

End Review of the Oil for Development (OfD) Programme in Nicaragua

Final Report

MATEO CABELLO, URIEL CENTENO AND MARTINA GARCIA

Norad Collected Reviews

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The report is presented in a series, compiled by Norad to disseminate and share analyses of development cooperation. The views and interpretations are those of the authors and do not necessarily represent those of the Norwegian Agency for Development Cooperation.



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Executive summary

Oxford Policy Management (OPM) has been engaged by the Royal Norwegian Embassy in Guatemala (the Embassy) to carry out an End Review of Phase V of the Oil for Development (OfD) programme in Nicaragua. The purpose of the programme is to contribute to securing an environmentally sound exploration and possible exploitation of petroleum resources by creating capacities at the level of the Government of Nicaragua. The purpose of the End Review is to assess achievements made in Phase V, including achievements in the total Programme, including documenting lessons learned.

Phase V of the OfD programme in Nicaragua comprises four years of activity, between 2011 and 2014. However, the first agreement aimed at supporting Nicaragua's petroleum administration was signed in August 1989. Phase V of the programme cannot be understood and, more importantly, evaluated without having a wide vision not only of the goals and activities carried out by the programme since its creation, but also of the changing environment where these activities have taken place. The introductory section of this document helps to put Phase V into context by exploring the main components of the oil project cycle, the history of the oil sector in the country as well as the goals of phases I to IV of the OfD programme.

Part 1 of this document presents the consultants' evaluation of whether the objectives of the Phase V program has been achieved. It first presents the methodological approach, followed by a review of the change matrix setting out how activities translate to outcomes, it then presents a review of the programme under DAC guidelines, and finally some concluding remarks.

One of the main findings on the consultancy's Inception Phase is the non-existence of a Theory of Change (ToC) or Logical Framework. This was a major setback as both are key elements in evaluating the performance of a project – without them, it is very difficult to explain the course followed by the OfD programme from activities to impact. In order to fill this gap, the team has put together a Change Matrix, so to explain how individual capacities have been generated ('capacity creation') but also how they have been put into adequate use in line with OfD's goals ('capacity utilisation'), as well as retained and disseminated over time ('capacity retention').

The analysis of the Change Matrix shows that Phase V the OfD programme has effectively contributed to strengthening the oil sector in Nicaragua. Thus, the development of individual capacities as a result of the training and capacity-building activities funded by the programme has clearly resulted in the effective use and retention of these capacities. More importantly, this exercise also shows that the Directorate for Petroleum Development (DPD), the key actor within the Ministry of Energy and Mines (MEM) is also stronger, from an organisational perspective, as a result of the activities carried out by the OfD programme. The analysis show a positive correlation between the activities of the Programme and the regulatory reforms at sector level introduced in Nicaragua. The work carried out by the by DPD with the private companies participating in the sector also shows the positive impact of the programme at the sector level, in terms of the use of capacities. The only question marks in this Change Matrix relates to

capacity retention at organisational and institutional level, i.e. to the sustainability and continuity of the capacities created by the programme. However, it is important to mention that factors with the potential to affect the sustainability of the project are mostly external, and therefore out of the control of both the Nicaraguan and Norwegian stakeholders.

The review of Phase V using DAC Criteria for Evaluating Development Assistance shows that the Phase V of the OfD programme was highly relevant for all actors involved, both Norwegians and Nicaraguans, as it comes at a moment when expectations regarding the chances of success of the exploration work carried out by Noble are very high. In this regard, Phase V is seen as the necessary culmination of the long process of support received by Nicaragua since 1989.

The effectiveness of Phase V of the OfD programme is also quite remarkable. Not only have all the objectives for this phase been achieved but the way they have been achieved is very significant too. The combination of a 100% technical approach to problem-solving and decision-making, the extraordinary relationship between the Norwegian and Nicaraguan actors and the level of commitment and ownership shown by DPD are some of the key elements identified during the evaluation.

In terms of efficiency and value for money, defined as the optimal use of resources to achieve the intended outcomes, the results of the programme are very good as well. The assessment of information about the achievements of the programme is particularly relevant as it was conducted with a total budget of around NOK 21 million over a period of 25 years. In this regard, it is necessary to highlight that the goal of the project was not to find oil but rather to develop the skills and capacities of the Government of Nicaragua to promote exploration and exploitation activities in the oil sector, i.e. to help Nicaragua to develop its capacity to find oil. Without the support of Norway, none of this (the capacity to negotiate contracts, development of EIA rules, development of geodata management systems, etc.) would have happened.

In terms of impact, the evaluation is based on a counterfactual - what would have happened if Phase V had not taken place? The answer is simple: none of the achievements made would have happened. Even worse, the arduous process of developing the trust of international investors and improving their confidence in the potential of Nicaragua would surely have stalled. In this regard, the most important evidence of the impact of Phase V of the OfD programme is the fact that companies like Statoil are still interested in conducting exploratory work in Nicaragua.

The sustainability of the achievements made by the programme is the area where more doubts are created. In relation to it, there is an interesting paradox – there is an inverse relation between sustainability and the chances of finding oil in Nicaragua. Thus, if oil is not found in Nicaragua, the chances of the results being sustainable in the long term will diminish dramatically, and *vice versa*.

After reviewing the total achievements of phase I-IV the document describes briefly the most important lessons learnt during the programme in Nicaragua. These are:

1. Profound institutional transformations do not necessarily have to be the result of expensive, bureaucratic and complex processes. Nicaragua proves that the opposite is true – significant changes can be achieved with very limited resources.
2. The development of a relationship between Norwegian and Nicaraguan stakeholders based on mutual trust, continuous dialogue and reflection was critical for the success of the OfD programme.
3. The value that Nicaraguans gave to intangible elements that Norwegian institutions brought into the relationship, like their international prestige, reputation or management style, is enormous.
4. The ability to keep a low, exclusively technical profile, away from unwanted attention, was critical for the success of the programme.
5. Having a 100% technical profile does not mean not being aware of the political developments surrounding the OfD programme. On the contrary, the more awareness there is about political or contextual factors affecting the programme, the higher the likelihood of the programme achievements to be sustainable over the long-time.
6. Although the philosophy of the programme is to act exclusively following the demands of the local counterpart, the experience of the OfD programme in Nicaragua shows that a certain level of 'soft interventionism' may not only be desirable but also produce very positive effects.
7. The lack of a Theory of Change or logframe is a serious obstacle to articulating correctly how the contribution of Norway is going to help to the development of the Nicaraguan oil sector. Although this obstacle has been successfully overcome has a result of the excellent relationships between Norwegian and Nicaraguan partners, the importance of these tools should not be underestimated.
8. In relation to the impact of the OfD programme in the area of gender, it is remarkable that a high proportion of the members of the DPD are women. Also, during phase I-IV, 40% of the Nicaraguan participants in the PETRAD 8-weeks courses in Norway were women. With respect to the rights of the indigenous people, the Constitution of Nicaragua (Art. 181) establishes that when areas are located in the Autonomous Regions, the contracts must be approved by the Regional Councils. In this regard, it is important to highlight the organization of different training and capacity-building activities and seminars with delegates from RAAS and RAAN in the area of oil exploration and exploitation. These activities also included major environmental elements.

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List of abbreviations

AAPG	American Association of Petroleum Geologists
DPD	Directorate for Petroleum Development – MEM
DPE	Department of Petroleum Economy – MEM
DPPEE	Department of Petroleum Promotion, Exploration and Exploitation – MEM
EIA	Environmental Impact Assessment
ENATREL	National Electricity Company
GHD	General Hydrocarbon Directorate – MEM
HS&E	Health, Safety and the Environment
INPESCA	Nicaraguan Institute for Fisheries
KLIF	Ministry of Environment – Norway
MARENA	Ministry of Environment and Natural Resources
MEM	Ministry of Energy and Mines
MTI	Ministry of Transport and Infrastructure
NAPE	North American Prospect Expo
NDP	Norwegian Directorate of Petroleum
NIE	Nicaraguan Institute of Energy
NORAD	Norwegian Agency for Development Cooperation
NPC	National Ports Company
NPD	Norwegian Petroleum Directorate
NTON	Technical and Safety Rules for the Exploration and Exploitation of Hydrocarbons
PETRONIC	Nicaraguan National Petroleum Company
SINAPRED	National System for the Prevention of Natural Disasters
OfD	Oil for Development
OPM	Oxford Policy Management
PSA	Petroleum Safety Authority Norway
RAAN	North Atlantic Autonomous Region
RAAS	South Atlantic Autonomous Region
SERENA	Secretaries of Environment and Natural Resources (RAAN and RAAS)
ToC	Theory of Change
ToR	Terms of Reference
UGA	Environmental Management Unit – MEM

Introduction

Oxford Policy Management (OPM) has been engaged by the Royal Norwegian Embassy in Guatemala (the Embassy) to carry out an End Review of Phase V of the Oil for Development (OfD) programme in Nicaragua. The goal of the OfD programme is to contribute to economic and social development and poverty reduction by identifying new fields in the use of natural resources. The purpose of the programme is to contribute to securing an environmentally sound exploration and possible exploitation of petroleum resources by creating capacities at the level of the Government of Nicaragua. The Terms of Reference (ToR) for the assignment are reproduced as Annex A.

Work on the assignment began in mid-December 2014 with a kick-off conference call with representatives from the Embassy and the Norwegian Agency for Development Cooperation (NORAD) to discuss the scope of the work within the existing timeframe. After that, the work continued with a review of relevant literature and data sources. Fieldwork in Nicaragua was carried out between 26 January and 5 February 2015. In accordance with the ToR, the fieldwork began with an introductory meeting at the Embassy in Guatemala. In Nicaragua, priority was given to representatives from the Ministry of Energy and Mines (MEM), the main beneficiaries of the OfD programme. Additionally, interviews were held with representatives of national and international oil companies operating in the country, local oil experts, private sector actors in the area of energy, and former members of the Embassy in Nicaragua. The main goal of these interviews was not only to understand the activities carried out by the OfD programme during Phase V but to analyse them in light of the existing political, economic and energy environment in the country.

This report is divided into two main parts. Before them, there is a background section that helps to put Phase V of the OfD programme into context. It briefly explores the project cycle in oil sector, the history of petroleum activities in Nicaragua, the overall goals and objectives of the OfD programme globally, and the goals and objectives of phases I to IV of the OfD programme in Nicaragua.

After that, Part 1 explores the programme's achievements during Phase V. In order to do so more effectively, the consulting team has *ex-post* designed a Theory of Change for the programme. This is critical to understanding how the training provided, which constitutes most of the activities carried out during this phase, has contributed to the achievement of the final goals of the programme. Following a description of the evaluation methodology, a matrix explaining how change has taken place is presented. This change matrix is used as a blueprint to determine the impact of the programme at the individual, organisational and sectoral levels. The matrix is also used as a reference point to review Phase V based on OECD's DAC Criteria for Evaluating Development Assistance.

As requested in the ToR, the OPM team has carried out a brief assessment of the total achievements of the programme and the lessons learnt, which are both contained in Part 2.

1 Background

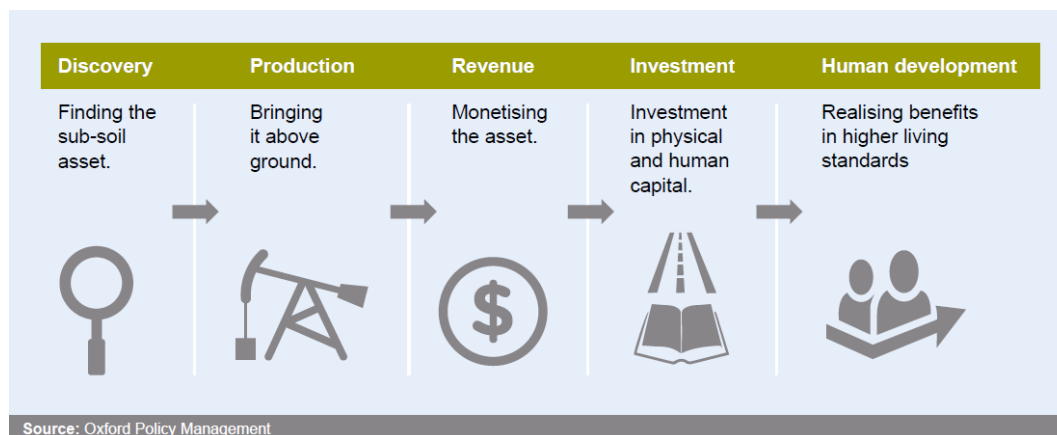
Phase V of the OfD programme in Nicaragua comprises four years of activity, between 2011 and 2014. However, the programme has been operating in the country since 1989, i.e. for almost 25 years. Phase V of the programme cannot be understood and, more importantly, evaluated without having a wide vision not only of the goals and activities carried out by the programme since its creation but also of the changing environment where these activities have taken place. The goal of this Background section, therefore, is to put Phase V into context.

For that purpose, we explain the main components of the oil project cycle and the usual time milestones for each of the activities along it. By doing that, as well as by briefly explaining the history of the oil sector in the country, we intend to explain the logic behind Norway's support to Nicaragua for almost a quarter of a century. The other elements in this section (the OfD programme in general, and phases I to IV of the programme in particular) contribute to enriching our understanding of the context in which Phase V has taken place.

1.1 The project life cycle in the oil sector

Natural resources, such as oil, are one of a nation's most important national assets, and as such they can play a critical role in economic and social development. However, they must go through a lengthy and costly transformation process before they are turned into physical, human or social capital, as shown in Figure 1.

