United Nations Environment Programme

Final	**F I R M project - Facilitating Implementation and Readiness for Mitigation** **CASE STUDY** **contributing to Terminal Evaluation of** **"Project 12/3-P1 – Support for Integrated Analysis and Development of Framework Policies for Greenhouse Gas Mitigation"** **And** **"Project 12/3-P2 – Support for the Deployment of Renewable Energy and Energy-efficient Technologies in Developing Countries"**

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Evaluation Office of UNEP **October 2016**

Table 1: Project Identification Table for the Project

UNEP PIMS ID:	00617	**IMIS number:**	3873
Sub-programme:	1. Climate Change	**Expected Accomplishment(s):**	Accomplishments 1 b and 1c of the UNEP sub-programme of climate change
UNEP approval date:		**PoW Output(s):**	POW 2010-11
Expected Start Date:	November 2010	**Actual start date:**	August 2011
Planned completion date:	October 2013	**Actual completion date:**	December 2016
Planned project budget at approval:	7.490.000 US$	**Total expenditures until 2014** **Total estimated expenditure until 2015**	3.838.413 US$; 5.316.412 US$
Planned Environment Fund (EF) allocation:	600.000 US$	**Actual EF expenditures reported as of [date]:**	0 US$
Planned Extra-budgetary financing (XBF):	0 US$	**Actual XBF expenditures reported as of [date]:**	0 US$
XBF secured:	-	**Leveraged financing:**	-
First Disbursement:	12 December 2010	**Date of financial closure:**	-
No. of revisions:	-	**Date of last revision:**	-
Date of last Steering Committee meeting:	19 August 2015		-
Mid-term review/ evaluation (planned date):	-	**Mid-term review/ evaluation (actual date):**	-

INHALT

List of tables, figures & diagrams

List of acronyms & abbreviations

COP	Conference of the Parties
DANIDA	Danish National Development Agency
DTIE	Division of Technology, Industry and Economics
DTU	Danish Technical University
EF	Environment Fund
ERC	Energy Research Institute, University of South Africa, Cape Town
EST	Environmentally Sound Technologies
F I R M	Facilitating Implementation and Readiness for Mitigation
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit, engl. German Corporation for International Development
GHG	Greenhouse Gas(es)
INECC	Instituto Nacional de Ecología y Cambio Climático, engl. National Insitute of Ecology and Climate Change
INDC	Intended Nationally Determined Contributions
LCDS	Low Carbon Development Strategy
LECB	Low Emission Capacity Building
MDG	Millennium Development Goals
Mio	Million
MRV	Measuring, Reporting and Verification
NAMA	Nationally Appropriate Mitigation Action
NDG	National Development Goal
PCA	Project Cooperation Agreement
PoW	Programme of Work
Prodoc	Project Document
SD	Sustainable Development
SEAN CC	Southeast Asia Knowledge Network of Climate Change Offices
TNA	Technology Needs Assessment
TOC	Theory of Change
UCT	Energy Research Centre of the University of Cape Town
UNEP	United Nations Environment Programme
URC	UNEP Risoe Centre on Energy, Climate and Sustainable Development
UDP	UNEP DTU Partnership
Umoja	UNEP Financial Data System

XBF	Extra budgetary financing

EXECUTIVE SUMMARY

i. This case study of the Facilitating Implementation and Readiness for Mitigation (FIRM) project is part of a larger evaluation effort by the UNEP Evaluation Office of two umbrella projects (12/3-P1 and 12/3-P2) of the Division of Technology, Industry and Economics (DTIE) Energy, Climate, and Technology Branch. The purpose of the assessment of FIRM is to measure results to date (accountability), and to generate lessons and recommendations for future projects (learning).

ii. The findings of the case study are based on desk reviews, as well as telephone and in-person interviews. Key informant interviews were undertaken with UNEP staff in Paris and UDP staff in Copenhagen, by phone and email exchange with the UNEP and UDP staff and the Vietnamese counterpart. The desk review included a project design assessment, a reconstructed Theory of Change analysis, the review of project documentation. This process stretched from July 2015 to October 2016.

iii. FIRM is part of the fast-track climate funding that was announced by the United Nations Environment Programme (UNEP) and the Government of Denmark at the 16th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Cancun, Mexico, in December 2010.

iv. The host institutions of FIRM are UNEP´s DTIE and the UNEP Risoe Centre on Energy, Climate and Sustainable Development (later on named UDP) as part of the Technical University of Denmark (DTU). FIRM was originally designed to be implemented over a period of three years until the end of 2013 with an indicative budget of 7,332 Mio US$ at project approval, with Denmark as the only financier through the Danish National Development Agency (DANIDA).

v. The idea presented in the project design was to offer each of the 6 to 8 participating countries a complete package of support. From the package each country could choose those components that best supported their efforts towards the use of cleaner technologies and would overcome barriers that prevented their priority Nationally Appropriate Mitigation Actions (NAMAs) from getting started.

vi. FIRM cooperated with the Governments of Costa Rica, Ethiopia, Ghana, Indonesia, Morocco, Senegal and Viet Nam, by defining appropriate low-carbon development strategies and developing pilot technology-based mitigation activities that pair with the concept of NAMAs. The approach adopted for Mexico and South Africa was different and geared towards preparing robust national baseline emission projections and the identification of areas of work that could be used to transfer knowledge to the other participating developing countries.

vii. The project has been extended three times. In view of the delays of project progress and pursuant of the Project Cooperation Agreement (PCA) of 20 September 2011, UNEP and DTU made a first amendment on 31 December 2013 that addressed issues on finances and project content. On 31 December 2014, the first PCA expired and DANIDA granted an extension of the donor agreement until 31 December 2015. A new PCA on the basis of the cooperation between FIRM and a related UNEP project, Southeast Asia Knowledge Network of Climate Change Offices (SEAN CC), was set up. By the end of 2015, DANIDA approved another extension until December 2016 to finalize the implementation of project activities and associated reporting requirements.

viii. FIRM has supported national mitigation frameworks and NAMA priorities with all participating countries, though at a much slower pace than expected. Country-specific NAMAs were

developed in many different sectors, for example Housing, Waste, Energy Efficiency of Capacitor Banks, Energy Efficiency Technology in Steel Industry, as well as NAMAs in Agriculture/Forestry, Transport, Solar Photovoltaic, Biogas and Wind Energy. In each country, two NAMAs were elaborated (except for Costa Rica where one NAMA was elaborated) and all countries developed Low Carbon Development Strategies Components (LCDS), except for Costa Rica which developed two LCDS. Work in all countries is completed, except for Senegal where activities to prepare LCDS as well as NAMAs are still on-going. The cooperation with Ethiopia was suspended in mutual understanding due to different opinions on the quality of NAMAs and disputes on records of payment. In Mexico and South Africa, reports on national baseline emission projections were elaborated.

ix. The FIRM project also produced a series of guidelines and reports, convened stakeholders in country, regional and international workshops and COP side events, although the final workshop is still due to be delivered in the first half of 2016. As part of new INDC-related activities supported in 2015, a country Intended Nationally Determined Contributions (INDC) report for political consideration within Senegal was submitted to the UNFCCC within the agreed timeframe. As part of the FIRM SEAN-CC collaboration, another product was a report on technical backstopping to the preparation of INDC in Indonesia. In the Philippines, a Workshop on Measuring, Reporting and Verification (MRV) took place, with the MRV Guideline for Mitigation Action still on-going.

x. Spending was below planned expenditures at all times. The findings imply that a potentially important factor contributing to the sluggish project progress is the fact that the logical framework was not specified in any significant detail, and also was not adapted throughout the different project extensions and amendments during the course of the project. This resulted in a lack of formal project planning and might have hampered timely implementation. Another important factor was the slow pace of progress at country level, which was in most cases tied to a lack of staff to act as project counterpart and complex country-level coordination arrangements. Compounding this, the very concept of NAMAs over the 2011-2013 period was being framed at the international level and countries were careful in the decisions they took concerning the design of their NAMA documents.

xi. The extent to which the intervention´s objectives were achieved is difficult to assess in this project, not only because of the lack of a logical planning framework and the associated indicator system, but also because the documentation on implementation progress often does not adequately reflect the changes in Project Design that were caused by amendments of the original and the new FIRM/SEAN CC (PCAs). The project is strong in producing technical guidelines related to MRV, NAMA and LDCS, but displays weaknesses concerning the level of detail in documenting project progress, the project's achievements and the barriers that the FIRM project team encountered in the developing countries in the phase of implementation. In the view of the evaluators, annual reports are a good way to express those findings, but should have been richer in country-level detail and the reporting discipline should be kept up until the end of the project. The project team notes that their reporting was in full compliance with UNEP requirements at all times, and in some cases goes beyond the minimum requirements. This might highlight more general room for improvement in UNEP's M&E schemes – the current required level of reporting does not seem to allow for meaningful evaluation and potentially also not for stringent monitoring-based management.

xii. The overall project rating is moderately satisfactory. The FIRM project has its strengths in the technical support provided to developing countries and the capacity building of its stakeholders, but shows weaknesses in the project steering and management. Especially the factors affecting performance show a wide variance from highly satisfactory performance in country ownership and driven-ness to moderately satisfactory performance in financial

planning and management as well as unsatisfactory performance in Monitoring and Evaluation.

xiii. The project illustrates that competing with other multilateral initiatives in climate mitigation can impede project progress, just like translating political guidance from the UNFCCC into country-driven mechanisms cannot be accomplished within three years. Countries themselves need to be setting the pace of such processes although a project like FIRM can probably provide orientation and accelerate the process by supporting the country needs and building capacity. Other lessons learned refer to the fact that the project has not set up a consistent Monitoring and Evaluation System (M&E) as a project management tool. The experiences gained during the project cycle might be helpful for other multilateral approaches in climate mitigation.

xiv. It is recommended that the project sets up and follows up on an internal M&E system and process and that in the future projects pay more attention to planning and documenting their achievements. This is not just for the sake of evaluation but also for internal learning and for being able to demonstrate the results of one's own work. Secondly, a more detailed project documentation that utilizes and updates the original logframe (or alternative planning tool) and risk assessment frameworks would produce improved planning documentation and help to deliver the expected results in due time and eventually reduce the risk of getting "derailed". Finally, it is recommended that the final workshop in 2016 includes additional developing countries to share the experiences of FIRM on developing LCDS and NAMAs.

1 INTRODUCTION

1.1 Background and purpose of FIRM

1. For the Copenhagen Conference of Parties (COP) in 2009 a crucial turn-around in the international climate negotiations was expected as a successor of the Kyoto Protocol. While that expectation did not come true, two major concepts were agreed upon there: the concept of NAMAs – Nationally Appropriate Mitigation Actions – and the Fast Start Financing – a funding envelope that bridges the time before the Green Climate Fund, another mechanism agreed upon at the UNFCCC, would come into operation. The FIRM project in a way is a merger of the two: it used Fast Start Financing, in this case from Denmark who also had the Presidency of COP15, to help flesh out what the concept of NAMAs could look like.

2. UNEP's FIRM project aims therefore at supporting international efforts to reduce greenhouse gases (GHG) by encouraging developing countries to adopt low carbon energy development paths to economic growth instead of following the "business-as-usual fossil energy trajectory"[1]. FIRM assists a small number of developing countries in integrating low-carbon options with sustainable development by defining appropriate low-carbon growth plans and implementing pilot technology-based mitigation activities that pair with the concept of NAMAs.

1.2 This case study

3. This case study forms part of a larger evaluation effort by the UNEP Evaluation Office of two umbrella projects (12/3-P1 and 12/3-P2) of the DTIE Energy Branch. The purpose of the assessment of FIRM is to measure results to date (accountability), and to generate lessons and recommendations for future projects (learning).

4. The case study is limited by the access of the evaluators to internal documents. Key informant interviews were undertaken with UNEP and UDP staff in Paris and Copenhagen in July, September and October 2015 and April 2016. After a closer desk review of the FIRM documents provided in July 2015, it became obvious to the evaluators that substantial information for an in-depth evaluation was lacking and they informed the FIRM staff accordingly in September 2015. In view of the preparations for the Paris COP21 the evaluators were put off to the time after the conference and the evaluation came to a halt. After the COP, in December 2015 and in January 2016, the evaluators took up again their efforts to get hold of key documents and retrieved some of the documents they had previously asked for. An annual report for the reporting period 2014 was provided to the evaluators in January 2016. In April 2016, upon receiving the first draft evaluation report, the FIRM staff responded to the queries and requests for clarification from the evaluators. After the evaluators had presented their initial findings on April 21 at DTIE in Paris, further information was provided on 29 April 2016. The new information was incorporated by the evaluators into the final version. However, until today, information is incomplete: since the Business Intelligence module of the UNEP financial data system Umoja is not working properly, expenditure statements for 2015 cannot be presented. Therefore the financial assessment is facing serious restraints and can touch on some key questions only partially.

[1] POW, p. 2

5. Additionally, the activities that FIRM and SEAN CC carried out together started in 2014 when a joint regional NAMA workshop was organized by UNEP, together with three other UNEP projects in the region, and which brought together 63 participants from 18 countries. In 2015, after the formulation of the new joint PCA, the collaboration continued through INDC-related activities in Indonesia and support to Measuring, Reporting and Verification in Philippines.

2 FACILITATING IMPLEMENTATION AND READINESS FOR MITIGATION (FIRM)

6. Endorsing the Copenhagen Accord, many developing countries expressed their strong interest in starting mitigation projects in the course of the year 2010. Though many of them had already taken first steps to follow a low carbon development model, they realized that there is a further need for technical and financial support from developed countries to scale up and systematize their efforts[2].

7. The 16th session of the COP (COP 16) in Cancun from 29 November to 10 December 2010 reaffirmed again the shift towards low carbon energy development paths, by realizing "addressing climate change requires a paradigm shift towards building a low-carbon society that offers substantial opportunities and ensures continued high growth and sustainable development, based on innovative technologies and more sustainable production and consumption and lifestyles, while ensuring a just transition of the workforce that creates decent work and quality jobs"[3].

8. FIRM was officially announced by UNEP and the Government of Denmark to the UNFCCC at COP16. To address the commitment by donors to meet developing countries´ needs for support in implementing cost-effective, nationally appropriate mitigation measures, the FIRM project was designed for national "quick start" mitigation actions to assist developing countries in systematizing and scaling up their efforts towards sustainable development with a focus laid on the sectors of energy efficiency and renewable energy by piloting NAMAs in these two sectors.

9. By responding to the national development priorities of developing countries, the FIRM project aims to help participating countries by providing technical advice and institutional capacity to national energy and environment agencies (and their stakeholders). Although at that point in time, and even today, a formal definition for NAMAs does not exist, FIRM supports developing countries in designing and implementing specific national mitigation activities within a NAMA framework[4].

2.1 Target geography, target groups

10. The implementing institutions of the FIRM project, UNEP's DTIE and the UNEP Risoe Centre on Energy, Climate and Sustainable Development (URC) as part of the Technical University of Denmark (DTU), later renamed UNEP DTU Partnership (UDP), share a long history of collaboration on energy development and issues of climate change. The target group was 6 to 8 developing countries from Africa, Asia and Latin America and the Caribbean that had previously worked together with DTIE, and could therefore build on existing relationships with governments

[2] Prodoc, p.5.

[3] REPORT OF THE CONFERENCE OF THE PARTIES ON ITS SIXTEENTH SESSION, Cancun, 2010, § 10

[4] Project Document (2), p.8

as well as national and regional partners. The proposed list of potential countries included the 13 countries[5] is written down in Table 1.

Table 1: Proposed list of Countries

Africa	Asia	Latin America
Kenya	Viet Nam	Peru
Ethiopia	Cambodia	Nicaragua
Morocco	Indonesia	Costa Rica
Senegal		Mexico
Mali		
South Africa		

11. The host institutions, UNEP DTIE and UDP, entered negotiations with these 13 countries to participate in FIRM. Although the indicative budget was original only calculated on national programmes for 7 developing countries, ultimately 9 countries were included: in Africa, Ethiopia, Morocco, Senegal and South Africa; in Asia, Viet Nam and Indonesia as well as Costa Rica and Mexico in Latin America (Figure 1). Kenya, Mali and Cambodia did not participate in the project, neither did any country in South America or the Caribbean. The Philippines component had been previously designed under the SEAN CC project. The inclusion of SEAN CC activities into the FIRM PCA for administrative reasons allowed for the inclusion of the Philippines as 10th target country from 2014 onwards.

Figure 1: FIRM participating countries[6]

2.2 Objectives and components, project partners

12. The FIRM project objective is identical to the expected UNEP accomplishments 1-b and 1-c of its sub-programme Climate Change of the POW 2009-2010:

- Accomplishment 1b: "Countries make sound policy, technology and investment choices that lead to a reduction in greenhouse gas emissions and potential co-benefits, with a focus on clean and renewable energy sources, energy efficiency and energy conservation (Outputs A and B)".

