

SELECTED REFERENCES

# CLIMATE CHANGE



**COWI GROUP**

COWI A/S

**COUNTRY**

Global (15 cooperation countries)

**PERIOD**

2020 - 2023

**CUSTOMER**

Danish Energy Agency/Danida

**FRAMEWORK AGREEMENTS REGARDING CONSULTANCY SERVICES TO THE DANISH ENERGY AGENCY ENERGY COUNTRY PRO-GRAMS AND PROJECTS ("DEPPIII") – POSITION 6: CLIMATE CHANGE MITIGATION PLANNING AND MODELLING**

The Danish Energy Partnership Programme III for 2020-2025 (so-called 'DEPPIII') is focusing on institutional capacity building where transformational change towards low carbon development can be achieved in support of the continued upscaling of NDC goals by 2025 and implementation of the Paris Agreement.

As a Government-to-Government modality, this is achieved through technical assistance with peer-to-peer exchange of experience at policy and operational level and coordinated climate diplomacy actions with the aim of providing convincing input for governmental energy, climate/low carbon policies, strategies and plans, and addressing implementation aspects of EE and high shares of variable RE in the national power/heating and cooling systems in a cost-efficient manner.

Position 6 on climate change provides support within climate and energy planning and modelling and focuses on co-development of key analytical documents, recommendations for policy reforms, regulatory development promoting RE, EE and climate change mitigation policies in order to assist the raising of the NDC ambitions in the main cooperation countries. Services include, but are not necessarily limited to, GHG-emissions scenarios and modelling, Cost-benefit analyses, development of financing mechanisms and international climate finance models, NDC measures costing and implementation as well as Monitoring Reporting Verification (MRV).

The project bases itself on the strong platform of DEPPII focusing on China, South Africa, Mexico and Vietnam (project implemented 2018-2020, led by COWI A/S), the four countries all being major transition economies and collectively standing for almost 1/3 of global GHG emissions. The current contract covers besides the four countries mentioned also India, Ukraine, Turkey, Indonesia, Ethiopia, Egypt, US, UK, Germany, South Korea, Netherlands as well as future upcoming cooperation countries.

The project relates to the following SDGs: 7 (Clean Energy), 8 (Jobs and Economic Growth), 9 (Industry, Innovation, Infrastructure), 13 (Climate Action) and 17 (Partnership for Goals).

- > GHG-emissions scenarios and models
- > Cost-benefit analyses
- > Financing mechanisms development and international climate finance models
- > NDC measures costing
- > NDC measures implementation
- > Monitoring Reporting Verification (MRV) at federal and subnational level aligning with Enhanced Transparency Framework best practice
- > Project management, technical backstopping services and coordination with DEA
- > Quality assurance/quality review of deliverables

**COWI GROUP**

COWI A/S

**PM**

MSJ

**COUNTRY**

Belgium

**SUPPORT TO THE EUS OBJECTIVE OF THE ASSESSMENT OF CLIMATE ACTION IN THE PROGRAMMES PREPARED BY MEMBER STATES FOR CO-FUNDING FROM THE REGIONAL DEVELOPMENT FUND, THE COHESION FUND AND THE JUST TRANSITION FUND**

The study supports DG CLIMA in its assessment of draft ERDF, CF, JTF and ETC programmes submitted by Member States to the European Commission. The contract will assess up to 287 individual programmes. The resulting assessments will be used by DG

**PERIOD**  
2020 - 2022

**CUSTOMER**  
EC, DG CLIMA

**TOTAL FEE**  
DKK 11.591.000

CLIMA in providing their response to the draft programmes as part of the Commission's Inter Service Consultation on it. The assessments will consider alignment, consistency and contributions towards key commitments and challenges such as those reflected in the NECPs and in the observations and recommendations from the European Semester, as well as in the minimum requirements for programme's financial allocations towards climate action. . A manual has been developed to guide the assessments and to ensure the consistency and comparability of assessments across programmes. A workshop was held to share the draft manual with assessors. Upon completion of the assessments, a report will be prepared that summarises the key observations and lessons learned from the assessments.

In total, 270 programmes were assessed.

- quality assurance,
- financial data analyses
- Expertise in climate action, EU climate policy and targets, structural funds and programming of those.

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Belgium

**PERIOD**  
2020 - 2022

**CUSTOMER**  
European Commission,  
DG CLIMA

**TOTAL FEE**  
DKK 2.810.000

## SUPPORT TO THE ASSESSMENT OF THE CLIMATE AMBITION IN THE EUROPEAN SOCIAL FUND PLUS.

The study supports DG CLIMA in its assessment of draft ESF+ programmes submitted by Member States to the European Commission. The contract will assess a total of 60 programmes. The resulting assessments will be used by DG CLIMA in providing their response to the draft programmes as part of the Commission's Inter Service Consultation on it. The contract will focus on assessing the programmes for regions and Member States that are assessed to be most affected by the transition towards climate neutrality in terms of potential job losses and reductions in economic activity. In this connection, a tool for pre-screening of draft programmes has been developed and will be used. The assessments will be done by a team of local experts. A manual has been developed to guide the assessments and ensure the consistency and comparability of assessments across programmes. A workshop has been held to share the draft manual with assessors

- Project management,
- Quality assurance,
- Expertise on ESF+; on the development of ESF+ programmes; on cohesion policy and on climate and environment

**COWI GROUP**  
COWI A/S

**PM**  
DSH

**COUNTRY**  
EU-27

**PERIOD**  
2019 - 2021

**CUSTOMER**  
DG CLIMA

## EU'S INNOVATION FUND – ASSISTANCE WITH THE LAUNCH OF THE 1ST CALL OF THE INNOVATION FUND

The project assists DG CLIMA and INEA in preparing for the first call of the EU's Innovation Fund, a key funding instrument for delivering the EU's commitment under the Paris Agreement, supporting the vision of a climate neutral Europe by 2050 and reinforcing EU's role as a global technology leader. The Innovation Fund will be implemented by the Executive Agency for Networks and Innovation (INEA), while the European Investment Bank will provide project development assistance to promising projects that are not ready for full application.