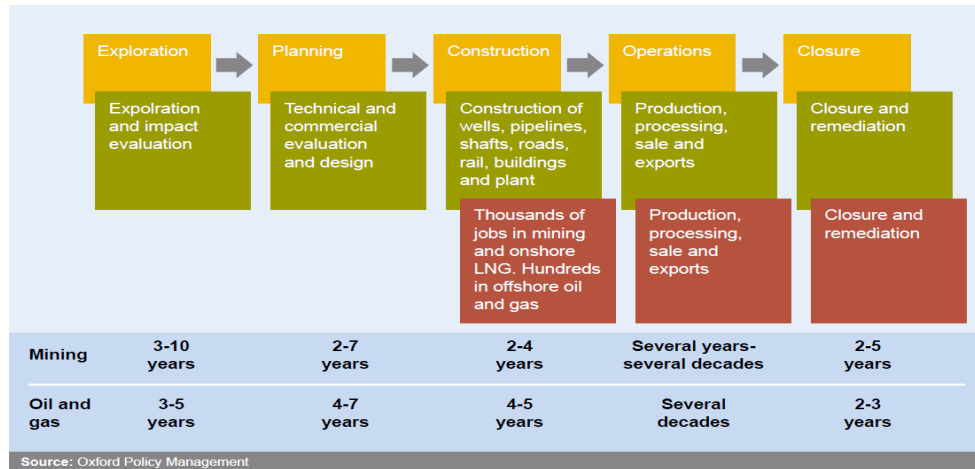
Figure 1 Asset transformation – from sub-oil assets to development



A key feature of oil and gas projects is that they are implemented over longer periods of time than most other development activities. Thus, for example, a long-term project in areas like education or health may last an average period of between five and 10 years. For extractive activities, however, the period of time that elapses between discoveries of sub-soil reserves and the impact that the revenues generated by these resources have on human development is easily two or three times longer, i.e. up to periods of 25 or

even 30 years. Figure 2 presents a stylised project life cycle for different extractive industries (oil and gas but also mining), with indicative timings for each phase.

Figure 2 Life cycle for extractive activities



In the case of a nascent oil sector, such as the one in Nicaragua, before any exploration of potential resources can be carried out it is necessary to perform a series of preparatory activities. Among others, they include the design and implementation of different laws and regulations so as to produce an enabling regulatory framework for the sector. Additionally, new public bodies need to be created too, such as independent agencies to regulate the sector or technical units within ministries (mines, petroleum, environment or finance). Variations in the institutional arrangements between countries often reflect the relative importance given to aspects of oil regulation. In Norway, for example, safety matters are vested in a distinct petroleum safety authority within the regulatory agency, highlighting the importance given to safety considerations. Whatever institutional arrangements are promoted, the formation and development of these actors is always a lengthy process.

The durations of these preparatory activities vary from one country to another. Issues like the capacity of the government to reach a certain level of consensus for the development of regulation, the availability of training for the improvement of technical skills in the area of oil, or the geo-political conditions of the country will have a direct impact on how fast these preparatory activities are carried out.

Key messages

Oil and gas are valuable resources, but they must go through a lengthy and costly transformation process – often 15-20 years – before substantive revenues are captured by the government. Additionally, it is necessary to bear in mind that the oil and gas sector is technically highly complex, and effective management requires a range of specialist capabilities within government agencies, including ministries of petroleum, finance, environment, and revenue authorities.

1.2 The oil sector in Nicaragua

In order to understand the oil sector in Nicaragua today, it is important to have a clear vision of the history of oil activity in the country. This can be divided into four main periods:

9. The 1930s marks the beginning of oil exploration in the country. In particular, the first well was drilled in at the Citalapa River, not far from San Cayetano, 40 km SW of Managua, although the results were negative.
10. After 30 years without any significant work in the sector, during the period between 1965 and 1979, there was a surge in activity carried out by Shell, Texaco and Chevron. These companies conducted seismic 2D acquisitions and drilling in both platforms of the country, the Caribbean and the Pacific.¹ The exploration in the Caribbean platform during this period resulted in the acquisition of 25,000 km of seismic lines and the drilling of 24 offshore and two onshore wells. About 10 of these wells reported good indications of oil and gas, including a short-lived production at Perlas-1, around 50 km NE of Bluefields. In the Pacific, exploration resulted in the acquisition of 10,931 km of seismic lines and four exploratory wells. The activity during this period was regulated by Law N° 316/58, the ‘Law concerning the exploitation of our mineral resources’.
11. During the period between 1979 and 1990, and coinciding with the Sandinista Revolution, oil activities come to a standstill. Most of the licences granted to international companies, the latest of which expired in 1981, were not renewed. The slowdown in activity can partly be explained by the high political and economic uncertainty surrounding the country during this time.
12. Reactivation of hydrocarbon activities, from 1989 to the present – ‘the Norwegian period’. 1989 marks a clear ‘before’ and ‘after’ point in the history of the oil sector in Nicaragua in general and, in particular, of the involvement of public actors in the sector. By 1989, the oil sector had reached a point where it was basically non-existent. Everything needed to be done again and the sector rebuilt from scratch. That was the size of the task facing Norway when it began its collaboration with Nicaragua.

¹ 2D is the simplest and oldest form of seismic work. In 2D, the seismic data is collected over a loose grid pattern, with the lines of the grid often conforming to local roads for ease of access. The lines may be several miles apart. While 2D can give geologists a good general understanding of an area, however, its reliance on relatively few cross sections means that such seismic surveys can result in considerable structural uncertainty between lines.

Key messages

The combination of the longer timeframes used in oil activities and the fact that the petroleum sector in Nicaragua needed to be reconstructed from scratch in 1989 helps to explain why this country has been receiving support from Norway for almost 25 years, despite the fact that no commercial oil has been found. However, the country is now very well prepared in the event that a successful discovery is made. For example, by the time this End Review was being completed, the Norwegian company Statoil was signing new contracts with MEM to carry out further exploration in the Pacific basin.

1.3 The OfD programme

Background before OfD

The OfD programme was initiated by the Norwegian Government in 2005. At that time, Norway had already provided petroleum-related assistance to countries rich in natural resources for more than 20 years, focusing primarily on resource management. The OfD programme has contributed to broadening the scope of this support to also include environmental, revenue and safety management.

The purpose behind the OfD programme is to share Norwegian experience in the management of petroleum resources, which is characterised by strategic state ownership, strong and competent institutions, a continual building up of technical knowledge, an advanced regulatory system and, above anything else, the determination of the society to secure control over these petroleum resources. It is precisely this practical experience in the management of oil resources that recipient countries of OfD support value most highly; 'They know how to do things' was one of the most commonly cited reasons obtained during fieldwork explaining why the OfD programme has such an excellent reputation in Nicaragua.

In 2013, the OfD programme was being implemented in 18 countries in Africa, Asia, Latin America and the Middle East. For many of them, the petroleum sector is increasing in significance, as in the case of Mozambique, Tanzania and Uganda, where important discoveries have been made in recent years. In 2015 the OfD portfolio consists of 11 countries.

A key element to put the OfD into context is that it often works in conflict-ridden states, under technically and politically challenging circumstances. In this regard, although the support provided is demand driven and exclusively technical, the programme has made an important effort in the last few years to improve the understanding of the political economy factors surrounding it. In addition, considerable efforts have also been made recently to clarify and document the mandates and responsibilities of all of the Norwegian institutions involved.

Key messages

The support provided by Norway to Nicaragua in the petroleum sector started more than 16 years before the OfD programme was formally launched. This, together with the small amount of funds destined to the programme (NOK 21 million in total between 1989 and 2014), helps to explain why some of the flaws in the original design of the programme, such as the absence of a baseline or a logframe, were never corrected. 'This is such a small programme, and it had been running so well for so long that it was not worth spending any money modifying it', was the answer provided to explain how the 'inherited' design problems of the programme were passed from one phase to the next.

1.4 The OfD programme in Nicaragua – phases I to IV

Since 1989, OfD has been providing support to Nicaragua in two main working blocks:

- The development of technical, commercial, professional and petroleum-specific contractual capacities; and
- The development of the technical, regulatory and legal infrastructure needed to create a framework within which companies interested in the exploration and production of oil and gas in Nicaragua can engage with the national authorities.

In summary, the main achievements of the programme in Nicaragua are:

- The design and implementation of a new regulatory framework for the petroleum sector, including Law 286/98 (the 'Special Law for Exploration and Exploitation of Hydrocarbons') and its regulation (Decree No. 43-98).
- The collection and processing of all available data from the 1960s and 70s and the creation of a Petroleum Database.
- The implementation of a Monitoring and Evaluation (M&E) system relating to health, safety and the environment (HS&E) for offshore operations.
- Analysis of new seismic data.
- An international promotional campaign highlighting the value of Nicaragua as a potential destination for investors.
- The updating and improving of the National Contingency Plan for Emergencies, related to the exploration and exploitation of resources.
- Professional and technical human resources capacities.

The evaluation report on phases I to IV defined as 'very successful' the work carried out by the OfD programme and strongly recommended its continuation. As a result of this recommendation, Phase V of the OfD programme was approved as the culmination of this long-term cooperation.

PART 1: End Review of Phase V of the OfD programme in Nicaragua

1 Introduction

Following the positive results of the evaluation of phases I to IV, and after considering that (a) 'Norwegian cooperation is especially useful since it has a unique expertise on resources management'; and (b) that 'the steady contribution of the Norwegian aid to Nicaragua is worthy to sustain the effort needed in the petroleum projects', MEM decided to formally request the approval of Phase V of the OfD programme in September 2010.

The specific objectives of Phase V are:

1. Updating of the Petroleum Data Base;
2. Implementation of the Monitoring and Supervision System for Offshore Activities;
3. Updating and improving MEM's Environmental Unit (UGA) on petroleum operation;
4. Petroleum promotion for available areas and future activities; and
5. Training for MEM staff and institutional support.

The outputs associated with these objectives are:

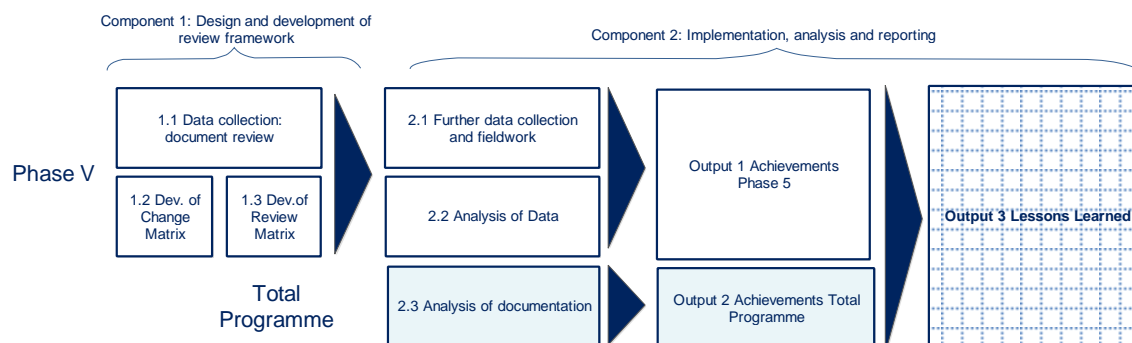
1. An upgraded Petroleum Database using storage and specific software, as well as well-trained MEM staff;
2. An information system for monitoring and supervising petroleum exploration and exploitation operations;
3. Better professional and technical capacities on the part of MEM's environmental staff in relation to offshore petroleum operations;
4. A health, safety and environment monitoring and auditing system at MEM for offshore drilling operations;
5. A licencing strategy for continuing the petroleum exploration campaign in Nicaragua's offshore areas; and
6. Better professional and technical human resources capacities on the part of exploration and environmental staff.

This section presents the consultants' evaluation of whether the objectives of the Phase V program of support has been achieved. It first presents the methodological approach, followed by a review of the change matrix setting out how activities translate to outcomes, it then presents a review of the programme under DAC guidelines, and finally some concluding remarks.

2 Methodological approach

Figure 3 below provides a graphic description of the methodology used by the consultancy team during this project.

Figure 3 Methodological approach



Below we describe in more detail the key elements of this methodological approach.

Data collection: document review

The team has undertaken a comprehensive review of the information available on the OfD programme in Nicaragua. This information was provided by different stakeholders, including, among others, NORAD, the Royal Embassy of Norway in Guatemala, MEM, the Petroleum Safety Authority Norway (PSA) and UGA. A list of stakeholders is included in Annex B. The desk-based review of the documents has provided the team with an understanding of the goals and activities of the programme. This information was used to inform the design of both the Change Matrix and the Review Matrix.

The lack of a Theory of Change

One of the main findings on the consultancy's Inception Phase is the non-existence of a Theory of Change (ToC) or Logical Framework, which is a major setback as both are key elements in evaluating the performance of a project – without them, it can be very difficult to explain the course followed by the OfD programme from activities to impact.

The term 'ToC' has gained considerable popularity within international development agencies in recent years, and it refers to a critical methodology that consists in defining a programme's short-, medium-, and long-term objectives (usually referred to as outputs, outcomes, and impacts), and later identifying the preconditions, assumptions, and causal linkages that have to be set in place in order to achieve the desired goals.²

² For the purposes of clarity, it is important to mention that the ToC and the Logical Framework are different tools, with inherently different functions. In brief, a ToC shows the big, messy 'real world' picture, with all the possible pathways leading to change, while the logframe is like zooming in on the specific pathway that one specific programme deals with and creating a neat, orderly structure for it. For that reason, a good Logical Framework should always embed a ToC.

A project's ToC is often built at a very early stage of the initiative, which is highly useful for having a complete understanding of what the current and intended situations are, and designing a consistent strategy in regard to what has to be done to move from one to another. Where this has not been the case, developing a ToC retrospectively can also be very useful.

Indeed, the relevance of developing a robust *ex-post* ToC for the OfD programme is undeniable when it comes to explicitly spelling out how change has occurred at different levels, that is how the outputs and outcomes of interest have been triggered by particular actions performed by specific actors. The purpose of the proposed ToC is to fully understand the contribution the programme may have made to observe changes, as well as to properly evaluate what has worked and what has not. The ToC also helps to isolate the counterfactual of a intervention, by making it clear what higher-level changes may actually be attributable to a specific donor intervention.

However, it is important to note that both tools were not commonly used back in 1989, at the time the programme was designed. Moreover, as mentioned above, the combination of the small size of the programme and the fact that it was deemed very successful acted as a deterrent to include a logframe or a ToC in any of the new phases of the programme.

