



A Baseline Study of Norwegian Development Cooperation within the areas of Environment and Natural Resources Management in Myanmar

Report 3/2015



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This report is the responsibility of the baseline study team and does not necessarily reflect the views of Norad's Evaluation Department, the Norwegian Ministry of Foreign Affairs or any of the organizations or individuals interviewed. Any factual or interpretation errors are the responsibility of Fafo.

Executive Summary

This study has two main purposes: 1) to assess Norwegian interventions within environment and natural resources management (ENRM) in Myanmar, individually and as a whole, in light of key principles of aid efficiency, and 2) to establish a baseline for the interventions at impact level, based on existing data presently available in Myanmar. A key finding early on in the study was that establishment of a baseline at the present stage was not feasible due to: a) the state of project planning (and documentation) of many of the interventions, and b) limited availability of relevant data. Hence, in practice, the second purpose has been to explore the options for establishing a baseline, rather than completing the actual establishment of such a baseline.

The assessment shows that the Norwegian portfolio of interventions within ENRM in Myanmar has substantial potential in contributing to further development in Myanmar. The interventions are well aligned with Myanmar needs and requests, as well as with Norwegian key priorities of development cooperation. Furthermore, the implementing partners have good professional competence and experience, which is believed to ensure good results from the interventions. The interventions are also generally well harmonized internally, although the picture is a bit more complex when external development interventions are taken into account. Hence a main impression from the study is that the portfolio has the potential of contributing to development in Myanmar according to key needs and priorities.

Realizing the full potential of the ENRM interventions, however, requires systematic planning in accordance to good practices of development cooperation. At present, many of the project documents indicate some weaknesses in this respect, and a general picture is that the international NGOs and UN-REDD are more professional when it comes to project planning and documentation compared to their Norwegian counterparts. Particularly for interventions related to institutional capacity development there is a lack of baselines and needs assessments, which should be used as basis for project planning and can enable monitoring activities at a later stage.

Another weakness in many of the present project documents is a lack of contextual considerations, including conflict sensitivity and institutional culture aspects. The latter aspect could have been improved by carrying out more structured and extensive baseline studies and needs assessments. Furthermore, it seems like the strong alignment of the ENRM interventions with Myanmar strategies and priorities, and the fact that most interventions are based on clear requests from Myanmar authorities, have reduced the focus on Theories of Change (ToC) considerations in the project planning. In fact, ToC consideration can at best be said to be implicit in most project documents and planning processes.

The level of competence in Myanmar institutions is varied. Ministries and departments have established good knowledge and networks internally in Myanmar while there are large gaps when it comes to international best practice. However, the level of resources for developing capacity in Myanmar institutions is very limited. As a result, the collaborative projects fill an important gap.

Some challenges in these collaborative projects need to be addressed. The most important challenge is an apparent lack of capacity needs assessments before project activities are initiated. A number of project documents state the importance of identifying capacity needs before designing courses and training activities. At the initial stage of development that Myanmar is in right now, any capacity

development activity is accepted with open arms and any small initiative goes a long way. However, in the long run the value of capacity needs assessments cannot be overestimated.

The collaborative projects can have a positive impact by introducing improvements to contextual and cultural elements that can impede creativity and innovation. Examples include the detrimental effect of generational gaps; lack of delegation of power; and a bureaucratic system that can negatively influence efficiency and productivity. Through the collaborative projects, Norwegian partners can contribute with a positive influence on the enabling environment.

Norwegian partners also stand to gain from these collaborations. They increase their experience in working in different contexts. However, the projects need to reflect better the politically unstable nature of Myanmar and include a reflection on the direct and indirect impact their project can have on the local context. This requires a keen understanding of the political situation to improve the sustainability and the long-term impact of the projects. A number of the projects aim to involve local communities and stakeholders because they will have an impact on local livelihoods. It is probably here the positive impacts can be maximized as Norwegian partners have a valuable degree of influence.

As mentioned, the study has identified substantial gaps in data availability with respect to establishing a baseline for the Norwegian ENRM interventions at present. A key challenge is that the location specific ENRM interventions are spread around the country and cover relatively small geographical areas, requiring data representative at low geographical levels such as townships or even villages. There are, however, a few major on-going data collection initiatives that have the potential of covering many of these gaps.

Still, it is difficult to see any other option than initiating some additional data collection activities to supplement the existing and forthcoming sources of data in order to enable thematically and geographically targeted baselines and results measurement systems for the ENRM interventions. Such activities can be organized in different ways. One way is to include more data collection activities with focus on outcome and impact measures as part of the individual interventions, as done by Proximity Design and RECOFTC. A second option is to establish a common results measurement system for the ENRM portfolio or Norwegian development interventions in Myanmar as a whole, e.g. with LIFT as a model. A third option is to coordinate data collection with existing surveys or M&E systems, e.g. by collaboration with international actors or by buying into existing surveys.

In general, all of these options require some degree of involvement from Norwegian authorities, i.e. Norad or donor ministries. The first option requires the least direct involvement from these actors, but would probably require development of guidelines and templates on inclusion of impact level indicators at project level, as well some additional and earmarked funding for the activity. The second and the third option should probably be organized and funded as separate projects with the sole objective of supporting projects in M&E on portfolio-wide level.

A more comprehensive set of recommendations based on the findings from the study are given in the last chapter of the report.

