Resources and organized an in-country workshop at ministerial level. SDC noted that additional advocacy would be beneficial for upscaling the project, addressing the unsustainable charcoal production in the National Energy Policy, and sharing lessons with other countries. The question is to what extent the Climate Parliament is open to pick up this topic. Thus far, the Climate Parliament concentrates on promoting large-scale renewable energy generation and regional/global grid interconnections. Fact is that the opportunity for a cross-fertilization between SDC's and the Climate Parliament's work is present on a topic with a direct bearing on climate change.

E.6. Concluding observations

288. **Real-world impact.** The Tanzanian Climate Parliament Network has – with the VAT reduction and the environmental protection paragraphs in the draft constitution – achieved clear and concrete results. These results are limited compared to (i) the Climate Parliament's ambition to promote renewable energy generation and reduce greenhouse gas emissions; and (ii) the potential for increased renewable power generation in Tanzania. Having said that, Tanzania presents a complex and difficult working environment, in which one needs to actively reach out and include the executive branch to enable change. To that end, the Tanzania findings support the Climate Parliament Secretariat's approach to actively reach out to the ministers of energy in its countries of operation (and invite them to the international parliamentary hearings) even when ideally one would wish the MPs to lead such efforts.

289. **Attribution.** The Climate Parliament has undeniably empowered a number of MPs and assisted them in achieving the abovementioned results. At the same time, Jitu Soni MP likely would have managed the VAT reduction on solar instruments on his own – once he realized its benefits – as he had already managed the same feat for agricultural tools and machinery, water chemicals, improved cookstoves and medical equipment for albinos.

290. **Theory of Change.** The findings corroborate parts of the espoused Theory of Change. The international parliamentary hearings have empowered Jitu Soni MP to, example given, promote the piloting of solar water pumping in Tanzania, as well as frequently engage with international organizations like IRENA. (This is what the Climate Parliament calls the '*network effect*'). The findings also confirm the importance of working with MPs who have the ear of the executive branch. At the same time, other parts of the Theory of Change have failed to materialize. The number of mobilized MPs has been too small and/or not influential enough to give Parliament a strong voice and a large impact in the renewable energy sector. Moreover, Parliament lacks the tools to hold the executive branch to account.

291. **Efficiency.** First, the Climate Parliament was able to make an impact at the time it had a Regional Director for Sub-Saharan Africa working out of South-Africa. This was the time when multiple in-country workshops were organized and

hands-on support was provided. When the contract of the Regional Director was not extended, the Climate Parliament’s support became more at arm’s length and mostly limited to inviting two MPs to the international parliamentary hearings. Second, the November 2015 parliamentary elections resulted in a 70% turnover of MPs. Although two out of a four-person core group of the in-country Climate Parliament Network maintained their seats, as well as several other second-tier supporters, the high turnover clearly affected the general awareness of parliamentarians of the Climate Parliament, renewable energy potential and climate change. These two points raise the question whether the Climate Parliament should have a regional presence when active in a country and built parliamentary staff capacity – in line with best practices on parliamentary strengthening (House of Commons IDC 2015, Menocal en O’Neill 2012, Democracy Reporting International 2015) – to maintain awareness, knowledge and momentum in the Climate Parliament Network.

292. **Grid interconnection.** Tanzania is pursuing grid interconnection with its neighboring countries out of need (for low-cost electricity) and ambition (to sell the country’s potential excess power). The intergovernmental arrangements are also being developed. This makes it at face value unclear what the value-added is of the Climate Parliament Green Grid Alliance except for pushing Tanzania to make the interconnections green (which at present is not the case) and higher voltage.

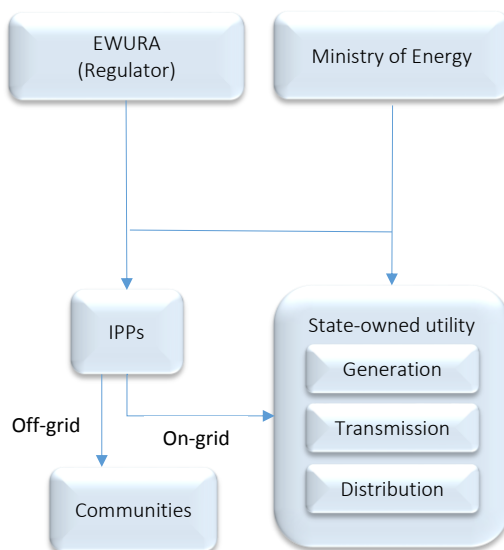
293. **Cross-fertilization.** It appears that at least since December 2014 there has been no cross-fertilization between SDC’s country operations and the Climate Parliament’s work in Tanzania even when the opportunity was present, namely through SDC’s program on charcoal, which addresses deforestation and unsustainable charcoal production (a key concern of TAPAFE members).