The particular framework is illustrated in the table below, and it provides a way to understand the different dimensions of 'capacity' that are relevant to overall organisational performance. First, effective programme performance requires capacity to be developed at three different levels: the individual level (the skills of staff members), the organisational level (the structures, processes and procedures that enable these skills to be deployed and used effectively), and the institutional level (the wider framework of laws, regulations, and informal rules governing behaviour). In the same manner, for a programme to successfully accomplish its objectives, capacity has to not only be generated ('capacity creation') but also be put into adequate use in line with OfD's goals ('capacity utilisation'), as well as retained and disseminated over time ('capacity retention'). The functioning of the Change Matrix will be explained in more detail in the following section.

The Change Matrix

	Capacity creation	Capacity utilisation	Capacity retention
Level 1: Individual level	Development of adequate skills, knowledge, competencies and attitudes	Application of skills, knowledge and competencies in the workplace	Reduction of staff turnover, facilitation of skills and knowledge transfer within institutions
Level 2: Organisational level	Establishment of efficient structures, processes and procedures	Integration of structures, processes and procedures in daily workflows	Regular adaptation of structures, processes and procedures
Level 3: Sector level	Establishment of adequate institutions, laws and regulations	Enforcement of laws and regulations for good governance	Regular adaptation of institutions, laws and regulations

By building up the Change Matrix, the consulting team has been able to carry out a **Contribution Analysis**. This involves identifying the contribution made by the OfD programme in Nicaragua to observable outcomes and impact, through different causal pathways. The Contribution Analysis is based on an understanding of the causal pathways by which the OfD programme's activities help build organisational capacity. This analytical tool has allowed us to explore the extent to which the outputs specified in the programme documents have been achieved with contributions from the OfD programme, and how far the programme has achieved its purpose.

The Review Matrix

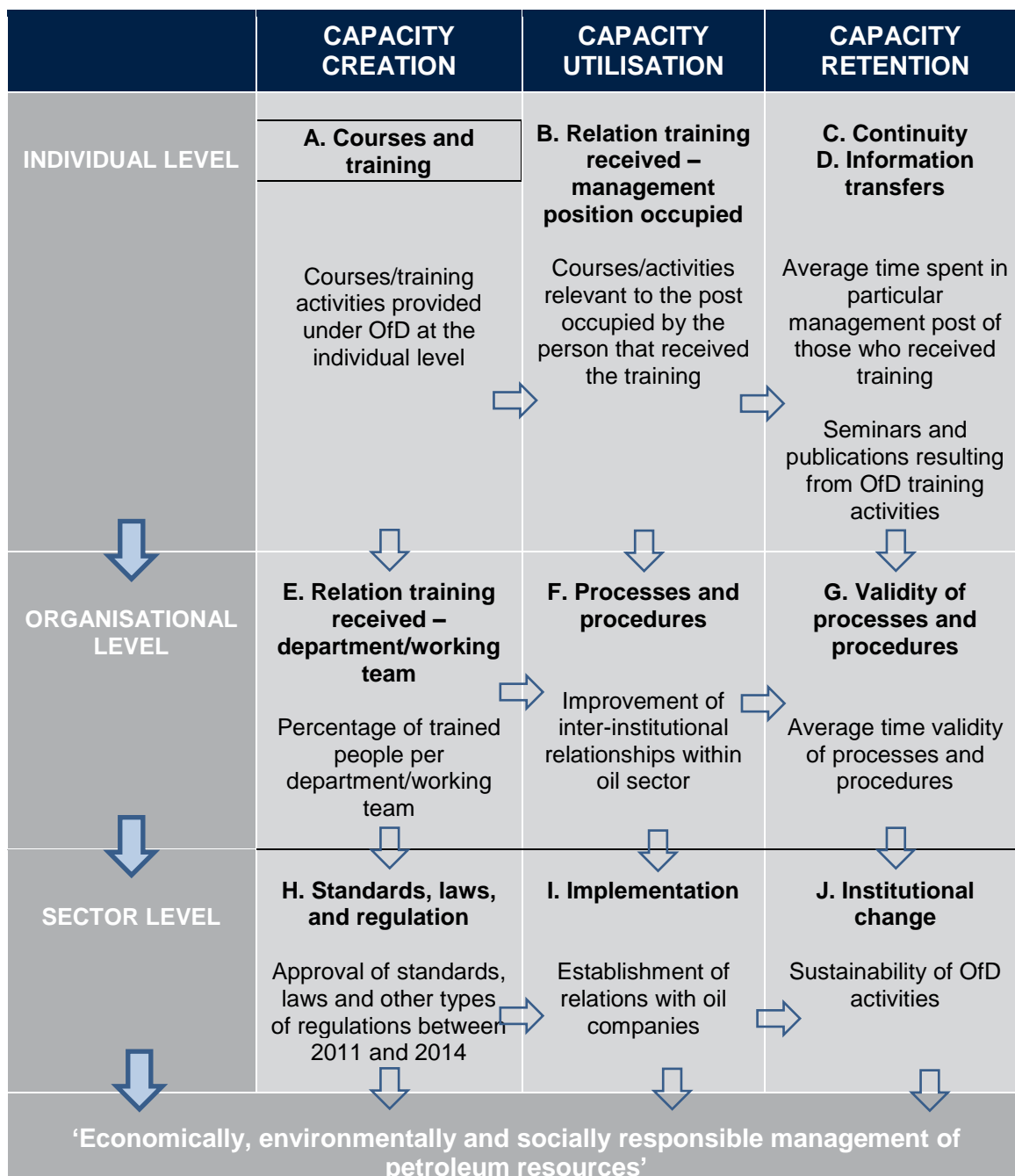
Once the Change Matrix had been developed, the next step is to develop a Review Matrix with specific review questions under each OECD-DAC criterion.

The Review Matrix

OECD-DAC criteria	Area of focus	Example(s) of specific questions
Relevance	Are objectives consistent with MEM's requirements, and Nicaragua's needs? Are they consistent with NORAD's priorities and policies?	How relevant are the OfD programme's activities to the purpose and programme objectives, the requirements of beneficiaries, and the priorities and policies of partners?
Effectiveness	Are the objectives achieved or expected to be achieved, considering their relative importance?	Were the desired behavioural changes of participants and their organisations achieved? Were outputs delivered against plans and objectives?
Efficiency	How economically are resources / inputs (funds, expertise, time, etc.) converted into results?	To what extent have activities been undertaken as planned (implemented on time, using resources as planned, and delivering outputs as planned)?
Impact	Were the positive and negative, primary and secondary long-term effects produced by OfD activities, directly or indirectly, intended or unintended?	Were there improvements in, for example, sustainable exploration as a result of the OfD activities? To what extent does the OfD programme add value beyond the specific objectives of the activities?
Sustainability	Will the benefits continue after NORAD support has been withdrawn, i.e. is the intervention socially, environmentally, economically and financially sound?	Is there a coherent exit strategy prepared in advance? How can the likelihood of achieving sustainable results be improved?

3 The Change Matrix and Contribution Analysis

As explained in the previous section, the aim of the Change Matrix is to explain the course followed by the OfD programme in Nicaragua from activities to impact. As can be seen below, the Change Matrix presents three differentiated horizontal levels. The logic behind them can be viewed as a hierarchy where the interrelationships between the different logic chains depart from the capacity creation activities at the individual level (Box A) and link down and across those other areas in which the OfD programme is expected to spread its effects.



At the end of the Change Matrix, it is expected that the programme will contribute to promoting the long-term impact of the ‘economically, environmentally and socially responsible management of petroleum resources’. For such a long-term goal to come to pass, however, certain changes have to first occur at the individual, organisational and institutional levels.

At the very first level of the Change Matrix, it is proposed that individual courses and other training activities delivered by the OfD programme constitute the key element that will trigger the process of change toward the outcomes and impacts.

Individual-level training is believed to provide staff members with a set of specific skills and abilities that will directly prepare them to contribute to the achievement of the programme’s goal. It is important to highlight, however, that for these inputs of ‘**capacity creation**’ to be completely effective, they should be delivered according to each individual’s potential for utilisation (‘**capacity utilisation**’). For the training work to fully develop its transformational role, staff members should also ideally remain in their posts for a considerable amount of time (‘**capacity retention**’), which would enable them to put into practise the new skills attained and to contribute to their diffusion through seminars and publications.

The second level of the Change Matrix aims to demonstrate that improved abilities at the individual level are expected to have a direct effect in capacity outcomes at the organisational level as well. More skilled individuals, by being part of a broader managerial scheme and developing their work within teams and departments, are likely to give rise to a renewed organisational structure that will be more capable of contributing to the achievement of the OfD goals (‘capacity creation’). As happened at the individual level, better trained work groups and departments will now be prepared to elaborate new processes and procedures in line with the long-term objectives of the OfD programme (‘capacity utilisation’), and preferably will validate them over time so they can fully unfold their transformational potential (‘capacity retention’).

At the third level of the Change Matrix, it is proposed that the OfD programme’s work will bring about changes all the way up to the institutional level. Nevertheless, unlike as happened at the individual and organisational levels, the OfD programme does not possess the capacity to trigger changes at this level directly, but rather indirectly. This highest dimension of OfD capacity development is likely to be highly conditioned by external socio-political factors, which will play a key role in determining the extent to which the OfD programme can exert an influence in the institutional sphere. The central thesis of ‘capacity creation’ at this level is that the new organisational structure, empowered with relevant new knowledge and skills, will promote the official approval of standards and laws in line with the final objective of the OfD programme. Moreover, these new regulations are expected to be put into practise by oil companies with which high-level relationships will be established, leading to deep institutional change favourable to the OfD objectives in the long term. Thus, although the attainment of new information and skills by the agents of change has a key transformational role at the individual and organisational levels, the achievement of the final impact of interest will ultimately also be determined by the conduciveness of the socio-political environment.

It is very important to note that change within the matrix is not unidirectional but bidirectional. The best way to illustrate this is by using an example. Take Box F, Processes and Procedures at Institutional Level – this change can only happen as the result of the combined changes at the development of capacities at the organisational level (Box D) *and* the utilisation of capacities at the individual level (Box B). If capacities are being used at the individual level (Box B) but new capacities are not being created at the organisational level (Box D), then it will be much more difficult to use these capacities at the organisational level (Box F). The same dual-direction logic applies to the whole matrix.

Each of the boxes within the matrix contains an indicator to measure how change has taken place. Below, a full description of each of these boxes is provided.

INDIVIDUAL LEVEL

Capacity creation

Training and capacity building were the main activities of Phase V of the OfD programme in Nicaragua. Training and capacity-building activities included technical courses, attendance at conferences, HS&E workshops and online training.

The training and capacity-building activities during this phase were attended by 138 participants. As the same people attended several activities, the total number of people trained during this period is 48, out of which 21 were men (44%) and 27 women (56%).

Technical courses were provided in the area of geology, geophysics, seismic surveys and M&E for exploration activities. Environmental technical courses were provided in the area of M&E and environmental impact. The following table provides information about the type of courses and the number of participants as well as their gender:

TYPE OF TRAINING	MEN	WOMEN	TOTAL	WOMEN (%)
Technical courses	9	12	21	57.1
Environmental courses	7	6	13	46.2
Environmental conferences	1		1	0.0
HS&E workshops	48	51	99	51.5
Online training	2	2	4	50.0
TOTAL	67	71	138	51.4

Source: General Hydrocarbon Directorate and UGA

As can be seen, the percentage of women involved in training and capacity-building activities during Phase V is (a) higher than that of men, which shows that the programme is having a significant impact in terms of gender, and (b) consistent with the proportion of women working at the General Hydrocarbon Directorate (GHD) and UGA.

In terms of the beneficiaries of the training and capacity-building activities, the main entities are GHD and UGA. Although to a lesser extent, other institutions that have benefited from the activities of the OfD programme include other departments from MEM,

the Ministry of Environment and Natural Resources (MARENA) and local authorities from the South and North Atlantic Autonomous Regions (RAAS and RAAN respectively).

TYPE OF TRAINING	MEM: GHD	MEM: UGA	MEM: Others	Other	TOTAL
Technical courses	20		1		21
Environmental courses		13			13
Environmental conferences		1			1
HS&E workshops	21	12	12	54	99
Online training	4				4
TOTAL	45	26	13	54	138

Source: GHD and UGA

Capacity utilisation

The aim of this indicator is to explore whether there is a correlation between the training and capacity building provided and the positions occupied by the people attending these courses. For example, a course in geophysics may be very pertinent for the objectives of the programme but if it is attended by an accountant then the capacity to put into practice the knowledge and skills acquired will be very small.

The analysis of the existing documents shows that there is a strong correlation between the training and capacity building provided and the jobs and professional responsibilities of the people receiving them.

According to MEM's Operational Manual, the key areas within the GHD are the Directorate for Petroleum Development (DPD), which includes the Department of Petroleum Promotion, Exploration and Exploitation (DPPEE), the Department of Petroleum Economy (DPE), and UGA. Out of the 48 people that received training during Phase V, four of them belong to the DPPEE, two of them to the DPE, and seven are members of UGA. During the fieldwork visits, the evaluation team had the opportunity to talk with most of the members of DPPEE and DPE, and representatives from UGA. A key finding of these meetings is that people who received training during Phase V are effectively using their newly acquired skills on a daily basis.

Capacity retention

To explore capacity retention, we used two indicators:

- (i) a direct one, aiming to measure whether the staff member receiving training is still working in the same position or a similar one within MEM;
- (ii) an indirect one, aiming to explore how the information acquired had been shared (both formal and informally) with other individuals within the institutions that form the petroleum sector in Nicaragua.

In terms of staff continuity, out of the six people belonging to DPD (four from DPPEE and two from DPE) that were trained during Phase V, five of them are still working there; only Bismark Blandino has left DPD. Within UGA, five out of the seven people trained are still working there. In other words, 77% of the MEM staff trained still work there.