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Abbreviations and Acronyms

CSO	Central Statistical Organisation
ASEAN	Association of Southeast Asian Nations
DAC	Development Assistance Committee
DHS	Demographic and Health Survey
DMH	Department of Meteorology and Hydrology
ECD	Environmental Conservation Department
ENRM	Environment and Natural Resource Management
FESR	Framework for Economic and Social Reforms
FRI	Forest Research Institute
FSMS	Food Security Monitoring System
IDP	Internally Displaced Population
IHLCA	Integrated Household Living Conditions Assessment
ILO	International Labor Organization
ITAB	International Technical Advisory Board
IWRM	Integrated Water Resource Management
LIFT	Livelihoods and Food Security Trust Fund
M&E	Monitoring and Evaluation
MDG	Millenium Development Goals
MIMU	Myanmar Information Management Unit
MOECAF	Ministry of Environmental Conservation and Forestry
MOEP	Ministry of Electric Power
MPLCS	Myanmar Poverty and Living Conditions Survey
NBSA	The National Biodiversity Strategy and Action Plan
NEA	Norwegian Environment Agency
NGO	Non-governmental Agency
NSDS	The National Sustainable Development Strategy
NTNU	Norwegian University of Science and Technology
NVE	Norwegian Water Resources and Energy Directorate
NWP	The National Water Policy
OECD	Organisation for Economic Co-operation and Development
RECOFTC	Regional Community Forestry Training Center for Asia and the Pacific
SCI	Statistical Capacity Indicator
SPSS	Statistical Package for the Social Sciences
ToC	Theory of Change
ToR	Terms of Reference
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	The United Nations Population Fund
UNICEF	The United Nations Children's Fund
	The United Nations Programme on Reducing Emissions from Deforestation and Forest
UNREDD	Degradation
UNSD	The United Nations Statistics Division
WB	World Bank

WFP World Food Program
WHO World Health Organization
YSPS Yangon School of Political Science

1. Introduction

1.1. Context in brief

Norway is an important international partner to Myanmar's transition, based on a longstanding commitment. Prior to 2008, and at the height of internal conflict and violence, Norway engaged with local partners promoting political reform - an engagement that continues today. At the same time, it worked with exile organizations promoting change from outside of Myanmar. As a result, Norway established unique and trusted relationships with organisations in civil society and other leaders, many of whom are key actors in the transition process.

Norway has also developed a trusting working relationship with the current government. In 2011, Norway became one of the first countries to offer official assistance to the new civilian government, especially in peacebuilding. In addition to the peacebuilding activities, assistance to the new civilian government focused primarily on humanitarian assistance and on strengthening institutional capacity. Norway's support helped develop its position as a trusted partner to the government, and complements its relationships with non-governmental actors.

As confirmation of Norway's long-term commitment, Myanmar has become a priority country for Norwegian assistance. A strategy for Norwegian development cooperation with Myanmar was developed in 2012¹, focusing on transition-related areas within Norwegian priority and national competence, and a Memorandum of Understanding (MoU) was signed between the two countries in December 2014², where "sustainable management of natural resources, energy and environment/climate change" is one of two major components mentioned specifically. Long-term development cooperation in these fields is an area where Norway has substantial experience and knowledge, and where Norwegian actors can play a role in shaping national institutions and activities.

The total amount of Norwegian bilateral funds allocated to Myanmar has increased from 105 million NOK in 2011 to 187 million NOK in 2013, of which 21 million NOK was allocated to environment and natural resources management (ENRM) initiatives, including energy development. Out of these 21 million NOK, environment received over half (53%), energy 35%, and forest 12%³.

The on-going shift of Norwegian engagement in Myanmar towards more long-term development cooperation provides a unique opportunity for a study that can provide baseline information to guide measurements of progress – and as such lay the foundation for future results-work, monitoring and evaluations.

1.2. Objectives and contents of the baseline study

According to its Terms of Reference (ToR), the main objective of this baseline study has been to establish and analyse relevant and reliable baseline datasets describing the current socio-economic situation, including conflict and environment related aspects, facing the populations in the targeted areas of Norwegian development cooperation within ENRM. In addition, the study was also to

¹ <http://www.myanmar.norway.info/NorwayMyanmar/DevelopmentCooperation/#.VR61-2Y4W70>

² <http://www.norad.no/contentassets/418332256fdd44f3a88e87ea2aa55fef/mou-mellom-norge-og-myanmar.pdf>

³ <http://www.norad.no/landsider/asia-og-oseania/myanmar/>

establish and analyse baseline data for organizational capacity of institutions participating in capacity development initiatives within ENRM – both Myanmar and Norwegian partner institutions.

It must be noted that the baseline indicators and data presented in this report are not meant to fit directly into the result measurement matrices of the individual ENRM interventions reviewed in the study. Rather, they are selected to provide a portfolio-wide picture of impacts with special attention to socio-economic impacts related to key priorities of Myanmar and Norwegian strategies for development and development cooperation. Efforts should be taken towards linking these two indicator systems, but this requires further clarification of the overall development objectives of the interventions, as well as the ENRM portfolio as a whole. It also requires development of explicit Theories of Change at the same two levels, and some mechanism of coordination and responsibility at the level above the individual interventions and implementing partners.

The study was based on a list of initiatives (projects/programmes) funded by Norway and which are under implementation or have been planned by March 2015⁴.