[5] Prodoc (2), p. 9 and POW, p.8

[6] Djaheezah Subratty: Integrating Low Carbon Options with Sustainable Development, Country Interaction Workshop, 09.04.2014, p.4

- Accomplishment 1c: "Improved technologies are deployed and obsolescent technologies phased out, thorough financing from private and public sources including the Clean Development Mechanism and the Joint implementation Mechanism of the Kyoto Protocol"

13. The defined means of verification of this UNEP Programme of Work 2009-2010 objective refers to the "actual number of countries implementing energy policies and measures with explicit renewable energy or energy efficiency components that result from UNEP projects". According to the FIRM project proposal document[7] the target shall be increased from the original 6-8 developing countries to a target number of 16 at the end of 3 years. The outcomes and outputs of the 3 components are stated in the logical framework of the Prodoc and are summarized in Table 2[8]:

Table 2: Outputs and outcomes of the project

Components	FIRM Project Output	FIRM Project Outcome
component A:	National sectoral low carbon development frameworks that contain a list of priority NAMAs, including for each an assessment of policy and finance requirements, carbon finance possibilities, technology specifications, institutional strengthening needs, and considerations for MRV under the UNFCCC.	Priority low carbon development options are identified for FIRM countries
component B:	NAMAs or country specific priority mitigation programmes e.g. on renewable energy development or energy efficiency and conservation.	FIRM countries benefit from increased national capacities for implementing low-carbon projects; improved national mechanisms, policies and instruments for deploying low-carbon technologies; and increased awareness of the national potential for low-carbon development
component C:	Increased South-South and North-South cooperation on climate change mitigation, technology transfer, and NAMA implementation Enhanced or expanded regional network for knowledge and experience sharing (e.g., in Africa) FIRM success stories and lessons learnt that build support for multilateral approaches to climate mitigation.	Developing countries beyond those participating in the FIRM project benefit from faster and more cost effective implementation of mitigation efforts

14. FIRM was designed to deliver an "adjustable package for each country focusing on either renewable energy or energy efficiency mitigation opportunities"[9]. The idea that was presented in the project design was to offer each participating country a complete package of support amongst which each country could choose those components that fostered their efforts towards the implementation of cleaner technologies and overcame barriers that prevented their priority

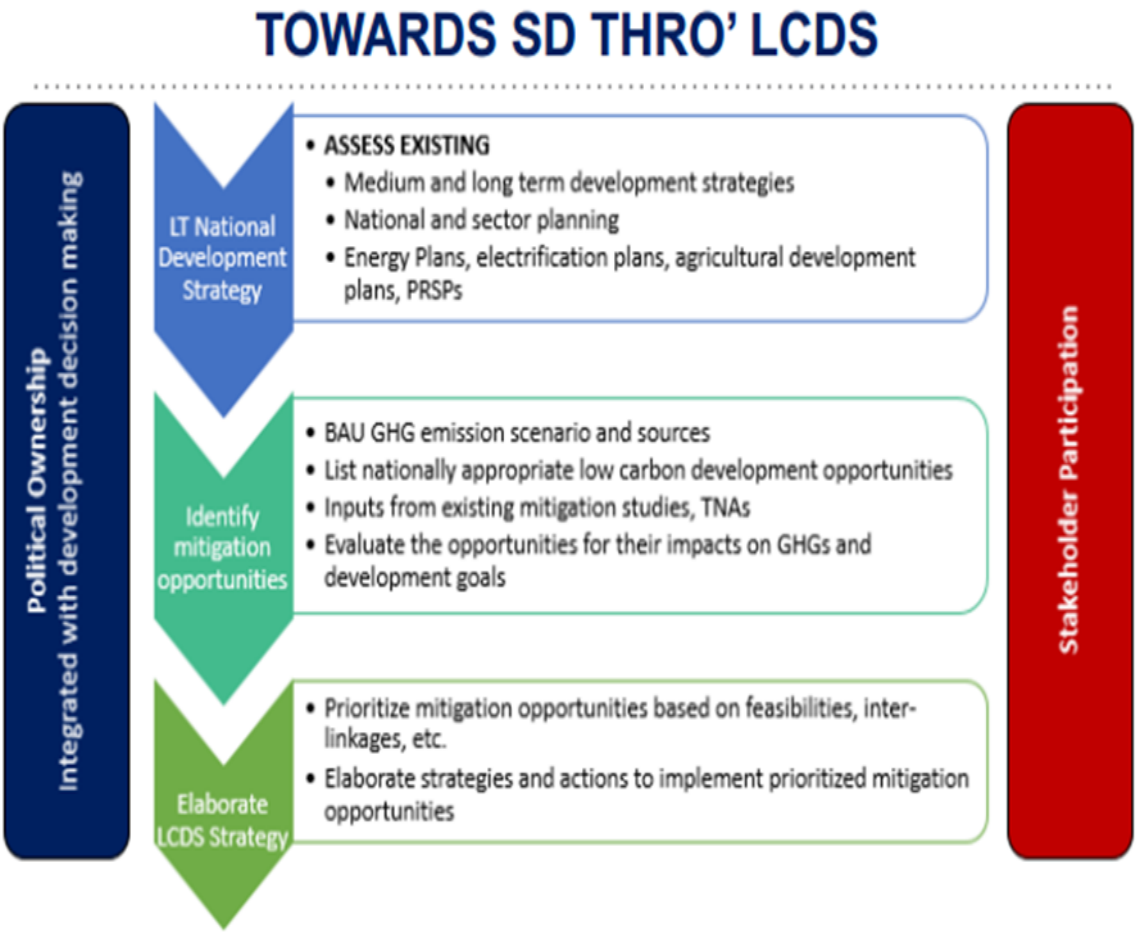
[7] Funding proposal submitted to DANIDA, p 9.

[8] Prodoc (2), p. 20

[9] Prodoc , p. 9

NAMAs from getting started. The path from the assessment of national development strategies through the identification of mitigation opportunities to the elaboration of low-carbon development strategies is modelled in Figure 2.

Figure 2: From sustainable development (SD) to low-carbon development[10]



Abbreviations: SD: Sustainable Development, thro´: through

2.3 Implementation arrangements and planned milestones/key dates in project design and implementation

15. The implementing agency of the project is the UNEP's DTIE in cooperation with UNEP regional offices and URC/UDP. FIRM was designed to be implemented over a period of three years from November 2010 to October 2013 with an indicative budget of 7.332 Mio. US$ at project approval with Denmark as the only financier.

16. FIRM is managed through a small team at UNEP, complemented by a team at the URC/UDP in Copenhagen. The Prodoc refers to the structure of a planned staffing table that includes a Programme Manager on part-time basis, two full-time Technical Officers, one with a focus on technology/policy and the other on finances in UNEP. During the implementation phase funding was used for UDP-Experts to manage the work of each country (called country coordinators), and the overall project managed by the Project Manager.

[10] Djaheezah Subratty: Integrating Low Carbon Options with Sustainable Development, Country Interaction Workshop, 09.04.2014, p.6.

17. The responsibility for FIRM rested with the Project Manager, who engaged with relevant UNEP staff in the Energy Branch of DTIE in Paris and in UNEP Regional Offices and also coordinated with UDP Project Manager. In addition, some specific technical and analytical input for the project was expected to be provided by the Danish Energy Agency as an in-kind contribution from the Danish Government.

18. The general oversight of FIRM was held by a Project Management Committee (PMC) that consisted of the Head of the Environment, Energy and Climate Division of DANIDA and the Director of UNEP DTIE, meeting every six months to "determine the overall direction of the project, review progress based on results based reporting methods and determine whether it is satisfactory, and take remedial decisions if necessary"[11].

19. Country work was expected to follow the scheme described in Table 3.The two year time period for country work in each country envisioned that the first six months were dedicated to the organization of the implementation arrangements and the national inception workshop. During the second half of the year, work on the development of the LCD Framework should start and at the same time the NAMA development should be started. For the second year, it was planned to develop the LCD Framework, to prepare and finalize the implentation plans for two priority NAMAs, carry out a national workshop, and to identify and implement the barriers to the two priority NAMAs. The project was expected to finalize its work in a country with a national workshop where project outcomes, political endorsement and final report should be presented.

Table 3: Timetable of FIRM in-country activities

Activities and deliverables	Year	2012		2013	
	Months	1 - 6	7 - 12	1 - 6	6 - 12
Finalizing implementation arrangements and organizing National Inception Workshop					
Low Carbon Development (LCD) Framework					
Development of LCD Framework.					
National workshop to share LCD Framework and finalize the outcome.					
NAMA development and demonstration					
Identification and prioritization of NAMAs					
Preparation and finalization of implementation plans for two¤ priority NAMAs and National workshop					
Identification and implementation of of non-financial barriers to create enabling framework two priority NAMA.					
Project Finalization: National Workshop to present the project outcomes, Political endorsement and Final report.					

20. In UDP, each country was managed by a country coordinator, a full time UDP staff. In the seven countries where LCDS and NAMA activities were undertaken, the implementation of FIRM was facilitated through country teams that were composed of a national project coordinator, (as counterpart of the respective UDP country coordinator), and working groups that consisted of experts from relevant government ministries, academia and private sector. It was also envisaged

[11] Prodoc, p. 10.

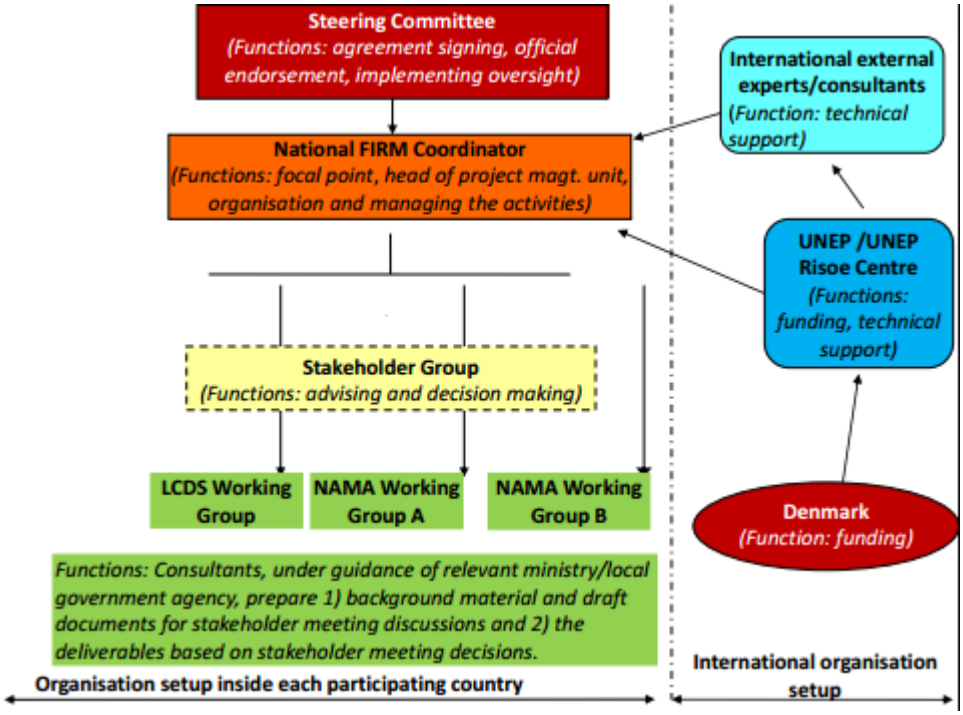
that international expertise - where required- would be sourced from UNEP experts (technical and finance) from DTIE and/or each region which were part of FIRM staffing at UNEP. In UNEP, the project manager role was undertaken by the Head of the Policy Unit. Furthermore, in-kind technical expertise was provided by Environment funded staff of the Energy, Climate, and Technology Branch (Branch Chief, Head of Policy Unit and two Programme Officers). In-kind finance expertise was provided (at no cost to FIRM) by staff from the Finance Unit of the Energy, Climate and Technology Branch and from the UNEP Regional Office for Asia and the Pacific.

21. Each country's progress was managed by a separate country project coordination mechanism in accordance with the requirements of each country. This national coordination mechanism included the following bodies.

- A National Steering Committee with stakeholders from relevant ministries, private sector and/or civil society set up to provide political acceptance to the NAMA process
- A National Committee of representatives of ministries and science to accompany project implementation
- A National Coordinator acting as focal point responsible for coordination and communication
- Working groups of national experts from academia, finance, ministries, private and public sectors, civil society and development institutions to introduce and accompany the technical and analytical process.

22. Figure 3 illustrates the institutional set-up inside each participating country and the international institutional setup.

Figure 3: Institutional set up[12]



[12] Zhu/Sharma: FIRM project overview and update, Viet Nam 2012

23. Key dates in forms of milestones related to activities are not formulated in the project design. Generally, the Logical Framework appears not to be thoroughly worked out. The content of the logical framework in chapter 7 of the Prodoc does not match fully with the content of the chapter of project components. Although indicators are elaborated at objective, outcome and output levels, baselines and targets for indicators are only formulated at outcome level.

2.4 Project financing

24. The Donor Agreement between DANIDA and UNEP settles that Denmark contributes a total of DKK 40.000.000 to UNEP over the whole project period and identifies the state of Denmark as a single contributor. This contribution is equivalent to the total of the indicative cumulative budget and amounts to a total of 7.9 Mio US$ in the Project Document[13].

25. Due to delays in the beginning of the project, the PCA between UNEP and the DTU was signed on 20 September 2011, commencing on 5 January 2012 and expiring on 1 July 2014. The Project Document in the Annex of the PCA contains additionally a risk analysis and a budget with an estimated total cost of the FIRM project of 7.94 Mio. US$, which comprises 600.000 US$ in-kind contribution. The Prodoc was accompanied by an Excel-based budget broken down by main budget items. The following table shows that the only financier of the project remains the Government of Denmark through DANIDA.

Table 4: Calculation of project costs under Prodoc

Project Commencing: (01/2010)	Project Completed: (12/2013)	Total duration in Months: 36

Cost to:	US$ 2010-11	US post 2012-13	**US$ Total**
Environment Fund	0	0	0
Other Contribution, Denmark[14]	**2.236.000**	**5.104.000**	**7.340.000**
- Of which Programme Support Cost (7%[15])	146.000	334.000	480.000
Subtotal			
In-kind Contribution[2]	200.000	400.000	600.000
Unsecured	**0**	**0**	**0**
Total	**2.436.000**	**5.504.000**	**7.940.000**

26. The donor agreement indicates a total budget volume of 40 Mio DKK. At the planning stage, this sum was equivalent to 7.94 Mio. US$. In view of the delays of project progress and pursuant of the PCA of 20 September 2011, UNEP and DTU made a first amendment on 31 December 2013 that addresses issues on finances and project content.

27. Due to fluctuations in the exchange rates at the project start, this rate was down to 7.332 Mio. US$ upon signature and further down to 6.898.659 US$ after both disbursements were made. Out of this overall budget the sum of 4.437 Mio.US$ was the total UDP budget. The

[13] Prodoc, p. 19

[14] Dollar estimates of the Danish Government contribution are based on an exchange rate of 1.00 US$ = 5.70 DKr

[15] Percentage of PSC and in-kind contribution to be determined.

breakdown of the financial planning of the Agreement between DTU and UNEP displays the following details, in the following table:

Table 5: FIRM Budget as laid out in the first PCA

Facilitating Implementation and Readiness for Mitigation (FIRM)					29.05.2013
Project No: CPL 5070-3B70-1111		2011	2012	2013	Total
URC		US$	US$	US$	US $
10 Project personnel component					
1100	**Project Personnel Title Grade w/m**				
1101	URC tech/policy experts	70.692	236.176	193.132	500.000
1199	**Total**	70.692	236.176	193.132	500.000
1200	**Consultants**				
1201	National programmes TA - URC	-	61.699	788.301	850.000
1202	RSA and Mexico TA - URC	-	-	250.000	250.000
1299	**Total**	-	61.699	1.038.301	1.100.000
1600	**Travel on official business**				
1601	Travel on official business - URC	70.224	15.426	94.350	180.000
1699	**Total**	70.224	15.426	94.350	180.000
1999	**Component Total**	140.916	313.301	1.325.783	1.780.000
20 Subcontract component					
2100	**Sub-contracts (MOUs/LOAs for cooperating agencies)**				
2101	7 Country National Programmes	-	227.755	1.904.245	2.132.000
2199	**Total**	-	227.755	1.904.245	2.132.000
2200	**Sub-contracts (MOUs/LOAs for supporting agencies)**				
2201	SSFA	-	-	-	-
2299	**Total**	-	-	-	-
2300	**Sub-contracts (for commercial purposes)**				
2301	Contract				-
2399	**Total**	-	-	-	-
2999	**Component total**	-	227.755	1.904.245	2.132.000
30 Training component					
3300	**Meetings/conferences (Title)**				
3302	Country team exchange meetings	-	-	350.000	350.000
3399	**Total**	-	-	350.000	350.000
3999	**Component Total**	-	-	350.000	350.000
50 Miscellaneous component					
5200	**Reporting cost**				
5201	Communication and outreach	-	6.265	81.735	88.000
5202	Guidelines, publications, info materials	-	-	87.000	87.000
5299	**Total**	-	6.265	168.735	175.000
5300	**Sundry**				
5301	Communications	-	-	-	-
5399	**Total**	-	-	-	-

5500	**Monitoring and Evaluation ***					
	5501	Evaluation Consultant (fees, travel & DSA)	-	-	-	-
	5599	**Total**	-	-	-	-
5999	**Component Total**		-	6.265	168.735	175.000
Grand Total URC			**140.916**	**547.321**	**3.748.763**	**4.437.000**
UNEP						
10	**Project personnel component**					
1100	**Project Personnel Title Grade w/m**					
	1181	UNEP project coordinator P3	-	-	350.000	350.000
	1199	**Total**	-	-	350.000	350.000
1200	**Consultants**					
	1281	NAMA support and TA	-	1.242	430.593	431.835
	1299	**Total**	-	1.242	430.593	431.835
1300	**Admin Support**					
	1301	Programme Assistant A. Lees	8.078	(8.158)		(81)
	1381	Programme Assistant L. Chaljub	-	105.515	150.721	256.236
	1399	**Total**	8.078	97.357	150.721	256.155
1600	**Travel on official business**					
	1681	Travel on official business	-	29.537	60.522	90.059
	1699	**Total**	-	29.537	60.522	90.059
1999	**Component Total**		8.078	128.136	991.836	1.128.049
20	**Subcontract component**					
2100	**Sub-contracts (MOUs/LOAs for cooperating agencies)**					
	2181	RSA & Mexico in country funds	-	65.000	335.000	400.000
	2199	**Total**	-	65.000	335.000	400.000
2999	**Component total**		-	65.000	335.000	400.000
30	**Training component**					
3300	**Meetings/conferences (Title)**					
	3201	Country exchange meetings	88			88
	3381	Regional exchange	-	-	350.000	350.000
	3399	**Total**	88	-	350.000	350.088
3999	**Component Total**		88	-	350.000	350.088
50	**Miscellaneous component**					
5200	**Reporting cost**					
	5281	Communication and outreach	-	22	79.335	79.357
	5282	Guidelines, publications, info materials	-	-	2.851	2.851
	5299	**Total**	-	22	82.186	82.208
5500	**Monitoring and Evaluation ***					
	5501	Evaluation Consultant (fees, travel & DSA)	-	-	50.000	50.000
	5599	**Total**	-	-	50.000	50.000
5999	**Component Total**		-	22	132.186	132.208
Grand Total UNEP			**8.165**	**193.158**	**1.809.021**	**2.010.345**

28. Conforming with the project budget and contingent on UNEP´s receipt of funds from the donor; UNEP makes available to its Project Partner, DTU, funds up to the maximum amount of 4.437.000 US$ with 3 instalments being agreed upon. Of this 2.132 Mio. US$ were budgeted for funds for countries. The remaining budget covered technical support from UDP, travel and organization of meetings. In 2013, the budget was adjusted down to address the currency fluctuations and the available funds at the end of 2013 were equivalent to 4.213 Mio. US$. Out of this amount 2.132 Mio. US$ to countries were committed as agreements were signed with them.

29. The following **Error! Reference source not found.** shows the consolidated expenses. In addition to the PCA expenditures, they also include other expenditures such as SSFAs for Mexico and South Africa, travel for meeting participants from Africa FIRM countries to the pre-COP21 Africa INDC workshop, presenting the FIRM renewable energy NAMAs and GHG modelling work to the renewable energy community at the South Africa International Renewable Energy Conference (SAIREC).

1. Two workshops were planned for 2015, but couldn't be held due to busy climate change calendar of the countries in 2015. As the final FIRM experience-sharing workshop did not take place as scheduled, the expenditures under activity 4 dropped below the indicative budget lines, too. The same applies to the development of the MRV Guideline and the final report on the MRV framework in the Philippines. Both activities were postponed which leads to a positive variance. Hence, the estimated total expenditure until 2015 amounts to 5.316.412 US$. This is only an estimate due to the inability of budget staff to obtain actual business intelligence from Umoja. Therefore, at the end of the year 2015 the excess of income over expenditures amounts to more than 1 Mio. US$.