The four people from the DPPEE who were interviewed during the fieldwork visit (Veronica Artilles, Manuel Alvarez, Reyna Baca and Rómulo Sánchez) have been working there for an average period of 19.7 years (30, 16, 25 and eight years respectively). This extraordinary level of staff retention is one of the key factors explaining the achievements of the project. However, it is also important to mention that the fact that oil has not been found in Nicaragua has certainly contributed to this high level of permanency.

During the visit, it was found that all the materials obtained during the training and capacity-building courses are permanently maintained at the offices of the DPPEE and UGA, which facilitates the transmission and retention of knowledge and skills. It was also interesting to note that the DPEE carries out regular coordination and technical meetings, which also contribute to the sharing and socialisation of knowledge and skills.

ORGANISATIONAL LEVEL

Capacity creation

To explore the capacity creation at organizational level, we have used as the indicator the percentage of trained people per department/working team. Thus, the fact that 90% of the people within a department have been trained means that this department is stronger than one where only 10% of the people have been trained. In the latter, additionally, the whole department is more dependent on those who have been trained.

The following table shows the percentage of people trained within MEM, by department:

AREA	STAFF	TRAINED	%
MEM/GHD/DPD/DPPEE	4	4	100.0
MEM/GHD/DPD/DPE	2	2	100.0
MEM/UGA	5	5	100.0
TOTAL/PERCENTAGE	11	11	100.0

Source: GHD and UGA

In the table below, we provide more detailed information about the type of training received by each of the members of MEM.

Institution	Name	Technical courses	Environmental courses	Online training	Environmental conferences	HS&E workshops
DPD/DPPEE	Manuel A.	x		x		x
DPD/DPPEE	Reyna B.	x		x		x
DPD/DPPEE	Martha D.	x		x		x
DPD/DPPEE	Roberto P.			x		x
DPD/DPE	Martha L.	x				x
DPD/DPE	Claudia O.	x				x
UGA	Luis M.		x		x	x
UGA	Geovany C.		x			x
UGA	Annette D.		x			x
UGA	Mariela		x			
UGA	Rubén		x			x

Capacity utilisation

In order to explore how capacities have been used at organisational level, during the fieldwork we aimed to explore the relationships between DPD and UGA, on one side, and between DPD and other key stakeholders on the other side.

A key finding during the fieldwork was that Phase V was key for the strengthening of the institutional relationships between DPD and UGA, which are the two most important stakeholders involved in the analysis, assessment and M&E of petroleum activities in Nicaragua. It is important to note that UGA had not received any training prior to Phase V. Stakeholders interviewed at both DPD and UGA highlighted how good their working relations are.

Regarding the relationship between DPD and other Nicaraguan institutions, the following table provides a detailed account of the number of courses and training sessions attended by institutions outside DPD. The institutions are: MARENA; the Nicaraguan Institute of Energy (NIE); the Secretaries of Environment and Natural Resources (SERENA) of RAAS and RAAN; the governments of RAAS and RAAN; the Nicaraguan Institute for Fisheries (INPESCA); the Ministry of Transport and Infrastructure (MTI); the National Electricity Company (ENATREL); the National Ports Company (NPC), and the National System for the Prevention of Natural Disasters (SINAPRED).

Relationships with these institutions are commonly defined as ‘very good’ and ‘fluent’. In this regard, it is considered that the communication and coordination problems with the authorities in RAAS and RAAN that in 2006 resulted in the paralysation of activity in the area are now a problem that has been left behind. However, most of the stakeholders we interviewed agreed that it is necessary to keep strengthening these relationships. While the continuity of staff and the high level of institutional stability at DPD have clearly favoured this, the lack of stability and the high level of staff rotation in the other institutions are clearly barriers to strengthening these bonds.

INSTITUTION	TRAINED STAFF		
	Men	Women	Total
MARENA	9	10	19
SERENA (RAAS)	6		6
SERENA (RAAN)	2	2	4
INPESCA		2	2
ENATREL		4	4
GRAAS	3		3
NPC	2		2
Municipality Corn Island		2	2
NIE	4	3	7
MTI	3		3
SINAPRED	2		2
TOTAL	31	23	54

Source: GHD and UGA

Capacity retention

To explore the capacity retention at organisational level, we have used as an indicator the capacity of government agencies to keep using the same processes and procedures over extended periods of time.

In this regard, one of the findings obtained during the interviews with DPD is that the high level of continuity in the staff clearly means that processes and procedures enjoy a high level of continuity as well. However, the deficiencies observed in the area of planning – there is no long-term plan or strategy governing the petroleum sector in Nicaragua – mean that this area is particularly vulnerable to changes that may occur in and around the institutional architecture of public actors.

For that reason, a long-term strategy for the DPD that may include development and capacity building, institutional relationships, promotion of petroleum activities, development of studies and gathering of information, could have been useful. Above all, this strategy should include a detailed operational and institutional scenario analysis in the event that petroleum is found in the future. This document should also reflect important changes that are currently happening in the sector, like the increasing involvement of the Nicaraguan National Petroleum Company (PETRONIC) in the sector, the end of the support provided by the OfD programme or the steps to take regarding the contracts recently signed with Statoil.

In this regard, it is important to mention that the absence of a formal, long-term strategy for the DPD does not mean that the DPD is lacking a sense of direction or a clear vision of what they want to do and the road they need to take to achieve their goals. One of the main findings of this End Review is that DPD has always had a clear idea of what the main priorities of the sector were and the necessary steps to handle them. This is clearly reflected in its relations with the OfD programme. However, this strategy or ‘vision’ was never institutionalised through a formal document. This situation can be explained by a combination of two factors: (i) a natural tendency in Nicaragua toward ‘informality’; and

(ii) the perception that with such a small oil sector, a strategy was unnecessary and might actually act as a 'straight-jacket' and disincentive to effective collaboration between Nicaraguan agencies and Norwegian counterparts

SECTOR LEVEL

Capacity creation

To explore the capacity creation at sector level, we have used as an indicator those standards, laws and other types of regulation that have been designed or passed during the period 2011–2014, and that are intimately connected to the training and capacity building funded by the OfD programme.

During Phase V, there have been proposals to modify the Technical and Safety Rules for the Exploration and Exploitation of Hydrocarbons, NTON 14-003-03. These proposals were made by DPD. Also, UGA has proposed to MARENA the modification of the Technical Guide for the elaboration of ToR for environmental impact studies, so that this instrument may better reflect the needs and problems of the petroleum sector.

For the purpose of exploring how change has taken place within the oil sector as a result of the programme intervention, it is possible to conclude that there is a clear correlation, as a result of the training provided, between these regulatory changes and the training and capacity building provided by the programme.

Capacity utilisation

To explore the capacity utilisation at sector level, we have used as an indicator the relationships developed by DPD with other companies (both national and international) operating in Nicaragua. These relationships have three different dimensions: (a) availability and relevance of information provided; (b) provision of technical support; and (c) DPD's facilitator role.

Regarding the first element – the availability and relevance of information – a key achievement of the OfD programme was the development and updating of the Petroleum Database. During Phase V, the online training received in the use of the Kingdom Suite program has been key for this activity. The fact that during Phase V two international companies acquired different packages of information (at a total cost of USD 285,000) confirms the validity and pertinence of the information provided by DPD.

In terms of the technical support provided as well as the facilitator role carried out by DPD, it has been praised by all actors interviewed. For example, the local energy and petroleum experts consulted defined DPD as 'a very competent actor, playing a key role for the development of the petroleum sector in the country'. The international oil companies consulted also praised the work done by DPD, with indicative quotes including the following: 'Working in Nicaragua with DPD was a very good experience from a regulatory and institutional perspective', 'We never had such a close relationship with a ministry before', 'Working with DPD was a joyful, great experience', and 'They have a willingness to do the right thing that we had never experienced before'. Praise for DPD also came from the side of the Nicaraguan companies operating in the sector; 'They

have done excellent technical work in recent years and successfully set the system in motion’.

Capacity retention

To explore the capacity retention at organisational level, we have used as a reference the continuity of the results obtained by the OfD programme. In this regard, there are several factors in the oil sector in Nicaragua that may contribute to altering the existing *status quo*, affecting the continuity of OfD results as a result. These are:

1. The emergence of PETRONIC as a key player in the Nicaraguan oil sector. The new role of PETRONIC is sanctioned by Law 879 (which modifies Law 286/98) and Decree 29/2014. These regulatory changes are complemented by Law 883, which reforms PETRONIC functions and roles

In particular, Law 879 establishes the participation of the Nicaraguan state through PETRONIC in the activities of surface survey, exploration and exploitation of hydrocarbons, as well as their transportation, storage and commercialisation. For such purposes, any party interested in carrying out the activities regulated by the Law, ‘shall have to previously sign the corresponding agreements establishing the ownership of PETRONIC’. Additionally, the Law establishes that PETRONIC will not assume any risk, debt or any responsibility of any kind.

Although from a legal perspective there is a clear delimitation of functions between MEM and PETRONIC, in practice there may be some overlapping of functions and responsibilities in the area of oil promotion activities, a function that both can carry out. Additionally, PETRONIC’s growth may result in a weakening of MEM’s capacities. During the conversations with PETRONIC it was mentioned that actually their main weakness is a lack of technical capacity. Although they plan to provide training for their staff, in practice it may be easier, as well as cheaper, to hire technicians already working for MEM. According to the experience of the members of the consulting team, this flow of personnel is quite common in other countries where the OfD programme is operating and the result is always a continuous weakening of programme partners. Preventing this from happening in Nicaragua is critical for the sustainability of the results of the programme.

2. The withdrawal of the company Noble Energy from Nicaragua.
3. The commencement of conversations with Statoil regarding new exploration work in the Pacific basin.
4. The end of the Norwegian cooperation in the area of oil.
5. The low price of oil in international markets, which may act as a disincentive in the short term for international companies to start new exploration activities.
6. The radical changes that the energy mix in Nicaragua has experienced in the last decade, with an increasing role given to renewable sources of energy that may

reduce the appetite of the Government for the oil sector. In fact, according to ProNicaragua, Nicaragua generated 51 percent of its energy matrix from renewable resources in 2013. The main electricity generation source in the country is geothermic energy (16.7%), followed by wind power (14.87%), hydroelectric (12.16%), and biomass (7.25%).

Key messages

The analysis of the Change Matrix presented in this section shows that, during Phase V, the OfD programme has effectively contributed to strengthening the oil sector in Nicaragua. Thus, the development of individual capacities as a result of the training and capacity-building activities funded by the programme has clearly resulted in the effective use and retention of these capacities. More importantly, this exercise also shows that DPD, from an organisational perspective, is stronger as a result of the activities carried out by the OfD programme. The fact that 100% of the staff within DPPEE, DEP and UGA have received training, together with the strengthening of the inter-institutional relationships with other stakeholders involved in the oil sector, is a clear indication of this. The regulatory reforms introduced between 2011 and 2014, which can easily be linked to the content of the training provided by the OfD programme, together with the amount and quality of the support provided by DEP to the private companies participating in the sector, also show the positive impact of the programme at the sector level. The only questions marks in this Change Matrix relate to capacity retention at organisational and institutional level, i.e. to the sustainability and continuity of the capacities created by the programme.

4 Results of the Review Matrix

The ToR establishes that the review will be based on OECD's DAC Criteria for Evaluating Development Assistance. Using these criteria (i.e. relevance, effectiveness, efficiency, impact and sustainability), this section explores the achievements during Phase V of the OfD programme in Nicaragua, in relation to the following objectives:

1. Updating of the Petroleum Database.
2. Implementation of an M&E system (relating to HS&E) for offshore activities.
3. Updating and improving UGA on petroleum operations.
4. Petroleum promotion for available areas and future activities.
5. Training for MEM staff and institutional support.

In relation to Objective 1, it is important to mention that this is an ongoing activity, in the sense that it is never totally completed – information must be kept up-to-date and available for internal purposes as well as for companies potentially interested in the country to acquire it. The courses on 'Basic Logging Methods and Formation Evaluation' (Houston, 2014) and 'Petroleum Economy' (Buenos Aires, 2014), together with the online training provided in the use of the Kingdom Suite program and interpretation of data, have been key to the correct updating and use of the database.

In terms of Objective 2, the four courses and training activities carried out aimed to strengthen the capacity of MEM to correct carry out these M&E activities. These activities include:

- Audit Practice of HS&E in the Planning of Exploration Drilling of Paraiso 1 (PS1) at the Tyra Block in the Caribbean. This activity took place in May 2013, with the participation of MEM, PSA and the Norwegian Ministry of Environment (KLIF).
- Online training on M&E for oil projects, provided by the Norwegian Petroleum Directorate (NPD).
- Training on legal issues and environmental aspects related to oil sector, with the participation of international experts from Peru, Ecuador, Brazil, Guatemala, Mexico and Venezuela.

In terms of Objective 3, this is particularly relevant as UGA had not received any training during the previous phases of the programme. The courses on 'Seismic structural interpretation' (Houston, 2013), 'Economic assessment of environmental disasters' (Heredia, 2013) and 'Evaluation of environmental effects on hydroelectric projects' (Houston, 2013) are key to improving UGA's capacity.

In terms of Objective 4, in 2011 MEM representatives participated in the annual convention of the American Association of Petroleum Geologists (AAPG) in Houston. In 2012, they participated in the annual convention of the North American Prospect Expo (NAPE), also in Houston. In 2013 and 2014, no promotional activities were carried out as MEM was waiting the resolution of the International Court of Justice in The Hague, regarding Nicaragua's dispute with Colombia about Colombia's sovereignty over the Caribbean islands of San Andres y Providencia.

Work in these four components has been complemented through online support provided by NPD, PSA and KLIF.

It is important to note that during Phase V MEM did not participate in any international event with the aim of promoting the Nicaraguan oil sector. However, discussions with private companies like Statoil, Repsol, Glenmore, Noble and Total can be seen as part of these promotional activities.

Finally, it is also necessary to mention that Objective 5 cannot truly be seen as a separate component, as most of the activities carried out within components 1, 2 and 3 involve training and capacity building.