More specifically, the study has included the following tasks⁵:

1. Mapping of the current Norwegian interventions within ENRM, including interventions which have been planned
2. Identification and assessment of explicit or implicit theories of change (ToC) of the interventions
3. Identification and assessment of the planning process underlying the interventions, including use of needs assessments and baseline studies, and establishment of monitoring and evaluation (M&E) systems
4. Identification and assessment of the initiatives' compliance with aid efficiency principles, especially with respect to ownership and harmonization, including identification of the initiation processes
5. Identification of geographical impact areas and target populations, including assessment of geographic and thematic overlaps between interventions
6. Specification of a set of socio-economic indicators, including relevant conflict and environment related indicators, for assessing the results of the interventions
7. Identification of data attributable to the indicators, including identification of possible comparator groups
8. Establishment of a baseline socio-economic profile of the target groups
9. Establishment of a baseline profile of human resource and infrastructure capacity in both Myanmar and Norwegian institutions involved in institutional capacity development activities
10. Identification of gaps in currently available information and other obstacles for establishment of baselines
11. Identification of possible ways of filling the gaps and dealing with the obstacles, including outlining a strategy for refining and updating the baseline framework as well as outlining an analytical approach for applying the baseline framework for future results measurements and evaluations

⁴ See next section

⁵ Derived from the ToR, with minor adjustments as outlined in the study inception report

1.3. Limitations to the study

It must be stated from the outset that fulfilling a number of the tasks outlined in the previous section has been challenging. This is particularly the case for establishing the institutional capacity and socio-economic baselines, but also for assessing the contents of the Norwegian ENRM interventions with respect to their planning process, alignment with strategies and aid principles, and general contents.

There are three main causes. Firstly, the majority of the assessed ENRM interventions are in a very early stage of implementation. Some are in an early stage of planning, and the project documents are still under development. Secondly, the collection of project as well as strategic documentation has been both time consuming and sometimes difficult, and the overall lesson from these efforts is that the availability of documentation has been far lower than anticipated. Thirdly, the availability of data for establishing useful baselines in Myanmar is at present very limited. This in itself was not surprising, given Fafo's extensive experience with data and data collection from other countries, but an additional obstacle in Myanmar was a general reluctance of providing access to existing data, particularly access to data on lower geographical levels – and not to say raw data.

Hence, the general picture of data availability in Myanmar at present is that there are few useful sources that can be used to establish baselines at the geographical level on which the Norwegian ENRM interventions expect to have an impact. This fact is underlined by the fact that the Myanmar Information Management Unit (MIMU), established by the UN to collect and coordinate data relevant for development monitoring in Myanmar, is in possession of limited data of relevance for this baseline study.

There are, however, quite a few data collection initiatives going on at the moment or being planned for the near future that can change this picture substantially. A description of these initiatives is included in chapter 3. A quote from a UN representative interviewed during our first visit to Myanmar underlines this situation:

“If I should do any baseline based on secondary data I would clearly wait until 2015/16, it will be a data revolution then, besides LIFTs data there is really no good and current available data yet. But there are so many initiatives being implemented now and in 2015 that it is almost meaningless not to wait for that. Things in Myanmar change so fast that data from 2011 are already very outdated.”

However, there are many lessons to be drawn from the study conducted, both with respect to project planning processes as well as possibilities and alternative approaches for establishing baselines and Monitoring and evaluation (M&E) systems. Some of these lessons are in compliance with Fafo's experiences from other comparable contexts, and will hopefully be useful inputs for both Norwegian authorities and for the Norwegian implementing agencies in the further process of planning and implementing ENRM interventions in Myanmar.

1.4. General study approach and sources of information

The study used various sources of information. Project and program documents are the primary information sources. In addition, we studied available Norwegian strategy documents that could provide information as to the overall coherence of the ENRM portfolio in Myanmar. More detailed descriptions of methodology and approaches applied in the different parts of the study are given in the respective sections of the report.

We conducted two field missions in Myanmar. One mission happened during the inception phase. We mapped out key sources of socio-economic data and talked with NGOs, the Norwegian embassy and civil society organizations. The second and main field mission was conducted in February 2015. We interviewed a wide range of actors both in Yangon and Nay Pyi Taw. In Yangon, we talked with key actors that are active in assisting the Myanmar government in data gathering and establishment of official statistics and socio-economic indicators. In addition, we talked with research organizations and civil society organizations. In Nay Pyi Taw, we interviewed relevant Ministerial offices, departments and organizations; in other words, the key government institutions for the ENRM portfolio. The field mission in Nay Pyi Taw provided crucial information to understand the Myanmar perspective towards capacity development initiatives.

We also conducted interviews with relevant actors in Norway. Interviews were conducted in two phases. The first phase was before the main field mission to Myanmar where we gathered strategy and project documents. After our main field mission in Myanmar, we had a second round of interviews with Norwegian partners where we triangulated the information we have so far been gathering through desk reviews and interviews in Myanmar. An exhaustive list of interviews is to be found in Annex 1.

1.5. The structure of the report

Findings and results from this baseline study are structured in two main parts according to the list of tasks outlined in section 1.1. The first part (chapter 2) describes the interventions included in the study and assesses their theory of change, compliance with aid effectiveness principles, their design elements, and planning processes, as specified in tasks 1-5 listed in section 1.1. The second part (chapter 3) outlines established baseline systems and strategies for refining and applying the systems, as specified in tasks 6-11 listed in section 1.1. The last chapter of the report (4) contains a set of recommendations on Norwegian engagement within ENRM in Myanmar based on overall findings from the study.

2. Norwegian interventions within ENRM in Myanmar

This chapter presents the main findings from an assessment of ENRM interventions in Myanmar funded by Norway, according to the criteria outlined in the ToR for the study: 1) Impact areas and target populations; 2) Thematic and geographical relationships; 3) Elements of their planning process; 4) Compliance with key aid efficiency principles; and 5) Underlying Theories of Change (ToC). The assessment focused on the ENRM portfolio as a whole rather than on the individual interventions as such. Hence, the primary aim of the assessment has been to provide knowledge that can lead to an overall planning process, coordination and synergies of the interventions – primarily directed towards Norwegian authorities.