2. The planned and actual financing is displayed in the following separate excel table:

Table 6: Project budget of the year 2015

	Cost Category	Notes	Quantity	Unit	Unit Cost USD	Cost in 2015 (USD)	Total Usd	Expenditures 2015 (USD)					
								from 21.04.2015-30.06.2015	01.07.15-31.08.15	01.09.15-31.10.15	01.10.15-30.11.15		Balance
	Activity 1 - Develop two priority NAMAs and support to strengthening national mitigation framework												
	Personnel cost												
	Senior researcher		136	person day	1.035	140.760	140.760	9.912	94.787	33.767	14.710		-12.415
	Research Assistant		41	person day	869	35.629	35.629		25.743				9.886
	Component sub-total					176.389	176.389	9.912	120.529	33.767	14.710	0	-2.529
	Consultants												
	Consultants (UN fee table D level)	One consultant to support UDP with liaison	19,5	person day	690	13.455	13.455						13.455
32	Consultants (Costa Rica)	In Costa Rica - Two consultants, each to support country level activities in country on the LCDS and NAMAs respectively	1	Lump sum		58.171	58.171		50.007				8.164
33	Consultants (Ghana)	In Ghana - Two consultants, each to support country level activities in country on the LCDS and NAMAs respectively	1	Lump sum		120.000	120.000		60.008	60.007			-15
34	Consultants (Senegal)	In Senegal - Two consultants, each to support country level activities in country on the LCDS and NAMAs respectively	1	Lump sum		165.000	165.000						165.000
35	Consultants (Ethiopia)	In Ethiopia - Two consultants, each to support country level activities in country on the LCDS and NAMAs respectively	1	Lump sum		255.000	255.000			39.757			215.243
36	Consultants (Morocco)	In Morocco - Two consultants, each to support country level activities in country on the LCDS and NAMAs respectively	1	Lump sum		190.000	190.000	37.881	109.815	-60.007	40.836		61.476
37	Consultants (Vietnam)	In Vietnam - Two consultants, each to support country level activities in country on the LCDS and NAMAs respectively	1	Lump sum		60.000	60.000						60.000

38	Consultants (Indonesia)	In Indonesia - Two consultants, each to support country level activities in country on the LCDS and NAMAs respectively	1	Lump sum		120.000	120.000			60.007			59.993
	Component sub-total					981.626	981.626	37.881	219.830	99.764	40.836	0	583.315
	Travel cost												
	Travel	12 missions of 6 days to FIRM countries: Flight: 1500 USD, Per diem = 83 USD*6=498 USD Hotel 190 USD*6 = 1140 USD, Total per mission:3138 Usd	12	6 days mission	3.138	37.656	37.656				3.394		34.262
	Component sub-total					37.656	37.656	0	0	0	3.394	0	34.262
	Activity 1 - total					**1.195.671**	**1.195.671**	**47.793**	**340.360**	**133.531**	**58.939**	**0**	615.048
	Activity 2 - Technical Support to Mexico and South Africa on GHG BAU scenario												
	Personnel cost												
	Senior researcher		22	person day	1.035	22.770	22.770	165		872	12.410		9.322
	Component sub-total					22.770	22.770	165	0	872	12.410	0	9.322
	Travel cost												0
	Travel	2 missions of 6 days to FIRM countries: Flight: 2011USD, Per diem = 83 USD*6=498 USD Hotel 190 USD*6 = 1140 USD, Total per mission:3649 Usd	2	6 days mission	3.649	7.298	7.298		1.564				5.734
	Component sub-total					7.298	7.298	0	1.564	0	0	0	5.734
	Activity 2- total					**30.068**	**30.068**	**165**	**1.564**	**872**	**12.410**	**0**	15.056
	Activity 3 - Support to Senegal and Indonesia for developing INDCs for submission to the UNFCCC process												
	Personnel cost												
	Senior researcher		30.5	person day	1.035	31.500	31.500	2.018		1.575	1.031		26.875
	Component sub-total					31.500	31.500	2.018	0	1.575	1.031	0	26.875
	Consultant costs												
	Consultants (UN fee table D level)	One consultant for country activity for Indonesia (SEAN-CC)	76	person day	690	52.440	52.440						52.440
	Consultant	Three consultants for INDC development in Senegal	1	Lump sum	150.000	150.000	150.000		45.007				104.993
	Component sub-total					202.440	202.440	0	45.007	0	0	0	157.433
	Travel cost												
	Travel	1 missions of 6 days to FIRM countries: Flight: 1500 USD, Per diem = 83 USD*6=498 USD Hotel 190 USD*6 = 1140 USD, Total per mission:3138 Usd	1	6 days mission	3.138	3.138	3.138			2.371	2.371		-1.604
	Component sub-total					3.138	3.138	0	0	2.371	2.371	0	-1.604
	Activity 3 - total					**237.078**	**237.078**	**2.018**	**45.007**	**3.946**	**3.402**	**0**	182.703
	Activity 4 - Sharing project experiences and analytical results, including through regional and international networks												
	Personnel cost												
	Senior researcher		120	person day	1.035	124.200	124.200						124.200
	Researcher		16	person day	869	13.904	13.904						13.904
	Component sub-total					138.104	138.104	0	0	0	0	0	138.104
	Consultant costs												
	Consultant		45	person day	690	31.050	31.050						31.050
	Component sub-total					31.050	31.050	0	0	0	0	0	31.050
	Travel cost												

Travel	3 person to participate in Final workshop and 3 persion per two workshops for information dissemination: Flight: 1500 USD, Per diem = 83 USD*6=498 USD Hotel 190 USD*6 = 1140 USD, Total per mission:3138 Usd	9	6 days mission for participation in final and other dissemination workshops	3.138	28.242	28.242		3.507				24.735
Travel	1 persons each missions of 12 days forparticipation in the negatiations: Flight: 1000 USD, Per diem = 83 USD*12=996 USD Hotel 150 USD*12 = 1800 USD, Total per mission:3796 Usd	2	12 days mission for participation in negotiation sessions	3.796	7.592	7.592		2.379				5.213
Component sub-total					35.834	35.834	0	5.886	0	0	0	29.948
Publication, Printing and Publishing costs												
Layout design	6 publications	6	publications	2.000	12.000	12.000				3.590		8.410
Layout design	2 newsletters	2	newsletters	2.000	4.000	4.000						4.000
Printing, publishing	printing of 200 copies	8	copies	2.000	16.000	16.000		4.653		1.060		10.288
Component sub-total					32.000	32.000	0	4.653	0	4.649	0	22.698
Activity 4 - total					**236.988**	**236.988**	**0**	**10.539**	**0**	**4.649**	**0**	**221.800**
Activity 5 - Developing the MRV indicators for Mitigation Actions in the Philippines												
Personnel cost												
Senior researcher		19,5	person day	1.035	20.183	20.183			24.030	1.663		-5.510
Researcher		14	person day	869	12.000	12.000						12.000
Component sub-total					32.183	32.183	0	0	24.030	1.663	0	6.490
Consultant costs												
Consultant		11,3	person day	690	7.797	7.797						7.797
Component sub-total					7.797	7.797	0	0	0	0	0	7.797
Travel cost												
Travel	1 mission of 5 days to the Philippines: Flight: 1645 USD, Per diem = 83 USD*5=415 USD Hotel 190 USD*5 = 950 USD, Total per mission:3010 Usd	2	Two missions	3.010	6.020	6.020			1.228	1.889		2.903
Component sub-total					6.020	6.020	0	0	1.228	1.889	0	2.903
Publication, Printing and Publishing costs												
Layout design	1 publication	1	publications	2.000	2.000	2.000				1.406		594
Printing, publishing	printing	1	copies	2.000	2.000	2.000		1.195	344			461
Component sub-total					4.000	4.000	0	1.195	344	1.406	0	1.055
Activity 5 - total					**50.000**	**50.000**	**0**	**1.195**	**25.602**	**4.958**	**0**	**18.244**
Total					**1.749.805**	**1.749.805**	**49.978**	**398.665**	**163.952**	**84.359**	**0**	**1.052.852**

30. The financial figures only allow the statement that project spending was systematically below the planned expenditures. A thorough, more detailed analysis of the finances cannot be carried out, because no coherent table of the financial status of the project in terms of expenditures by year and component throughout the whole project duration, from the first expenditures in 2010 until the end of 2015, could be presented by the financial officers as the budget figures for 2015 are not available due to Umoja. Therefore, a clean comparison of the planned budget against the actual one could not in detail be carried out and the assessment of cost-effectiveness of resource utilization is therefore not possible throughout project duration.

31. However over the whole duration of the project, the systematic observation is that the funds could not be spent. After 6 years of implementation, less than 5 of the 7 Million US$ have been utilized, while 90% of the tasks have been completed. There are a number of explanatory factors for this:

- Many countries were not prepared to design NAMAs quickly. Therefore, the funds needed to be stretched over a long period of time.
- Of the initial set of countries, some indicated interest in the beginning but political priorities changed and countries withdrew from the project (e.g. Ethiopia).
- In addition, the overall budget of 7 Million US$ divided by the overall initial set of target countries (six) would have resulted in a TA budget for the NAMA preparation of 1 Million US$ per country. It is evident that it takes more than 2 years for country governments to spend this amount of money on organizing workshops, identifying and coordinating local support around a Nationally Appropriate Mitigation Action, and coordinating local consultants writing up a NAMA implementation plan.
- Assuming that 2 NAMAs are prepared per country, financial efficiency of so much (external) funding is debatable. A potential comparison is GEF funding for INDCs. According to the GEF website, the GEF supported INDCs in 46 countries with 11.1 Million US$. Developing a NAMA over two or three years requires a certain level of readiness, i.e. the project should not start from scratch which should result in cost savings. Admittedly it is difficult to assess how much funds are exactly required to design a NAMA's.
- A potential explanatory hypotheses why so much funding has been provided might be that it might not have been clear from the very beginning if the underlying idea was to support also some of the incremental costs of the implementation of the NAMAs.

32. While the overall funding surplus attests to considerate and efficient use of resources on the side of UNEP and UDP it also raises questions with respect to the harmonization of expectations between the donor and the implementer. Consistent answers to these questions were not found during the evaluation. A clear and crisp logframe- and milestone-based project plan with quantitative targets would have provided important documentation for these questions and their assessment.

3 IMPLEMENTATION AND CHANGES IN DESIGN DURING IMPLEMENTATION

Project contents and management

33. Although FIRM was officially launched at COP 16 in Cancún in December 2010, the project formally did not start until August 2011, when UNEP and DANIDA signed the cooperation

agreement. FIRM was originally designed to run over a period of three years until the year 2013. The project was extended 3 times and is still ongoing. DTU provided the technical backstopping to the country project team in preparing the outputs. The project team was the primary lead in preparing the outputs and they were supported by national experts. UDP staff provided guidance through in-country workshops on explaining the process, the tools required, and the analysis. UDP also reviewed the outputs at various stages and advised the project team. In-country missions were used to provide reviews, assessments and further guidance on the work. This also included identifying specific expertise and information to be organized and involving them in supporting the team. The UDP team was in touch with the NAMA facility and also using the guidance coming out of the NAMA facility to help shape the outputs in the countries and encouraged all the countries to submit the NAMAs to the facility, as it was a countries decision to do so. For instance, the NAMA facility was involved in the FIRM Country Interaction workshop (Copenhagen, 2014) to provide guidance to countries on what they considered a NAMA that met their funding requirements. FIRM project management team viewed the NAMA facility as a collaborator.

34. One UDP staff was dedicated to providing continuous support to the country project team and for providing guidance. Also, where required, UDP provided sector expertise through its staff as requested by the UDP Country Coordinator. External experts were engaged where UDP internally lacked expertise. One example is the LEAP training for Senegal.

35. The project follows a country-driven approach led by designated national institutions to agree on a multilateral approach to limit GHG emissions. Therefore, the time span that developing countries need to put up pilot NAMAs or LCDS varies from country to another. The physical outputs of the project are technical documents on the elaboration of LCDSs or NAMAs, workshop reports or guidelines. The project is very strong in processing technical guidelines related to MRV, NAMA and LDCS such as the paper “Understanding the MRV framework” and the dissemination of technical knowledge, in the form of capacity building between the management, the consultants and the target group, through the country scoping missions, regional workshops and supra-regional workshops, or through counselling the process of elaboration of the NAMA/LCDS concepts and analysis or full NAMAs.

36. Within the logical framework presented in the Prodoc, 1 objective, 3 project outcomes and 3 project outputs are defined for the FIRM project. The activities are not formulated in the logical framework, they are only described in the continuous text. And not all activities are listed up, either. The activity of launching the FIRM website, for instance is only stated in the timetable of the first PCA Amendment. The activity of elaborating and publishing a FIRM flyer as an activity appears neither in the Prodocs, nor in the PCA Amendments or the annual reports. Additionally, the logframe lacks milestones that relate to activities. Baselines and targets for indicators are only formulated on outcome level.

37. In the course of the project, there is no consistent and coherent handling with the project objectives, outcomes and outputs defined in the **logframe.** The inconsistency already starts in the Project Document itself. The three project outcomes that are described from page 9-16 in the Prodoc text are both identical with the outcomes formulated in the logframe on page 20 (chapter 7). The same is applicable in terms of outputs. The formulation of the three outputs written down under Project components in chapter 3 is not identical with the formulations in the logframe in chapter 7. They differ from those into the logframe of chapter 7.

38. Additionally, there are no causal pathways from outputs to outcomes to objectives given that are convincing and foster the process of working with the project logframe towards the impacts.

39. The logical framework complies only to some extent with the international standards for logframes. It specifies no milestones for the planned activities. Baseline and target information are only given on objective level; baseline information on performance indicators has only been collected from the UNEP PoW, not adapted to project requirements and only defined on objective level.

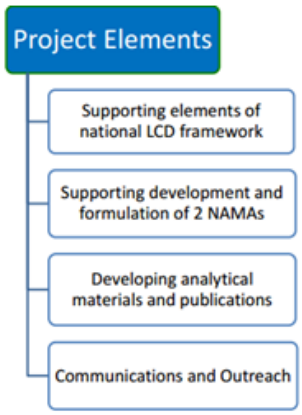
40. Furthermore, there are inconsistencies between the Prodoc and the annual reports of the years 2012 and 2014 a) in terms of expressions used and b) the content of project outputs and activities. Within the logframe, the longer term outcome or project objective is equivalent to expected accomplishments 1 b and 1c of UNEP´s sub-programme of climate change. The annual reports however, do not refer to the stated project objective, but rather introduce a new project goal, which is "to support international efforts to reduce the emission of greenhouse gases" . This goal, however, defines rather the impact the project leads to than an objective (see chapter 4 Reconstructed Theory of Change). The annual reports quote 5 "main objectives" that are not consistent with the other 3 objectives formulated in the Prodoc, but match to a large extent with the text that was published as "project objectives" in the flyer . The list of expected results that were published in the FIRM flyer by UNEP and UDP matches to some extent the main project components.

41. In order to simplify the understanding of the FIRM project objectives and make it easier to communicate to the wider public, the FIRM Programme management started to describe the 3 project outputs as the three main components. Presentations in participating countries mostly used the wording of p. 10, Prodoc:

- Component A: Developing a national mitigation framework and NAMA priorities
- Component B: Supporting implementation of pilot NAMAs
- Component C: Sharing project experiences and analytical results, including through regional and international networks[16].

42. Figure 4 illustrates that in workshops that took place in developing countries, the project elements were also expressed in the following way, indicating that within each country at least two NAMAs shall be worked out.

Figure 4: Project elements[17]



[16] Facilitating Implementation and Readiness, Powerpoint Presentation, p. 3

[17] Djaheezah Subratty: Integrating Low Carbon Options with Sustainable Development, Country Interaction Workshop, 09.04.2014, p.4

43. In the internal project reporting of the overall FIRM project to UNEP the following terms for the 3 main components were used[18]:

i. Countries have developed a national low carbon development framework strategy/ institutional strengthening framework
ii. Countries have developed two NAMAs in identified mitigation priorities and identified general and specific non-financial barriers as well as financial requirements at country level for the implementation of country identified pilot NAMAs.
iii. Shared project experiences, lessons learned and analytical results allowing more cost effective implementation of mitigation efforts in developing countries beyond those participating in the FIRM project.

Scope of country work from the beginning of the project until the end of the year 2014

44. In view of the needs expressed by each participating country, the FIRM team supported country-specific plans. By the end of the year 2014 the outputs listed in Table 7 had been completed.

Table 7: Scope of country work implemented at the end of the year 2014[19]

Country	NAMA-outputs	LCDS outputs
Costa Rica	NAMA in the housing sector to reduce the energy consumption for lighting, heating/cooling and cooking	Two LCDS: Urban planning and the housing sector in the greater metropolitan area (GMA) focusing on four sub-sectors, namely: energy, transport, building, and waste. Sustainable agriculture, focusing on livestock.
Ethiopia	Promoting sustainable agroforestry practices in identified erosion prone zone. The objective is to increase carbon sequestration while ensuring sustainable use of land; Solid Waste Management in 20 cities of the country to better collect, treat and manage solid waste.	Strengthened MRV system for NAMAs.
Ghana	Developing the transport system in Accra to address public mobility and reduce congestion from use of private vehicles; Promotion of NAMA Energy Efficiency through Installation of Capacitor Banks for	MRV systems for Energy Sector

[18] FIRM, First Annual Report, 2012, p.3. and FIRM, Second Annual Report, 2014, p. 3

[19] FIRM. Second Annual Report 2014, p. 10, unfortunately it is unclear if this is cumulative over the whole period or just activities in the year 2014.

	Commercial and Industrial Customers of Electricity Company of Ghana.	
Indonesia	Promotion of solar PV systems in meeting national goal of full electrification, especially in remote islands as well as reducing import dependency; and, Promotion of EE technologies in the steel industry to make industry competitive plus reducing energy import dependency.	Development of MRV framework for Energy Component of RAN-GRK
Morocco	Promoting use of rooftop solar PV in urban areas; and Promoting use of solar PV for irrigation pumps in agriculture.	Development of an MRV framework and Energy Information System for the Energy sector
Senegal	Promoting use of biogas in rural areas to better manage animal waste and address rural energy deficit; and Promoting use of residential or small grid solar PV systems for addressing energy access deficit in rural areas.	Development of MRV framework for Energy Sector
Viet Nam	Promoting use of wind energy to reduce energy imports and achieve the goal of 5% wind energy in electricity mix; and Promotion of biogas using pig farm waste to address rural energy access issues as well as challenge of waste disposal in land and water in rural areas.	LCDS for increasing the share of renewable energy.

The country example of Viet Nam

45. The activities that were undertaken in the country of Viet Nam exemplify the work that has been undertaken in each participating country. Depending on the needs in each participating country, either the full range of the activities planned in Viet Nam took place or only a limited set of activities that include the preparation of NAMA plans and the identification of a data Monitoring, Reporting and Verification System. The MoU between UDP and Viet Nam included the hiring of an NGO by the Viet Nam Ministry, the Center for Rural Communities Research and Development for local consulting services.

46. The activities undertaken in Viet Nam are displayed in :

47. Table 8:

Table 8: Project activities in Viet Nam[20]

Project	Activities

[20] Quach Tat Quang: FIRM Project Inception Workshop, Content and Plan, October 18, 2012, p. 6ff.