E.7. Facts and figures

294. This chapter includes facts and figures on:

- the electricity sector structure;
- Tanzania-specific Climate Parliament products;
- the Tanzanian Climate Parliament Network and regular participants to international parliamentary hearings;
- selected data on the Tanzanian Parliament and Climate Parliament Network.

Figure 18. The Tanzanian electricity sector structure



Source: Interviews and (Eberhard, et al. 2016)

Table 24. Tanzania-specific Climate Parliament products

Policy option and briefing papers			
#	Name	Description of content or change	Source
1	Power to the People	Policy options to attract investment in off-grid renewable energy in Tanzania	Climate Parliament Secretariat
2	Technical one-page briefing notes (2014)	On a renewable energy fund financed by a share of the off-shore gas sale revenues; net metering; feed-in tariffs; solar water heating	Climate Parliament: AR 2014
3	Briefing document on mini-grids (2013)	Different policy and investment frameworks	Climate Parliament: AR 2013
4	Briefing Note - Budget Discussion - Net Metering - 2014	Memo on net metering potential in Tanzania	Climate Parliament Secretariat
5	Fighting Poverty with Power	Policy options report emerging from a parliamentary hearing in Dar Es Salaam	Climate Parliament Secretariat
6	Final Report Tanzania Workshops - 2015	Policy report on 2015 workshops	Climate Parliament Secretariat
7	Improving Renewable Energy Equipment Standards in Tanzania	Memo on import regulations options	Climate Parliament Secretariat
8	Detailed technical briefing	Current state of Tanzanian Energy Legislation and Regulation	Climate Parliament Secretariat
9	International Cooperation to Promote Solar Energy in Tanzania	Briefing on International Solar Alliance	Climate Parliament Secretariat
10	Briefing papers (2014)	UK renewable energy and climate change legislation and applicability to Tanzania context	Climate Parliament: AR 2014
11	Parliamentary questions and discussion points (2014)	Support documentation for budget discussions	Climate Parliament: AR 2014
12	Briefing papers (2016)	International cooperation to promote solar energy in Tanzania, including sources of financing from bilateral and multi-lateral institutions	Climate Parliament Secretariat
13	Briefing papers (2016-17)	Institutional strengthening on renewable energy equipment standards (best practices in different countries)	Climate Parliament Secretariat
		<i>Target</i>	<i>1 per country</i>
Knowledge products			
#	Name	Description of content or change	Source
1	Capacity Building Guidance Document (2015)	Digested overview of current renewable energy policy and legislative problems and guide to future policy making	Climate Parliament: AR 2015
2	Research paper on Investing fossil fuel based revenue in renewable energy (with UNDP, 2015)	A compilation of country strategies to use fossil fuel revenues on sustainable energy development	Climate Parliament: AR2015
		<i>Target</i>	<i>1 per country</i>

Source: Climate Parliament

Table 25. The Tanzanian Climate Parliament Network (subgroup of TAPAFE)

No.	Name	Party	Parliamentary terms (5-years each)
1	Jitu Soni	CCM	3
2	Bernadetha Mushashu	CCM	3
3	Peter Msigwa	CHADEMA	2
4	Magdalena Sakaya	CUF	3
5	Luhaga Joseph Mpina	CCM	2
6	Dr Titus Kamani	CCM	3
7	Saleh Ahmad Pamba	CCM	2
8	Jeremiah Maselle	CCM	3
9	Dr Semesi Sware	CHADEMA	1
10	January Makamba	CCM	2
11	Doto M. Biteko	CCM	2
12	Anna Mangungu	CCM	3
13	Peter Msigwa	Chadema	2
14	Danstan Kidatula	CCM	2
15	Luaga Joelson Mpina	CCM	3
16	Dr. Titus Kamani	CCM	3
17	Salehe Pamba	CCM	2
18	Jeremiah Maselle	CCM	3
19	Abdulkarim E. Shah	CCM	3
20	Joseph Kandege	CCM	3
21	Job Ndugai	CCM	4
22	George Simbachawene	CCM	3