2.1. Methodology for portfolio analysis

The portfolio analysis served two main purposes: 1) Obtain information on the project/programme development process with respect to aid effectiveness, and 2) Identify ENRM projects, project objectives, underlying ToCs, and target areas and populations as basis for establishing a baseline framework and indicators.

The analysis was based on reviews of project documents; strategic and policy documents; and aid effectiveness principles, complemented by interviews with project partners; Norwegian donors; and Myanmar authorities (see appendix 1). Document reviews and stakeholder interviews were guided by the points stated in the ToR of the study (see section 1.2).

In the analysis, priority has been given to information provided in written documents, while interviews have primarily been used to gain additional information on the project development process, including reflections around aid effectiveness principles, contextual characteristics, Theories of Change (ToC), and other issues not explicitly included or discussed in project documents.

2.2. Present and planned ENRM interventions

ENRM interventions can loosely be defined as development projects directed towards improvement and conservation of the environment for the benefit of people at local, national or global level, and development of natural resources to enhance living conditions at local and national level.

Table 2.1 identifies the present portfolio of ENRM interventions funded by Norway in Myanmar, and which has been assessed according to the criteria outlined above. The table lists the interventions for which sufficient project documentation was available for an assessment. However, defining ENRM as a separate “sector” is not clear-cut, and other development interventions funded by Norway may have elements related to ENRM embedded in them. Various activities conducted through RECOFTC’s Myanmar Country Program (via core support from Norad and project grant from the Royal Norwegian Embassy in Bangkok) are among the interventions that could have been included in the portfolio.

Furthermore, other ENRM interventions are in the planning stage, of which the Oil for Development programme is one example. This programme has not been assessed in this study due to lack of concrete plans for activities at present. Oil for development aims to develop concrete plans and project documents after the Myanmar election in November 2015. The Rainforest Foundation plans activities under their framework agreement with Norad, but their project documents for activities in 2015 were not available during the implementation phase of our study.

Table 2.1: The portfolio of ENRM interventions assessed in this study

#	Projects assessed in the study	Norwegian Funder	Norwegian partner	Myanmar/ International Partner	Budget amount ('000)
1	Development of a Sustainable Framework for Hydropower Development	Embassy	NVE	MOEP	NOK 87,313
2	UN REDD - National Program document	Ministry of Climate and Environment	-	UN	USD 4,788
3	Safeguarding Natural Heritage in Myanmar within the World Heritage Framework	Embassy	NEA	UNESCO	NOK 8,700
4	Management of Hazardous Waste in Myanmar	MFA, KLD	NEA, SINTEF	MOECAF	-
5	Integrated Water Resources Management – Institutional Building and Training	MFA, KLD	NIVA	MOECAF	NOK 30,089
6	Climate-smart Products & Services for Rural Myanmar	Embassy	-	Proximity Designs	USD 1,300
7	Scaling Up Community Forestry in Myanmar	Embassy	-	RECOFTC	NOK 20,144
8	Conservation of Biodiversity and Improved Management of Protected Areas in Myanmar	MFA, KLD	NEA	MOECAF	-

Most interventions in the ENRM portfolio are primarily directed towards building capacity in environmental and natural resources management institutions in Myanmar, primarily central government institutions. This is the case for 6 out of the total 8 interventions in table 2.1. The two remaining interventions, “Climate smart products and services” (Proximity Design), and “scaling up community forestry” (RECOFTC), also contain elements of capacity development, but not only directed towards authorities at the national level. Proximity Design trains distributors and users of their products as part of their programmes, in addition to providing farmers with affordable products such as solar energy devices (both for use in households and for farming), irrigation systems for farming and crop management techniques to improve life quality and production. RECOFTC trains local stakeholders in community forestry, including national authorities operating at the local level⁶.

Only the two latter interventions are directly aimed at improving the socio-economic conditions of their target populations, while this is a more implicit and longer term vision for the six other interventions. With exception of the “UN REDD” and the “hazardous waste” interventions, the six institutional capacity development interventions all have selected geographical sites where they will test or implement projects which will affect the socio-economic conditions of the areas’ population.

⁶ The “scaling up community forestry” project does also aim to influence national policy development, and is thus also ultimately directed to authorities at the national level.

Embedded in these projects are also objectives of socio-economic development in the project areas, as a key premise for ensuring sustainability of the introduced management systems, e.g. integrated water resources management (IWRM) or nature conservation management.

It can be discussed whether ENRM interventions in table 2.1 can be termed a “programme” or whether they should be considered only as individual projects directed towards environment and natural resources. Our impression is that they should be categorized somewhere between these two options, and hence we refer to the interventions as a group as “the ENRM portfolio”. Some of the interventions are related to each other thematically (e.g. intervention 2, 3 and 8 in table 2.1, which are all related to nature conservation), some by sharing the same target populations (e.g. the capacity development interventions directed towards the same ministries), and some by the way they were initiated (e.g. intervention 1, 3, 4 and 8 in table 2.1, which are part of a three year cooperation programme (2015-2017) between Norway and Myanmar).

Three of the interventions are also defined as a separate programme – the Environment Programme, which consists of project 4, 5, and 8 in table 2.1. Project 3 was also part of the Environment Programme until the Norwegian embassy in Myanmar decided to enter into a separate agreement for this project with UNESCO.