Components, outcomes and outputs		
Component A: Developing a national mitigation framework and NAMA priorities	A1: Develop management structure and implement the project	1.1 Develop work plan to implement project components 1.2 Organize kick-off workshop
	A2: Identify national development priorities and priorities related to greenhouse gas emissions (long term goals)	2.1 Analyse existing strategies and plans
	A3: Develop procedures and systems for integration of climate change consideration into development strategy and implementation	3.1 Assess structure of coordination organization, define sectors to integrate climate change issues into development strategy 3.2 Local consultancy services by the Center for Rural Communities Research and Development on the responsibilities of stakeholders and preparing procedures
	A4: Define LCDs objectives	4.1 Develop framework for assessing the opportunities for LCD 4.2 Develop LCD objectives and timeframe and finalize them through stakeholder consultations
	A5: Define LCDs strategy documents	5.1 Propose LCDs strategy: concentrate on support activities to implement policies promulgated such as the Natinal Target Programme to Respond to Climate Change etc.
	A6: Attend regional workshops/sharing experiences under the plan of the international project	
Component B: Supporting implementation of pilot NAMAs	B1: Develop NAMAs	1.1 Assesss policies, technologies and other actions to achieve mitigation targets 1.2 Develop a framework to prioritize identified NAMAs 1.3 Undertake stakeholder consultation on framework for prioritization and identified NAMAs
	B2: Develop framework for monitoring progress in implementation	2.1 Review existing systems and procedures for data collection 2.2 Identify data, information required to review implementation progress and impact of NAMAs 2.3 Develop plans and systems for data collection and its reporting 2.4 Develop procedures for integration of these systems into existing NAMAs
	B3: Pioritize NAMAs	3.1 Review of existing studies on mitigation analysis, including TNAs, 3.2 Prepare a list of mitigation options 3.3 Analysis to prioritize identified NAMAs
	B 4: Prepare NAMA Plans	4.1 Analyse policy, regulatory and institutional framework for implmentation of identified priority NAMA 4.2 Identify requirements to implement NAMAs 4.3 Identify data MRV system

	B 5: Identify specific activities in NAMAs for implementation	5.1 Identify top one or two NAMAs from prioritzed NAMAs 5.2 Identify specific elements related to general and specific non-financial barriers for enabling implementation for these NAMAs
	B 6: Seek political endorsement for identified NAMA	6.1 Organize a workshop to present prioritzed NAMAs
	B 7: Develop project proposals for implementation	7.1 Develop detailed workplan for implementation 7.2 Identify key players for implementation and establish a project implementation structure 7.3 Develop financial plan for implementation
	B8: Attend regional workshop/sharing experiences under the plan of the international project	
Component C: Sharing project experiences and analytical results, including through regional and international networks[21].	C1: Develop guidance materials to support the above components C2: Organize meetings and workshops to disseminate project progress and results C3: Attend training course related to NAMAs C4: Seek political endorsement on outputs of Component C C5: Develop goals to coordinate with regional workshop C6: Develop FIRM communication and outreach material C7: Exchange experience on devising and implementing national measures for responding to mitigation opportunities C8: Develop the final report, organize the final workshop	

48. The activities undertaken in Viet Nam led to these key outputs

- **Component A:**
  - Baseline scenario for renewable energy for the period of 2010-2030
  - Alternative policy scenarios for renewable energy for the period of 2010-2030
  - Proposal of a renewable energy development strategy framework published as "Viet Nam Country Report: Low Carbon Development Strategy: Component covering Renewable Energy Development in Viet Nam " including: identification and selection of prioritized technology, identification of barriers and measures to overcome, proposal of suitable policy, institutional and implementation plan
- **Component B:**
  - NAMA on "Biogas for onsite power generation for medium/large pig farms"
  - NAMA on "Supporting programme for wind power development in Viet Nam"
- **Component C:**
  - Capacity of the experts:
    "Information was exchanged and experiences shared during the implementation of the project at the national, regional and international workshops/events[22]"
  - Participation of Stakeholders in the FIRM country interaction workshop (2014), the UNEP regional NAMA workshop (2014).

[21] Facilitating Implementation and Readiness, Powerpoint Presentation, p. 3

[22] Viet Nam Final Report for the Firm Project; December 2015, p. 4

49. According to the final Vietnamese project report, the project completed the two NAMA proposals in the 1st Biennial Update Report to the UNFCCC. Some options of the renewable energy development strategy framework were used for the development of the Intended Nationally Determined Contribution of Viet Nam to the UNFCC. The outputs of the project also serve as reference information for the work of the related agencies and projects such as the development of the Third National Communication and Second Biennial Update Report to the UNFCCC.

The FIRM project in Mexico and South Africa

50. Mexico and South Africa are not included in the above list because they play a special role in the project design and are not integrated into the general FIRM budget. Scoping missions to both countries were undertaken in the year 2012. The project activities were financially supported on the basis of small scale funding agreements with Mexico and South Africa in 2012 and 2013, which involved in-kind expert support from UDP. In 2014, the new PCA included concrete support by UDP to Mexico and South Africa, to support finalizing the technical reports.

51. In Mexico, FIRM supported the National Institute of Ecology and Climate Change (INECC) to enhance their climate change Low-range Energy Alternatives Planning System (LEAP) model in cooperation with the Stockholm Environment Institute, seated in Massachusetts, USA. Although a version of LEAP should have been made available at INECC in late 2012 and selected staff trained, it was not until the year 2015 that the final reports of Mexico were submitted.

52. In South Africa, FIRM supported the Energy Research Centre of the University of Cape Town by contributing to the improvement of the national climate change model used to develop the baseline scenarios for GHG emissions. The project task was to prepare a technical report that "quantifies the uncertainty of selected model inputs and defines a small number of plausible alternative model structures for selected model components" and "to identify and coach experts" accordingly. The sub-project activities were to be delivered between June 2013 and January 2014 and were finally submitted on 31st October 2015.

Changes of the Project Design

53. In the course of project implementation, a couple of changes were made to the project design and find their expression in amendments to the PCA and finally a new PCA in the year 2015.

54. The PCA between DANIDA and UNEP of 5 January 2012 and expiring on 1 July 2014 sets forth the terms and conditions set out in the original Project Document. The Version of the Project Document in the Annex of the PCA is an amendment of the original Prodoc (here called Prodoc 2), and additionally contains a risk analysis and a revised budget.

55. In view of the delays of project progress and pursuant to the PCA of 5 January 2012, UNEP and DTU made an amendment on 31 December 2013 that addresses issues in terms of finances and content. Under this amendment project component C was amended with regard to specific activities and a timetable that enables the country participants to participate in meetings either in person or virtually and saves them time and money to take part personally in the workshops and conferences.

56. On 31 December 2014, the first PCA expired as the "first PCA covered only parts of the originally intended activities"[23]. "Due to political challenges and uncertainties surrounding the

[23] Annex 1-Budget and Implementation Plan of PCA, p.2, 2015

negotiation process related to NAMAs", the Government of Denmark (DANIDA) granted an extension of the donor agreement until 31 December 2015 "for UNEP and DTU to complete the originally intended activities as well as with a provision to support new activities on INDC, both methodological and in country"[24]. Therefore a new PCA was set up with an indicative budget of 1.75 Mio US$, covered by DANIDA as part of the original contribution and in accordance with Article XI of the Agreement.

57. The new PCA primarily served administration purposes and came into force in 2015 with changes concerning project activities and a reviewed budget for project period until the end of 2015, which enabled UNEP and DTU to complete the originally intended activities and to provide methodological and in-country support on INDC and related activities.

58. The extended project period covered new activities in cooperation with SEAN-CC to support national climate and development plans and to respond to national priorities with project results feeding directly into the UNFCCC process and providing support to build confidence in broad multilateral solutions to climate change. The new activity 1 follows the old component A and completes the activities of the development of national NAMAs and LCDS. The activity formulated as Activity 4 corresponds with Component C and completes the actions that started being implemented over 2011-2014.

59. FIRM project activities until the end of 2015 include activities in South Africa and Mexico of developing Business as Usual (BAU) scenarios. DANIDA broadened FIRM's support to the two countries of Indonesia and Senegal in the formulation of their Intended Nationally Determined Contributions (INDCs) for the post 2015 agreement that was negotiated by Parties to the UNFCCC with the remaining resources. That was done for administrative reasons by formulating a new PCA, based on the cooperation between FIRM and SEAN CC, although the FIRM SEAN-CC cooperation only took place with South East Asian countries such as Indonesia and Philippines and could not include Senegal.

60. Hence, two new components were introduced:

- Developing INDCs for Senegal and Indonesia for submission to the UNFCCC process
- Developing MRV indicators in the Philippines

61. On 29 October 2015, UNEP requested a last contract revision and extension for 12 additional months through 31 December 2016 to complete the implementation of final project activities and associated reporting requirements. The Danish Ministry of Foreign Affairs approved the no-cost extension on 19 November 2015. This last no-cost extension, valid until 31 December 2016, was granted to use the unspent remaining funds to support the remaining project activities and support developing countries to "build on the NAMA and INDC work undertaken to date and areas where they have indicated the need for support post-COP 21 to strengthen their mitigation readiness capacity for pre-operationalization of their INDCs"[25]. Furthermore, the project will assist in "undertaking policy-dialogues" and the "development of further methodological guidance".

[24] Ibid., p2

[25] UNEP: Request for contract revision for the FIRM project, 29. October 2015

4 RECONSTRUCTED THEORY OF CHANGE

62. The logframe's components are discussed in section 3. Figure 5 presents the reconstructed project Theory of Change in a diagram on the basis of the logframe laid down in chapter 6 of the Project Document. A number of observations can be made. The longer term project objective is equivalent to expected accomplishments 1b and 1c of the UNEP sub-programme of climate change:

- Accomplishment 1b: "Countries make sound policy, technology and investment choices that lead to a reduction in greenhouse gas emissions and potential co-benefits, with a focus on clean and renewable energy sources, energy efficiency and energy conservation (Outputs A and B)".
- Accomplishment 1c: "Improved technologies are deployed and obsolescent technologies phased out, through financing from private and public sources including the Clean Development Mechanism and the JJ mechanism of the Koto Protocol".

63. The project targets building the capacities and capabilities for increased south-south and north-south cooperation on climate change mitigation, technology transfer (TT) and NAMA implementation in developing countries, which are included at the level of outcome C. The immediate outcomes comprise enhanced capacities and capabilities, the transfer of more cost-effective mitigation technologies and the accelerated phasing out of obsolescent technology, ultimately leading to impacts of reduced GHG emissions and enhanced resilience to climate change.

64. Through its outputs and outcome FIRM contributes to the outcome of the umbrella project to enhance countries to make sound policy choices on clean and renewable energy sources, energy efficiency and energy conservation. The following overview shows that FIRM supports selected developing countries in underpinning national and sectoral policy planning as well as national technology-specific policy planning through supporting them to make a "quick start" on technology-based mitigation activities that are compatible with the evolving concept of NAMAs and feed into the UNFCCC process on mitigation and TT.

65. Looking at the assumptions underlying the reconstructed Theory of Change on the output–to–outcome level, it becomes obvious that the development of a framework of a national low carbon development strategy (output 1) is highly dependent on a number of assumptions, including country willingness and political support, developed institutional capacities with sufficient staffing, knowledge of cost-effective and efficient green technologies, sufficient resources of private or public sector investors and sufficient coordination and cooperation between national institutions. The support of the implementation of pilot NAMAs will prove successful (output 2), if sufficient resources of private or public sectors are available, if national partners take ownership, and if positive spill-overs from international climate negotiations to national internal policy take place. The assumptions in the table are highlighted in orange arrows.

66. The drivers identified (and highlighted in Figure 5 as blue arrows) are those external factors that could (and should) be reinforced by the project and/or have synergies with other UNEP projects. For example, in the letters inviting the countries to participate in FIRM was explicitly mentioned that the implementation of a NAMA seems more promising if the project builds upon existing experience and support in areas such as the GEF funded initiative for Technology Needs Assessment (TNA), Technology Action Plans (TAPs) or other national priorities identified through studies, such as the Green Economy scoping studies, by motivated national

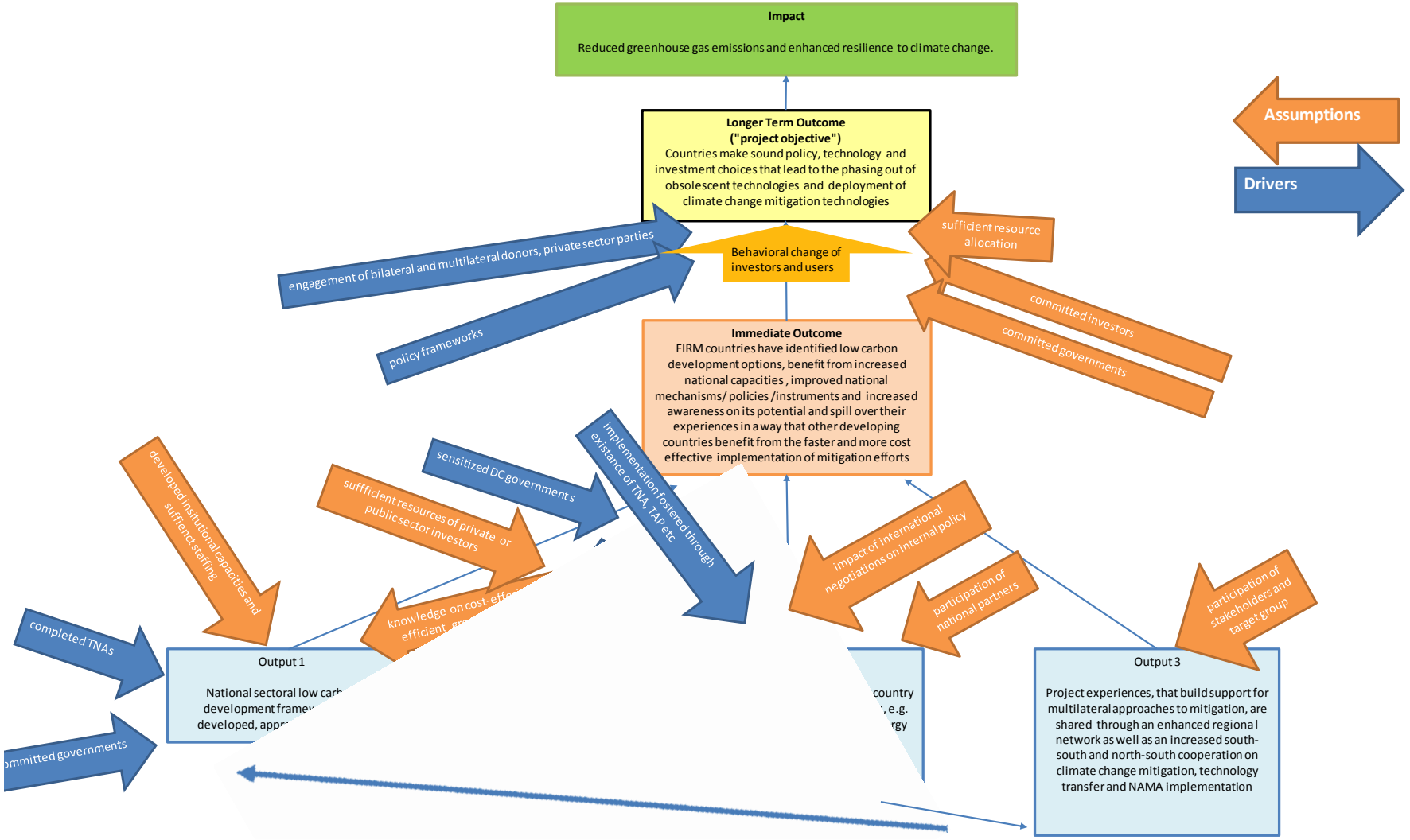
institutions/academia and sensitized governments. In Ghana, joint activities were undertaken at country level with the Green Economy-Trade Opportunities project. The table below gives indications of the synergies with other UNEP projects in the countries:

Table 9: Synergies with other UNEP projects in the countries

Country	Synergy
Indonesia	Synergies were built with: The UNEP ADB Asia Pacific Climate Technology Facilitation Centre. The project took up work on development of specifications for use of Regenerative Burners in Steel Industry, which was identified as one of the barriers in implementing NAMA to promote the technology. The SEAN -CC project. Asia Regional Workshop on NAMAs was organized in collaboration with SEAN-CC to invite countries in the region to share the experience gained under FIRM in Indonesia and Viet Nam.
Morocco	Synergies were built with the UNEP Green Economy project. The T21 model used in the Green Economy project was applied to estimate the socio-economic impacts of the baseline and NAMA scenario of the PV household NAMA developed under the FIRM project. Attempts were made to build synergies with the UNDP Low Emission Capacity Building project in Morocco, which was led by the Environment department. Environment Department representatives and UNDP were invited to be part of the FIRM project steering committee in Morocco.
Senegal	Synergies were built with the Technology Needs Assessment (TNA) project implemented by UDP/UNEP. The two NAMAs develop under the FIRM project are among the technologies prioritized and analysed for the energy sector under the TNA project. The barriers analysis carried out for the development of the NAMA documents under FIRM is based on the results of the barrier analysis performed for these two technologies under the TNA project.
Viet Nam	Synergies were built with the Danish Energy Agency, the TNA project and NAMA partnership platform. These were as follows: Contribution to the final national FIRM workshop 30 June 2015, Ha Noi, Viet Nam by Dr. Jorgen Hvid, Special advisor, Danish Energy Agency. The presentation was titled 'Analysis of energy systems integration - a Danish/Viet Namese initiative' and synergies addressed the potential for FIRM to be followed up with further analysis of integrating renewable energy into the existing Viet Namese energy system using models such as Balmorel supported by institutional and policy coordination across ministries for energy system integration to be implemented. Experience sharing from FIRM / TNA in Viet Nam: In relation to the implementation of a second phase of Technology Needs Assessment (TNA) project with 26 countries globally, a kick-off/experience sharing global workshop was arranged for the TNA Phase II countries in Bangkok 26-27 May 2015. The workshop was organised by AIT and is a collaborative effort between UDP, UNEP, CTCN and UNFCCC. For this workshop, one Phase I representative from each region was invited to share experience from the participation in TNA. Further, it was highlighted to second round countries, how countries have used different tools to implement their TNA outputs. Viet Nam has developed a NAMA under the FIRM project building on

	identification of Wind as a priority technology and therefore participated in TNA Phase II to share its experiences in the TNA Phase I and development of NAMA.
Ghana	In September 2013, the Facilitating Implementation and Readiness for Mitigation (FIRM) project and the Green Economy Trade Opportunities Project (GE-TOP), both UNEP projects organized two joint stakeholders' workshops in Ghana, in Accra (10th September) and Kumasi (12th September). UDP and UNEP Economics and Trade Branch staff presented their respective projects . FIRM focused their interventions on the interlinkages between these two projects and had discussions with the stakeholders on how to work together in addressing the clean energy challenge and transition. The stakeholders very much liked the concept and expressed the desire for more joint activities among similar UNEP projects in the country as well as increased cooperation among national departments and institutions. Each workshop was attended by approximately 30 delegates (with 15 attending both Accra and Kumasi workshops). Delegates included some high level participants such as the Deputy Minister of the Ministry of Environment, Science, Technology and Innovation (MESTI) as well as two directors of MESTI. Also present were the directors from Ministry of Finance and Economic Planning (MoFEP), the then Ministry of Energy and Petroluem (MoFP) and Ministry of Trade and Industry (MoTI). Additionally, delegates from universities, research institutions, civil societies and NGOs participated. Following the joint workshops, the two resource persons continued to engage each other in the projects and in provision of analytical inputs towards finalizing their respective final project deliverables.
Costa Rica	Coordination was undertaken with the UNDP Low Emission Capacity Building (LECB) programme which was also supporting the development of NAMAs to avoid duplication of work on the same thematic NAMAs. A FIRM kick-off workshop was organized together with UNDP.
Mexico and South Africa	The activities undertaken in Mexico and South Africa complemented work conducted by the Danish Energy Agency and the Organisation for Economic Co-operation and Development, by capacities in the area of greenhouse gas emission baseline scenario development. In addition, the activities conducted in Mexico complemented work financed by the French Development Agency (AfD).