The Innovation Fund focuses on innovative low-carbon technologies and processes in energy intensive industries, including products substituting carbon intensive ones, carbon capture and utilisation (CCU), construction and operation of carbon capture and storage (CCS), innovative renewable energy generation, and energy storage. The EU Emissions Trading System (EU ETS) is providing the revenues for the Innovation Fund from the auctioning of 450 million allowances from 2020 to 2030, as well as any unspent funds

from the NER300 programme. The Fund may amount to about €10 billion, depending on the carbon price.

The project assists DG CLIMA in establishing the basis for the first large scale and small scale calls for applications, inter alia evaluation criteria, ranking methodology, concept for project development assistance (PDA), knowledge sharing and reporting, input to the standard grant agreement, and development of the call for pro-posals, templates for evaluations and guidelines. The project also provides support to stakeholder workshops and Commission consultation of Member States, the IFEG (Innovation Fund Expert Group) industries and Financial Institutions.

As result of the first call for large-scale applications, the Commission received 311 applications requesting a total of EUR 21.7 billion in support, distributed as follows: Renewable energy (58); Energy-intensive industries (204, out of which 56 in hydrogen; Energy storage (35); Carbon capture, use and storage (14). Evaluations by external evaluators are currently ongoing. The call for small-scale applications were launched late 2020 with a deadline for applications early March 2021.

Overall project management, including:

- > Climate change mitigation expertise in relevant sectors: Renewable energy, energy storage, CCS, energy intensive industries
- > Expertise in EU funds and international climate change finance
- > Liaison with EIB on the concepts for Project Development Assistance (PDA), and with JRC on GHG reduction calculation methodologies in cooperation with DG CLIMA
- > Presentation at the Innovation Fund Expert Group (IFEG) meetings
- > Presentations at DG CLIMA Innovation Fund workshops
- > Reporting to DG CLIMA and INEA
- > Quality Assurance on all deliverables and outputs

**COWI GROUP**  
COWI A/S

**PM**  
HEQH

**COUNTRY**  
United States

**PERIOD**  
2020 - 2021

**CUSTOMER**  
Forest Trends

**TOTAL FEE**  
USD 194.757

## FOREST TRENDS ECONOMIC COSTS OF ILLEGAL DEFORESTATION

The project is addressing illicit agro-conversion, using an economic and financial lens that will speak to political leadership and to ministries of finance and land use planning. The project will result in a widely applicable methodology for assessing the financial and economic costs of illicit agro-conversion. The methodology includes guidance on consultation and consensus building processes and will be piloted in two countries, Papua New Guinea and Ghana. Such processes aid facilitating access to data, institutions and individuals and ensure that the analytical approach is tailored to national circumstances.

- Project Management and Project Coordination
- Methodology Development and Pilot Selection
- Pilot Country Research and Analysis
- Guide for in-country consultation and consensus-building processes

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**PM**  
HEQH

**COUNTRY**  
Belgium

## EC RTD CARBON ECONOMY (LOT 1)(STUDIES ON SUPPORT TO R&I IN THE AREA OF BIO-BASED PRODUCTS AND SERVICES)

The overall purpose of the project is to provide a range of new information and analysis that will help identify future policy directions, emerging technologies, societal demands, challenges and opportunities in the field of bioeconomy dedicated to bio-based products and bio-based innovation. Specially, the project explore the nature and challenges to ensure the resource-efficient sourcing and use of carbon, and identify potential ways in

**PERIOD**  
2019 - 2021

**CUSTOMER**  
European Commission -  
DG RTD

**TOTAL FEE**  
EUR 478.035

which it can be addressed. The project has a particular emphasis on the role of research and innovation in addressing the challenge at global, European, national, regional and urban levels. The study will complement the existing reflections on circular economy on the transition to allow a low-carbon economy by considering in particular the unavoidable need for carbon for bio-based products.

The contract has involved the delivery of four work packages:

- a) Status quo - Understanding the carbon economy,
  - b) Future scenarios,
  - c) Regulatory analysis and assessment of innovative technologies and
  - d) Case studies of bio-waste valorisation in Europe. Information and communication activities have been delivered across all four work packages including a promotional video
- Project Management
  - EU and Global Climate cycle
  - Bio-based value chain experts
  - Climate mitigation in bio-based sectors

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ASOS

**COUNTRY**  
Korea, Republic of

**PERIOD**  
2019 - 2020

**CUSTOMER**  
Green Climate Fund  
(GCF)

**TOTAL FEE**  
USD 274.000

### GCF - SUPPORT FOR THE DEVELOPMENT OF THE NATURE-BASED SOLUTIONS FRAMEWORK AND SECTORAL GUIDANCE OF THE FOREST AND LAND USE, ECOSYSTEMS AND ECOSYSTEMS SERVICES

The Green Climate Fund's (GCF) mandate is to promote a paradigm shift through developing-country action towards low-emission, climate-resilient development pathways. This Sectoral Guidance supports countries and Accredited Entities (AEs) in identifying high-impact, transformative projects and programs in the Forest and Land Use, and Ecosystems and Ecosystem Services (EES) results areas respectively, and in linking these to the GCF's Board-adopted programming and investment frameworks. It does so by providing context, sharing evidence-based experiences, lessons and good practices.

Specifically, the guidance documents provide identify, analyse and provide guidance on paradigm shifts towards low-emission and climate-resilient development pathways within the two sectors, as well as how to catalyse public and private sector finance, including barriers, financial instruments and co-finance opportunities. Further, the guidance documents provide examples of transformative initiatives. Lastly, high-impact full areas and invention are identified to provide overall guidance for developing impactful GCF projects within the Forest and Land Use and Ecosystem and Ecosystem Services sectors.