2.3. Geographical impact areas and target populations

A key premise for establishing baselines for future measurement of the results from development interventions is a clear definition of target populations and target areas – or more precisely, “impact” areas and “impacted” populations. Measurements should also include unintended effects on parts of the population in an area not defined as “target population”.

For the institutional capacity components of the ENRM interventions, two ministries stand out as target “populations”: Ministry of Environmental Conservation and Forestry (MOECAF), and the Ministry of Electric Power (MOEP). MOECAF is in fact the target ministry for six of the projects in the ENRM portfolio, including the “scaling up community forestry” intervention led by RECOFTC. Within this ministry different units are targeted by different interventions, both at central level as well as local branches. The Environmental Conservation Department is a key partner for capacity development in three of the six interventions. MOEP is the primary target institution for the project on development of a sustainable framework for hydropower development led by NVE. MOECAF and MOEP serve as focal points and coordinate the involvement of other Ministries in many of these interventions.

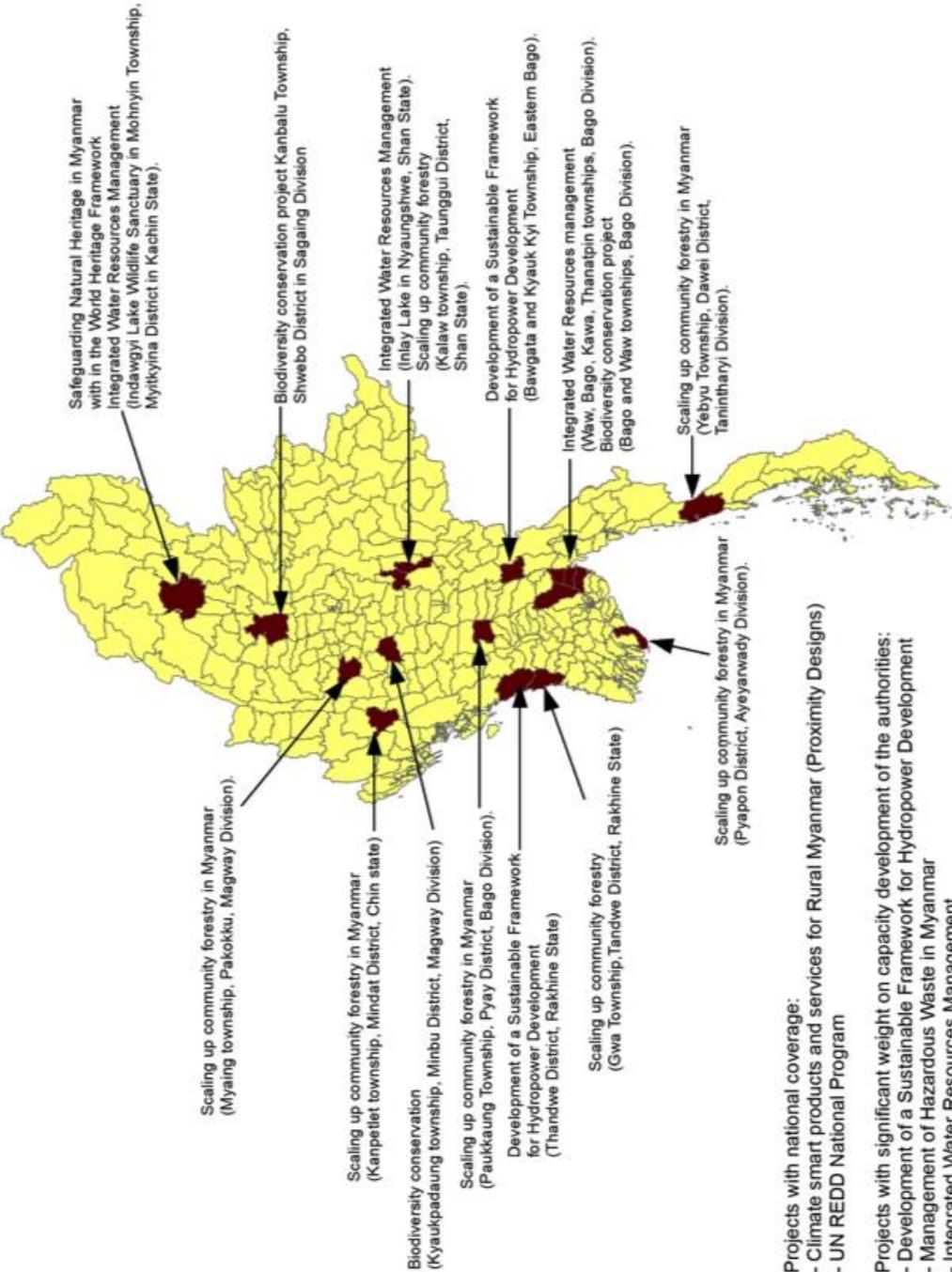
The townships⁷ where Norwegian interventions have some level of activity are shown in figure 2.1. The map contains townships where some level of activity is taking place including locations that are identified as possible sites. However, there are some projects that are waiting to finalize their project sites, and other projects that have target areas spanning across administrative borders (for example,

⁷ Myanmar is divided into regions and states for administrative purposes. The regions were called divisions prior to August 2010. The regions can be described as ethnically predominantly Burman, while the states, zones and Wa Division are inhabited predominantly by ethnic minorities. States and regions are divided into districts. These districts consist of townships that include towns, wards and village-tracts. Village-tracts are groups of adjacent villages.

state, township or district borders). These are not included in the map in the interest of accuracy. The “climate smart products and services” intervention by Proximity Design covers at present 80 per cent of the rural population in Myanmar, which in practice is to be regarded as national coverage.