Figure 5: Reconstructed Theory of Change



67. Because of the inconsistencies of wording concerning project components and activities in the Prodoc, the annual reports and the new PCA, the following terminology is introduced. The components A-C refer to the components used in the Prodoc and are flanked by outcomes that were formulated in the Prodoc. Component D-E regroup activities of the new PCA between FIRM and SEAN CC. For those last components, the outputs are written underneath.

Component A: Developing low-carbon development frameworks (LCDS) and NAMA priorities

- Outcome A: "For each FIRM country, Component A will lead to the identification of country-specific options that would yield GHG emission reductions at a relatively low or even negative net cost and that offer strong opportunities for economic growth and improved human well-being".[26]

Component B: Supporting the implementation of pilot NAMAs

- Outcome B: "Component B will result in the implementation of one or more pilot NAMAs in each FIRM country and yield increased capacities, improved mechanisms, policies and instruments, and awareness for deploying low-carbon technologies".

Component C: Sharing project experiences and analytical results, including through regional and international networks

- Outcome C: "The outcome of component C will be faster and more cost effective implementation of mitigation efforts in developing countries beyond those participating in the FIRM project".

Component D: Support to Senegal and Indonesia for developing INDCs for submission to the UNFCCC process (New Component with Indonesia under FIRM/SEAN CC cooperation)

- Output D: "INDCs for submission to the UNFCCC process of the countries of Senegal and Indonesia will be developed with the assistance of FIRM in advance of the Paris COP".

Component E: Developing MRV indicators in the Philippines (New Component under FIRM/SEAN CC cooperation)

- Output E: "MRV indicators in the Philippines developed and submitted to the national authorities"

Component F: Technical support to Mexico and South Africa on GHG BAU scenario (Component previously covered under SSFAs with INECC and UCT/ERC, extended by a year under FIRM)

- Output F: "Technical reports on National BAU GHG emissions for South Africa and Mexico and synthesis report on country experience on developing GHG BAU scenarios and challenges are developed".

FINDINGS

4.1 Project Context

68. The project follows a country-driven approach, led by designated national institutions to implement a multilateral modality for limiting GHG emissions. During the scoping missions to the participating countries, the FIRM team got to know the different country strategies towards carbon neutrality each country is embarking on. In meetings with the national focal point

[26] Prodoc, p. 16

ministries the contents of country Memorandum of Understanding, the institutional framework, the implementation plan and the overall budget were discussed, and later on drafted and signed.

69. For example, in February 2012, during the scoping mission to Costa Rica, it was realized that the country of Costa Rica was collaborating with UNDP on a Low Emission Capacity Building project. Therefore it was agreed that a Prodoc for a joint LECB-FIRM project would be set up. This was intended to integrate the work for both projects, including a combined work plan. As a result, FIRM was expected to contribute to a Low Carbon Development Strategy for the Housing, Building and Livestock Sector and a NAMA for the Housing and Building Sector. FIRM supported an analysis of the barriers for the implementation of mitigation measures that were proposed for the Strategy of Low Carbon Development. It also provided technical support to the Ministry of Housing and Building and the Ministry of Environment on the actual situation and the progress in the Housing and Building Sector of the Great Metropolitan Area of Costa Rica in the context of climate change in April 2014.

70. Ethiopia has adopted a Climate Resilient Green Economy Strategy and within the strategy had identified the sectors of agriculture and waste as priority areas for NAMAs with the aim of using the NAMAs as an effective tool for seeking international climate finance to implement their low carbon development plans. In the course of the project differences occurred that related to a) technical and b) financial issues that led to the fact that Ethiopia did not continue the project cooperation: a) The draft NAMAs submitted by the country were considered inadequate in information and not meeting the requirements of a good NAMA. From UDP perspective the NAMA was akin to a NAMA concept but not a full developed NAMA. Ethiopia was of the opinion that from their perspective the NAMA was a full NAMA document and they didn't consider any further work, as requested by UDP through detailed suggestion on further work on NAMAs. b) The financial statements from Ethiopia indicated that certain expenses were not related to FIRM activities and hence couldn't be paid by FIRM budget. This was finally resolved by agreeing to deduct the expenditure.

71. The project was designed as an initiative to support the Copenhagen Accord implementation in developing countries, but as far as stakeholders are concerned, the project design comprises no clear stakeholder analysis, because wide country stakeholder consultation was not done at formulation stage except for checking if countries were interested in participating. Stakeholder priorities and needs are mentioned. Developing countries concentrate on meeting national development goals, such as creating jobs, enhancing energy security, reducing local environmental impacts of conventional energy technologies and satisfying the demand for energy of growing populations. The FIRM flyer emphasizes that the project should follow a “country driven approach led by a designated Authority” and engage “a broad range of stakeholders, from the public and private sectors, sector-specific experts, academia, civil society and project developers.”[27]

72. The beneficiaries mentioned in the Project Documents are the participating countries with particular emphasis "on energy and environmental policy makers and experts, and the institutions in which they work"[28]. Further on, it is mentioned in the Prodoc that Governmental

[27] UNEP (2011): „Facilitating Implementation and Readiness for Mitigation (FIRM). Support for Nationally Appropriate Mitigation Actions in Developing Countries.

[28] Prodoc, p.1

institutions and academia play a crucial role as stakeholders. This was done by integrating country authorities and stakeholders in the consultation process, the planning of activities and set up of country-specific objectives.

73. The country example of Viet Nam shows, though, that in the course of the national project implementation, stakeholders played an important role. The national consultation process included government agencies, research institutes, universities, research centers and other public and private sector organizations. “The stakeholders gave their direct comments, advices, consultancy for the low carbon development strategy framework and NAMA proposals. The project management unit and national technical expert team created favorable conditions to encourage, mobilize and help stakeholders to actively participate in the project activities. Participants had opportunities exchange information, share experiences, lessons learned and discuss on the implementation of the project activities under the detailed work plan and propose measures and methods to implement these activities”[29]. Also the diversity of activities in the different countries indicates that the project was very much influenced by nationally expressed priorities and needs.

4.2 (Strategic) Relevance

Relevance for UNEP’s Mandate

74. FIRM was implemented by UNEP´s DTIE together with the UNEP Risoe Centre on Energy, Climate and Sustainable Development (UDP) and relevant UNEP regional offices. UNEP has a mandate of strengthening environmental policy and management capacity, including technical skills and knowledge about policy options that integrate project management and market approaches, ease the costs and risks of entry of financial actors in mitigation investments and develop skills towards analysing how clean technologies contribute to macroeconomic growth. UNEP´s role as the leading global environmental authority and their political mandate towards a world-wide low-carbon energy development make the link to its mandate very clear.

75. The FIRM project design takes into consideration cross-cutting issues of North-South and South-South cooperation through Component C. A good way to foster and cost-effectively implement mitigation efforts in developing countries is institutional cooperation and capacity building. Mexico and South Africa were participating in the project to foster learning and cooperation. Modelling work of the climate research institute INECC in Mexico and the Energy Research Institute in Cape Town, University of South Africa has been shared with all FIRM countries at the Country Interaction workshop in 2013.

76. The networking component was built on UNEP´s network of climate change focal points and the relationships of DTU to stakeholders in the participating countries, with the UNFCCC and through the NAMA Partnership. The character of the project therefore was meant to be country-driven with FIRM delivering an “adjustable package focusing on either renewable energy or energy efficiency mitigation opportunities”[30]. How far these goals were achieved cannot be detailed, only that generally these activities bring the project very much in line with the Bali Strategic Plan.

[29] Viet Nam, Final Report for the FIRM project, December 2015, p. 5

[30] Prodoc, p. 8

77. There is no indication given that the project design included the deepening of the cross-cutting aspects of gender equity or poverty alleviation, nor are these issues mentioned in the country documentations. As the project team reports all country project steering committees had gender representation. In Senegal and Morocco, the country project coordinators were women. UNEP and DTU staff in project management and implementation comprised both men and women.

4.3 Achievement of Outputs

78. FIRM was launched at the Copenhagen COP to give developing countries a quick start on mitigation activities compatible with the evolving concept of NAMAs and with the aim to foster action towards low-carbon development in developing countries[31].

Intended Results and Causality/project results, outcomes, outputs and activities

79. Thus, overall a significant number of outputs have been achieved, albeit at a pace that was significantly slower than expected. As reasons for the delays in the achievement of outputs until the end of the year 2014, the following issues are very generally mentioned in the first and second annual report[32]:

- Lack of institutional structures for climate change issues
- Lack of human capacity within the target countries
- Political challenges
- Heavy coordination requirements, especially at the initial phase between planners, implementers and "international interface"[33] at national levels
- Impact of negotiations on the internal decision making process
- Uncertainty around financing for implementation
- Technical aspects considering the elaboration of BAU greenhouse gas modelling.

The country example of Viet Nam

80. The example of Viet Nam highlights that the project is very strong in producing technical guidelines related to MRV, NAMA and LCDS. It also shows that the project management unit and national expert team were able to create favorable conditions that encouraged, mobilized and helped stakeholders to actively participate in the project activities. Working group meetings, technical seminars and workshops were organized regularly to produce the intended outputs.

81. In Viet Nam the project aim was to develop two NAMAs (wind and biogas) and a strategy for enhancing the share of renewable energy in power generation, as identified by national stakeholders. MRV were developed for each NAMA. According to Vietnamese plans, a national MRV system would be operationalized when the NAMAs are implemented.

82. The National Coordinator underlines in his final report to FIRM in December 2015 that the implementation of the project contributed to the strengthening of technical capacity of stakeholders in the country related to the aspects of understanding transformational change,

[31] Prodoc, p.1 and 4

[32] 1st annual report, p. 6 and 2nd annual report, January-December 2014, p. 7

[33] ibidem

understanding the development of NAMAs, utilizing results from the technology needs assessment and action plan in NAMA and low carbon strategy framework development and the country´s INDC. He attributes the 22 monthly delay of the project progression a) to the fact that the national approval process was extended and therefore took longer than planned and b) complicated technical issues. This affected the payment transfer of the project and created difficulties in the project implementation.

83. Multilateral and bilateral agencies and donors (UK Department of Energy and Climate Change on behalf of the Technical Support Unit of the NAMA Facility, Frankfurt School of Finance, GIZ, SEI, and the World Bank) participated in the 2013 FIRM Country Interaction workshop and discussed with the countries on the technical requirements for NAMAs, in order to be fundable. However, until today, there is no funding for e.g. Viet Nam's NAMAs prepared under the FIRM project. The FIRM project team has encouraged Viet Nam to submit their NAMAs to the UNFCCC NAMA Registry, which would help them get visibility for funding from donors. Another source of funding was foreseen to be the Global Climate Fund, but that has been very slow to become operational and thus could not be accessed by Viet Nam yet. As highlighted by example of Viet Nam, weakness remains that funding for the implementation of none of the NAMAs has been identified[34].

Achievements of the year 2015

84. Under the new PCA, the above mentioned activities were continued and linked up to the development of INDCs. The new activity of developing MRV indicators for Mitigation Actions in the Philippines was added. The following table gives an overview of the state of the project activities in its participating countries by the end of the year 2015.

85. Out of 5 knowledge sharing products 4 publications are ready: a) one on transformational change, b) one on prioritizing NAMAs c) on waste management, and d) one on NAMA and INDCs to address the issue of whether NAMAs will be irrelevant post 2020 in context of the concept of INDC. This document actually was developed with the German Corporation for International Cooperation (GIZ).

86. The last report, which was planned but has not been finalized, is the one on experiences and lessons learned from NAMA development under FIRM. This report will be developed based on the final products by all countries and a review of the process and outputs. As the products were not yet all available, their review also has not been completed.

87. The component on developing MRV indicators in the Philippines has not yet been brought to an end. The final report on the MRV framework is still due, because the Philippine Government is in the process of a last revision of the documentation.

88. Table 10 lists the project activities in 2015, their status at the end of the year 2015 and explanations of why certain activities were cancelled or postponed. For example, the proposed report to Mexico on access to climate finance was cancelled by the Government of Mexico. Due to changes in the staff of the Climate Change Research Institute INECC, the input is no longer demanded.

[34] Viet Nam, Final Report for the Firm project, December 2015, p. 6

89. In terms of sharing project experiences and analytical results, the final experience sharing workshop was postponed to the first half of 2016 because the representatives from the national focal points were not able to attend the workshop in autumn 2015 due to the preparations of the Paris COP. Out of 5 knowledge sharing products 4 publications are ready: a) one on transformational change, b) one on prioritizing NAMAs c) on waste management, and d) one on NAMA and INDCs to address the issue of whether NAMAs will be irrelevant post 2020 in context of the concept of INDC. This document actually was developed with the German Corporation for International Cooperation (GIZ).

90. The last report, which was planned but has not been finalized, is the one on experiences and lessons learned from NAMA development under FIRM. This report will be developed based on the final products by all countries and a review of the process and outputs. As the products were not yet all available, their review also has not been completed.

91. The component on developing MRV indicators in the Philippines has not yet been brought to an end. The final report on the MRV framework is still due, because the Philippine Government is in the process of a last revision of the documentation.

Table 10: FIRM Activities in 2015[35]

No.	Activities	Deliverables	Delivery date	Status of Activity in December 2015
1	Develop 2 priority NAMAs and support to strengthening national mitigation framework	2 NAMA documents in each country Country reports on LCDS	31 October 2015 31 October 2015	Ongoing: Senegal; work finalized in Morocco, Viet Nam, Indonesia and Costa Rica have completed. The work in Ethiopia was closed with mutual consent and proportional payments made. The Ghana report was indicated by the Government to have been completed in December 2015, but was submitted in January 2016.
2	Technical Support to Mexico and South Africa on GHG BAU scenario	Report on Support to Mexico for proposal to access climate finance	31 May 2015	Not done as due to change in country, country indicated it no longer needed

[35] Activity delivery status, reporting period from 31/06-30/11/2015

				the product.
		Technical Reports on National BAU GHG emissions for Mexico and South Africa	30 June 2015	Final reports have been submitted.
		Synthesis Report on GHG BAU scenarios	30 October 2015	Final report has been submitted.
3	Support to Senegal and Indonesia for developing INDCs for submission to the UNFCCC process	Country INDC report for politcal consideration within Senegal	31 October 2015	The country INDC report has been elaborated and was submitted by Senegal to the UNFCCC.
		Report on Technical Backstopping to the preparation of INDC in Indonesia	31 October 2015	The report has been written and Indonesia submitted its INDC to the UNFCCC.
4	Sharing project experiences and analytical results	Report on final FIRM experience sharing workshop	31 October 2015	Delayed; workshop is postponed to the first half of 2016
		Update and Maintenance of FIRM website	31 October 2015	Ongoing
		5 knowledge sharing products elaborated	31 October 2015	Ongoing. Three publications completed. Two delayed, including one on the final project report after all project activities are completed.
	Developing MRV indicators in the Philippines	Workshop Report on MRV system	31 August 2015	Workshop was held from 1-2 October 2015.
		MRV Guideline for Mitigation Action	30 September 2015	Ongoing, initiated but not completed
		Final Report on MRV framework	31 October 2015	

92. Even in the year 2015 FIRM has not been able to finalize the activities stated in the new PCA. The “slower than anticipated process” is largely due to insufficient human capacity in the

countries[36]. This aspect was reinforced by the strong toll on in-country government capacity taken by the preparations for the Paris COP. In the course of the year 2015 the governments were asked to provide INDCs to the UNFCCC. There was a natural synergy with the FIRM, some countries might have utilized capabilities and intermediate products (analyses) built and produced by the FIRM project for their INDCs, in particular the national coordination structures established under FIRM. Countries deprioritized completing the initial UNEP / UDP products in order to focus on their international commitments which were time-bound. Senegal and Indonesia utilized FIRM to support their INDC development.

93. The degree to which internal factors in the national governments – including but not limited to the prioritization of the INDCs - contributed to the delay in project progress is not sufficiently documented in the annual reports under the section on Key Challenges, nor in PIMS where the word limitations of the platform do not allow for detailed recording. It seems that it has never been assessed in an internal revision or evaluation. Systematic stocktaking – through a coherent monitoring system – of the delays could have helped understand the factors leading to delays and a systematic and managed reaction to these challenges.

Achievements concerning component A: Developing low-carbon development strategies (LCDS) and NAMA priorities

94. Component A dealt with elaborating technical baseline scenarios on BAU greenhouse gas emissions, policy scenarios and low carbon development strategies. With respect to the intended original outputs, the following observations can be made:

1) **Low Carbon Development Frameworks (sectors and numbers):** Country-specific LCDS-related activities were carried out in two countries on urban planning and housing as well as on renewable energy; and on MRV systems (for the energy sector in four countries and for NAMAs in one). In Mexico and South Africa, the emissions baseline work carried out will help to improve the security and accuracy of national climate change models.

2) **Pace of the country activities**: No country activity was completed within the planned timeframe. The project implementation for each country did not take two years, but at least 4-5 years. The accomplishment of Component A was planned to be finished in 2013, but actually completed by December 2015, except for the country of Senegal, where activities concerning LCDS are still on-going.

3) **Cooperation with one country was not fully completed**: FIRM has not succeeded in supporting all countries to the completion of at least one full NAMA until the end of the project. Disagreements over technical aspects of the NAMAs and accounting meant that the work with Ethiopia was closed with mutual consent and proportional payment was made.

4) **Guidelines developed under Component A**: The workshop documentation displays that general guidelines for establishing national NAMA criteria and tools in developing countries, as well as key sectors were worked out. One report, on

[36] Request for contract revision for the FIRM project

experience and lessons learned from NAMA development under FIRM is still pending. In terms of NAMAs, the following reports were completed:

- Template for LCDS report (2011)
- Template for NAMA proposal (2011)
- Nationally Appropriate Mitigation Action: Developing a Multi Criteria Decision Analysis (MCDA) Process for Prioritization of NAMAs (October 2015, with SEAN CC)
- Understanding transformational change in NAMAs (November 2014, in cooperation with Wuppertal Institute for Climate, Environment and Energy)
- Guidebook for the Development of Nationally Appropriate Mitigation Actions on Sustainable Municipal Waste Management (2015)
- Nationally Appropriate Mitigation Action: Understanding the MRV framework for developing countries (September 2014, with SEAN CC)
  Nationally Appropriate Mitigation Action: Understanding NAMA cycle (September 2014, with SEAN CC)
- Financing Nationally Appropriate Mitigation Actions (September 2014)
- Transformational Change for Low Carbon and Sustainable Development (May 2015, with UNFCCC and UDP).

Component B: Supporting the implementation of pilot NAMAs

95. Although Component B was about "supporting the implementation of pilot NAMAs" but in fact, it never came to the actual implementation of NAMAs. In the course of the projects, NAMAs were only formulated because the project proposal was written in 2009/2010, when the NAMA concept was initially defined in the Copenhagen Accord. The project started in August 2011, by that time there was more clarity on the NAMA concept and NAMA requirements, though still the process was being developed through actual development of NAMAs. Thus it was clear that development of NAMA is a full proposal development and not just the concept. The resources allocated per country for two NAMAs and LCDS component were USD 300,000 per country was not sufficient to help develop a full NAMA and also pilot them. The emphasis thus was on developing a fully developed NAMA.