4.1 Relevance

The aim of this section is to review the extent to which the project has responded to the needs and priorities related to the long-term development of the oil sector in Nicaragua. It also explores whether these priorities are consistent with NORAD's objectives and policies.

One of the key findings of this End Review is the absence of technical documents justifying the need for intervention or the reasons to prioritise one or another area. However, as explained in the previous section, the fact that these documents do not exist formally does not mean that the programme lacks a sense of direction or a clear understanding of what its main priorities were. On the contrary, and as will be explained in Part 2 when describing the lessons learnt, the absence of such formal documents may in fact have contributed to the general success of the programme.

It is possible to establish a clear link between the activities carried out between 2011 and 2014 and activities developed during phases I to IV. These components 'are closely connected to the needs arising from progress in the process' of exploration initiated as a result of the 1st International Bidding Round carried out in January 2003, as a result of which five concessions for hydrocarbon exploration in onshore and offshore areas were granted. According to the project proposal presented by MEM to the Norwegian authorities in 2010, the activities carried out during Phase V are justified as 'offshore operations are coming and Nicaragua does not have experience in monitoring, evaluating, and regulating offshore exploration drilling, neither in ensuring the viability of contingency plans in case of accidents.'

The Decision Document prepared by the Royal Embassy of Norway in Nicaragua in November 2010 confirms the link between the activities of Phase V and the work carried out during the previous phases. The relevance of the project is confirmed when, among the reasons provided to approve Phase V, it is mentioned that without Phase V 'the resources invested so far would not achieve their full potential for development'. A note provided by NPD included in the Decision Document also mentions that despite the limited resources used in the OfD programme in Nicaragua, 'it is possible to contribute to the Nicaraguan oil exploration in a substantial way'.

The relevance of the project was confirmed both by all Norwegian stakeholders interviewed (including NPD, NORAD and former members of the Embassy) and by MEM representatives.

Key messages

Phase V of the OfD programme was highly relevant for all actors involved, both Norwegians and Nicaraguans, as it comes at a moment when expectations regarding the chances of success of the exploration work carried out by Noble are very high. In this regard, Phase V is seen as the necessary culmination of the long process of support received by Nicaragua since 1989.

4.2 Effectiveness

An assessment of the activities carried out during Phase V shows that the results of this phase have been quite effective. The Petroleum Database has been satisfactorily updated. Moreover, as explained in previous sections, the fact that two international companies acquired different packs of information is clear evidence of how effective this component has been. Other companies also showed interest in acquiring packs of data during the period 2011–2014. During the interviews it was mentioned that the number of requests from companies has been significantly lower in recent months. However, this situation is the result of the adjustment made by companies in their investment strategies as a result of the low oil price and has nothing to do with the quality or relevance of the MEM database.

Activities under objectives 2 and 3 have also been successfully carried out. As a result of the training and capacity building provided, it is possible to talk about a more adequate M&E system for offshore activities and the strengthening of UGA respectively. It is important to highlight that, as has been the norm during the whole OfD programme, the usefulness and validity of the training courses funded by the programme was discussed with the NDP and other Norwegian technical actors before the training took place. The goal of such discussions was to have the best possible match between the training needs of MEM staff and their characteristics. Thus, for example, language skills were a key factor determining the type of training received – if the selected staff did not speak English, they were enrolled in similar courses taught in Spanish. Discussions with both NPD and MEM confirmed the rigorousness of the decision-making process for the selection of the most appropriate technical courses and the staff attending.

In relation to Objective 4, as was explained before, MEM representatives participated in 2011 in the annual convention of the AAPG in Houston and in 2012 in the annual convention of the NAPE, also in Houston.

In terms of whether the programme setup has contributed to the achievement of the results, it is important to highlight several factors:

- As explained before, MEM does not possess a long-term strategy for the development of the oil sector, where the goals of the different public actors involved in the sector, as well as the means to do it may be defined.
- This evaluation team had no access to any technical document justifying the decisions taken in relation to the prioritisation of activities.

Intuitively, it could be argued that these two factors have a negative influence in regard to the effectiveness of the OfD programme in general, and of Phase V in particular. However, and surprisingly to a certain extent, the opposite is the case.

The lack of a long-term plan for the oil sector in Nicaragua has been an opportunity for both MEM and the OfD programme itself to act in a very flexible way. Thus, one of the key factors in the success of the programme has been the constant communication and dialogue between all the actors involved, both Norwegians and Nicaraguans. This, in turn, was critical for an effective sequencing of activities for the development of the sector.

A key to explaining this situation was provided by the Norwegian stakeholders interviewed during the Inception Phase of this work (i.e. NPD, NORAD and PSA), when they mentioned that one of the factors to justify the success of the programme was its low profile. By 'low profile' what is meant is that the programme always managed 'to operate below the radar of Nicaraguan politicians'. Similarly, it was mentioned that the programme 'did well because it did not attract any unwanted attention'.

The development of a formal, long-term strategy for the oil sector would have inevitably resulted in long political discussions. This not only would have resulted in a certain level of paralysation of activities but also in an undesirable level of political interference. By keeping this low profile, the programme was always managed by technicians from both sides, and all the decisions were taken exclusively for technical reasons.

However, this is not the only organisational arrangement that can be referenced in order to explain the effectiveness of the programme. Two other elements can be cited as well, both linked to the nature and composition of the DPD team. The first is the human quality of the team assembled. During the interviews with NPD a lot of emphasis was put on the extraordinary professional and personal relationships developed with the members of DPD. This, although categorised as extraordinary, could of course be understood using the frame of a relationship between a donor and the recipient of aid, the latter making all possible efforts to please the former. However, during the interviews in Nicaragua with oil and energy experts, all of them highlighted as well the high level of professionalism and commitment on the part of the members of DPD. Interestingly, during the conversations with one international oil company operating in Nicaragua, all the comments in relation to DPD were equally flattering. In particular, it was mentioned that 'what they liked more about DPD was the passion of everybody involved to make something good for the country'. 'They had the willingness to always do the right thing', it was added.

The other element is the continuity within the team. It was mentioned above that the four core members of DPD have been working there for 30, 16, 25 and eight years

respectively. This longevity is critical in explaining the effectiveness of the programme, as it allowed the members of DPD to establish long-term relationships with their Norwegian counterparts based on confidence and mutual trust. This high degree of longevity helps us to understand what in the words of the Director of DPD, Veronica Artiles, is the reason behind the success of the programme: “Our relations were based on honesty and transparency”.

Regarding the low level of staff rotation in the programme, it is necessary to mention that the fact that no oil was found probably contributed to this – without oil, the demand for the kind of skills and capacities that the members of DPD have is quite low in Nicaragua. Perhaps, as has happened in other countries where the OfD programme is operating, if oil had been found this high level of continuity would have been more difficult to attain, as members of DPD would have been lured away to work for private actors or for PETRONIC.

Another key element affecting the effectiveness of the OfD programme has been the high level of ownership shown by DPD in relation to the programme. This level of ownership is manifested in different ways. For example, there is a strong sense of pride at DPD regarding their working relationship with Norway and the Norwegian actors. “When we go to talk to international companies, we feel like they respect us because we have the support of Norway” and “We are Norway’s son and daughters” are two examples of comments provided during the meetings in Managua.

From a gender perspective, it is important to highlight that 56% of the total people receiving training and capacity building during Phase V are women. The presence of a high number of women has been a constant during the whole lifetime of the OfD programme.

From an environmental perspective, the training provided by the OfD programme has had a double positive impact, on the one side in the strengthening of the capacities of UGA and on the other in the improvement of existing legislation regarding UGA’s proposal to modify the Technical Guide for the elaboration of ToR for environmental impact studies. Considering that most of the indigenous population in Nicaragua live in areas (RAAS and RAAN mainly) where exploration activities have taken place, it is possible to conclude that the improvement in the environmental regulation described above will have an indirect positive impact on the country’s indigenous population.

Key messages

The effectiveness of Phase V of the OfD programme is extremely high and it is important to note that all the objectives for this phase have been achieved. Even more important than that is how these objectives have been achieved: the combination of a 100% technical approach to problem-solving and decision-making, the extraordinary relationship between the Norwegian and Nicaraguan actors and the level of commitment and ownership shown by DPD are particularly noteworthy.

4.3 Efficiency

According to the Decision Document, the Norwegian contribution to Phase V of the OfD programme in Nicaragua is NOK 4,500,000, which represents 21.4% of the total budget of the programme since its creation in 1989. The table below shows how funds were used during Phase V, as well as the differences between how items were initially budgeted and the final use of the resources.

No.	Components	TOTAL BUDGET	EXECUTED					BALANCE
			2011	2012	2013	Jan - Jul 2014	TOTAL	
1.0	Petroleum Database	2,180,000	639,405	532,141	369,997	232,386	1,773,929	406,071
2.0	M&E system (HS&E) for off-shore activities	300,000	32,992	124,869	607,589	-	765,450	-465,450
3.0	Improving MEM's Environmental Unit (UGA)	580,000	-	201,755	-	-	201,755	378,245
4.0	Petroleum Promotion	630,000	252,841	320,088	253,713	-	826,642	-196,642
5.0	Training and Capacity Building	600,000	100,638	325,405	303,174	155,341	884,558	-284,558
6.0	External Audit	60,000	-	13,605	13,396	20,284	47,285	12,715
7.0	Unforeseen Expenses	150,000	418	17,809	9,701	23,693	51,621	98,379
TOTAL		4,500,000	1,026,294	1,535,672	1,557,570	431,704	4,551,240	-51,240

Regarding the Phase V budget, it is important to highlight that there are important differences between the original budget and the final use of resources. Thus, in item no. 1, Petroleum Database, the difference is -18% in relation of the original budget. Similar variations can be appreciated for the rest of items. These huge variations can be explained as a result of the lack of adequate planning in the preparation of Phase V. MEM had a clear vision regarding what the main priorities were for them, but obviously the budget was not correctly calculated. However, the high level of flexibility in the project, as a result of the good relationship and high level of trust between the actors, made sure that these important modifications in the budget were not a problem.

It is also important to mention that the amount of resources for Phase V as well as for the totality of the programme is modest. This is particularly evident when the budget is put side by side with the final objective of the programme, which in practice is to contribute to securing the environmentally sound exploration and possible exploitation of petroleum resources by creating capacities at the level of the Nicaraguan government.

The Final Review of Phases I to IV states that ‘with relatively small resources, a substantial improvement in professional development has been achieved and DPD has obtained its objectives of collection of old data, a new quality seismic has been acquired on spec by Fugro Team, the data has been quality assured, data packages with blocks to be offered were put together, the concession round was successful and five concessions contracts with three companies have been signed’.

In order to understand the level of efficiency regarding the resources of the OfD programme, it is worth mentioning the activities carried out by Noble between 2008 and 2014 in Nicaragua:

- Environmental impact assessment and acquisition of Environmental Licence;
- Collection, processing and interpretation of 4.950 km² of seismic 3D in two areas;
- Drilling an exploratory well PS-1 in Tyra area (although the results were not satisfactory and the well was abandoned);
- Lab analysis of samples collected in PS-1; and
- Collection, processing and interpretation of seismic 2D.

In total, Noble has invested more than USD 300 million in all these activities.

In 2013, Infinity Energy Resources obtained an Environmental Licence for two areas (Tyra and Perlas). Infinity carried out the collection, processing and interpretation of seismic 2D. Up to this date, the company has invested USD 3.5 million and is analysing the data collected in order to eventually drill in some areas.

Up to 2010, Indoklanicsa had drilled three wells in Nicaragua, at San Bartolo, Las Mesas and Maderas Negras.

Repsol, Total, Statoil and GEOEX have also expressed different levels of interest in conducting work in the oil sector in Nicaragua. Statoil is presently negotiating contracts with PETRONIC and MEM in relation to conducting exploration work in the Pacific basin.

A key element to understanding whether resources have been used efficiently is the destination of the resources generated by the selling of information packages to international oil companies. As explained earlier, this amounts to USD 283,000 for two packages sold in 2012 and 2013 respectively. According to the information provided by DPD, this money will be reinvested in training courses and safety equipment. Part of these funds will also be used to pay for the Kingdom Suite licence.

Key messages

The information about the achievements of the programme is particularly relevant because all this was done with a total budget of around NOK 21 million over a period of 25 years. In this regard, it is necessary to highlight that the goal of the project was not to find oil but rather to develop the skills and capacities of the Government of Nicaragua to promote exploration and exploitation activities in the oil sector, i.e. to help Nicaragua to develop its capacity to find oil. Without the support of Norway, none of this (the capacity to negotiate contracts, development of EIA rules, development of geodata management systems, etc.) would have happened. Considering the small investment made by the OfD programme in Nicaragua, the results in terms of value for money, defined as the optimal use of resources to achieve the intended outcomes—both for the totality of the programme and for Phase V – are extraordinary.

4.4 Impact

As explained in the section dedicated to the Change Matrix, it is possible to clearly establish how training at an individual level resulted in an improvement of capacities both at organisational level, within MEM, and at sectoral level. As a result of the work carried out during Phase V, there has been a significant improvement in the capacity of UGA to better perform its functions. Additionally, the training and capacity provided have resulted in an improvement of the M&E system (relating to HS&E) for offshore activities. Also, the training provided has contributed to keeping the Petroleum Database updated, which is critical in terms of providing potential investors with accurate, pertinent and reliable information. Finally, the participation of MEM in international forums has certainly contributed to putting Nicaragua on the map of international oil companies.

Key messages

While the impact of Phase V of the OfD programme is clear, it is important to explore a counterfactual. In other words, what would have happened if Phase V had not taken place? The answer is simple: none of the achievements described in the previous sections would have happened. Even worse, the arduous process of developing the trust of international investors and improving their confidence in the potential of Nicaragua would surely have stalled. In this regard, the most important evidence of the impact of Phase V of the OfD programme is the fact that companies like Statoil are still interested in conducting exploratory work in Nicaragua, even though the programme is not working any more. That in itself shows that the impact of the Norwegian aid to Nicaragua's oil sector is quite solid.