Hence, the general picture of the ENRM intervention is that they are quite scattered around the country, implying that they are characterized by quite different challenges and socio-economic conditions.

Figure 2.1: A map the location specific interventions of the ENRM portfolio



2.4. Thematic and geographical overlaps

Thematically, overlaps between the interventions in the ENRM portfolio are practically unavoidable, and like geographical overlaps, they might in many cases be intentional and coordinated to increase the overall effect of individual interventions. The thematic overlaps identified in the ENRM portfolio seem to be well coordinated and have potential for synergy. This is particularly the case for the interventions directed towards capacity development of MOECAF units and environmental conservation, including RECOFTC's community forestry programme. For example, the planned collaboration between the Norwegian Environment Agency (NEA) and the Rainforest Foundation, with their different perspectives, approaches, and experiences, may lead to inclusion of more aspects and consideration into management of protected areas compared to if only one of the partners were in charge.

Although contact has been established between the implementing partners of the various interventions of the ENRM portfolio within environmental conservation, the specific overlaps and responsibilities were not always clear between the different actors. In particular the UNESCO representatives we interviewed were not clear about the specific role of NEA within their own programme.

There are few geographical overlaps between the interventions in the ENRM portfolio. The only significant overlap is in Bago Division where the IWRM and the Biodiversity Conservation interventions are targeted towards the same townships, and where the Sustainable Framework for Hydropower Development intervention is planned in the same area.

2.5. The interventions' planning process

The intervention planning process includes the way interventions were identified, and by whom; the way evidence-based criteria, e.g. use of baseline studies and other sources of information, were used for defining and planning the intervention; whether plans have consistent Logical Frameworks and M&E systems integrated; and whether contextual considerations, such as conflict sensitivity issues and particular institutional aspects, have been included in the planning of the interventions.

The general impression from the document reviews and interviews conducted in the study is that all projects in the ENRM portfolio have been clearly requested by Myanmar counterparts, primarily at ministerial level, and that the objectives and activities have been defined primarily by Myanmar partners. This impression is also reflected by the fact that all interventions are clearly aligned with national plans and priorities (see next section).

The process of more detailed planning for defining activities and their contents shows a more varied picture. The general impression is that many activities are planned and implemented in a pace that is inconsistent with an ideal and systematic planning process. With respect to the institutional capacity development interventions, there is very little detailed information in the project documents on the needs and situation in the Myanmar partner institutions beyond very general statements on the need for capacity development. Although capacity development needs in the Myanmar partner institutions are quite obvious, lack of more detailed baseline assessments in the planning process lead to further challenges in identifying good measures for institutional capacity development as well as for assessment of progress.

In particular there is a lack of assessments regarding cultural and organizational aspects within the Myanmar institutions that could affect the effects of interventions. For instance, one aspect that came up during many of the interviews we had in the target ministries was the “cultural tradition” of high rotation of staff. Another very relevant aspect related to institutional capacity development in Myanmar at present is the limited absorption capacity of the ministries, and the heavy load posed by international partners on the ministries and their ability to fulfil their daily tasks while at the same time building capacity and serving their partners. Quite a few international organizations have introduced measures to mitigate this situation.

Another aspect that was generally poorly elaborated in many project documents is conflict sensitivity, which is highly relevant in a Myanmar context and with respect to ENRM interventions, touching upon questions of land rights and access to natural resources. This aspect is further elaborated in paragraph 2.6.4 (“do no harm”).

Whether conflict assessments should be the sole responsibility of the Norwegian partners is however another question. Given Norway’s former and present engagement in peacebuilding in Myanmar, a proper inclusion of this aspect in the planning of interventions should in some way be organized. An exception from this general picture is RECOFTC’s informal discussion and use of Myanmar Peace Support Initiative in their project planning process.

Concerning logical frameworks and results matrices, the general picture is that these are still under development in the project documents by the Norwegian partners. On the other hand, particularly the M&E systems included in the projects of Proximity Design and RECOFTC are quite impressive and cover also socio-economic impact indicators and data collection activities, which may be included in a baseline indicator framework.

2.6. Compliance with principles of aid effectiveness

Key principles of aid efficiency of relevance for the assessing the ENRM interventions in Myanmar are given in the Paris and Busan standards, as well as in the DAC principles for good international engagement in fragile states and situations and the New Deal for engagement in fragile states. The following principles are discussed in this section: Alignment with national plans and priorities; host country ownership; Harmonization among partners; and “do no harm”.

2.6.1. Alignment with national plans and priorities

The following Myanmar sources are of relevance for assessing the ENRM interventions alignment with national plans and priorities:

- Framework for Economic and Social Reforms (FESR)
- The National Sustainable Development Strategy (NSDS)
- The National Biodiversity Strategy and Action Plan (NBSA)
- The National Water Policy (NWP)

The FESR was approved in 2013 and outlines the overall development priorities of the Myanmar Government. The reform strategy resembles the “poverty reduction strategy papers” that have been produced to guide international development cooperation by many other low-income countries. Of particular relevance for ENRM interventions in Myanmar is the FESR’s focus on agricultural and rural development, equitable sharing of resources between states and regions, generation of good

statistics, and in particular its focus on achieving the Millennium Development Goals (MDGs) by 2015.