96. Outputs of Component B were the national NAMAs: "Consistent with the above examples, specific national outputs would include a fully functional national programme on e.g. wind energy development and a national approach to improving building energy efficiency, both developed as NAMAs. If other areas were identified as priorities by FIRM countries the outputs would differ accordingly.

97. This output was achieved by all participating countries at the end of 2015, except for Senegal where the activities on NAMAs are still ongoing:

1) **Sectors of country-specific NAMAs:** Country-specific NAMAs were developed in the sectors of Housing, Waste , Energy Efficiency of Capacitor Banks, NAMA on Energy Efficiency Technology in Steel Industry, Agriculture/Forestry, Transport, Solar Photovoltaic, Biogas, Wind Energy

2) **Number of country-specific NAMAs:** All countries developed two NAMAs, except Costa Rica which developed one NAMA

3) **Time frame:** The accomplishment of Component B was planned to be finished in 2013, but actually completed by December 2015, except for the country of Senegal, where activities concerning NAMAs are still on-going.

Component C: Sharing project experiences and analytical results, including through regional and international networks

98. In terms of concrete outputs, the following experience sharing activities were carried out:

1) **Workshops**:

a) Inception Workshops took place in all participating countries.

b) In-country National Workshops: took place on LCDS and NAMAs; as well as final national workshops, where the project outcomes, political endorsement and final report were presented.

As support to the request of the countries of Senegal and Morocco training workshops for the LEAP model were organized in each country, where national experts were trained on the model to undertake a mitigation options analysis for low carbon development strategies. The participants were trained on data needs and quality assurance, model structure, input requirements, result interpretation and model operations.

c) International experience sharing workshops: Two workshops of experience sharing took place:

- in Copenhagen in April 2014 through the FIRM country interaction workshop, involving all project country coordinators and experts, as well as the NAMA Facility Technical Support Unit and the Danish Energy Agency.

- in South Africa in October 2015 as a side-event of the International Renewable Energy Conference (SAIREC), where the emissions activities in South Africa, the solar PV NAMA for Morocco and the wind power NAMA for Vietnam were presented to an international renewable energy community.

d) Regional experience sharing conferences took place in Asia in 2014 together with SEAN CC and three other UNEP projects active on NAMAs in the region, which brought together 63 participants from 18 countries, as well as involved other donors such as the NAMA Facility and GIZ.

e) The final workshop was postponed: The final workshop amongst all participating countries, which was scheduled for 2015, was suspended "because the developing countries had no time"[37]. The final workshop is now postponed to the first half of 2016, and is being planned in collaboration with the UNEP-GEF INDC project as a joint experience sharing and policy-dialogue event to contribute to the development of the UNEP INDC Implementation support programme. Collaboration with regional CTCN events throughout 2016 is also being explored, where feasible, for dissemination of the FIRM project results.

f) The project website was regularly updated, including with publications, flyers

g) The FIRM **project experience** was shared, such as through presentations (UNEP NAMA activities at Warsaw COP, UDP FIRM side event at Lima COP20, Ethiopia participation in COP21 NAMA Fair), through guidance documents and through dissemination of country NAMAs developed at the UNFCCC NAMA Partnership calls and meetings.

[37] Interview with project manager in Copenhagen on 13 October 2016

Component D: Support to Senegal and Indonesia for developing INDCs for submission to the UNFCCC process (New Component with Indonesia under FIRM/SEAN CC cooperation)

Outputs:

- Country INDC report for politcal consideration within Senegal- was submitted by Senegal to the UNFCCC and delivered on time
- Report on Technical Backstopping to the preparation of INDC in Indonesia - has been written and submitted to the UNFCCC ; was submitted on time

Component E: Developing MRV indicators in the Philippines

Outputs:

- **Workshop on Measuring, Reporting and Verification** – workshop was held and report was submitted by Philippines to the UNFCCC and delivered on time
- **MRV Guideline for Mitigation Action -** ongoing, initiated but not completed because documents from the Phillipine Government are missing

Component F: Technical support to Mexico and South Africa on GHG BAU scenario

Outputs :

- The intended output was: "Technical reports on National BAU GHG emissions for South Africa and Mexico and synthesis report on country experience on developing GHG BAU scenarios and challenges are developed".

99. The approach adopted for Mexico and South Africa was different and geared "to initiate discussions through the existing contacts" and "to prepare more robust national baseline emission projections from the points of view of risk and uncertainty" [38]. The training and technical support to National Institute of Ecology and Climate Change (INECC) in Mexico and the Energy Research Centre of the University of Cape Town was finished by the end of the year 2015. In-country workshops were held to present the project outcomes and its political endorsement.

Apart from Workshop papers the following documents have been produced:

- **South Africa:** Obtaining long-term forecasts of the key drivers of greenhouse gas emissions in South Africa (prepared by national counterpart, reviewed by UDP and endorsed by UNEP)
- **Mexico:** BAU Scenario for the Energy sector in Mexico in the year 2014 (prepared by national counterpart, reviewed by UDP and endorsed by UNEP)
- **Both countries:** Final Synthesis report for South Africa and Mexico (prepared by UDP and reviewed by national counterparts)

4.4 Effectiveness: Attainment of project objectives and results.

100. It is obvious that a key assumption across all project outputs is the willingness and capacity of various stakeholders to engage in FIRM with the objective to contribute to its objective and outcomes. This underlying assumption proved to be true for all countries but Ethiopia.

[38] First Annual report, p. 6.

101. Outcome of Component A: For each FIRM country, Component A will lead to the identification of country-specific options that would yield GHG emission reductions at a relatively low or even negative net cost and that offer strong opportunities for economic growth and improved human well-being.

- This outcome was achieved by all participating countries at the end of 2015, except for Ethiopia where the LCDS component was not required as it was supported by another project and the country opted to develop a strengthened MRV system for NAMAs, and in Senegal where the LCDS activity is ongoing.
- The example of Mexico and South Africa illustrate that the outputs of the FIRM project are components that help to improve the security and accuracy of national climate change models and therefore contributes to the identification of country-specific options that would yield GHG emission reductions at a relatively low or even negative net cost and that offer strong opportunities for economic growth and improved human well-being.

102. Outcome of Component B will result in the implementation of one or more pilot NAMAs in each FIRM country and yield increased capacities, improved mechanisms, policies and instruments, and awareness for deploying low-carbon technologies.

- All countries worked out two NAMAs, except Costa Rica which developed one NAMA.
- None of them are under implementation so far.

103. Outcome of Component C will be faster and more cost effective implementation of mitigation efforts in developing countries beyond those participating in the FIRM project.

- Except for Ethiopia, where the cooperation was not fully brought to an end, the outcomes of Component C were achieved in the participating countries, varying in their degree of effectiveness from country to country. Experience sharing and capacity building took place in each country, as well as in regional and international events with the participation of countries beyond the FIRM countries.

104. Outcome D: "INDCs for submission to the UNFCCC process of the countries of Senegal was developed with the assistance of FIRM in advance of the Paris COP".

- The Republic of Senegal submitted its new climate action plan (INDC) to the UNFCCC on 26 September 2015[39]. FIRM supported the Ministry of Environment in its INDC process by determining the baselines and mitigation scenario for mitigation component of the INDC and in defining the adaptation component of the INDC, undertaking multi-stakeholder consultations and engaging in coordination, as well as reviewing and providing comments on the draft version of the INDC before its submission. Senegal was also assisted in their domestic preparation for the formulation of their INDC by GIZ.

105. The assessment of effectiveness is difficult, because the basis for the assessment is very thin. As described above, the reporting does often not adequately respond to changes in Project Design that were stipulated in the PCA, its amendments and the new Project Cooperation Agreement (PCA). Let us take the example of the second project report to highlight it. The Amendment to the PCA entered into force on the 31 December 2013 and therefore was valid for all the activities of the year 2014. The Amendment comprised changes in the activities of

[39] www.newsroom. Unfccc.int/unfccc-newsroom/Senegal

component C. The second annual report, however, does not comment on the amendments. It follows the same structure of the first annual report and does not refer to the changes. Neither does it explain why the amendment became necessary, nor that there is an amendment of project design, nor does it reflect on the impact of project design.

106. Guidance documents were developed by UDP staff and reviewed by expert reviewers and endorsed by UNEP. Papers and Powerpoint Presentations presented at workshops were developed by UDP or UNEP staff. For country activities, countries hired in some cases local consultants and/or local centres of excellence to support the ministries to develop their LCDS and NAMAs as well a support in coordination. These experts worked closely with the UDP which provided complementary expert guidance to ensure the technical level of the work was comparable across FIRM countries. But the feedback and reporting cycle through UDP up to UNEP DTIE seems to have gaps. While there are detailed M&E arrangements in the MOU between UDP and UNEP DTIE, information chains are broken. Compounded by the nature of the soft intervention, it is a difficult challenge to assess the extent to which the FIRM has enhanced a country's capacity and capability in developing personal skills and enhancing the countries capacity on new low-carbon frameworks and technologies. That makes it almost impossible to assess to what extent FIRM has enhanced the participating countries´ capacities and capabilities.

107. The country example of Viet Nam illustrates that the formulation of the NAMAs has been included in the first Biennial Update Report to the UNFCCC and it is highly likely that the other countries acted likewise. The National Coordinating Agency of Viet Nam is currently processing the national procedures to submit the two NAMA proposals to the UNFCCC registry for seeking financial support for NAMA implementation. An analysis of the participating countries INDCs shows that those countries often do not mention gratitude towards UNEP for their support on single elements of the INDCs in their country reports.

108. By the end of 2015, key activities of original FIRM are over, barring Senegal where the work is ongoing and Ethiopia that finished its work, as per its own assessment in 2014. Activities on INDC support to Senegal were also finished. The new activities on INDC support in the Philippines and Indonesia from the year 2015 remained unfinished, but formed only less than 10% of the deliverables. Apart from those, the remaining activities were two publications and workshops. However, none of the NAMAs are currently under implementation, which was a stated goal of the project.

109. On a higher level, the project was mandated to contribute to the international discussion about what NAMAs are. The project's products (e.g. guidance documents, workshops, capacity building offering etc.) have significantly contributed to this discussion. While the FIRM project is not the only programme that strives for that, it is accepted as one of the major knowledge providers in this area, as for example acknowledged by the BMUB/DECC NAMA Facility. This goal has been attained.

4.5 Efficiency

110. The project utilizes existing relationships, partnerships and institutions in a strategic manner. UNEP DTIE and UDP have long-lasting experience in climate change mitigation. UDP is a recognized international Centre of Excellence on energy development and climate change and for years a core part of UNEP´s climate change programme. The project aims at ensuring good coordination and alignment with related mitigation activities, avoiding duplications by intending to benefit from UNEP´s TNA effort during the development of the low carbon development

framework and consulting “other donors and UN agencies active in each country in developing the work plans"[40]. Whether the project achieved this aim cannot be assessed due to a lack of documentation.

111. The annual financial expenditures from the year 2011 until the end of the year 2015 are not in line with the planned expenditures. At the beginning of the FIRM, the project was meant to receive a contribution of 7.332 Mio. US$ by the state of Denmark. Due to currency fluctuations, the amended Prodoc indicates a total amount of 7 Mio. US$. The total amount received from DANIDA finally was 6.898 Mio. US$ due to further currency fluctuations. This amount of money was supposed to be spent within the first three years of the project life. However, this was not possible and the project was extended until the end of 2014. Over the full implementation period, the project income was higher than the expenditures. This led a new joint PCA, with SEAN CC for administrative reasons. By the end of the year 2015, as there was still an excess of income over expenditures, DANIDA granted UNEP DTIE another extension.

Reasons given for underspending are:

- Ethiopia was disbursed only 79.000 USD of the total USD 300.000 allocated as the country considered the project deliverables completed.
- Senegal had not submitted its financial statement because of which USD 165.000 remained un-disbursed.
- Indonesia and Philippines were not completed due to political changes in the countries.
- Lower spend on travel, publications and workshops than planned due to collaboration and synergies with other UNEP projects.
- In terms of publications the costs were shared with some other projects and that is why not all the funds were spent.

112. With respect to funding volumes, therefore, on one hand, the project was not able to drive all the activities forward, partially for political reasons. Apart from the fact that the political support in some of the countries was fluctuating, the subject of NAMAs was to some degree weakly defined at the outset of the project, which initially caused some delay. In 2014, 70% of the work was considered complete. 90% of the original output was achieved by end of 2015 while at the same time showing financial disbursements were at much lower levels. More activities could have been planned with these funds, and due to the highly risky and political nature of this projects, overprogramming could have been justified easily. Potentially, there were other limiting factors.

4.6 Sustainability/replication and catalytic effects

113. The national implementation is also, to a large extent, in the hands of the national FIRM Coordinators, the steering committee and the stakeholder group. Their engagement reflects their commitment to the Copenhagen Accord to proceed with specified NAMAs, after technological and financial support is provided and channelled through FIRM. The project relies heavily on the initiative of the governments in developing countries and their drivers for initiating climate

[40] PRODOC, p.9

change mitigation activities and their skills and willingness to replicate the project. The formulation of a low-carbon development strategy is the point of departure for developing a NAMA and the successful development of both components is crucial for the success and replication of the project.

114. However, in the joint workshop that took place in Copenhagen in April 2014 and which was attended by all participating countries, the "countries pointed out that many requirements can be a discouraging starting point for new countries. Therefore there is a need for a simple starting point and an incremental approach for building towards the full institutional package"[41], which implies ensuring the institutional coordination of policy measures. The participants highlighted as well the risks to low carbon options as the main limitation on climate investment from local financiers, as well as the low profitability of low carbon options. As long as those aspects are not resolved or at least enhanced in the view of developing countries, the replication of the project at the level of developing countries without aid from international donor agencies is doubtful.

115. The project rationale is that, selected developing countries will enhance their mitigation activities and considerably reduce greenhouse gas emission growth with the financial, technical and advisory support of FIRM, because "market mechanisms alone will by no means solve all development, security and environmental problems"[42] (p.16). The concept of NAMA is intricately associated with "mitigation actions" in context of its sustainable development needs and plans, thereby also addressing local social, economic and environment issues in a sustainable manner, as per the NAMAs developed in the project. None of the NAMAs are under implementation so that this is purely theoretical at this point.

Risk identification and social safeguards

116. The risk assessment of the second Project Document includes the following potential risks:

Table 11: Risk assessment

On institutional/organizational/civil level:	**On economic level:**
Failure of governments to agree on limiting GHG emissions	External factors, such as a decline in fossil fuel prices, negatively affect the phasing out of obsolescent technologies
Stakeholders don´t actively participate in partnerships	Private sector fails to take up key technologies
Weak or decaying national social and economic circumstances	Consumer acceptance is lacking
National security issues hinder project implementation	Funding does not materialize for full scale implementation of NAMA, exceeds financial support provided by FIRM

[41] Firm Country Interaction Workshop, Workshop Report, p. 2

[42] Prodoc, p. 16

117. There is no indication that risks and assumptions have been discussed with key stakeholders in the process of the project design. The risk assessment is neither reflected in the annual reports, nor in the activities of the first period, nor in the joint activities of the FIRM and SEAN CC cooperation. As documentation is lacking it gives rise to the suspicion that the factors written above, were never assessed in detail, neither for the project as a whole nor on country level.

118. The project implementation proves that most of the above risks did not become a reality. The country example of Viet Nam points out that so far no NAMA has been implemented in Viet Nam. They will submit the two NAMAs to the NAMA registry in 2016 to seek financial support. Out of over 150 NAMAs on the UNFCCC NAMA registry, only eight have to date been funded for implementation. The Green Climate Fund, which was initially intended to fund implementation of the NAMA developed under the FIRM project, was not yet fully operational. But on the other hand, none of the FIRM-supported projects have been submitted to Facilities, like e.g. the NAMA Facility.[43]

119. The underlying assumption of the FIRM project is that there is no negative environmental footprint as the project aims at accelerating the transfer and deployment of mitigation policies in developing countries; instead developing countries shall abandon their fossil-based energy paths towards a low-carbon intensive and thus, contribute to the improvement of the countries environment. The concept of NAMA integrates sustainable development and mitigation actions thus ensuring that mitigation actions also lead to sustainable benefits. This inherent element of NAMAs is demonstrated by the fact that NAMAs identified by countries were to meet their national Sustainable Development goals with the benefit that they also reduce emissions. Therefore, the countries are looking at low carbon options to fossil fuel because it addressed energy security and local air pollution problems.

4.7 Factors affecting performance

Management, execution and partnership arrangements

120. The Prodoc refers to the experience of UNEP DTIE and UDP as implementing agencies in a rather general fashion. According to the first annual report the overall project management was being shared between UNEP DTIE and UDP. Roles and responsibilities of the FIRM team were later documented in a project implementation guidance document. How well the multi-stakeholder coordination strategy worked at country level with its individual bodies cooperating in each country, where the barriers for the development for a low-carbon development strategy were lying and how the FIRM project team managed to overcome the barriers would be interesting to know; but lacks reporting. The FIRM team indicated this was done mostly through the country level multi-stakeholder coordination mechanism.

121. Partnerships arrangements include the agreements between UDP and the FIRM countries. At the country level, implementation arrangements include partnering, through the local project coordinator, with local experts and local centres of excellence. According to the project team, multi-stakeholder coordination mechanisms were set up in each country as per MOUs signed between the countries and UDP.

[43] With the exception of the Ethiopia work that was considered incomplete by UDP

Monitoring and Evaluation

122. Monitoring and Evaluation complied with the UNEP M&E requirements, when the project was designed in 2010. Ever since, M&E has been done by a six-monthly PIMS reporting, IMDIS reporting and regular summary project status tables. The project team also considers its regular calls between UNEP and UDP on project progress a monitoring activity. Monitoring and Evaluation of the FIRM project are not easy to measure, because several elements were not a requirement of UNEP´s project document templates at the time when the FIRM project was being designed, but belong to today´s standards for a well-functioning M&E system. To these elements belong technical and/or organizational milestones to underpin project progress, a detailed M&E framework and SMART indicators.

123. The budget of a draft version of the Prodoc has foreseen 37.000 US$ in the third year for "evaluation", that remained the same as per budget of PCA and overall official project accounts. Due to large workload of the evaluation office the evaluation did not take place in 2014. When FIRM was moved from P2 to P1 in 2014, it was agreed that the evaluation budget was to be provided for the terminal evaluation. More detailed information is given in the template of the quality of project design in the List of individuals consulted for the case study

21st of July 2015:

Djaheezah Subratty, Head Policy Unit (DTIE). UNEP Paris
Jerome Malavelle, Project Manager SEAN-CC (DTIE). UNEP Paris
Mark Radka, Chief Energy, Climate, and Technology Branch (DTIE). UNEP Paris
Martina Otto, former Head Policy Unit (DTIE). UNEP Paris (FIRM project manager until March 2014)

15th of September 2015:

Djaheezah Subratty, Head Policy Unit (DTIE). UNEP Paris

13th of October 2015:

Sudhir Sharma, Project Manager FIRM. UNEP Copenhagen

20th of January 2016:

Djaheezah Subratty, Head Policy Unit (DTIE). UNEP Paris

28th of January 2016:

Djaheezah Subratty, Head Policy Unit (DTIE). UNEP Paris

16th of March 2016:

Nguyen Van Anh, National Coordinator of the FIRM Project in Viet Nam

4th April 2016:

Djaheezah Subratty, Head Policy Unit (DTIE). UNEP Paris

21st of April 2016:

Djaheezah Subratty, Head Policy Unit (DTIE). UNEP Paris
Mark Radka, Chief Energy, Climate, and Technology Branch (DTIE). UNEP Paris
Rahel Steinbach, Programme Officer, Energy, Climate and Technology Branch. UNEP Paris

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125. The findings indicate however, that one factor contributing to the sluggish project progress is the lack of a fully detailed logical framework that could guide implementation. The logical framework is rather reduced compared to the international standards for logframes. It specifies no milestones for the planned activities. Baseline and target information are only given at the objective level; baseline information on performance indicators has only been collected from the UNEP PoW, not adapted to project requirements and only defined at the objective level. No further baseline information was collected. Baseline and indicative cumulative targets on outcome and output level are not worked out. This finding might also be an explanation for the varying descriptions of project objective, outcomes and outputs in the different project documents.