4.5 Sustainability

Despite all the positive contributions made by the OfD programme in relation to the development of the capacities of MEM for the exploration and exploitation of oil in

Nicaragua, their sustainability is far from guaranteed. On the contrary, sustainability is probably the most worrying element of the whole project.

In the short term, the sustainability of the Phase V achievements is not immediately at risk. With the income derived from the selling of information packages, DPD will be able to pay for next year's licence for the Kingdom Suite program. Even though NPD is no longer being paid to provide assistance to DPD technicians, one positive side effect of the excellent relationships that both institutions maintain is that this support is still being provided, albeit at an informal level.

However, beyond 2016 it is difficult to say whether DPD will have enough funds to keep paying for the Kingdom Suite licence. One direct consequence of the fall in oil prices in the last months is that the demand for information packages has fallen as well. Although it is likely that the informal support provided by NPD will still be maintained, without an up-to-date database it will be difficult to keep operating as efficiently as until now. The same can be applied to the progress made by UGA – it is very difficult to anticipate how they can sustain over time the achievements made during Phase V.

In order to understand better the challenge of making the achievements of the OfD programme more sustainable, it is important to have a clear understanding of the factors that may contribute to changing the reality of the oil sector in Nicaragua. These factors are as follows:

1. The emergence of PETRONIC as a key player in the Nicaraguan oil sector. Experience in other countries where the OfD programme is operating, like in Bolivia, shows that the coexistence between a public oil company and the minister in charge of the sector is not always easy. The stronger political support received by the public oil company as well as the fact that they often have more capacity and facilities to get access to funding tend to be factors that create unbalances between them. The worst scenario for the sustainability of the achievements of the OfD programme is one where the institutional strengthening of PETRONIC is done at the expense of the weakening of MEM. That is a likely scenario, as PETRONIC has the urge to develop the skills of its staff. This is a lengthy and costly process. The easiest and, in the long term, cheapest solution is hiring staff with solid technical skills and experience in the area of oil. If MEM lost some of its staff, the sustainability of the achievements made would be seriously threatened.

The demand for highly qualified technical staff would clearly be accelerated in case that petroleum is found in Nicaragua, as incoming oil and gas companies would seek to recruit skilled locals to develop their operations and in response to calls for 'local content'.

Even if there were to be no transfer of human resources from MEM to PETRONIC, the role of the former could nonetheless be threatened, and with it the sustainability of the achievements made by the OfD programme, if there is not a clear delimitation of functions between both actors. Experience from other countries make it clear that this is fairly common.

2. The changes taking place within MEM also contribute to the creation of uncertainty around the sustainability of the results of the OfD programme. In this regard, the

substitution of Emilio Rappaccioli after eight years as the head of MEM has created some uncertainties regarding the direction that MEM and DPD may take in the near future. The fact that the new minister, Salvador Mansell, will also keep working as the Director of ENATREL also creates some uncertainties in the energy sector.

3. Interestingly, the regulatory change (Law 879, which modifies Law 286/98) to allow PETRONIC a more fundamental role in the sector does not seem to have created any particular concerns among potential investors. Noble confirmed that their decision to abandon Nicaragua had been taken 100% based on the results of the geological assessment. Additionally, Statoil remains in conversations with PETRONIC to carry out exploration work in the country.

In relation to the sustainability of the result of Phase V in particular, and of the OfD programme in particular, an important paradox appears – there is an inverse relation between sustainability and the chances of finding oil in Nicaragua. Thus, if oil is not found in Nicaragua, the chances of the results being sustainable in the long term will diminish dramatically, and *vice versa*. A higher demand for technical skills and the relations with PETRONIC will mostly determine the sustainability of the results of the programme. However, it is important to mention that both factors are external to the OfD programme and not controllable by the programme as a result.

5 Conclusions

The forensic work carried out to build up an *ex-post* ToC that shows how change took place during Phase V of the OfD programme reveals that it can be considered a complete success. The Change Matrix set out in Section 3 clearly reflects how activities carried out between 2011 and 2014 – most of them intended to provide training and capacity building to members of DPD and UGA – resulted not only in the creation of individual capacities but also in the effective use and retention of these capacities. More importantly, the methodological approach adopted proves how these individual capacities resulted in a notable improvement of capacities at organisational and sectoral level.

The updating of the Petroleum Database, the implementation of an M&E system (regarding HS&E) for offshore activities, the updating and improving of UGA, MEM's environmental unit on petroleum operations, and the activities to promote available areas for exploration have all been successfully achieved.

The use of the OECD's DAC Criteria for Evaluating Development Assistance helps us to conclude that activities during Phase V were not only relevant and had an important impact on the Nicaraguan oil sector but were also conducted both in an efficient and effective way. The only area where some doubts arise is in terms of the sustainability of the achievements. However, as was explained in the previous section, this is caused by factors which are external to the project rather than by flaws in its own design. While little can be done about issues like the rise of PETRONIC, one of the key lessons of this Phase V is the importance of having a clear understanding of the political context wherein the OfD programme is taking place.

The reasons we cite to explain the achievements made during Phase V are intrinsically no different to those that will be described in the following part to explain why the OfD programme in Nicaragua has been so successful. The development of an excellent and solid working relationship, based on mutual trust and good communication, between the Nicaraguan and Norwegian counterparts is the key to understanding the progress made by the project. In a way, the informality of these relationships was a clear advantage – in the absence of a long-term strategy for the development of the capacities of the public actors in the oil sector in Nicaragua constant dialogue was needed to decide on the main priorities for MEM and was thus a cornerstone of the design process.

PART 2: Overall achievements of the OfD programme in Nicaragua and lessons learnt

1 Overall achievements of the OfD programme Nicaragua

The aim of this section, as requested in the ToR, is to briefly describe the main achievements of the OfD programme in Nicaragua since its creation in 1989. In order to do that, the consultant team has mainly used the documentation available for the End Review of Phase V, which in many cases also included information about the progress made during the previous stages of the programme. The team also had access to the document 'Final Review Phases I, II, III and IV of the Norwegian Support programme' that, in February 2010, evaluated the work carried out during these phases. However, not many more documents were available, mainly because of two factors:

1. As has been described before but as will also be mentioned in the Lessons Learnt section, a principal feature of the programme was its significant level of informality. A key outcome of this is the fact that the existing documentation barely reflects the wealth of activities and actions that were produced by the programme.
2. As the Royal Norwegian Embassy in Nicaragua was closed down in 2011, most of the documents of the programme were therefore unavailable to us in 2014/15. As we were told, these documents are contained in what is unofficially termed a 'dead archive'. To access these files would have meant going through long and laborious processes that were not possible within the timeframe of this End Review.

With these two elements in mind, and considering the brief introduction to the history of the petroleum sector in Nicaragua made at the beginning of this report, the main achievements of the OfD programme in Nicaragua between 1989 and 2014 are set out as follows:

- The aim of Phase I (1989–1995) was to set the foundations for the development of the capacities of the Government of Nicaragua in the area of exploration of oil and gas. The main activity during this phase was the gathering of all the scattered information available in the country as a result of the activities carried out during the 1960s and 70s. This information was the embryo of what would later become the Petroleum Database in Nicaragua.

Additionally, at the end of 1995, work began on the development of a new regulatory framework for the petroleum sector in Nicaragua, as it was correctly thought that the existing law (316/58, the 'Law concerning the exploitation of our mineral resources') was obsolete and unfit to deal with the modern requirements of the industry.

- During phases II and III (1996–2004) the main activities of the programme were the preparation, analysis and updating of the Petroleum Database, the development of information packages for exploration areas and promotional activities intended to raise the profile of the Nicaraguan oil sector on the international stage. It was at this stage when the emphasis on training and capacity building of MEM staff (at that time still known as the National Institute for Energy) began.

In 1998, and after some difficult political deliberations, Law 286/98, 'Special Law for Exploration and Exploitation of Hydrocarbons', and its regulation, Decree No. 43-98, were approved.

Also in 1998, the environmental analysis of the exploration areas was carried out, with the support of the Canadian consulting company Abt Associates and the active involvement of MARENA. The analysis of the seismic information from the 1960s and 70s was completed in 2000. Also in that year, new information about offshore areas in the Caribbean platform were analysed and processed. The first information packages for potential investors were also finally available that year.

Training on promotion strategies was provided by PETRAD during the same phase. Training on contract negotiations and licencing preparations was also carried out during this period. Finally, in 2002 Decree 252-2002 was passed, by which new offshore exploration areas were created both in the Pacific and Caribbean basins. In 2003 the first round of bidding for international companies potentially interested in the exploration and exploitation of oil and gas in Nicaragua took place.

- During Phase IV (2005–2009), as a result of the bidding process carried out in 2003, five exploration contracts were signed with international companies – four of them for areas offshore in the Caribbean and one for an area in the mainland. These companies were Indoklanicsa in 2004 and MKJ Xploration and Infinity Energy Resources in 2006. Noble Energy took over from MKJ in 2008, and in that year they also finalised the Environmental Impact Assessment (EIA) for their exploration areas. Infinity signed their final contract in 2009 and started working on their own EIA.

The work on the development of an M&E system (regarding HS&E) for offshore activities was also initiated during this period.

- During Phase V, the main activities of the programme were to keep updating the Petroleum Database, finalise the implementation of the M&E system (HS&E) for offshore activities, update and improve UGA, MEM's environmental unit on petroleum operations, and promote available areas for exploration. All have been successfully achieved.
- In relation to the impact of the OfD programme in the area of gender, it is remarkable that a high proportion of the members of the DPD are women. Also, during phase I-IV, 40% of the Nicaraguan participants in the PETRAD 8-weeks courses in Norway were women. With respect to the rights of the indigenous people, the Constitution of Nicaragua (Art. 181) establishes that when areas are located in the Autonomous Regions, the contracts must be approved by the Regional Councils. In this regard, it is important to highlight the organization of different training and capacity-building activities and seminars with delegates from RAAS and RAAN in the area of oil exploration and exploitation. These activities also included major environmental elements.

The 'Final Review Phases I, II, III and IV of the Norwegian Support programme' document concluded that the OfD programme in Nicaragua has been a clear success. The analysis carried out during the present work serves to confirm this. The list of achievements provided above confirms it.

However, there is a more graphic, and simple, way to explain why this project has been so successful, which can be done by taking a look at the state of the petroleum sector in Nicaragua in 1989 and comparing it with what this sector looks like now.

Back in 1989, the country was still suffering the effects of a prolonged armed conflict, the economy was in tatters, and institutional stability was difficult to achieve. Back then, the oil sector was non-existent. Memories of the work carried out in the 1960s and 70s were fading away quickly and information obtained during that period was gathering dust, completely useless. No people within the Nicaraguan public administration had a basic knowledge of the technical, regulatory and environmental intricacies of the sector.

25 years on, and after a very small economic contribution and tons of intangible and invaluable support from Norwegian institutions, the capacity of the Government of Nicaragua to deal with an extremely complex sector is well-established. a) They have put together and kept updated a complex data system; b) they have developed from scratch a modern regulatory system; c) they are capable of engaging efficiently in difficult technical issues with highly sophisticated multinational companies in the world, with whom d) they have successfully negotiated intricate contracts to carry out exploration activities in the country; e) and they have raised the profile of Nicaragua in international oil arenas. Above all else, f) DPD is seen as a trusted, respectable partner.

In the words of a high-ranking representative from an international company operating in Nicaragua, 'the members of DPD are the best I have ever dealt with in my entire professional career, not only from a technical perspective but, more importantly, because of the passion and willingness they always showed to make their country better'.

There is surely no better way to summarise the achievements of the programme.

2 Lessons learnt

- The most important lesson of the OfD Programme in Nicaragua is that **profound institutional transformations do not necessarily have to be the result of expensive bureaucratic and complex processes.**

The history of development activities abounds with gigantic, extremely expensive projects in all sectors that included the mobilisation of scores of international experts and the creation of complex organisational structures. In Nicaragua, like in many other developing countries, there are plenty of such examples – ‘ministries’ created within existing ministries, aimed not only at promoting institutional change from inside but also leading deep reform processes. Very few of these projects resulted in anything positive and durable once they were completed.

The results of the OfD programme in Nicaragua show that a lot can be achieved with few resources, if they are managed in an efficient way.

The money spent by the programme since its creation is very modest by all standards – NOK 21 million from 1989 to 2014, meaning an average of less than NOK 1 million per year. Yet the results, as explained in the previous sections, are extraordinary.

- **The development of a relationship between Norwegian and Nicaraguan stakeholders based on mutual trust, continuous dialogue and reflection was critical for the success of the OfD programme.** Cultivating such relationships is not easy, of course. How doable this can be depends on a large number of factors. In the case of Nicaragua, these factors were as follows:
 - The low level of rotation of DPD staff, which in turn was partly motivated, as indicated earlier, by the absence of oil in the country. Unlike other countries where the OfD programme is operating that present a higher level of staff turnover, Norwegian actors consistently faced the same interlocutors across the course of many years.
 - The high level of flexibility shown by both parties was critical. This was indirectly facilitated by the lack of a long-term strategy for the oil sector in Nicaragua that could act as a straitjacket, limiting the capacity of actors to introduce changes and modifications in the programme depending on the circumstances. According to one person interviewed in Managua, ‘we learned to walk while actually working. After every step, we stopped for a while to reflect on what was needed next. During these reflection processes the support of the Norwegians was incredible. They helped us to understand what was better for us depending on where we were, and they positively responded to all of our requests.’
 - The fact that Norway was the only country supporting the development of the oil sector also contributed to increasing the bonds between the Nicaraguan and Norwegian actors and the level of identification of the latter with the objectives, ways of working and methodologies of the latter. In this regard, there was not just a mere transmission of skill between Norway and Nicaragua but also of values as well as ways of operating.

It is important to recognise of course that many of these factors are context-specific and for that reason non-replicable. A Norwegian stakeholder defined this situation as ‘a perfect storm’. However, even though circumstances will vary from one country to another, the key lesson is still valid: relationships are critical for the success of the programme.