Source: Climate Parliament

Table 26. Tanzanian MPs regularly participating to international parliamentary hearings

No.	Name	Party	Parliamentary terms (5-years each)
1	Jitu Soni	CCM	3
2	Bernadetha Mushashu	CCM	3
3	Beatrice Shelukindo	CCM	Ex.
4	Peter Msigwa (CHADEMA)	CHADEMA	2

Source: Climate Parliament

Table 27. Selected data on the Tanzanian Parliament and Climate Parliament Network.

Number of members in the Climate Parliament's Network (TAPAFE)	#	56
	<i>Target</i>	10
Number of members in the Climate Parliament's Network Steering Group (TAPAFE)	#	14
	<i>Target Steering Group</i>	5
Number of female members in the Climate Parliament's Network Steering Group (TAPAFE)	#	>2
	<i>Target</i>	2
Total number of active Parliamentarians	#	56
Total number of Parliamentarians	#	393
	<i>Members of the active parliamentarians as percentage of total parliamentarians</i>	14%
	<i>Target</i>	5%
The number of meetings of the formal committee or informal caucus	Ave. #/year	4 to 5
The number of parliamentary workshops organized by the Climate Parliament between 2014 and 2016	#	>2
	<i>Target</i>	2

Source: Interviews

F. Country case study selection

295. The Terms of Reference foresaw in-country data collection in four countries in two geographical regions. The Climate Parliament is active in over 15 countries. The number of countries is too small and the type of countries too heterogeneous to allow for a random sampling strategy in the selection of the case study countries. Instead, we selected four countries based on pre-defined functional selection criteria – a so-called purposeful sampling strategy (M. Q. Patton 2002, 563, Morra Imas en Rist 2009, 362). Below, we define three sets of selection criteria.

Defining the selection criteria for the case study countries

296. First, the selected case study countries needed to be **rich in information**. This is a condition *sine qua non*: without, a basis for rendering a judgment would simply fail. This means that in the selected countries the Climate Parliament must have spent substantial effort for a considerable amount of time to achieve its goals. In other words, the selected countries must have relatively mature and well-resourced Climate Parliament programs.

Textbox 12. Mature networks, do not automatically imply active networks

The Climate Parliament pointed out that while it has been active in Jordan and Morocco for a longer period of time, recent activity has been low to non-existent. For two interconnected reasons: (i) Morocco and Jordan have recently had elections with a substantial number of the Climate Parliament Network members not returning to parliament (either because they did not stand or were not elected); and (ii) the Climate Parliament redirected its efforts – on behest of individual donors – to other countries or regions: in this case to West-Africa (Benin, Cote D'Ivoire and Senegal) financed by the UNDP.

As a result, the Climate Parliament does not have an active network of parliamentarians in either Morocco or Jordan. According to the Climate Parliament, this could hamper the effectiveness of a field mission because the in-country institutional knowledge is less deep than in countries with a more active network and there will be less parliamentarians to meet. The Climate Parliament's position only holds if and when it proves difficult or impossible to contact and interview ex-parliamentarians from the Climate Parliament Networks. Moreover, government changes are common and a reality which any initiative should be able to withstand in terms of effectiveness/sustainability. From an evaluation point of view, countries such as Jordan and Morocco constitute valuable case studies about the durability and sustainability of the Climate Parliament's efforts. We have included the activity level of the Climate Parliament Networks as a judgment criteria.

297. The second set of selection criteria aims at ensuring that we obtain a **fair picture** of the Climate Parliament's portfolio (even if the countries do not form a statistically representative sample). This implies a balanced selection between countries which are: more successful and less successful, larger and smaller political constituencies, more or less democratic¹¹⁷, and use a variety of technologies promoted by the Climate Parliament.

298. The third and final selection criteria is that we focus on countries, which are **relevant to GPCCE's current and future work program**. Some countries must have an active GPCCE program to allow an assessment of the cross-fertilization between the Climate Parliament's and GPCCE's in-country work. Selected countries without GPCCE presence should ideally match SDC's priority countries and focus regions for the period 2017 – 2020 (the time-frame of the new Federal Dispatch).