126. While each country component naturally was implemented at its own speed, overarching management might not have been in a position to steer the resources in a way that they would accelerate the project, at least there could no controversial debate be found on whether or not UNEP or UDP could accelerate country pace of progress by alleviating staff constraints.

127. On the technical level, Monitoring, Reporting and Verification (MRV) have been addressed by the project as one important element in climate change mitigation actions as "the main objective of MRV activities is to enhance the transparency of mitigation actions undertaken. MRV is an effective way of monitoring the implementation of NAMAs in particular in the assessment of greenhouse gas emission reduction, cost effectiveness and sustainable development benefits"[44].

128. However, on the organizational level of the FIRM project this component is missing. A monitoring and evaluation tool would have contributed in most cases to anticipate and uncover upcoming problems before they actually happened and preventive measures could have been undertaken.

129. The reporting system (PIMS and IMDIS etc.) also displays weaknesses concerning the level of detail in documenting project progress, the project's achievements and the barriers that the FIRM project team encountered in the developing countries in the phase of implementation. Annual reports are a good way to express those findings, but should have been more detailed by country as well as by thoroughly describing individual and general challenges that hamper project progress and NAMA development, by communicating the resulting discussions with stakeholders on country-level and illustrating how the barriers and challenges were individually tackled and overcome in the participating countries. All the more a project lacks detailedness and the capturing of top level information in the annual reports and reporting in general, the more progress is difficult to assess.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

130. The creation of the FIRM project was triggered by the political momentum of the UNFCCC process. The COP 16 held in Cancun from 29 November to 10 December 2010 emphasized the

[44] NAMA RBCS, Final Draft, p. 48

need for developing countries to address climate change and urged them to a shift of paradigm from the “business-as-usual” fossil-based economy towards a low-carbon society. Therefore, the FIRM project was designed for national “quick start” mitigation actions after COP 16 to assist developing countries in systematizing and scaling up their efforts towards sustainable development.

131. The project was implemented by two host organizations - UNEP and UDP - that have successfully cooperated in the past and could rely on existing relationships with several developing countries, amongst them initially 7 countries selected for participation. Later Ethiopia opted for an early termination of the project. The Philippines joined the FIRM project as part of the collaboration with the SEAN-CC project and further to the UNEP 2014 regional workshop on NAMAs. Mexico and South Africa came in at an early stage to foster South-South learning and cooperation.

132. The FIRM project was originally designed for three years and is still ongoing and will be finalized in 2016. About 90%) of the original activities have been completed by 2015 and in 2016 new activities are being implemented from funds left in the project. So far, no evaluation has ever been carried out due to overload of work of the UNEP evaluation office in 2014. The project was scheduled for a three year period from 2011-2013, and then extended over the year 2014 due to late start in August 2011, as countries took longer than anticipated to officially confirm their participation in the project. By end 2014, 70% of the project activities were completed, with remaining activities largely in Ethiopia and Senegal and in remaining publications (one which required completion of all project activities to be done) and a final project workshop for information sharing. It continued its activities under a new PCA in the year 2015 and new activities added as a result of excess funding and evolving needs for guidance linked to the climate negotiations. Because there was still money unspent by the end of 2015 and a few of the activities not yet brought to an end, the project was granted a final no-cost extension until end 2016 to support countries with INDC-related policy dialogue and activities.

133. The following evaluation ratings in Table 12 summarize the project performance of the FIRM project in total:

Table 12: Evaluation Ratings

Criterion	Summary Assessment	Rating
A. Strategic relevance	The FIRM project helped countries at a critical point in the negotiation process to prepare for a new stage in the negotiation process.	Satisfactory
B. Achievement of outputs	90% of outputs initially planned have been completed in a project time that was twice as long as originally intended.	Moderately Satisfactory
C. Effectiveness: Attainment of project objectives and results		Moderately Satisfactory
1. Achievement of direct outcomes	Some NAMAs (although fewer than expected) have been designed. NAMAs might have found entry into the INDCs. But none have been implemented so far.	Moderately Satisfactory
2. Likelihood of impact	All project activities have the potential to lead to the independent impact of "reduced	Likely

Criterion	Summary Assessment	Rating
	greenhouse gas emissions and enhanced resilience to climate change".	
3. Achievement of project goal and planned objectives	On the national levels, assumed goals are initiation of the implementation of NAMAs. These have not yet been achieved. On the international level, the project's goal was to contribute to the definition of NAMAs. This has been achieved.	Moderately Satisfactory
D. Sustainability and replication		Moderately Likely
1. Financial	Until today, there is no funding for the implementation of NAMAs prepared under the FIRM project, but it is likely that some NAMAs will find funding in the near future.	Likely
2. Socio-political	The process of developing LCDS and NAMAs is built upon the assessment of existing socio-political and environmental development strategies of the participating countries and therefore likely to be socio-politically sustainable.	Likely
3. Institutional framework	It is not guaranteed that the project was able to change national structures sufficiently for sustainable institutional anchoring in the countries.	Moderately Likely
4. Environmental	The NAMAs developed in the project integrate sustainable development and mitigation instruments which should ensure that mitigation of GHG does not lead to other negative impacts.	Highly Likely
5. Catalytic role and replication	As implementation of the first NAMAs is still outstanding, the replication of the projects without aid from international donors seems also difficult.	Moderately Likely
E. Efficiency	The project was implemented in a very cost-conscious and efficient manner, leveraging multiple synergies. The overall funding volume would have allowed more ambitious planning targets.	Satisfactory
F. Factors affecting project performance		Moderately Satisfactory
1. Preparation and readiness	The project follows a country-driven approach led by national focal points in the ministries of the participating countries or research institutions.	Satisfactory

Criterion	Summary Assessment	Rating
2. Project implementation and management	The extent to which the project management responded to direction and guidance provided by the steering bodies established for the participating countries is difficult to assess, as no documents handle that issue. Apart from the institutional and technical challenges the project a more detailed functioning M&E system could have provided more evidence.	Moderately Satisfactory
3. Stakeholders participation and public awareness	The stakeholder participation differed from country to country, and lead to the expected outcomes, except for Ethiopia.	Satisfactory
4. Country ownership and driven-ness	The project is highly country-driven, as expressed for example in an “adjustable tool package”. The countries chose those project elements from the package that were meeting their demands.	Highly Satisfactory
5. Financial planning and management	Financial planning was too generous and would have allowed for greater ambition. Financial management was tight and efficient.	Moderately Satisfactory
6. UNEP supervision and backstopping	Regular PIMS entries document rather general UNEP supervision and backstopping.	Moderately Satisfactory
7. Monitoring and evaluation	While the documentation might follow historic UNEP standards, the M&E system does not allow for meaningful project management nor evaluation.	Unsatisfactory
a. M&E Design	The FIRM Prodoc details no M&E design.	Unsatisfactory
b. Budgeting and funding for M&E activities	The FIRM project budgeted 37.000 US$ for evaluation.	Moderately Satisfactory
c. M&E Plan Implementation	There is no documentation on the M&E process available, because M&E section was not required in the UNEP 2010 Prodoc template. The evaluation planned in 2014 was not undertaken due to overload of the UNEP evaluation office. Final evaluation is currently underway in the form of this case study.	Moderately Unsatisfactory
Overall project rating	The project convinces on the technical support given to developing countries and the capacity building of its stakeholders, but shows weaknesses in the project steering and (financial) management.	**Moderately Satisfactory**

5.2 Lessons Learned

> ***Lesson 1.*** ***It has not been possible to translate vague political guidance from the UNFCCC in country-driven mechanisms within the typical project cycle of three years, if country-drivenness is setting the pace of the project.***

134. UNEP services under FIRM were delivered as an adjustable package focusing either on renewable energy or energy efficiency mitigation opportunities. In a demand-driven approach FIRM offered each country support to overcome non-financial barriers by a process of formulating (Components of) Low Carbon Development Strategies and NAMAs. NAMAs were carried out in the sectors of Housing, Waste, Energy Efficiency of Capacitor Banks, Energy Efficiency Technology in Steel Industry, Agriculture and Forestry, Transport, Solar Photovoltaic, Biogas and Wind Energy. Even if UNEP could have managed the process more directly, it would have needed more time than planned. This flexible project approach is convenient for the participating countries as they can take their time to organize a broad-range stakeholder participation and ensure ownership, but it is very time-consuming for the project staff and presents difficulties in terms of project management.

> ***Lesson 2.*** ***Monitoring and Evaluation can and should be used as a project and knowledge management tool.***

135. A functioning Monitoring and Evaluation system provides a continuous flow of information that should be used as a continuous management tool to inform on progress, problems and performance. It would have aided the project management in thinking about and clarifying the project goals and objectives. A functioning M&E system would have helped the managers to identify the project weaknesses and to take action to correct them, eventually bringing about a more rapid completion of the project. The M&E system would have also aided in promoting greater transparency and accountability to the donor and thus it is somehow surprising that the donor extended the project three times. Having a good documentation of the project implementation process and the delaying factors would have supported project management also in learning about the delaying factors in country-driven work and take active counter measures.

> ***Lesson 3.*** ***Competing with other multilateral initiatives in climate mitigation can impede project progress.***

136. At the beginning of the project institutional structures in some participating countries were not yet fully developed for climate change issues and therefore had to be laboriously set up. Especially at the initial phase of the project the project faced a huge challenge of coordination between planners, implementers and the project team at national levels. The existence of other competing ongoing similar projects increased the need for additional coordination with the country. Then, in the course of the project, various country missions were conducted to provide guidance to the national committees and country groups and FIRM responded to individual country priorities by providing capacity building and training. How the project overcame these shortfalls and especially how the approach to NAMAs was affected by the impact of negotiations on the internal decision making dynamics will be helpful to communicate to similar projects and multilateral approaches in climate mitigation and allow these initiatives to learn from the experiences made by FIRM.

Lesson 4. ***Collaborating with other activities and projects can preserve project funds, improve product quality, multiply impact, lessen burden on stakeholder and make project activities more sustainable.***

137. The FIRM project collaborated with other organisations, e.g. UNFCCC or GIZ, and UNEP projects (e.g. SEAN-CC). This related to the development of technical guidance publications, international networking and international capacity building activities like workshops. FIRM also coordinated with low-carbon projects in countries, for example in the case of Ethiopia, so that duplication on LCDS was avoided, or in Costa Rica where the cooperation enabled joint activities with the UNDP Low-Emission Capacity Development programme. Participation in the UNFCCC NAMA partnership facilitated the coordination of country activities among donors, avoiding duplication and enabling the sharing of project results.

138. The FIRM project benefitted from this through several pathways: financial savings, enhanced quality of local outputs through donor coordination and joint utilization of local steering capacity and enhanced quality of international products which were able to draw on a larger pool of experiences. Overall, these results enhance the likelihood of the sustainability of impact of the project.

Lesson 5. ***Developing technical guidance drawing from country experiences***

139. Most of the FIRM technical publications drew from the FIRM country activities and either the request of participating countries for guidance (e.g. on financial engineering of NAMAs) or the use of lessons gathered from country activities to support similar thinking in non-FIRM countries, such as through the guidebook or the link between INDCs and NAMAs.

5.3 Recommendations

Recommendation 1. *The set up and implementation of an internal M&E system and process is highly recommended, in particular in a country-driven multi-country programme.*

140. To fully understand the strengths and weaknesses of the FIRM project and to learn from the project experiences, the set up and follow-up of an internal M&E system is necessary. The project has acquired a lot of knowledge on the sometimes long and stony way of formulating NAMAs in different developing countries and on the factors that hamper their implementation. A thorough internal M&E system would not only reflect on the rather technical outputs of Low Carbon Development Strategies and NAMAs but also upon the processes that were triggered in each country. It could also deepen the reflection upon the work with Ethiopia. Just to state that "they have their own views about the quality of a good NAMA[45]" is not enough for those wanting to see demonstrable impacts from UNEP in all participating countries.

141. In particular, in this case, the project would have greatly benefitted from a mid-term evaluation. Specific aspects that could have remedied early on through this measure relate to:

- Strategic and productive reprogramming of underutilized funds – for example with respect to the question whether the deepening of the collaboration with the

[45] Project Implementation Status in Countries (July 2015)-Implementation Phase; p.3

existing programme countries, a broadening of the number of countries or a reconfiguration in a replication-oriented TA facility would have been the most productive choice with respect to the strategic goals of the programme,

- A cross-cutting evaluative look across country programs would have resulted in an independent opinion if the cross-learning potentials have been exhausted.
- The M&E system could have been updated to current UNEP standards, so that a number of challenges throughout project implementation and evaluation would have been reduced,
- A robust and sustainable exit strategy could have been developed.

Recommendation 2. *Detailed and transparent project documentation that refers and updates the original logframe and risk assessment produces improved planning documentation and can eventually reduce the risk of getting "derailed" and helps to submit the expected results in due time.*

142. In view of the elaboration of the final project document of the FIRM project, it is recommendable to refer to and update the original logframe and risk assessment. Deviations from the designed project matrix are then easier to detect.

143. This is particularly noteworthy with respect to the lack of quantified project targets on the outcome level. Delegating the actual choice of project activities to the local level is in line with a "country driven" approach but can also be a way to - unintentionally - delegate away the responsibility and accountability for the results of the programme. The project was provided with ample resources and more active project management could potentially have leveraged more success stories, if the goals would have been set in a way as to incentivize this.

Recommendation 3. *Use some of the remaining funds for learning on a meta-level and acceleration of replication and implementation of mitigation commitments from NDCs.*

144. The risks identified at the beginning of the project can be validated against actual occurrences. The main risk that materialized here was that countries' readiness for NAMAs might have been misjudged and countries' attention got distracted by the NDC process in the run-up to Paris. Can any lessons be derived for similar situations in the future? Where were the bottlenecks in stakeholder engagement and which lessons can be derived for future projects? Were there any additional national challenges, e.g. national economic, political or social circumstances that also influenced the delay of the project apart from the institutional difficulties? As these challenges in the national implementation and coordination processes occur regularly, the project would have offered some opportunity to contribute to the solution of this challenge in a more systematic and strategic manner through their analysis and the structured testing of new approaches to national coordination around climate challenges.

145. An important learning opportunity would have consisted in the analysis of why funding for full scale NAMA implementation could not be found so far? Answers to those questions will help future UNEP and UDP projects to submit the expected results in due time.

It is recommended that UNEP/UDP use some of the remaining project funds on a deeper analysis of country stakeholder processes around climate mitigation, and the driving and decisive factors for success or failure and provide learning opportunities to the other 170 climate change focal points that did not benefit from the FIRM.

146. In this vein, it is recommended that in the final project workshop FIRM brings together stakeholders of all participating countries with stakeholders from non-participating developing countries, which are currently struggling to elaborate their Low Carbon Development Strategies and/or NAMAs in renewable energy or energy efficiency. In that way, the output of component C could be nearly fully achieved. The institutions and stakeholders involved in the FIRM project have gathered valuable, practical information. Their success stories and lessons learned deserve to be heard by other developing countries, because the exchange of experience on devising and implementing national measures are useful for national and multilateral approaches to climate mitigation. Through an additional participation of other developed countries the networks for knowledge and experience sharing could be further enhanced or expanded and lead to increased south-south and north-south cooperation.

Recommendation 4. *Develop "best practice" NAMAS and role models and encourage Governments to submit to the NAMA Facility and other Funding Facilities.*

147. NAMAs as a concept were borne out of the Copenhagen Agreement of 2009. They are considered an important shape in which developing countries can actively contribute to climate mitigation. They do bear some new aspects compared to earlier climate mitigation approaches in developing country (like GEF projects), in particular with respect to the Monitoring, Reporting and Verification (MRV) process that are called for in the Copenhagen Accord. Helping Developing Countries to find possible shapes for NAMAs was an important step in encouraging them to take on mitigation commitments and pave the way for a comprehensive agreement for future climate action that included commitments by Developing Countries.

148. The run-up to the Paris COP has siphoned away some of the attention from the NAMAs towards the INDCs. While the Paris Agreement is not explicitly referring to NAMAs anymore, it is currently unclear if the term "NAMA" will play a role in the future. However, a number of aspects from what is now considered a NAMA – including but not limited to the fact that generally a NAMA constitutes sectoral approach that is MRV'ed – will remain very important in the future. So, even if the term might lose relevance in the future, the templates, general idea and learnings throughout the process will remain valuable. It is therefore recommendable that the FIRM project- as a major knowledge provider- continues to encourage Country Governments to develop NAMA Support Projects on the basis of the FIRM NAMAs and eventually submit to the NAMA Facility and other Funding Facilities.