The project outcome:

- Sector Guidance on Forest and Land Use
- Sector Guidance on Ecosystems and Ecosystem Services, including oceans.
- Sector Guidance Presentations
- Project Management and Project Coordination;
- Development of the guidance plan;
- Supporting technical expert on both guidance documents (focus on providing transformative case examples);
- Quality Assurance.

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**PM**

OLBI

**COUNTRY**

Uganda

**PERIOD**

2019 - 2021

**CUSTOMER**

Earth Energy Limited

**TOTAL FEE**

USD 650.000

**FULL FEASIBILITY STUDY FOR 20MW BIOMASS PLANT**

The overall purpose of the project is to conduct site-specific and project-specific assessments. This includes providing a bankable full feasibility study for the project, including power generation, power evacuation, biomass availability and feedstock supply, as well as power supply for the feedstock processing facility. The feasibility study assesses the practical, technical, economic and sustainable feasibility of building and operating technical infrastructure that allows utilization of milling residues, field residues and other biogenic waste and residues streams for power production in rural areas of north- and northwestern Uganda. The project concerns the development of 16 decentralised sites (REPARLE sites) around Gulu in Northern Uganda using gasification of agricultural process residues to produce power for local processing equipment, mini-grids and captive use. In addition to these sites, the project concerns the development of a biomass gasification and/or combustion plant at a central site in Gulu to supply the national power grid. Besides generating energy for local grids, the REPARLE sites provide milling and storage services to farmers in the surrounding areas (REPARLE areas), which simultaneously supplies the REPARLE sites with biomass residues from the processing of crops.

Preparation of a detailed, bankable full feasibility study to determine the technical, operation, commercial, regulatory and financial feasibility of the project including: (i) power generation of 20MW for the grid; (ii) power generation at the associated off-grid feedstock processing sites; (iii) feedstock availability, security and feasibility including an assessment of the supply chain; (iv) end-to-end circular economy solutions for monetizing non-electricity outputs in order to maximize value e.g. briquettes, construction bricks/cement, pulp/paper etc.; and (v) power evacuation.

- > Evaluate and determine the optimal configuration for the 20MW of grid-tied power generation.
- > Identify and evaluate all the relevant risks and procedure detailed recommendations for strategies for risk mitigation.
- > Develop recommendations required to ensure compliance with all the relevant regulatory considerations within Uganda, as well as compliance with the highest international standards for emissions, health and safety.
- > Provide all the requisite inputs to the other contractors hired by Earth Energy (EE) for this project.
- > Conduct a comprehensive and quantitative assessment of all emissions, waste and by-products that result from the project and (i) develop strategies and approaches to ensure that the project is compliant with all the relevant Uganda accords and codes, as well as the highest international standards; (ii) make use of cutting-edge commercially proven technologies, to design a circular economy approach to waste management; (iii) setting "zero-waste" as the objective, identify, quantify and assess the potential and avenues for monetization of waste and by-products.

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**PM**

HEQH

**COUNTRY**

Belgium

**PERIOD**

2018 - 2021

**ANALYTICAL SUPPORT FOR THE OPERATIONALISATION OF AN EU CARBON FARMING INITIATIVE**

The general objective of the project is to explore the key triggering wide-scale adoption of result-based "Carbon Farming" schemes or initiatives linked to climate change mitigation and adaptation in the farming sector. The study should result in a practical reference that may be utilised by Member States of the European Commission in potentially developing proposals around an incentive scheme directed to result-based payments related to climate action. The study will be performed through four Tasks:

Task 1: Review of existing policies, payment schemes or projects that reward farmers and foresters for the delivery of carbon sequestration or other climate-related public goods.

**CUSTOMER**  
European Commission,  
DG CLIMATE ACTION

**TOTAL FEE**  
EUR 434.730

The task aims to 1) map and review existing policies, schemes and projects, and 2) to establish a standard set of sustainability indicators for impacts and results.

Task 2: Identification of challenges and barriers to implementation of Carbon Farming Schemes and development of approaches to address them. The task aims to 1) define a list of carbon farming scheme options for the EU, applicable to different farming systems and bio-geographic and socio-economic context; 2) Identify barriers, challenges and possible solutions for carbon farming scheme options based on desk research and expert interviews; and 3) to conduct a stakeholder workshop and define a short list of carbon farming scheme options to be tested in case studies.

Task 3: Case studies. The task is divided into four activities: 1) develop a case study typology, definition of long list of coverage and identifying a short list of five case studies; 2) to conceptualize five case studies – task list, priorities, key questions, allocation of task mapping to expertise and identification of stakeholder groups; 3) case study data collection through desk based research, in field interviews and mini workshop/discussion groups; and 4) collation of key messages, discursive one-day workshop in Brussels – reviewing messages in the context of guidance development.

Task 4: Develop technical guidelines, taking account of feedback from project participants, on how to set up, implement and monitor a Carbon Farming Scheme. The task firstly 1) develop requirements of good guidance; followed by 2) the development of guidance context.

- > Overall project management and coordination
- > Communication
- > Quality assurance
- > Literature review and mapping of policies
- > Establishment of sustainability indicators
- > Identification of challenges and barriers for implementation of Carbon Farming Schemes
- > Development of technical guidelines

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**PM**  
ASOS

**COUNTRY**  
Denmark

**PERIOD**  
2019 - 2021

**CUSTOMER**  
Cowifonden

**TOTAL FEE**  
DKK 2.999.750

## COWIFOND BLOCKCHAIN FOR BIO-BASED VALUE CHAINS

The purpose of the project is to identify how blockchain technology can be used to enhance sustainability within bio-based supply chains. This has been materialised into the overall project objective to investigate how blockchain technology can increase level of correct and reliable transfer of sustainability information at batch/consignment level from producer to user, thus preventing fraud and enabling better upstreaming of incentive for sustainable behaviour at producer level, in particular for small-scale coffee farmers (preferable in Africa).