¹¹⁷ Based on The Economist Intelligence Unit's Democracy Index 2015 (EIU 2016)

299. Over and above these functional selection criteria, **two countries stood out from the pack: India and China**. Both countries are significant producers of greenhouse gases¹¹⁸, which – due to their regional, economic and/or political weight – can become instrumental in triggering a paradigm shift in the global energy sector. In India, the Climate Parliament has a well-resourced in-country secretariat, which allows it to provide much more hands-on and continuous support (at both the national and subnational level) than all other countries which are supported by a non-residential regional director and ad-hoc external expertise and / or consultancy inputs.

300. In China, the Climate Parliament has created and mainly works through an advisory group (rather than a network of parliamentarians) consisting of representatives from government agencies, research institutes, industry representatives and (a small group) parliamentarians. The Climate Parliament’s approach in China is therefore distinct from the other countries. Moreover, significant effort is spend in China on furthering the idea of regional and global electricity interconnectivity. This is also done with an eye on establishing the global Green Grid Alliance, which is a current strategic priority of the Climate Parliament. Finally, 25% of SDC’s financial support to the Climate Parliament are spent on the China activities.

Classifying the country portfolio

301. The Climate Parliament does not maintain country fact sheets, which comprehensively list its activities, achievements, the network’s current status, and key contextual developments. The country selection is therefore based on a review of the Climate Parliament’s annual reports (Climate Parliament 2016, 2015), the country program descriptions in the Evaluation of the Parliamentary Action for Renewable Energy Project (Particip GmbH 2014) and discussions and reflections with the GPCCE program manager for the Climate Parliament and the Climate Parliament’s senior management. Figure 19 (see next page) organizes the Climate Parliament’s countries of operation according to the functional criteria. Below Table 28 details how we operationalized the functional selection criteria.

Table 28. Detailing the functional selection criteria for the country case studies

Functional selection criteria	Cut-off points
Maturity	Countries where CP has been active for 3 years or more are labeled 'more mature'
Activity level of network	Countries which have not been described in the last two CP annual reports or where CP has indicated to be currently less involved have been categorized as 'less active'.
Level of success	'More successful countries' are those countries, which have recorded at least one concrete and significant change in its legal framework or fiscal budget, or where the CP Network has successfully pushed for a renewable energy project.
Constituency size	Countries with population sizes of over 50 million people have been labeled large constituencies.
Democracy level	'More democratic countries' are the so-called full and flawed democracies in The Economist Intelligence Unit's Democracy Index 2015. 'Less democratic countries' are the countries labeled hybrid and authoritarian regimes in the Democracy Index 2015.
Technology type	Distinguishes solely between on- and off-grid initiatives promoted by the CP Networks.
SDC priority countries and focus regions	Lists the countries where GPCCE is present or concerns a priority country or focus region of SDC.

¹¹⁸ The Global Carbon Budget 2016 ranks China and India first and fourth in the world on CO₂ emissions from fossil fuels burning. <http://www.globalcarbonproject.org/carbonbudget/16/highlights.htm> Retrieved on 6 December 2016.

Figure 19. A categorization of the Climate Parliament's countries of operation along functional selection criteria

<i>Countries of operation</i>	<i>More mature</i>	<i>Less mature</i>	<i>More active (network)</i>	<i>Less active (network)</i>	<i>More successful</i>	<i>Less successful</i>	<i>Larger constituency*</i>	<i>Smaller constituency</i>
	Bangladesh	Bolivia	Chili	Bolivia	Chili	Bolivia	Bangladesh	Bolivia
Africa & Middle East	India	Chili	Peru	Ecuador	Bangladesh	Ecuador	China	Chili
Rep. of the Congo	Rep. of the Congo	Ecuador	Bangladesh	Rep. of the Congo	China	Peru	India	Ecuador
Morocco	Morocco	Peru	China	Morocco	India	Rep. of the Congo	South Africa	Peru
Senegal	Senegal	China	India	Senegal	Tunisia	Morocco	Tanzania	Rep. of the Congo
South Africa	South Africa	Lebanon	Tanzania	South Africa	Jordan	Senegal		Morocco
Tanzania	Tanzania		Tunisia	Lebanon		South Africa		Senegal
Tunisia	Tunisia			Jordan		Lebanon		Tunisia
Lebanon	Jordan					Tanzania		Lebanon
Jordan								Jordan
Latin America	<i>More democratic**</i>	<i>Less democratic</i>	<i>On-grid technology</i>	<i>Off-grid technology</i>	<i>GPCC presence***</i>	<i>SDC program****</i>		
Bolivia	Chili	Bolivia	All countries	India	China	Bangladesh		
Chili	Peru	Ecuador		Tanzania	India	Bolivia		
Ecuador	India	Bangladesh			Peru	Jordan		
Peru	Senegal	China				Lebanon		
	South Africa	Rep. of the Congo				Morocco		
Asia	Tunisia	Morocco				Tanzania		
Bangladesh		Tanzania				Tunisia		
China		Jordan						
India		Lebanon						