The NSDS (2009) focuses in particular on establishment of Monitoring and Evaluation (M&E) systems and capabilities, as well as on the need for institutional capacity development. The NBSA (2011) refers back to the Natural Environmental Policy of 1994 and to the National Agenda 21 from 1997, and highlights the following priorities:

- Strengthen protected areas and management
- Development of a biodiversity database
- Strengthen laws and regulatory framework
- Protection of species
- Strengthen sustainable use of natural resources
- Public awareness raising and participation

The NWP was launched in 2014, and lists the following key priority areas in relation to water management and resources in Myanmar:

- Integrated Water Resources Management (IWRM)
- Water policy development
- Development of data and monitoring systems
- Implementation of the Water Framework Directive
- Institutional development and management systems
- Development of research and research capacity
- Conservation

The overall picture is that there is a strong alignment between the interventions in the ENRM portfolio and the strategic points and priorities given in these Myanmar sources. Interestingly, however, an opinion poll conducted by the International Republican Institute in 2014 shows that the alignment between priorities given in national strategies and people's priorities are not so clearly aligned. Highest on people's priority lists were employment and poverty reduction, while e.g. electrification and other physical infrastructure improvements were less prioritized.

2.6.2. Host country ownership

Compared to the principle of alignment with national priorities, the host country ownership of the ENRM interventions is less clear. One aspect of this is that the selection of interventions seems to be based on a "wish list" presented by Myanmar authorities. This procedure ensures a strong link to national priorities, but do not necessarily guarantee strong ownership of the interventions.

Documents from Myanmar authorities as well as interviews with representatives from government ministries partly reflect clear engagement in defining what interventions to implement, i.e. developing the "wish lists", but less engagement in the more detailed process of project planning. E.g. many of the baseline assessments that have not been carried out, but which ideally should have been part of the project planning, could most easily be conducted by the Myanmar partners themselves instead of the Norwegian partners. A reason behind this could of course be that the present overload of activities in the Myanmar partner institutions makes it more difficult to take part in project planning compared to identifying priority projects.

2.6.3. Harmonization among partners

As mentioned, there is established contact between all partners working with related interventions within the ENRM portfolio, and the Norwegian partners have regular meetings in Oslo to keep each other informed about their activities. Hence, the premises for harmonization look good, but due to the fact that many project plans are still under development, many details of harmonization are not yet clear or secured.

Although communication between the various partners seems to have been strong from the initiation of the interventions, there seems to have been room for more collaboration and joint efforts in the planning process. For instance, partners working with capacity development in the same ministries could have carried out joint capacity assessments, collaborated in development of results matrices, and in building their own capacity with respect to contextual knowledge of the Myanmar institutions and Myanmar in general.

The harmonization of development actors in Myanmar in general is more complex, and this seems also to be the case for the interventions within the ENRM portfolio with respect to harmonization with the broader network of development actors in Myanmar. There are several coordination networks among international actors in Myanmar, including a coordination group on energy led by ADB and a donor coordination group on environment co-chaired by Norway, in addition to 14 other sector working groups established by the Myanmar Government. However, our general impression from the study is that there is a lack of overview and coordination of efforts, between nations, international organizations and smaller NGOs. There are initiatives to enhance the level of coordination in support to the country, but the picture on the ground is still complex.

2.6.4. Do no harm

As mentioned, there is a general lack of conflict sensitivity considerations in the project documents; this has also been reflected in many of the interviews carried out in the study.

Conflict sensitivity is an unavoidable issue in interventions within ENRM in Myanmar, and conflict related indicators are central for assessing the results of interventions. Control and exploitation of natural resources and natural resource management have been central to the outbreak and continuation of intrastate conflicts in the country, and many natural resources that are vital for Myanmar's further socio-economic development are located in areas that are dominated by ethnic nationalities and have been conflict-affected. Numerous militant and non-militant movements have challenged the authority and legitimacy of the central unitary state in these areas and there is a complexity of contested, parallel and hybrid forms of sovereignty. Parallel administrative systems are especially found in health and education, but the legitimacy of the central state in ENRM has also been contested within specific issues and in localities.

Interventions in ENMR, therefore, raise complex and contextual questions about socio-economic impacts, and also about the impacts on peace-promoting governance through institutional capacity building. It seems especially pertinent that such interventions should promote inclusion of diverse stakeholders in policy-making and implementation in ENMR, making decentralization, participation, transparency and accountability key concerns and indicators for assessing the results of interventions. Such considerations are generally poorly developed in the Norwegian interventions within ENRM in Myanmar. We consider this as deeply problematic as it raises the risk for conflict

escalation and reduces the likelihood of positive impacts from interventions in terms of conflict transformation and peace building.

2.7. Underlying theories of change

We have made the use of Theory of Change (ToC) operational in this study by assessing how the ENRM partners have clarified the following aspects in their project planning and documents⁸:

- The context for the intervention, including social, political, and environmental conditions and other actors able to influence change
- Long-term change that the intervention seeks to support and for whose ultimate benefit
- Process (sequence) of change that is anticipated in order to create the conditions for the desired long-term outcome
- Assumptions about how these changes might happen, as a check on whether the activities and outputs are appropriate for influencing change in the desired direction in this context
- Diagram and narrative summary that captures the outcomes of the discussion

None of the ENRM partners use the ToC concept explicitly in their project documents, and few of them touch upon the aspects listed above in any formalized way. This is particularly true for the Norwegian partner institutions. Anticipated long-term effects at outcome or impact level of e.g. capacity building are mentioned in project documents, but more as statements of the obvious rather than supported by evidence, experiences or discussion. Furthermore, reflection and discussion of contextual factors are generally missing out in the documents.