- **The value of intangible elements, like prestige or reputation, is enormous.** While the more tangible support (i.e. funding for training and capacity building as well as equipment) was key to giving Nicaraguan agencies the credibility necessary to engage effectively with international investor. ‘We felt that oil companies took us more seriously because they knew that we had Norway supporting us’ was mentioned a couple of times during interviews.
- **The ability to keep a low, exclusively technical profile was critical for the success of the programme.** Considering that almost everything in Nicaragua is political one way or other, this is a great and rare accomplishment. The programme did not receive any ‘unwanted attention’ and as a result all the decisions taken were strictly based on technical criteria.
- **Having a technical profile does not mean not being aware of the political developments surrounding the OfD programme, however.** In this regard, as mentioned earlier in this report, those elements with the capacity to threaten the sustainability of the programme are mostly external. This fact should not be seen as a reason for not having a better understanding of how political economy factors may create barriers but also opportunities for the programme.
- Although the philosophy of the programme is to act exclusively following the demands of the local counterpart, the experience of the OfD programme in Nicaragua shows that **a certain level of ‘soft interventionism’ may not only be desirable but also produce very positive effects.** Many decisions in Nicaragua were jointly taken by DPD and the Norwegian stakeholders. However, that cannot be done in an environment where relationships are not based on trust and confidence.
- **The lack of a ToC or logframe is a serious obstacle to articulating correctly how the contribution of Norway is going to help to the development of the Nicaraguan oil sector.** However, in this case the absence was not a big problem because the route map had already been traced, albeit informally, by both parties through their extensive conversations. In countries where the relationship between local and Norwegian actors is not so solid, developing a robust ToC is critical.
- **Other elements that clearly contribute to the successful implementation of a project are a baseline, an adequate and realistic set of indicators and an actual hypothesis based on an in-depth understanding of the political reality surrounding the project.** All these elements were missing in Nicaragua for the reasons already described in this document.
- In the case of Nicaragua, most of the reports we accessed were very brief. In fact, they had what we could call ‘a telegraphic quality’. Logically, information was missing sometimes, information that as a result could only be relayed orally. However, this is very inefficient. A good example of that is the training on legal issues and environmental aspects relating to the oil sector, which involved the participation of

international experts from Peru, Ecuador, Brazil, Guatemala, Mexico and Venezuela. The training was mentioned in the reports but nothing was said in the reports regarding the relationships developed by DPD with its Latin American colleagues, which are as important as the training itself.

Annex A Terms of reference

INVITATION TO TENDER

PURCHASE OF CONSULTANCY SERVICES “END REVIEW OF THE OIL FOR DEVELOPMENT (OFD) PROGRAM IN NICARAGUA”

CASE NO. NIC 0010-10/0009

DATE: 24.11.2014

The Norwegian Public Procurement Act of 16 July 1999 No 69 and Part I of the Norwegian Public Procurement Regulations of 7 April 2006 No 402 apply to this procurement

1. GENERAL INFORMATION

The Royal Norwegian Embassy in Guatemala City, hereinafter referred to as the Embassy, is inviting participation in a tender procedure for a review to the Norwegian Programme “Assistance to the Petroleum Sector, Phase V” in Nicaragua.

The tentative schedule for the procurement process is:

Activity	Time/Date
Dispatch of invitation to tender	24.11.2014
Deadline for receipt of tenders	07.12.14 at 20.00 hrs
Notification of award	10.12.14
Contract signing	11.12.14
Expiry of tender validity period (tenders remain open for acceptance for 30 days after the deadline for receipt of tenders)	07.01.15 at 08.00 hrs

1.1 Contact person at the contracting authority

Any queries relating to this invitation to tender may be addressed to the contracting authority’s contact person: Mr. Per Anders Pollen Nilsen

(per.anders.pollen.nilsen@mfa.no) alternatively, to Ms. Maria Gilani (maria.gilani@norad.no) at Norad.

2. BACKGROUND

2.1 The Oil for Development (OfD) Program

The Oil for Development (OfD) program, launched by the Norwegian government in 2005, offers transfer of knowledge to developing countries asking for advice on how to manage their petroleum resources. In collaboration with partner countries, the OfD program targets poverty reduction through responsible management of petroleum resources. Three main outcomes define the work of the program:

1. Policy makers set goals, define, and assign responsibilities. Sound policies and legislation must be established, and the responsibilities should be organized in a manner that ensures oversight and minimizes conflict of interest and duplicity of effort. The OfD program provides support in developing the capacity necessary to establish the policies and the legal framework governing the petroleum sector.
2. The authorities regulating the petroleum sector carry out their assigned responsibilities. Authorities must have the capacity and resources to carry out the responsibilities as defined in the legal framework. Support for capacity development covers a broad range of issues related to the management of the petroleum sector and is provided through on-the-job training, workshops, delegation visits etc.
3. Policy makers and regulatory authorities are held accountable for their management of the petroleum sector. Parliamentary committees, civil society organizations and the media are crucial in holding the executive body to account. In order to perform a meaningful role, these actors must enjoy independence, have relevant competence and capacity, as well as access to information about the petroleum sector. In dialogue with partner institutions, the OfD program suggests measures for transparency in institutional frameworks and in their implementation.

The main approach of the OfD program is support for capacity development through institutional collaboration. This involves Norwegian public institutions entering into long-

term cooperation agreements with public institutions in partner countries. In 2014, the program is cooperating with 15 countries in Africa, Asia, Middle East and Latin America. Further information about the OfD program can be found on Norad's website: <http://www.norad.no/ofd>

2.2 The OfD program in Nicaragua

In the 1980s Nicaragua started to work on the conditions to reactivate the county's oil exploration. These efforts were strengthened in 1989 with the signing of the first cooperation agreement between the Government of Nicaragua (GoN) and the Government of Norway (MFA), regarding the assistance to the petroleum sector in Nicaragua. Since then technical assistance has been provided by experts from the Norwegian Petroleum Directorate (NPD) in five phases of the program, with a total of NOK 21 million.

Training has been the main component of the Program, including support to master and post-graduate studies in Norway, courses, workshops and seminars on different petroleum and environmental disciplines, as well as petroleum licensing negotiations.

The assistance has also included the reprocessing of all the technical information available from the Offshore Pacific and Caribbean Margins of Nicaragua, and the preparation of data packages for the oil industry. Equipment and specific software have been acquired, as well as online support from NPD on technical and promotional activities to carry out the first international bidding round in 2001.

After the granting of oil concessions in Nicaragua, assistance has focused primarily on training for the monitoring of petroleum operations, institutional strengthening, creation and updating of the petroleum Data Base, data interpretation and study of new areas for promotion purposes.

Phase V (2010-2014), with a total budget of NOK 4,500,000 is now in the process of closing. The goal of the Program is to contribute to the economic and social development and poverty reduction by identifying new fields in the use of the natural resources. The purpose of the Program is to contribute to secure an environmentally sound exploration and possible exploitation of petroleum resources by creating capacities at the level of the Government of Nicaragua.

3 ABOUT THE PROCUREMENT - DESCRIPTION OF THE SERVICES REQUIRED

3.1 Purpose

The purpose of the End Review is to assess achievements made in phase 5, including achievements in the total Programme, including documenting lessons learned. Based on the analysis made on what has worked well/not well and why.

3.2 Scope of work

The review shall be based on OECD's DAC Criteria for Evaluating Development Assistance. The criteria of Effectiveness and Efficiency shall be the key focus areas in the review, in particular identifying the underlying causes for the current status in the Program. In order to indicate priority, a suggested number of pages in the report is provided per criteria.

3.3 Effectiveness (8 pages) – the extent to which the Program has achieved its objectives. The issues to be assessed shall include, but is not be limited to, the following:

An assessment of the achievements, including an assessment of planned versus actual activities and reasons for deviations;

An assessment of what extent the results framework and Program setup facilitates achieved objectives of the Program;

Identify factors that affected effectiveness in the Program implementation, including the choice of modality in planning and implementation of activities, the ownership to the Program at the appropriate level in Nicaraguan institutions;

Assess and comment on how the Program has cooperated with other stakeholders (such as other related projects, donors and civil society) who are involved in the sector or sectors relevant for the success of the Program.

3.4 Efficiency (8 pages) – an examination of the Program outputs – qualitative and quantitative – in relation to the inputs. The issues to be assessed include, but is not limited to, the following:

Assess the set-up and actual Program management, including the relationship between Nicaraguan and the Norwegian institutional partners, level of capacity and ownership/commitment in implementation of activities within both the Nicaraguan and Norwegian institutions;

The use of resources in the Program, including an assessment of cost-effectiveness, and value for money;

3.5 Anti-corruption measures and conflict of interests (2 pages) - assess whether the program has positively affected the ability of MEM to contribute to the governance

of the petroleum sector in a transparent manner. An analysis of particularly the transparency of the licensing processes should be included.

Brief assessment on how gender and anti-corruption issues have been integrated into the planning, implementation and monitoring of the Program activities.

3.6 Impact (1-2 pages) – the positive and negative changes produced by the Program directly or indirectly, intended or otherwise. The issues to be assessed include, but are not limited to, the following:

Review changes in the regulatory and institutional capacity to deal with key issues related to resource assessment, promotion, licensing, and monitoring and data management.

Taking by impact the positive and negative changes produced by the program directly or indirectly, intended or otherwise. The issues to be assessed include, but are not limited to, the following:

The use of Petroleum Resources Management and related systems in participating countries;

Distribution, access and transparency of national petroleum data and figures to the public in the countries involved;

Environmental impacts of natural gas development and production;

3.7 Relevance (1-2 pages)

Review the extent to which the project has responded to the needs and priorities related to the long term development of the oil sector in Nicaragua.

3.8 Sustainability (1-2 pages) – intended to measure whether the benefits of an activity are likely to continue after donor funding has been withdrawn. The issues to be assessed include, but are not limited to, the following:

Review sustainability perspective (institutional, economic, legal and technical). Future perspectives for the upstream petroleum sector (e.g. Future prospects and international interest). MEM dependence of future financial and technical support to fulfil its role to contribute to a sound management of the potential resources, taking always into consideration the adherence to high standards of HS&E (Health, Safety & The Environment), should also be looked at. Review the commitment of Government to provide basic funding for the long-term operation of the Directorate of Hydrocarbons, and the MEM's Environmental Unit (UGA). The possibility to maintain a trained and sufficiently experienced staff should also be looked at.

3.9 Particular concerns to be investigated

The review should analyse whether the following situations occurred and, if so, what measures were taken by MEM to deal with these issues:

Conflicts with indigenous people and /or communities, mainly in the Caribbean region

Complications in the relation between the GoN with local and regional governments regarding preparation of exploration licenses

International disputes regarding maritime borders

3.10 Risk management and mitigating actions (2 pages): Internal and external risk factors. A section indicating risk factors and mitigating actions, to be included as part of each sub-section in each chapter.

Verify the occurrence and management of the risks, such as change in staff, local funds limitation, as well as any other significant risks identified during the implementation of the project. Assess whether the appropriate risk factors and mitigating actions have been identified and how these have been followed up and integrated into the planning and implementation of activities;

Review the administrative arrangements, including whether reporting on progress in implementation of activities as well as reporting on expenditures have been timely and of satisfactory quality;

4. METHODOLOGY

4.1 Literature review and fieldwork

The review shall be carried out through studies of available documentation, both general documents and Program specific documents, and through interviews with representatives of relevant stakeholders in Norway and Nicaragua. Norad and the Norwegian Embassy in Guatemala will assist in the provision of relevant documents and reports.

The Consultant will be provided with a list of suggested institutions and contact persons to be interviewed. The selected interviewees shall receive a written request outlining the purpose of the review and the main issues to be discussed in due time before the interview is conducted. The Consultant will contact the relevant stakeholders in Norway directly, while the Norwegian Embassy in Guatemala will assist in contacting the relevant stakeholders in Nicaragua.

Fieldwork in Nicaragua is estimated to last for approximately 2 weeks, including travel days. Minimum two people shall conduct the fieldwork. The Consultant team shall have an introductory meeting with the Embassy in Guatemala prior to arrival in Managua, Nicaragua, in addition to a debrief meeting in order to present preliminary findings before leaving Nicaragua. The donor may invite other stakeholders to the debriefing meeting. A written debriefing note shall be submitted to the contracting authority upon the meeting (with Norad copied).

The final dates for the fieldwork are to be agreed upon with the Norwegian Embassy in Guatemala. The list of relevant stakeholders to be consulted (by personal meetings and/or telephone interviews) includes, but is not limited to, the following:

- Interviews with representatives at different levels in Nicaraguan cooperating institutions;
- Interviews with representatives in Norwegian implementing institutions;
- Key staff at the Norwegian Embassy in Guatemala, the Norwegian Ministry of Foreign Affairs and the Oil for Development Secretariat in Norad;
- Selected other donors and civil society organisations engaged in the sector;
- The consultants will act independently from the embassy in terms of logistics
- Consultants will be responsible for securing local air and ground transportation

4.2 Estimated workload and tentative timeframe

The estimated workload of the assignment is 300 man-hours. Travel time is included in the estimated workload. It is expected that field-work is conducted within January 2015. Hence, the date of submission of the report is one of the evaluation criteria. However, it should be known that conducting field visits during late December and the first week of January may be difficult due to annual leave in Nicaragua.

4.3 Reporting- Inception report and inception meeting

No later than 2 weeks after contract signature, and in due time before the field visit, the Team Leader shall present an inception report to the Embassy and Norad. As a minimum, the inception report shall consist of the following:

- Outline/table of content/structure of the report;
- Description of methodology and research design;
- Preliminary list of references for the literature review;
- Preliminary list of interviewees and outline of the interview guides;
- Final implementation plan for the fieldwork including a detailed timeline; and
- Final detailed budget, separated into inception work, fieldwork, report writing and finalisation of assignment – per team member.