6 ANNEXES

6.1 List of individuals consulted for the case study

21st of July 2015:

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13th of October 2015:

Sudhir Sharma, Project Manager FIRM. UNEP Copenhagen

20th of January 2016:

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16th of March 2016:

Nguyen Van Anh, National Coordinator of the FIRM Project in Viet Nam

4th April 2016:

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6.3 Project Design Evaluation Matrix

	Project context		Evaluation Comments	Rating
1	Does the project document provide a description of stakeholder consultation during project design process?		No	U
2	Does the project document include a clear stakeholder analysis? Are stakeholder needs and priorities clearly		The beneficiaries mentioned in the Prodoc are the participating countries with particular emphasis "on energy and environmental policy makers and experts- and the institutions in which they work" (p.1).	MU
3	Does the project document entail a clear situation analysis?		The project document entails a general analysis of climate change, the necessity of mitigation efforts and the need to support development countries towards a low-carbon development paths that is in line with the Millenium Development (MDG)and National Development Goals	S
4	Does the project document entail a clear problem analysis?		The project document contains a clear problem analysis. Developing countries have an increased demand for energy as their economies and populations are growing. So far, they are focussed on reaching their national development goals by relying heavily on fossil-based energy production. To leapfrog this process and make use of international programmes to reduce greenhouse gases, developing governments need	S
5	Does the project document entail a clear gender analysis?		No.	U
	Relevance			
6	Is the project document clear in terms of relevance to:	i) Global, Regional, Sub-regional and National environmental issues and needs?	The document does not provide an assessment of the difference in the needs between regions, sub-regions and countries, but implies that the countries will act and set up low-carbon development frameworks and NAMAs according to their needs and in line with national development strategies.	MS
7		ii) UNEP mandate	UNEP´s role as the leading global environmental authority and their political mandate towards a world-wide low-carbon energy development make the link to UNEP´s mandate very clear. UNEP has a successful record of building up technical skills and knowledge about policy otions that integrate business management and market approaches, ease the costs and risks of entry of financial actors in mitigation investments and developed skills towards analyzing how clean technologies contribute to macroeconomic growth. (p. 6)	S
8		iii) the relevant GEF focal areas, strategic priorities and operational programme(s)? (if	The relationship with GEF CC focal area is not discussed. GEF is only indirectly mentioned as financier of other UNEP projects.	MU

9		iv) Stakeholder priorities and needs?	Stakeholder priorities and needs are mentioned. Developing countries concentrate on meeting NDG, such as creating jobs, enhancing energy security, reducing local environmental impacts of conventional energy technologies and satisfying the demand for energy of growing populations.	S
10	Is the project document clear in terms of relevance to cross-cutting issues	i) Gender equity	Gender aspects are not outlined in the Prodoc.	U
11		ii) South-South Cooperation	South-south cooperation will be achieved through the establishment of Component 3. Networking and exchange of project result will be accomlished through builing on UNEP´s networks of climate change focal points and UNEP´s specialized network among developing countries. For a fast and cost-effective implementation of mitigation efforts in developing countries can foremost be fostered through institutional cooperation, the Output of component C comprised south-south and north-south cooperation on mitigation, technology transfer and NAMA implementation. Networking and exchange of project result were to be accomplished through building on UNEP´s networks of climate change focal points and UNEP´s specialized network among developing countriesOutput of component C comprises a. o. south-south and north-south cooperation on mitigation, technology transfer and	S
12		iii) Bali Strategic Plan	The projects' focus on government capacity building is strong, bringing the projects very much in line with the Bali Strategic Plan.	S
	Intended Results and Causality			
13	Are the outcomes realistic?		The outcome targets were difficult to achieve within a timeframe of three years and a budget of a maximum of 500.000 US$ for each country.	MU
14	Are the causal pathways from project outputs [goods and services] through outcomes [changes in stakeholder behaviour] towards impacts clearly and convincingly		The causal pathways from outputs to outcomes towards impacts are not clearly described, but there is an intrinsic logic within the project. Component C was meant to foster a more cost effective implementation of mitigation efforts in developing countries beyond those participating in the FIRM project, an output too ambitious to be achieved under the given time constraints and financial limitations.	S
15	Is the timeframe realistic? What is the likelihood that the anticipated project outcomes can be achieved within the stated duration of the project?		The indicative timeline given in the Prodoc deems by far too optimistic with country visits and development of national programmes that were to be completed only after 4 months after the official project launch. The implementation of early "quick start" NAMAs were scheduled to start only 5 months after Project take-off. Up-scaling is not part of the expected project outcome, but networking and success stories and lessons learnt, as well as guidance material on NAMA criteria, tools and Monitoring, Research and Validation Guidelines for analysing key sectors are provided under Component B and A. 1.	MU
16	Are activities appropriate to produce outputs?		The logical framework complies with UNEP standards though it does not comment on the causal links between input and output, output and outcome or outcomes and impacts. Indicators are on mostly on national or sector level. Therefore, the impact of FIRM is difficult to assess, as many factors influence sector or national initiatives, instruments, laws etc.	MU

17	Are activities appropriate to drive change along the intended causal pathway(s)?	Yes. Discussion on reconstructed TOC.	S
18	Are impact drivers and assumptions clearly described for each key causal pathway?	No assumptions on objective, outcome and programme output level are displayed. Impact drivers are not mentioned.	U
19	Are the roles of key actors and stakeholders clearly described for each key causal pathway?	The roles of key actors and stakeholders are not specified.	U
20	Is the ToC-D terminology (*result levels, drivers, assumptions etc.*) consistent with UNEP definitions (*Programme Manual*)	Yes	S
	Efficiency		
21	Does the project intend to make use of / build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency?	The projects builds upon existing relationships, partnerships and institutions and utilizes them in a strategic manner. UNEP DTIE and URC have longlasting experience in climate changemitigation. URC is a recognized international Centre-of-Excellence on energy development and climate change and for years a core part of UNEP´s climate change programme, e.g. in UNEP climate change strategy and Clean Tech Readiness. "Other donors and UN agencies active in each country will be consulted in developing the workplans in order to ensure good coordination and alignment with related mitigation activities" p.9). FIRM intends to benefit from UNEP´s TNA effort during the	S
	Sustainability / Replication and Catalytic effects		
22	Does the project design present a strategy / approach to sustaining outcomes / benefits?	The outcome of the programme is to a large extent in the hand of the National governments and experts. It reflects the committments of developing countries on the Copenhagen Accord to proceeed with specified NAMAs, if technological and financial support is provided (p.5).	S
23	Does the design identify social or political factors that may influence positively or negatively the sustenance of project results and progress towards impacts?	The project relies heavily on the initiative of the governments in devoloping countries and their drivers for initiating climate change mitigation activities. If there is no financial committment of international donors and/or national drivers, mitigation activities will not considerably reduce greenhouse gas emission growth. Several studies have shown, that "market mechanisms alone will by no means solve all development, security and environmental problems" (p.16).	S
24	Does the design foresee sufficient activities to promote government and stakeholder awareness, interests, commitment and incentives to execute, enforce and pursue the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project?	The project design assumes that the governments are comitted to fostering climate technology transfer. To ensure that their support the following measures are undertaken:1) advise and support related to the identification of technology needs is provided through UNEP and URC 2) knowledge-sharing events, meetings and workshops take place; lessons learnt will be shared; Component A and B rely on the formulation of national priorities. After a general approach across FIRM countries, the project setup "will be adapted to specific national circumstances"(p.9).	S

25	If funding is required to sustain project outcomes and benefits, does the design propose adequate measures / mechanisms to secure this funding?	36. The indicative programme budget is outlined with an estimated total cost of 7 mio US$ over 3 years. Funding is secured through the Danish Ministry of Foreign Affairs for the period 2010-2013. The grant has a volume of 32 million DKr as core funding for URC. No mechanisms to secure the funding for a second period are laid out.	S
26	Are financial risks adequately identified and does the project describe a clear strategy on how to mitigate the risks (in terms of project's	No risk log was elaborated.	U
27	Does the project design adequately describe the institutional frameworks, governance structures and processes, policies, sub-regional agreements, legal and	There is no chapter that deals with the underlying assumptions and rationale of strategies for adressing risks.	U
28	Does the project design identify environmental factors, positive or negative, that can influence the future flow of project benefits? Are there any project	There are no environmental factors mentioned that influence the flow of future project benefits.	U
29	Does the project design foresee adequate measures to promote replication and up-scaling / does the project have a clear	Up-scaling is not part of the expected project outcome, but networking and success stories and lessons learnt, as well as guidance material on NAMA criteria, tools and MRV; and guidelines for analyzing key sectors are provid under Component B and A.	S
30	Are the planned activities likely to generate the level of ownership by the main national and regional stakeholders necessary to	The sustainablity of national stakeholders depends on their participation and committment. This can assessed through the means of verification.	S
	Learning, Communication and outreach		
31	Has the project identified appropriate methods for communication with key stakeholders during the project life?	The project relies on existing relationships with "priority countries" for Denmark; countries where UNEP DTIE and URC have projects underway.Capacity training is an element of Component A, international meetings of knowledge-sharing shall take part under Component C: "Participation of countries in transition shall foster south-	S
32	Are plans in place for dissemination of results and lesson sharing.	Yes, through COMPONENT C, knowledge sharing, networking and best practices.	S
33	Do learning, communication and outreach plans build on analysis of existing communication channels and networks used by key	No explicit plans are provided.	MU

34	Are all assumptions identified in the ToC presented as risks in the risk management table? Are risks appropriately identified in both, ToC and the risk table?	There is no indication given that risks and assumptions have been discussed with key stakeholders. As project risks are not identified in the Prodoc, an appropriate risk management strategy cannot be built upon. The single underlying assumption is that there is no negative environmental footprint as the project aims at accelerating transfer and deployment of mitigation policies in developing countries; instead developing countries shall abandon their fossil-based energy paths towards a low-carbon intensive and thus, contribute to the improvement of the countries environment.	U
35	Is the risk management strategy appropriate?	There is no appropriate risk management strategy.	U
36	Are potentially negative environmental, economic and social impacts of projects identified?	No.	U
37	Does the project have adequate mechanisms to reduce its negative environmental foot-print?	The underlying assumption is that there is no negativ footprint as the project aims at accelerating transfer and deployment of mitigation policies in developing countries; instead developing countries shall abandon their fossile based energy paths towards a low-carbon intensive one	HS
38	Have risks and assumptions been discussed with key stakeholders?	The document gives no indication of that.	U
	Governance and Supervision Arrangements		
35	Is the project governance model comprehensive, clear and appropriate? (*Steering Committee, partner consultations etc.*)	Prodoc has no project governance model; it eventually came up at first annual report from august 2011-December 2012, repeated and enriched in second annual report 2014.	U
36	Are supervision / oversight arrangements clear and appropriate?	In the Prodoc, no oversight/supervision arrangements are described.	U
	Management, Execution and Partnership Arrangements		
37	Have the capacities of partners been adequately assessed?	The capacities of the hosts are very detailed, capacities of possibly cooperating countries not.	MU
38	Are the execution arrangements clear and are roles and responsibilities within UNEP clearly defined?	Execution arangements are not defined in Prodoc. Only in the first report, it becomes clear that UNEP and URC share overall project management and both will be responsible for procurement, recruitment, administration, management and reporting.	U
39	Are the roles and responsibilities of external partners properly specified?	No	U

	Financial Planning / budgeting			
40	Are there any obvious deficiencies in the budgets / financial planning? (*coherence of the budget, do figures add up etc.*)		Obvious deficiencies in the budget cannot be traced.	S
41	Is the resource utilization cost effective?		N/a. Cannot be assessed as budget is not broken down on activity level.	N/a
42	How realistic is the resource mobilization strategy?		It is not described in the document and seems to be unforeseen, because of the character of the project of given developing countries a quick start.	N/a
43	Are the financial and administrative arrangements including flows of funds clearly described?		Financial arrangement are clearly described with one single contributor, the administrative arrangements in developing countries are not outlined.	MU
	Monitoring			
44	Does the logical framework	• capture the key elements of the Theory of Change for	The logical framework does not comment on the causal links between input and output , output and outcome or outcomes and impacts , but complies with UNEP standards.	S
45		• have 'SMART' indicators for outcomes	Indicators are on mostly on national or sector level and the impact of FIRM as single project therefore contributing to the national range difficult to assess. Many factors influence sector or national initiatives, instruments, laws etc.	MU
46		• have appropriate 'means of verification'?	The logical framework has means of verification, but many of them are on a national or sectoral level. The impact of FIRM on national documents is difficult to assess,	S
47	Are the milestones appropriate and sufficient to track progress and foster management towards outputs and		There are no Milestones to underpin the organisational structure and technical assistance.	HU
48	Is there baseline information in relation to key performance indicators?		Baseline information is only given on objective level.	MU
49	How well has the method for the baseline data collection been explained?		It is not explained. N/a	N/a
50	Has the desired level of achievement (targets) been specified for indicators of outputs and outcomes?		No, only at objective level.	MU
51	How well are the performance targets justified for outputs and outcomes?		N/a	N/a
52	Has a budget been allocated for monitoring project progress in implementation against outputs and outcomes?		M&E process is not explicitly explained in Prodoc. As there are activities on FIRM success stories and lessons learnt listed up, it becomes clear that there must be an underlying M&E procedure in conjunction with Component C. The budget foresees 37.000 US$ in the third year for "evaluation", to build support for multilateral approaches to climate mitigation, 31% of Budget on knowledge management.	MU
53	Does the project have a clear knowledge management approach?		yes. The installation of KM is one activity of output 3.	S
	Have mechanisms for involving			

53	Does the project have a clear knowledge management approach?	yes. The installation of KM is one activity of output 3.	S
54	Have mechanisms for involving key project stakeholder groups in monitoring activities been clearly articulated?	In Pro Docs the means of verification relies on country communication, country mechanisms are not articulated.	MU
	Evaluation		
55	Is there an adequate plan for evaluation?	M&E process is not explicitely explained in Prodoc. But as there are activities on FIRM success stories and lessons learnt it becomes clear that there must be an underlying M&E procedure in conjunction with Component C. The budget foresees 37.000 US$ in the third year for "evaluation", to build support for multilateral approaches to climate mitigation	MU
56	Has the time frame for evaluation activities been specified?	The evaluation takes place over the last year.	S
57	Is there an explicit budget provision for mid-term review and terminal evaluation?	It is assumed that part of last year´s evaluation budget is provided for the terminal evaluation. No evidence is found on mid-term evaluation.	S
58	Is the budget sufficient?	31% of Budget on knowledge management is foreseen for evaluation.	S
	Stakeholder Assessment		
59	Have all stakeholders who are affected by or who could affect (positively or negatively) the project been identified and explained in the stakeholder analysis?	A specific stakeholder analysis is not given.	MU
60	Did the main stakeholders participate in the design stages of the project and did their involvement influence the project design?	There is no evidence given in the document that stakeholders were involved.	N/a
61	Are the economic, social and environmental impacts to the key stakeholders identified, with particular reference to the most vulnerable groups ?	No.	U
62	Have the specific roles and responsibilities of the key stakeholders been documented in relation to project delivery and effectiveness?	No.	U
63	For projects operating at country level, are the stakeholder roles country specific? Is there a lead national or regional partner for each country/region	In each country there is the national government involved in the project. The roles are not yet defined in the Prodoc.	MU

6.4 Quality Assessment of the Evaluation Report

Evaluation Title:

Case Study F I R M project - Facilitating Implementation and Readiness for Mitigation Contributing to Terminal Evaluation of "Project 12/3-P1 – Support for Integrated Analysis and Development of Framework Policies for Greenhouse Gas Mitigation" And "Project 12/3-P2 – Support for the Deployment of Renewable Energy and Energy-efficient Technologies in Developing Countries"

All UNEP evaluations are subject to a quality assessment by the Evaluation Office. The quality assessment is used as a tool for providing structured feedback to the evaluation consultants.

The quality of both the draft and final evaluation report is assessed and rated against the following criteria:

	UNEP Evaluation Office Comments	Draft Report Rating	Final Report Rating
Substantive report quality criteria			
A. **Quality of the Executive Summary**: Does the executive summary present the main findings of the report for each evaluation criterion and a good summary of recommendations and lessons learned? (Executive Summary not required for zero draft)	Draft report: Final report:	N/A	6
B. **Project context and project description**: Does the report present an up-to-date description of the socio-economic, political, institutional and environmental context of the project, including the issues that the project is trying to address, their root causes and consequences on the environment and human well-being? Are any changes since the time of project design highlighted? Is all essential information about the project clearly presented in the report (objectives, target groups, institutional arrangements, budget, changes in design since approval etc.)?	Draft report: Final report:	5	6
C. **Strategic relevance**: Does the report present a well-reasoned, complete and evidence-based assessment of strategic relevance of the intervention in terms of relevance of the project to global, regional and national environmental issues and needs, and UNEP strategies and programmes?	Draft report: Final report:	5	6
D. **Achievement of outputs**: Does the report present a well-reasoned, complete and evidence-based assessment of outputs delivered by the intervention (including their quality)?	Draft report: Final report:	5	6
E. **Presentation of Theory of Change**: Is the Theory of Change of the intervention clearly presented? Are	Draft report: Final report:	5	6

	causal pathways logical and complete (including drivers, assumptions and key actors)?			
F.	**Effectiveness - Attainment of project objectives and results**: Does the report present a well-reasoned, complete and evidence-based assessment of the achievement of the relevant outcomes and project objectives?	Draft report: Final report:	5	6
G.	**Sustainability and replication**: Does the report present a well-reasoned and evidence-based assessment of sustainability of outcomes and replication / catalytic effects?	Draft report: Final report:	4	5
H.	**Efficiency**: Does the report present a well-reasoned, complete and evidence-based assessment of efficiency? Does the report present any comparison with similar interventions?	Draft report: Final report:	4	6
I.	**Factors affecting project performance**: Does the report present a well-reasoned, complete and evidence-based assessment of all factors affecting project performance? In particular, does the report include the actual project costs (total and per activity) and actual co-financing used; and an assessment of the quality of the project M&E system and its use for project management?	Draft report: Final report:	5	6
J.	**Quality of the conclusions:** Do the conclusions highlight the main strengths and weaknesses of the project, and connect those in a compelling story line?	Draft report: Final report:	5	6
K.	**Quality and utility of the recommendations**: Are recommendations based on explicit evaluation findings? Do recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?)'. Can they be implemented?	Draft report: Final report:	5	6
L.	**Quality and utility of the lessons**: Are lessons based on explicit evaluation findings? Do they suggest prescriptive action? Do they specify in which contexts they are applicable?	Draft report: Final report:	5	6
Report structure quality criteria				
M.	**Structure and clarity of the report**: Does the report structure follow EO guidelines? Are all requested Annexes included?	Draft report: Final report:	6	6
N.	**Evaluation methods and information sources**: Are evaluation methods and information sources clearly described? Are data collection methods, the	Draft report: Final report:	4	6

	triangulation / verification approach, details of stakeholder consultations provided? Are the limitations of evaluation methods and information sources described?			
O.	**Quality of writing**: Was the report well written? (clear English language and grammar)	Draft report: Final report:	5	6
P.	**Report formatting**: Does the report follow EO guidelines using headings, numbered paragraphs etc.	Draft report: Final report:	6	6
	OVERALL REPORT QUALITY RATING		**4.6**	**5.9**

The quality of the evaluation process is assessed at the end of the evaluation and rated against the following criteria:

		UNEP Evaluation Office Comments		Rating
Evaluation process quality criteria				
Q.	**Preparation:** Was the evaluation budget agreed and approved by the EO? Was inception report delivered and approved prior to commencing any travel?			6
R.	**Timeliness:** Was a TE initiated within the period of six months before or after project completion? Was an MTE initiated within a six month period prior to the project's mid-point? Were all deadlines set in the ToR respected?			6
S.	**Project's support:** Did the project make available all required documents? Was adequate support provided to the evaluator(s) in planning and conducting evaluation missions?			2
T.	**Recommendations:** Was an implementation plan for the evaluation recommendations prepared? Was the implementation plan adequately communicated to the project?			N/A
U.	**Quality assurance:** Was the evaluation peer-reviewed? Was the quality of the draft report checked by the evaluation manager and peer reviewer prior to dissemination to stakeholders for comments? Did EO complete an assessment of the quality of the final report?			4
V.	**Transparency:** Were the draft ToR and evaluation report circulated to all key stakeholders for comments? Was the draft evaluation report sent directly to EO? Were all comments to the draft evaluation report sent directly to the EO and did EO share all comments with the			6

	commentators? Did the evaluator(s) prepare a response to all comments?			
W.	**Participatory approach:** Was close communication to the EO and project maintained throughout the evaluation? Were evaluation findings, lessons and recommendations adequately communicated?			5
X.	**Independence:** Was the final selection of the evaluator(s) made by EO? Were possible conflicts of interest of the selected evaluator(s) appraised?			6
			OVERALL PROCESS RATING	**5**

Rating system for quality of evaluation reports

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1

The overall quality of the evaluation report is calculated by taking the mean score of all rated quality criteria.