The Association will provide the following services:

- 1) Identify and map current and potential use of blockchain in the context of sustainability of bio-based supply chains.
- 2) Explore how a batch of a physical commodity can be tied to a digital ID containing the relevant information on the origin, sustainability and legality of the batch.
- 3) Develop a model for application of blockchain technology and test this on a number of case studies gain earlier insights.
- 4) Compare energy use of creating a blockchain for a batch of bio-based commodity with that of the most common alternative practices applied to ensure sustainability.

5) Share the model, and report and disseminate insights and experiences to a wide audience to promote the use of blockchain.

Project Management and Coordination, Agriculture and Value chain expertise

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DSH

**COUNTRY**  
Luxembourg

**PERIOD**  
2018 - 2019

**CUSTOMER**  
European Investment  
Bank, Operations  
Evaluation

**TOTAL FEE**  
EUR 201.523

## EX-POST EVALUATION OF THE IMPLEMENTATION OF THE EIB'S ENERGY LENDING CRITERIA (ELC) 2013-2017

The COWI led ex-post evaluation assessed the extent to which the EIB's current energy lending criteria are relevant and effective with respect to the EIB selecting projects that support the EU energy policy and EU highest policy priorities. The policy priorities focus on the Paris Agreement and the EU's 2030 framework. They set ambitious targets with respect to GHG emission reductions, renewable energy and energy efficiency; support sub-sectors with the highest investment needs and meet the EIB's standards in terms of quality and soundness, and with respect to the EIB transparently consulting and informing internal and external stakeholders as to how the Bank selects energy projects.

The project covered energy lending activities inside and outside the EU. It carried out a review of the EU energy policy and of the currently applicable energy lending criteria (July 2013) and covered three work streams:

1. The relevance of the ELC with focus on the ELC's appropriateness with the EIB corporate operational plans (COPs) and their consistency with global, EU and Member State energy policy.
2. The effectiveness of the ELC and the extent to which the ELC has been used and has achieved its expected results covering both the results achieved at portfolio level and those achieved at project level with case studies on selected energy projects.
3. How internal and external stakeholders are informed and consulted within the context of the ELC .
  - > Overall project management and expertise in the field of complex evaluations
  - > Experience in energy financing, energy policy and legislation
  - > Experience in mainstreaming of climate change into public and private finance
  - > Establishment of an evaluation framework, data collection, literature review and analysis, including:
    - Review of the EU and global energy market
    - Portfolio review of energy projects including portfolio classification, comparison and analysis
  - > 50+ interviews with EIB staff across the various EIB directorates, external stakeholders including promoters, borrowers and other development partners
  - > Ten case studies for selected energy projects including site visits to local projects and EIB offices
  - > Elaboration of fact sheets
  - > Reporting to the EIB with final analysis, conclusions and recommendation including availability for queries until presentation for the Management Committee and the EIB's Board of Directors.

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**PM**

KSP

**COUNTRY**

Mexico, China, South Africa and Viet Nam

**PERIOD**

2017 - 2020

**CUSTOMER**

Danish Energy Agency (DEA), Danish Ministry of Energy, Utilities and Climate

**TOTAL FEE**

EUR 3.280.265

**FRAMEWORK AGREEMENT FOR CONSULTANCY SERVICES FOR THE DANISH ENERGY PARTNERSHIP PROGRAMME (DEPP) PHASE II WITH MEXICO, CHINA, SOUTH AFRICA AND VIET NAM**

Technical assistance project to Mexico, China, South Africa and Viet Nam based on government-to-government partnership agreements, focusing on high-level energy policy and planning, energy demand forecasting, renewable energy integration in power systems, energy efficiency and climate change mitigation policy and planning in a peer-to-peer manner. The overall target is to ensure that the four countries are making sufficient progress in their energy and climate change policies, planning and investments to be on track to meet their GHG targets according to their NDCs and the Paris Agreement. The framework contract is structured around Memorandum of Understanding with the shared governmental goals for cooperation, a project support facility and a call down mechanism providing support on demand and transferring Danish, EU and international best practices and technology solutions. This will assist the respective government institutions of the four countries in making well-informed decisions on how to design and implement future energy and climate change policy, thus assisting the countries in their transformation to low carbon economies. In Mexico, the focus is on continued analytical support for informed policy choices for NDC implementation. In South Africa, the emphasis will be on formulation of policies to promote RE including through better use of power system scenarios and in establishing policy alternatives based on socio-economic tools. In China, the focus will be on helping achieve progress in making RE the backbone of the Chinese energy system. In Viet Nam, the focus is in particular on increased interaction of RE in the national power system and for reduced energy intensity of industries.

Main consultant as lead in J/V with Viegand Maagøe. COWI's provided following services:

- > Energy policy and planning
- > Energy efficiency analyses
- > Renewable energy integration in power systems
- > Climate mitigation policy and planning

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**PM**

MIKL

**COUNTRY**

Mexico

**PERIOD**

2015 - 2017

**CUSTOMER**

The Ministry of Foreign Affairs of Denmark

**TOTAL FEE**

DKK 35.600.000

**PROJECT SUPPORT FACILITY (PSF) FOR THE DANISH-MEXICAN CLIMATE CHANGE MITIGATION AND ENERGY PROGRAMME (CCMEP)**

The Governments of Mexico and Denmark have initiated a long-term cooperation on low carbon transition with a focus on climate change mitigation and the energy sector. The Climate Change Mitigation and Energy Programme (CCMEP) builds on existing cooperation between Denmark and Mexico and supports the implementation of Mexico's Special Programme for Climate Change 2014-2018 (PECC 2), Programme on Renewable Energy (PEAER) and Programme on Sustainable Use of Energy (PRONASE). The Project Support Facility (PSF) has been set up to manage the program under the supervision of a Steering Committee consisting of high-level representatives from SEMARNAT, SENER and the Danish Energy Agency (DEA). The PSF is managed by the Danish consulting firm COWI in a consortium with Danish and international partners (Ea Energy Analyses, UNEP-DTU, the Danish Building Research Institute, Viegand & Maagøe and Center for Clean Air Policy).