Notes

* The World Bank population data. <http://data.worldbank.org/indicator/SP.POP.TOTL>. Retrieved on 29 November. Arbitrary cut-off at a population of 50 million

** Based on The Economist Intelligence Unit's Democracy Index 2015. More democratic are the so-called 'full' and 'flawed democracies'. Less democratic are the countries labeled 'hybrid' and 'authoritarian regimes'.

*** GPCC supports multilateral processes, as well as climate change mitigation and adaptation projects. The Climate Parliament focusses on climate change mitigation through improved renewable energy generation and access. The relevant overlap in activities occurs in the countries where GPCC has a local presence. We have thus foregone a more comprehensive listing of all countries where GPCC (directly or indirectly) is active.

**** Corresponds to SCO presence and SDC priority countries or focus regions

Possible case study countries

302. Through the process of categorizing the countries several possible sets of countries emerged for the case studies and field missions. These are proposed and argued in Table 29. Each combination includes India to allow us to compare the Climate Parliament's most mature country program and distinct organizational approach in India vis-à-vis the other countries of operation. All selected countries have either GPCCE or SDC programs running, which allows to assess the communication and cross-fertilization between the Climate Parliament and GPCCE and SDC respectively. Moreover, the different combinations are more or less balanced in levels of democracy.

Table 29. Possible combinations of countries for the case studies and the reasons for and against their selection

Arguments in favor	Arguments against
Option 1: India, China, Morocco, Tunisia	
<ul style="list-style-type: none"> - China: <ul style="list-style-type: none"> - provides insight into the advocacy of the CP; - sheds light on the GGA / regional electricity trade; - accounts for 25% of SDC's contribution to the CP. - Morocco: <ul style="list-style-type: none"> - Significant level of effort by Climate Parliament - Significant number of activities by / with MPs - Few (if any) concrete / clear results - Indication of the sustainability of efforts - SDC presence in country - Tunisia <ul style="list-style-type: none"> - Multiple parliamentary initiatives by CP Network MPs - Successful amendment of constitution and introduction of RE Law. - General <ul style="list-style-type: none"> - Allows for two combined field missions 	<ul style="list-style-type: none"> - China <ul style="list-style-type: none"> - Does not allow testing of key elements of the Theory of Change - Morocco: <ul style="list-style-type: none"> - Risk of not being able to contact former CP Network MPs
Variation 1 on Option 1: replace Tunisia with Tanzania	
<ul style="list-style-type: none"> - Tanzania: <ul style="list-style-type: none"> - Includes off-grid, solar product initiatives (most notably solar water pumps) - Better geographical representation - Appears to create a better balance in more successful (India), medium successful (Tanzania) and less successful (Morocco). 	
Option 2: India, Morocco, Tanzania/Bangladesh and Tunisia	
<ul style="list-style-type: none"> - Tanzania: <ul style="list-style-type: none"> - Includes off-grid, solar product initiatives (most notably solar water pumps) - Bangladesh: <ul style="list-style-type: none"> - Maintains the Asia-Africa balance - .General: <ul style="list-style-type: none"> - Relatively balanced in more, medium and less successful 	<ul style="list-style-type: none"> - Tanzania: <ul style="list-style-type: none"> - Tilts selection towards Africa - Bangladesh: <ul style="list-style-type: none"> - Possible slightly more successful and similar to India and Tunisia
Variation 1 on Option 2: India, Jordan, Tanzania, Tunisia	
<ul style="list-style-type: none"> - General: <ul style="list-style-type: none"> - Better geographical spread - Jordan currently also has a less active network (similar to Morocco – see notes above) 	<ul style="list-style-type: none"> - Jordan: <ul style="list-style-type: none"> - Jordan possible slightly more successful than Morocco