In addition, the Consultant shall present the inception report at an inception meeting to be conducted with the Embassy and Norad. The inception meeting may take place as a skype/telephone meeting. In general, it will be important for the Consultant to keep a close dialogue with the Embassy and Norad during planning and implementation of the Assignment.

4.4 Draft and final report

The main deliverable of the review exercise is the final report with an executive summary. The report should cover the key review issues outlined in section 3. It

should describe the methodology used and highlight any methodological limitations, identify key concerns and present evidence-based findings, conclusions, recommendations and lessons learned, as further described in section 4. Reporting language will be English and the report should not exceed 30 pages (excluding executive summary and annexes).

The Consultant Team will share the draft report with MEM, the main counterparts and the contracting authority (including Norad) no later than February 16 2015, with a minimum of 7 working days for comments. No later than 8 days after consultants have received the comments, the final report shall be submitted in 8 copies to the Embassy of Norway in Guatemala. The proposed adjustments shall be carefully reviewed and comments shall be taken into consideration in preparing the final version of the report.

The final report shall be submitted 1 week later for the contracting authority's final approval and no-objection. The Assignment must be finalised no later than 18.03.15. The contracting authority will be the sole owner of the report and its content, and will hold the right to share and publish it. The Consultant will not have the right to publish the report, nor any of its content, without the contracting authority's permission in writing. The final report must be submitted to the Embassy of Norway in Guatemala in hard copy and electronic versions, using Microsoft Word, and PDF. The Embassy of Norway shall submit the Final Report to NPD, NORAD and MEM.

4.5 Presentation of final report

As part of the Assignment, the findings and conclusions will be presented by the consultant(s) to Norad in Oslo, or to the Embassy in Guatemala. The presentation will be conducted in the first quarter of 2015, to whom and at which date will be decided later, but it is likely to take place before the Assignment can be finally approved and should be included in the overall budget.

4.6 Budget

The total cost of the final review programme "Assistance to the Petroleum Sector, Phase V" will be up to NOK 500,000 including VAT, and covered by the Embassy of Norway in Guatemala. The costs of travel for presentation of the final report are included in the total budget.

4.7 Contract

The following contract type will be used for this Assignment: Standard Government Agreement - Purchase of independent consultancy services.

5. DEADLINES AND PROGRESS PLAN

The contracting authority has set up the following time frames for the procurement process:

Activity	Date
Dispatch of invitation to tender	24.11.14
Deadline for receipt of tenders	+ 2 weeks, Sunday 7 December 2014, at 20.00 hrs. (GMT +2.00)
Period for evaluation of tenders	+3 working days
Announcement of contract award	+ 1 working day
Contract signing	+ 2 working days

The right is reserved to make changes in the progress plan.

5.1 Deadline for tenders

Tenders must be received by the contracting authority's contact person by e-mail by the expiry of the deadline for tenders.

5.2 Tender validity period

The tender is binding for 30 days reckoned from the expiry of the deadline for tenders.

6. GENERAL REQUIREMENTS

6.1 Declaration on health, safety and environment (HSE declaration)

Any supplier intending to perform work (i.e. services) in Norway will be required to present a declaration to the effect that he meets or, if awarded a contract, will meet statutory requirements in Norway relating to health, safety and environment. The HSE declaration must be enclosed with the tender and must be received by the deadline for receipt of tenders and no later. If the declaration is not received by the deadline, the tender may be rejected.

6.2 Legally established enterprise

The supplier must enclose a certificate of registration or (in the case of a sole

proprietorship) a register printout from the Central Coordinating Register for Legal Entities.

6.3 Good conduct

The contracting authority will maintain a rigorous approach to suppliers who can be linked to malpractices. The supplier must confirm that the business has not been convicted of an offence listed in the appendix “Declaration of good conduct”. The appendix shall accompany the tender in a fully completed and signed state.

7. QUALIFICATION REQUIREMENTS

7.1 Team composition

Norway, by the Norwegian Embassy in Guatemala, shall put the review on a tender. The winner of the bid should have relevant knowledge and experience from Nicaragua, knowledge about the Petroleum sector, Norwegian development policy and knowledge about the overall design and purpose of the Oil for Development Program. A team of at least two consultants, hired by the embassy, is considered necessary to conduct the end review of the program. No review member shall have been involved in the management or the implementation of the Program.

The consultant team should comply with the following requirements:

- University graduated, with a minimum level of Master
- Proven relevant experience from the petroleum industry /or the governance of the sector of at least 5-10 years
- Background of negotiations skills for the oil industry
- Experience in evaluation of gender and environmental issues
- At least five years of experience in monitoring and evaluation of cooperation projects of international agencies
- Command of the logical framework methodology
- Experience in Rights of Indigenous Peoples
- Fluent in English and Spanish

8. AWARD CRITERIA / SUPPLIER’S TENDER REPLY

The tenders will be ranked on the basis of an overall assessment of compliance with the award criteria in order to determine which tender is the most economically advantageous. A scoring scale of 1-10 is used.

Award criteria	Weight in % (Total sum is 100%)
Price The consultant shall give a fixed price for the consultancy assignment. The price shall be given in NOK incl. VAT and include all elements.	30 %
Solution-specific competence The supplier shall describe each of the offered consultant’s relevant competence and experience, in accordance with the requirements in chapter 7. The supplier shall submit CVs for each offered consultant to document the described competence and experience.	45 %.
Proposed solution The supplier shall submit a description of the proposed solution, in accordance with chapters 3 and 4, with a detailed work plan and date of delivery of the final report.	25 %

9. REQUIREMENTS ON TENDERS

9.1 Submission of tenders

Complete tenders must be delivered electronically to the following e-mail address: emb.guatemala@mfa.no with copy to per.anders.pollen.nilsen@mfa.no and maria.gilani@norad.no.

E-mails’ subject field should be marked: “NIC 0010-10/0009”

9.2 Tender structure

Tenders must be written in English. They must be structured as shown below, divided into the chapters shown and in the sequence stated:

Signed tender letter

Documentation of fulfilled qualification requirements

Reply to tender documents’ chapter 8 – award criteria

Reservations

10. TREATMENT OF THE TENDERS

10.1 Opening

Opening will not be public. The tenders are expected to be opened immediately after the expiry of the deadline for tenders. After opening, the contracting authority will evaluate the tenders received against the tender requirements.

10.2 Award of contract

The decision on who is to be awarded the contract will be notified in writing by e-mail to all suppliers. The notification will give reasons for the selection made. The agreement is binding once it is signed by both parties.

10.3 Return of tenders

The Ministry of Foreign Affairs will not return the tenders of tenderers who are not selected.

10.4 Award of contract

The decision on who is to be awarded the contract will be notified in writing by e-mail to all suppliers. The notification will give reasons for the selection made. The agreement is binding once it is signed by both parties.

Annex B List of stakeholders interviewed

NAME	ORGANISATION
Øystein Kristiansen	NDP
Bjørn Randeberg	NDP
Fridtjof Riis	NDP
Ole Øveraas	Former Embassy of Norway in Nicaragua
Per Anders Nilsen	Embassy of Norway in Guatemala
Mara Bocaletti	Embassy of Norway in Guatemala
Maria Gilani	NORAD
Fernando Ocampo	MEM
Lorena Amanda Lanza Espinoza	Former General Director of Hydrocarbons
Vladimir Delagneau	President and CEO - Tecnosol
David Bradford	Former Embassy of Norway in Nicaragua
Róger Cerda	Former Director of NIE
Felipe Rios	Former Embassy of Norway in Nicaragua
Verónica Artiles López	DPD-MEM
Reyna Dania Baca Rodríguez	DPD-MEM
Manuel Álvarez Obregón	DPD-MEM
Mauricio Darce Rivera	PETRONIC
Luis Molina Barahona	UGA-MEM
Geovanni Carranza Bermúdez	UGA-MEM
Rómulo Sánchez Rocha	DPD-MEM
Avil Ramírez	American Chamber Commerce
Edgar Figueroa	NOBLE Energy
Scott Rogers	NOBLE Energy
Ana Isabel Obando	NOBLE Energy

Annex C Technical and environmental courses

Technical Courses

DATE	COUNTRY	COURSE NAME	PARTICIPANTS	INSTITUTION
2011 (Jun.)	Cuba	Geological criteria for oil exploration	Martha Fabiola Delgado Miranda	MEM/GHD/DPD
			Bismarck Javier Blandino	MEM/GHD/DPD
			Manuel Salvador Álvarez Obregón	MEM/GHD/DPD
2011 (Nov.)	Panama	International oil & gas contracts	Martha Ileana López Reyes	MEM/GHD/DPD
			Claudia María Ortiz Espinoza	MEM/GHD/DPD
2012 (Jun.)	Cuba	Analysis of petroleum system	Martha Fabiola Delgado Miranda	MEM/GHD/DPD
			Bismarck Javier Blandino	MEM/GHD/DPD
			Manuel Salvador Álvarez Obregón	MEM/GHD/DPD
2012 (Oct.)	Norway	Petroleum Development and Operations	Rómulo Eduardo Sánchez Rocha	MEM/GHD/DPD
2013 (Mar.)	USA, Texas	Training at Seismic Micro Technology (SMT)	Reyna Dania Baca Rodríguez	MEM/GHD/DPD
			Martha Fabiola Delgado Miranda	MEM/GHD/DPD
			Bismarck Javier Blandino	MEM/GHD/DPD
			Manuel Salvador Álvarez Obregón	MEM/GHD/DPD
2013 (Mar.)	USA, Texas	Advanced Tool in a Carbonate Environment	Reyna Dania Baca Rodríguez	MEM/GHD/DPD
			Manuel Salvador Álvarez Obregón	MEM/GHD/DPD
2013 (Aug.)	USA, Texas	Seismic Structural Interpretation	Reyna Dania Baca Rodríguez	MEM/GHD/DPD
			Martha Fabiola Delgado Miranda	MEM/GHD/DPD
2014 (Feb.)	USA, Texas	Basic logging methods and Formation Evaluation	Reyna Dania Baca Rodríguez	MEM/GHD/DPD
			Manuel Salvador Álvarez Obregón	MEM/GHD/DPD
2014 (Jun.)	Argentina	Analysis of costs - upstream & downstream)	Martha Ileana López Reyes	MEM/GHD/DPD
			Claudia María Ortiz Espinoza	MEM/GHD/DPD

Environmental Courses

DATE	COUNTRY	COURSE NAME	PARTICIPANTS	INSTITUTION
2012 (Oct.)	Trinidad & Tobago	Developing Resources for sustainability	Mariela Arauz Torres	MEM/UGA
			Rubén Urbina Juárez	MEM/UGA
2013 (Jun.)	Colombia	Petroleum engineering for non-oil experts	Geovanni Carranza Bermúdez.	MEM/UGA
			Annette Duarte Mejía	MEM/UGA
2013 (Aug.)	Costa Rica	Economic evaluation of environmental damage	Rubén Urbina Juárez	MEM/UGA
			Annette Duarte Mejía	MEM/UGA
2014 (Apr.)	Costa Rica	Prevention on environmental conflicts	Annette Duarte Mejía	MEM/UGA
			Karla Lara	MEM/UGA
2014 (Apr.)	Costa Rica	Cumulative environmental effects	Annette Duarte Mejía	MEM/UGA
			Karla Lara	MEM/UGA
2014 (Jun.)	Mexico	Environmental training on oil exploration	Luviana Bonilla	MEM/UGA
			Luis Molina Barahona	MEM/UGA
			Rubén Urbina Juárez	MEM/UGA

Annex D Bibliography and references

- Evaluation Program Phase I-IV, February 2010
- Project Document, September 2010
- Decision Document, November 2010
- Decision Document, Project and Program Support, November 2010
- Agreement Document, December 2010
- NDP, Work Plan 2011-2013, April 2011
- NDP, Report 2nd / 3rd Quarter 2011, July 2011
- NDP, Report 1st Quarter 2011, July 2011
- Minutes Annual Meeting Program, August 2011
- Report visit to Program, Norwegian Directorate of Petroleum (NDP), September 2011
- NDP, Report 4th Quarter 2011, January 2012
- Contract between NDP and Ministry Energy and Mines (MEM), February 2012
- Collaboration Agreement MEM and Embassy, April 2012
- OfD Accumulated Disbursement Table, April 2012
- OfD Disbursement Table 2011, April 2012
- Agenda Training Workshop, April 2012
- Financial Statements, April 2012
- Work Plan, 2012-2013, May 2012
- OfD Budget Plan, 2012-2013, May 2012
- OfD Progress Report, June 2011 to May 2012, May 2012
- NDP, Report 1st Quarter 2012, June 2012
- OfD Minutes Annual Meeting Program, July 2012
- NDP, Report 2nd Quarter 2012, September 2012
- NDP, Report 3rd and 4th Quarter 2012, December 2012
- OfD Audited Accounts 2012, April 2013
- Disbursement Table, May 2012 to April 2013, April 2013
- OfD Disbursement Table, January 2011 to April 2013, April 2013
- Report visit to Program, Petroleum Safety Authority Norway (PSA), May 2013
- OfD Progress Report, May 2012 to April 2013, June 2013
- OfD Work Plan, April 2013 to 2014, June 2013
- OfD Minutes Annual Meeting Program, June 2013
- OfD Accumulated Disbursement Table, June 2013
- OfD Accumulated Financial Statements, June 2013
- Agenda Workshop on M&E and environmental regulation, July 2013
- NDP, Report December 2012 and 1st Quarter 2013, July 2013

- NDP, Report 2nd and 3rd Quarter 2013, November 2013
- NDP, Report 4th Quarter 2013, November 2013
- Addendum Extension Program, November 2013
- Addendum Protocol Signature, December 2013
- OfD Audited Accounts 2013
- OfD Final Report, October 2014
- OfD Draft Minutes Annual Meeting Program, October 2014
- OfD Progress Report, July 2013 to July 2014, August 2014
- OfD Annex Progress Report, Disbursement Table July 2013 to April 2014, August 2014
- OfD Annex Progress Report, Accumulated Disbursement Table, August 2014