The program consists of three main components: Climate Change, Renewable Energy and Energy Efficiency. All three components will focus on cooperation and knowledge exchange on Danish experiences and international best practices in climate change mitigation, increasing the use of renewable energy and improving energy efficiency in buildings and industry. The Climate Change component covers implementation, progress monitoring and evaluation of the Mexican climate change targets established in the General Law on Climate Change and the PECC2. The Renewable Energy component covers capacity building on methodologies for renewable energy planning, the planning of efficient

integration of increasing shares of renewable energy in the power system, and technology capacity in wind energy, bioenergy and system integration. The Energy Efficiency component focusses on cooperation towards implementation of the National Energy Strategy 2013-2027 as well as the National Programme for Sustainable Energy Use (PRONASE) in both buildings and industry.

The objective of the PSF is to provide technical assistance and administrative and logistical support to ensure the successful implementation of the Climate Change Mitigation and Energy Programme.

The total budget for the PSF is DKK 29 million of which an assessed 25% is COWI's share. The PSF runned from 1 February 2015 to 30 June 2017.

#### Assignments under Component 1 - Climate Change

- INDC Analysis and Consultations (DKK 0.2 million)
- Evaluation Coordination (DKK 0.9 million)
- PECC II Tracking (DKK 0.1 million)
- Support for Mexico´s preparation of its participation in the UNFCCC COP-21 and regional cooperation on climate change (DKK 0.25 million)
- Mexican Technology Catalogue for Biomass to Energy (DKK 0.5 million)
- Mexican Technology Catalogue for Low Carbon Transport (DKK 0.5 million)
- Emission Life-Cycle Assessment for Selected Low Carbon Transport Technologies (DKK 0.5 million)

#### Assignments under Component 2 - Renewable Energy

- Wind Atlas for Mexico (DKK 4.3 million)
- Biomass Baseline and Sugar Sector Studies (DKK 0.5 million)
- Workshop on RE scenarios (DKK 0.1 million)
- Renewable Energy Outlook 2015 for Mexico (DKK 0.4 million)
- Feasibility Study for Biomass Conversion of Petacalco Coal-fired Power Plant (DKK 0.75 million)
- Biomass and Biogas Roadmap for Mexico (DKK 1.0 million)

#### Assignments under Component 3 - Energy Efficiency

- Implementing EMS in food industry (DKK 2.5 million)
- Implementing EMS in refineries (DKK 1.25 million)
- Implementing EE in Building Code (DKK 2.7 million)
- Strategy for EE Policy in Mexico (DKK 1.85 million)
- Prepare for a Mexican Voluntary Agreement scheme for energy intensive industries (DKK 1.0 million)

The PSF provides the following services:

- > A long-term, local climate adviser to SEMARNAT to support the actions of the climate component
- ✓ Short-term technical expertise on demand to support all components in the programme
- ✓ A series of exchange visits, workshops and secondments between Mexico and Denmark to deepen technical co-operation, technology and know-how transfer

- ✓ Institutional cooperation between the focal points and Mexican institutions specialized in climate and energy if and when these institutes are identified in the annual work programme
- ✓ Administrative and logistical support to the programme.

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COWI A/S

**PM**  
DSH

**COUNTRY**  
Global

**PERIOD**  
2016 - 2017

**CUSTOMER**  
Nordic Council of Ministers; Nordic Working Group for Global Climate Negotiations (NOAK)

**TOTAL FEE**  
DKK 400.000

## MITIGATION AND ADAPTATION SYNERGIES IN THE INDCS

The objective of the project was to look at mitigation and adaptation synergies in the submitted INDCs. The project explored and identified possible approaches for enhancing such synergies as well as their possibilities to attract international climate finance. It concentrated on - but was not limited to - forestry, agriculture, energy and urban areas. The project addressed the following tasks:

- > Reviewing the most important recent studies, submissions and case studies on synergies between mitigation and adaptation as well as their financing.
- > Reviewing examples of synergies between adaptation and mitigation in the submitted INDCs, concentrating on forestry, agriculture, energy and urban areas, and consider how the INDCs take advantage of the contribution from natural ecosystems in adaptation and mitigation.
- > Identifying how the various elements in the Paris agreement and further work under the agreement could support synergies between adaptation and mitigation.
- > Examining the current funding criteria of the most important climate funds that have a suitable mandate for synergies - e.g. how possible synergies and co-benefits are addressed and reported, and how they could be suited to finance implementation of INDCs with mitigation and adaptation synergies.
- > Exploring the feasibility for international climate finance of those INDCs containing conditional targets, in particular regarding mitigation-adaptation synergies.
- > Identifying ways to use mitigation-adaptation synergies as a possibility to implement and enhance ambitious climate action to 2020.
- > Presenting recommendations for Nordic stakeholders to drive further synergies between mitigation and adaptation.

The project was presented at the Nordic side events at COP21 in Marrakesh in November 2016.

<http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1097909&dswid=9432>

Type of services provided:

- > Overall project management
- > Adaptation and mitigation expertise in the relevant sectors (agriculture, forestry, energy, urban sectors), review of mitigation and adaptation synergies in the NDCs
- > Review of the elements of the Paris Agreement with positive bearings towards M&A synergies
- > Expertise in international climate change finance
- > Interviews with relevant MDBs and bilateral/regional donors
- > Reporting to the focal point in NOAK and the Steering Committee
- > Presentation at the Nordic side events at COP21 in Marrakesh in November 2016

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PM  
MSJ

COUNTRY  
EU

PERIOD  
2017 - 2018

CUSTOMER  
European Commission,  
DG for Research &  
Innovation

TOTAL FEE  
EUR 1.621.200

## STUDY ON SUPPORT TO R&I POLICY IN THE AREA OF BIO-BASED PRODUCTS AND SERVICES

A bio-based economy integrates the full range of natural and renewable biological resources —delivering biochemical building blocks and raw materials such as food, feed and fiber to industry and consumers, often substituting fossil-based resources with larger environmental footprints. A bio-based economy is a key pillar of developing a low carbon, circular economy and is a key priority for policy makers, investors and innovators across Europe.