Selection of case study countries and field missions

303. On 1 December 2016, in a conference call between GPCCE and the Evaluator, the selection criteria and resultant combinations of countries were discussed. GPCCE spoke in favor of including China as a case study country. We subsequently agreed on selecting variation 1 on option 1 for the **case study countries and field mission, i.e. India, China, Morocco and Tanzania.**

G. Key informants

Name	Position	Organization
SDC		
Reto Thönen	Programme Manager	
Pio Wennubst	Vice-Director SDC, Head Global Cooperation Department	
Anton Hilber	Co-Head Division GPCCE	
Yuka Greiler	Co-Head Division GPCCE	
Patrick Sieber	Programme Manager	
Mirjam Macchi Howell	Mirjam Macchi Howell	
Frédérique Weyer	Head Employment and Income Domain	SCO Tanzania
Clara Melchior	Program Officer Employment and Income Domain	SCO Tanzania
Benjamin Frey	Director International Cooperation	SCO Morocco
Mouna Lyoubi	Program Head	SCO Morocco
Philippe Zahner	Head International Cooperation Division	SCO China
Liyang Wang	Senior Climate Change and Environment Advisor	SCO China
Janine Kuriger	Head Swiss Cooperation Office	SCO India
Shirish Sinha	Deputy Head Swiss Cooperation Office	SCO India
Climate Parliament		
Nick Dunlop	Secretary-General	
Sanjay Kumar	Executive Director	
James Corrè	Program manager	
Geng Dan	China Director	
Mukul Sharma	South Asia Director	
Sumedha Basu	Policy coordinator, South Asia	
Taruna Idnani	Researcher, South Asia	
Ayisha R Wadhwa	Media and administrative coordinator, South Asia	
Madhushree BN	State Coordinator Karnataka, India	
Itishree Kanungo	State Coordinator Odisha, India	
Dhamir Mannai	Former Regional Director MENA and West-Africa	
Global partners		
Rudolf Rechsteiner	Former Swiss parliamentarian and Climate Parliament consultant	
Julia Keutgen	UNDP - program specialist Inclusive Political Processes, Governance and Peacebuilding	
Tanzania		
Jitu V. Soni	MP (Chairman TAPAFE)	Parliament
I. Sware Semesi	MP	Parliament
Bernadeta K. Mushashu	MP	Parliament
Doto M. Biteko	MP (Chairman Energy Committee)	Parliament
Magdalena Salcay	MP	Parliament
Lolesia Bukwimba	MP	Parliament
Costa L. Rubagumya	Senior Manager Generation	TANESCO
Godfrey Chibulunje	Acting Director Electricity	EWURA
Msafiri Mtepa	Manager Financial Analysis and Modeling	EWURA
Styden N. Rwebangila	Acting Assistant Commissioner Renewable Energy	Ministry of Energy
Paul Morris Kiwele	Renewable Energy Section	Ministry of Energy
Frédérique Weyer	Head Employment and Income Domain	SDC