COWI has been assigned to lead a major study on the innovative bio-based economy on behalf of the European Commission (DG Research and Innovation). The overall objective of this project is to provide a range of new information and analysis to enable policy-makers, the scientific community, primary producers, financial market participants, enterprises and other stakeholders to make more informed decisions about innovative bio-based products.

Specifically, the project will result in:

- better decisions on whether and when to consider policy measures to support innovative bio-based products
- better decisions on where to concentrate research and innovation funding within the overall field of bio-based products
- better decisions on whether and when to invest in the scaled-up production of innovative bio-based products.

The project is organised into three distinct but related tasks, including the analysis of the environmental impact of specific innovative bio-based products, raising awareness about commercial and financial success stories within the EU and, finally, identifying the top 20 innovative bio-based products holding the greatest promise for deployment in the coming five to 15 years. A cross-cutting task involves engaging with the broader stakeholder community to disseminate new information about the sector.

To achieve the objectives of the project, the team is drawing on scientific research, including on Life Cycle Assessment and recent studies on a variety of biotechnologies, policy development in adjacent domains, and direct engagement with more than 10 companies, investors, organisations, and universities active in the development of the innovative bio-based economy.

COWI A/S (DK) is leading a team of five sub-contractors: University of Bologna (IT), Ecologic Institute (DE), Utrecht University (NL), Fraunhofer ISI (DE) and Bio-based World News (UK).

- > Overall project management
- > Management of task on LCA of products and task on success stories
- > LCA expertise
- > Economics and finance
- > Communication
- > Quality assurance
- > Expertise on bio-based sector
- > Expertise on agriculture production

**COWI GROUP**  
COWI A/S

**PM**  
CAG

**COUNTRY**  
Worldwide

**PERIOD**  
2015 - 2016

**CUSTOMER**  
International Finance  
Corporation (IFC)

**TOTAL FEE**  
USD 196.300

## CONVERTING BIOMASS TO ENERGY: A GUIDE TO DEVELOPERS AND INVESTORS

COWI developed the IFC guidebook for developers and investors in energy production from bio-waste generated from medium and large sized firms that operate in the agricultural (including livestock and biomass from any crop), food and beverage processing, or wood processing sectors. The guidebook which covers all technical, economic, financial, supply chain and environmental aspects of the identification, development, procurement and operation of biomass and biogas based energy generation facilities will be publicly launched in June 2017. An supporting Excel Model, was developed as a decision support tool which provides the biomass to energy project developers with an easy-to-use template for the initial calculation of potential energy conversion, assessed GHG emission reductions and project financial viability. Furthermore, a biomass and biogas training and study tour for 10 IFC specialists from Africa, Asia, Latin America and Eastern Europe was prepared to learn about the Danish experience with energy generation from biomass and biogas from a practical perspective by site visits to a representative selection of Danish biomass/biogas to energy facilities that can share valuable experience and from a theoretical perspective through three days of training in the subjects of the guide at COWI. Finally, presentations and hand-out material supporting the dissemination of the Guide are developed to support capacity building among key stakeholders on the feasibility of the different waste to energy options available to businesses and industry.

1. Discuss the different technologies available for certain industries in agribusiness, food and beverage processing, and wood processing industries.
2. Develop a detailed project development process based on the selected technologies.
3. Examine and discuss the different energy conversion options: How much energy can be generated? Which industries are the lowest hanging fruits (animal waste, palm oil, others)? How to identify the optimal plant size (from a commercial angle)? What is the minimum size of an operation (from the supply of biomass angle and from the price of electricity side)?
4. Discuss issues with and options to secure the supply of biomass: How much biomass is needed? Recommendations on contractual arrangements (if third party sourced)? (Quantity / quality / price / logistics).
5. Plant Design Process: Permits, site selection, PPAs, O&M
6. Project benchmarking costs and financial analysis / feasibility
7. Examine positive/negative social and environmental externalities: use of waste, reduced GHGs, reduced smell, other... Quick guide on how to estimate GHG emission reductions
8. Overview of market potential for these technologies in emerging markets and developing countries

**COWI GROUP**  
COWI A/S

**PM**  
ASOS

**COUNTRY**  
Belgium

**PERIOD**  
2016 - 2018

**CUSTOMER**  
European Commission DG  
CLIMA

## STUDY ON FINANCING OF REDD+ READINESS ACTIVITIES AND RESULT-BASED PAYMENTS PRE AND POST 2020: SOURCES, COST-EFFECTIVENESS AND FAIR ALLOCATION OF INCENTIVES

The Paris Agreement sets forests and ecosystems as one of the key solutions for reaching the long-term goals of the Agreement. The aim of this project was to support the implementation of REDD+ result based payments to developing countries that manage to sustainably reduce forest emissions, in line with the Paris Agreement and relevant EU goals.

The project developed 3 concrete tools to help the Commission, partner countries and EU decision makers to fully operationalize REDD+ , through the following 3 work packages:

**TOTAL FEE**  
EUR 227.000

- 1) A REDD+ Overview 2030 in 15-20 Priority REDD+ Geographies (PRG), country-wise or sub-national PRGs,
  - 2) A REDD+ Results Framework 2050 of potential instruments to support REDD+ implementation based on an aspirational magnitude of up to USD 5 billion per year being available globally to support REDD+ implementation, and
  - 3) a legal and administrative analysis of current bottlenecks to REDD+ implementation and recommendations for general conditions and modalities under which EU funding could flow implementing REDD+. The project provided recommendations to the EU on whether EU's commitment to REDD+ financing should be served through market or non-market mechanisms; on how EU resources could be best mobilised and coordinated; and outline and specify the terms and conditions (general and PRG specific) which could imply if the Commission was to engage in bilateral Result-Based Payment (RBP). The potential for further EU funding on REDD+ was assessed in context with other international REDD financing mechanisms available such as the Forest Carbon Partnership Facility (FCPF), the Forest Investment Program (FIP), the BioCarbon Fund Initiative for Sustainable Forest Landscapes, the EMP REDD Early Movers Program (GIZ), the EU REDD Facility, UN-REDD, and the Green Climate Fund (GCF). The findings and recommendations were presented and validated with relevant stakeholders (PRG representatives, donors, institutions, civil society, private sector) through a series of workshops held in Brussels and back-to-back with relevant UNFCCC meetings.
- Project management, conduction of workshops, elaboration of work package 3 on how EU funding could flow implementing REDD+ in terms of concrete instruments and conditions and modalities (general and PRG specific).

**COWI GROUP**  
COWI A/S

**PM**  
SLBA

**COUNTRY**  
Finland

**PERIOD**  
2016 - 2017

**CUSTOMER**  
Ministry of the  
Environment /  
Environmental Protection  
Department

**TOTAL FEE**  
DKK 400.000

## NOAK AGRICULTURE AND COP22

In the lead-up to the 22nd Conference of the Parties for the UNFCCC, the Nordic Working Group for Global Climate Negotiations (NOAK) has contracted COWI to work on a project on "Agriculture initiatives and COP22," with the objectives to take stock of regional and global initiatives related to agriculture and climate change that have been launched since 2005, and place these initiatives in the context of the agriculture related components in the INDCs. Further, to assess the objectives and impacts of these initiatives and identify the most promising ones with a view to evaluating the extent to which the most promising agriculture and climate change initiatives could be further developed to address climate action overall (i.e. not just adaptation or mitigation), and replicated in other regions in the world (e.g. not just Africa). Finally, the findings will be discussed at a workshop at COP22 in Marrakech with a view to identifying challenges and suggesting ways to address these challenges in the implementation of these initiatives.

Analysis support of agricultural mitigation and adaptation in INDCs and in the Paris Agreement.

- (i) Desk review/SWOT analysis of existing regional and global initiatives related to agriculture and climate change 2005-2016.
- (ii) Compile a synthesis of agriculture components in the INDC in African countries.
- (iii) Assessment of the objectives and impacts of these initiatives and identification of the most promising ones.
- (vi) Evaluation of the extent to which the most promising agriculture and climate change initiatives could be further developed to address climate action overall (i.e. not just adaptation), and replicated in other regions in the world.
- (v) Organization of a Nordic event/Ministerial roundtable at COP22 to discuss agriculture and climate change; presentation of initial findings and further input to finalize the project.

(vi) Identification of challenges and suggest ways to address the challenges in the implementation of these initiatives.

**COWI GROUP**  
COWI A/S

**PM**  
ASOS

**COUNTRY**  
Belgium

**PERIOD**  
2015 - 2019

**CUSTOMER**  
European Commission,  
DG Environment/Climate  
Action

**TOTAL FEE**  
DKK 2.499.234

## DG ENV ENVIRONMENT IN CAP

The purpose of the project is to support DG ENV, in the choice of the most appropriate instrument to improve the state of the environment in agriculture and in the discussions at Commission level on CAP instruments, including the MFF and a possible mid-term review. The objective of the project is therefore to support DG Environment by providing information, reports and analysis on the role of agri-environment and context indicators in the development of the choices of Member States pursuant to several provisions of the Direct Payment regulation and the Rural Development Regulation, to illustrate trends in the state of the environment, which are expected as a result of the elements notified under Good Agricultural and Environment Conditions and the greening components, to identify the uptake of agri-environment measures by different farmers and farming communities, including the identification of barriers to environmentally sufficient uptake of agri-environment measures, and finally, to explore the potential to use more widely innovative funding mechanisms, such as results based payments for areas beyond biodiversity protection, and collective rural development funding.

This has been translated in four key objectives:

- i. The role of agri-environment and context indicators in the development of the choices of MS pursuant to several provisions of the Direct Payment regulation and the Rural Development Regulation (DPSIR: State-Impact-Response).
- ii. The illustration of trends in the state of the environment which are expected as a result of the elements notified under Good Agricultural and Environment Conditions and the greening components. (DPSIR: State-Impact).
- iii. The uptake of agri-environment-climate measures by different farmers and farming communities, including the identification of barriers to environmentally sufficient uptake of agri-environment-climate measures (DPSIR: Response-Drivers-Pressures).
- iv. The potential to use more widely innovative funding mechanisms such as results based payments for areas beyond biodiversity protection, and collective rural development funding. (DPSIR: Response-Drivers-Pressures).

A key cross cutting theme is assessing how payments for environmental services will actually deliver at the level of beneficiaries, regions and member states.

The analysis covers an assessment of 12 MS, in which it is analysed which kinds of measures that achieve the best results in terms of EU environmental objectives in agricultural areas: obligatory measure, cross-compliance, CAP greening measures or voluntary measures. Furthermore, a specific analysis on agri-environment climate measures is carried out, the aim of which is to characterise the beneficiaries, notably from the socio-economic point of view, and understand their motivation to participate in voluntary schemes. Finally, it is assessed whether in precise cases they are sufficient to address environmental issues or if obligatory measures should not be taken instead.