Clara Melchior	Program Officer Employment and Income Domain	SDC
Anna Hovhannesyanyan	Technical Advisor Parliament	UNDP
Ferhat Esen	Senior Energy Specialist	World Bank
Natalia Kulichenko	Principal Energy Specialist	World Bank
Helen Barnes	Governance Advisor	DFID
Leanne Jones	Climate and Environment Advisor	DFID
Nathan T. Moore	Energy and Water Utility Advisor	GIZ
Matthew Matimbwe	Executive Secretary	TAREA ¹¹⁹
Morocco		
Moh Rejdali	MP	Parliament
Salima Farji	MP	Parliament
Nabila Benomar	MP	Parliament
Fatima Hamdouch	Strategy Director	MASEN
Khadija Oualif	Technical Director	MASEN
Samira Lakhli	Head of Strategic Studies	AMEE
Roger Coma Cunill	Principal Energy Sector Specialist	World Bank
Caroline Friehe-Chevalier	Head Governance and Human Rights Program	EC
Leila Truelsen	Principal Advisor Energy Sector	EC
Abderrazzaq Khaoua	Project Coordinator Energy Sector	KfW
Johannes Kraus	Consultant Energy Sector	KfW
Philippe Simonis	Principal Technical Advisor Renewable Energy and Climate Change	GIZ
Sonia Alessandrelli	Business Development	Enel Green Power
Rania El Moubaraki	Business Development	Enel Green Power
Hassan Abbach	Energy Sector Specialist	Independent Consultant
Mohammadi Benhmid	Professor Renewable Energy	CUB University
China		
Choy So Yuk	Deputy	NPC
Zhai Wong	Director Legislative Department, Commission on Environmental Protection and Natural Resources	NPC
Bi Yanqui	Deputy Director Cooperation and Communication	GEIDCO
Huang Xia	Advisor Cooperation and Communication Division	GEIDCO
Ding Hui	Deputy Director Division of General Affairs, Department of Climate Change	NDRC
Wu Yi	Advisor, Department of Climate Change	NDRC
Hu Runqing	Associate Research Fellow	Center for Renewable Energy Department, ERI
Li Dan	Executive Vice Secretary-General	CREIA
Markus Wagner	Advisor Renewable Energy Sector	GIZ
Xinjian Liu	Senior Project Officer Energy	ADB
Wanxing Wang	Senior Advisor on Clean Power	Natural Resources Defense Council
Jijiang He	Policy Research Office Director	Energy Internet Research Institute
India		
Sanjay Jaiswal	MP	Parliament
Nagendra Kumar Pradhan	MP	Parliament

¹¹⁹ Tanzania Renewable Energy Association

Vandana Chavan	MP	Parliament
Mr Amar Prasad Satpathy	State legislator	State Parliament
Mr Prasant Kumar Muduli,	State legislator	State Parliament
Mr Sashi Bhusan Behera	State legislator	State Parliament
Mr Prafulla Samal	State legislator	State Parliament
Upendra Tripathy	Ex-Secretary	Ministry of New and Renewable Energy
Pankaj Batra	Additional Secretary	Central Electricity Authority
K.B.K. Reddy	Deputy General Manager	Indian Renewable Energy Development Agency
Arif Ghauri	Governance Advisor	DFID
Sayantani Sarkar	Senior Climate Change Advisor	British High Commission
S.N. Srinivas	Program officer Energy for Development	UNDP
Deepak Gupta	Sr. Program Manager (Power)	Shakti Sustainable Energy Foundation
Pranav Sinha	Director	Globe India
Ashok Choudhury	Deputy Director	Odisha Renewable Energy Development Agency
Akshaya Kumar Biswal	Regional Manager	Oxfam India
Pravash Ranjan Mishra	Programme Officer, Economic Justice	Oxfam India
Animesh Prakash	Programme Officer, Disaster Risk Reduction	Oxfam India
Arunabha Ghosh	CEO	Council on Energy, Environment and Water

H. Indicative outline for a country-level monitoring framework

Country: ...			
Country-specific strategy, foci and targeted outcomes			
<ul style="list-style-type: none"> - Briefly list intentions (Initial for full program period and planned for past year) 			
Qualitative descriptive assessment (2 – 3 paragraphs)			
<ul style="list-style-type: none"> - The quality of the Climate Parliament Network - The behavioral changes observed in the network members - Influence of network members in Parliament <p><i>Ideally supported by annual survey amongst key stakeholders</i></p>			
Comprehensive (cumulative listing of all concrete achievements)			
- Change	- Description	- Multiple sources	- Year
Cumulative development of the legislative framework for renewable energy and climate change (Time-line¹²⁰)			
<ul style="list-style-type: none"> - Historical overview of key legislation 			
Development of impact indicators to showcase operating context (graphically over 10-year time-period¹²⁰)			
<p>Example given:</p> <ul style="list-style-type: none"> - Energy mix (installed and generation) - Greenhouse gas emissions (total and per capita) <p><i>Include source</i></p>			
Provide qualitative comprehensive description of contextual developments (2 -3 paragraphs)			
<ul style="list-style-type: none"> - What key initiatives, decisions, actions have been undertaken by other stakeholders? <p><i>Supported by annual (reflective) consultations with key stakeholders (government / development partners) – include sources</i></p>			
Agenda			
<ul style="list-style-type: none"> - Summary listing of key opportunities being pursued in next period 			

¹²⁰ See case study reports for presentation ideas

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That's it