- > Project Management, including 12 EU country teams
- > Scrutiny of land/environment legislation at NUTS1 and 2 levels
- > Environmental Data gathering and analysis
- > Report drafting based on data gathering and analysis
- > Analysis of innovative financial/result based payment schemes applied in Rural Development Programmes

**COWI GROUP**

COWI A/S

**PM**

ABH

**COUNTRY**

Denmark

**PERIOD**

2008 - 2010

**CUSTOMER**Copenhagen Municipality,  
Center for Park og Nature**TOTAL FEE**

DKK 800.000

**COPENHAGEN, CLOUD BURST PLAN**

The study included a very detailed dynamic analysis of flooding from cloudburst. Evaluation of SUD solutions in combination with emergency storm water tunnels or diversion in canals, roads, parks etc. to make the city cloudburst resilient to an acceptable and economically feasible level.

The study pointed out the break-even point based on macroeconomic calculations of investments and benefits for many different levels of protection seen over a 100 year period with the expected climate change. Furthermore the economic consequences for the different actors were illustrated as budget economy and investment plans.

Hydraulic modelling and advanced GIS applications were used for the illustrations, evaluation of consequences and risk assessment. Analysis, investigation and evaluation

**COWI GROUP**

COWI A/S

**PM**

MSJ

**COUNTRY**EU including all EU  
Member States plus  
Croatia**PERIOD**

2012 - 2016

**CUSTOMER**European Commission,  
DG Climate Action - DG  
CLIMA**TOTAL FEE**

EUR 4.532.000

**MAINSTREAMING OF CLIMATE CHANGE INTO EU'S STRUCTURAL AND INVESTMENT FUNDS (ESIF)**

No investment value. In its February 2013 Conclusions, the European Council stated that climate action objectives will represent at least 20% of EU spending in the 2014-2020 period. In its resolution of 23 October 2012, the European Parliament supported this proposal from the Commission. This political target is on-boarded in the regulatory framework for the European Structural and Investment Funds (ESIF) through a call for the mainstreaming of climate action into Partnership Agreements and Programmes and by developing a common methodology for the calculating the financial support for climate action. The ESIF consists of the European Social Fund, the European Regional Development Fund including the European Territorial Cooperation Goal, the Cohesion Fund, the European Maritime and Fisheries Fund, and the European Agricultural Fund for Regional Development.

This study assisted the European Commission (DG CLIMA) in assessing all 28 Partnership Agreements and 530 Operational Programmes: The assessments were used by DG CLIMA as the foundation for preparing their response to InterService Consultations on each Partnership Agreement and Operational Programme. Among the deliverables produced were templates, guidelines and assessment criteria based upon which almost 2,000 assessment reports were produced. The study has delivered summaries of each approved Programme and Partnership Agreement and a comprehensive and user-friendly database on the contents of these. The study has delivered a conclusions report that assesses the mainstreaming achievements as well as a family of funds-specific fact sheets that set out a) the mainstreaming potentials of each fund, b) the funds-specific criteria for assessing achievements regarding mainstreaming and c) funds-specific mainstreaming results.

The core of the assignment consisted in the assessment of some 600 Partnership Agreements and Operational Programmes throughout Europe. National teams in each of the 28 Member States were responsible to conduct the actual assessments. They did so on the basis of detailed templates and guidelines. These were prepared by horizontal teams of thematic experts and funds specific experts. Each individual assessment was quality assured by a thematic experts and by funds-specific experts. All assessments were done within a set time frame of 12 days. The revised versions of the Agreements and Programmes were scrutinized once more by the same team following another set of specific guidelines and templates. National teams also delivered summaries of the approved programmes and agreements. These summaries were subject to detailed quality assurance as well, and the key observations were entered into an extensive ACCESS database allowing for targeted extraction and cross-comparisons. Once, all Operational Programmes and Partnership Agreements were approved, a conclusions report

summarized the key findings: it assessed to what extent the 20% aspiration had been achieved and the contributions made from the different funds and it identified the key types of actions taken to pursue the 20% target. Fact sheets were prepared throughout the study: One set of funds-specific fact sheets explained about the different funds and how the related regulations address climate action, another set of fact sheets provided good examples from the 2007-2013 period of projects in climate action: one fact sheet for each fund. A final set of fact sheets described for each of the funds the key achievements in regards to the mainstreaming of climate action into the specific programmes of the fund. Project management was essential in the project: to ensure timely delivery of some 2,000 deliverables, to ensure consistent and comparable deliverables across countries, and to ensure that deliverables were fully reflecting and respecting the funds specific regulations while onboarding all climate-action relevant considerations.

- > Economic, policy and legal analysis of the ESI Fund Framework
- > Assessment and evaluation of PAs and OPs in terms of climate action and Europe 2020 goals
- > Climate change adaptation and disaster risk assessment expertise
- > Greenhouse gas mitigation expertise
- > EU Fund-specific expertise (ERDF incl ETC goal, CF, EAFRD, EMFF, ESF)
- > Provision of communication services – lay-out of fact sheets
- > Planning and conduction of workshops
- > Access Database design and construction
- > Overall project management

**COWI GROUP**

COWI A/S

**PM**

AR

**COUNTRY**

Regional

**PERIOD**

2008 - 2009

**CUSTOMER**

Ministry of Foreign Affairs,  
Danida

**TOTAL FEE**

DKK 1.796.348

## EVALUATION OF THE LEAST DEVELOPED COUNTRY FUND (LDCF)

The LDCF (administered by the GEF Secretariat) is one of the adaptation financing mechanisms under the UN Framework Convention on Climate Change (UNFCCC) mandated by the parties, amongst others, to provide support for the preparation of National Adaptation Programmes of Action (NAPAs) in the least developed countries (LDCs) and to fund implementation of the priority projects identified in the NAPAs. 19 donors have pledged and contributed funding for the LDCF. The focus of this evaluation is to assess the NAPA products, the NAPA process and the NAPA catalytic effect and to analyze and document the results and lessons learned from the use of the LDCF in financing and promoting adaptation in the development programmes of the LDCs and to provide recommendations regarding the future role of LDCF. The Evaluation was launched on the initiative of the DANIDA EVAL and joined by the GEF Evaluation Office (GEF EO) in part due to its relevance for the Fourth Overall Performance Study (4th OPS) of the GEF.