A key objective of using ToC is to help move beyond “business as usual” and generic programme design through greater awareness of the context⁹. We find this point of particular relevance for the capacity development interventions, which contain typical “business as usual” capacity building activities such as courses and training in technical skills. We believe the effects of the capacity development interventions could be further secured by more contextual exploration prior to the selection of activities, e.g. by including institutional culture and behaviour aspects in the planning of activities. This is also partly relevant for the other interventions in the ENRM portfolio, with the clearest exceptions being the Proximity Design and RECOFTC interventions.

It is our impression that ToC considerations are less in focus in the intervention planning process if the intervention is based on a request by the authorities, and that an “official “ request for a particular intervention can be perceived as meaning less need for ToC considerations in the planning process. This aspect is not only relevant at the intervention level, but also at programme and national cooperation levels, and it is not clear at what level responsibilities for including ToC consideration should be. Professional planning of development interventions does however require that TOC considerations are taken by some actors at some (early) stage of the planning process. According to our findings in relation to national ownership of the ENRM interventions, it is unlikely that such considerations have been taken by the Myanmar authorities and partner institutions in the development of the interventions “wish lists”.

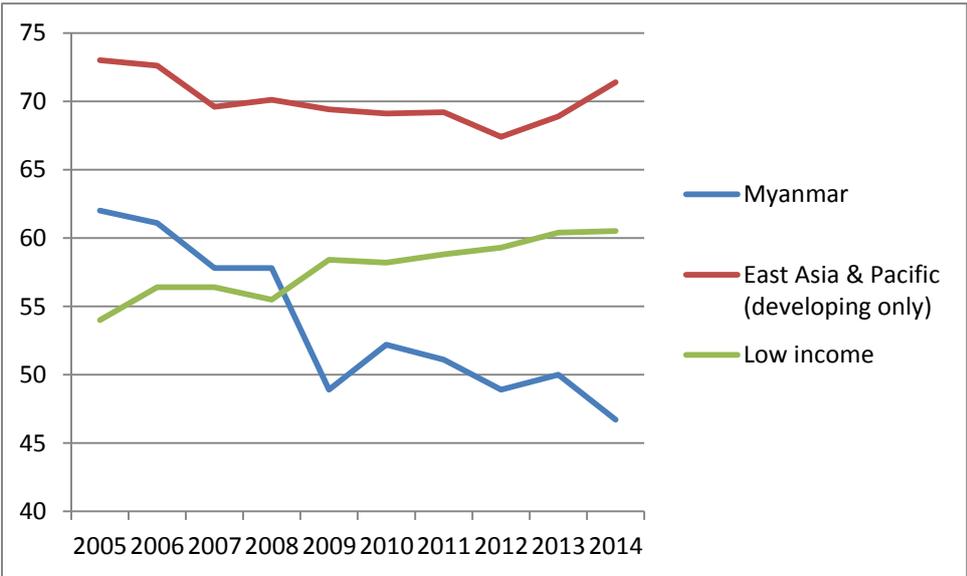
⁸ Derived from Isabel Vogel 2012: Review of the use of Theory of Change in international development, UK Department of International Development

⁹ Isabel Vogel 2012: Review of the use of Theory of Change in international development, UK Department of International Development

3. Towards a baseline indicator system for future assessments of results

3.1. Availability and access to data

Access to good and reliable statistics in Myanmar is very challenging and has been for a long time. The World Bank’s indicators for statistical capacity illustrates that Myanmar’s statistical capacity has been deteriorating over the last decade compared to other developing countries, both in the region and among other low income countries. The Statistical Capacity Indicator (SCI) provides an overview of the statistical capacity of developing countries. It is based on a diagnostic framework developed with a view to assessing the capacity of national statistical systems and monitoring progress in statistical development over time. The framework has three dimensions: statistical methodology; source data; and periodicity and timeliness. For each dimension, a country is scored against specific criteria, using information available from the World Bank, IMF, UN, UNESCO, and WHO. A composite score for each dimension and an overall score combining all three dimensions are derived for each country on a scale of 0-100. A score of 100 indicates that the country meets all the criteria. The World Bank indicator is based on information from a large group of international actors, including UN agencies, and illustrates what our project has experienced in the work with the collection and evaluation of large scale survey data-sources in Myanmar.



Source: <http://data.worldbank.org/country/myanmar> visit 13.04.2015 15:43

Other evaluations of the availability of good social data and survey capacity in Myanmar also echo our findings. An international review sponsored by the Open Society Foundations¹⁰ stresses that training in survey research methods has been absent from Myanmar universities until recently, and that there are only a few actors beside the Central Statistical Organization (CSO) and government ministries themselves that have been collecting data in the country. When international organizations have initiated data collection, their surveys have had to be implemented together with or under the supervision of some government ministry, hence ownership to the data rests with the ministry and is subject to statistical laws in Myanmar (THE Central Statistical Authority Act, 1952 ACT

¹⁰ Open Society Foundations (2015) ‘From Novelty to Normalcy – Polling in Myanmar’s Democratic Transition’.

NO. 34 OF 1952)¹¹. These laws state that ownership to the data rests with the government/CSO. This has made it particularly difficult for organizations to share data.

Another large problem in data collection in Myanmar to date has been lack of reliable sampling frames and difficult access to some areas of the country that until lately have been under the control of opposition groups.

Prospects for future data collection and access to reliable data in Myanmar seem to be getting better. With the release of the census data, currently scheduled for May 2015, and with it the sampling frames produced during the census, there are good reasons to believe that the near future will offer more reliable and good quality data from Myanmar. A master sample frame for surveys has already been created based on the census data and includes non-enumerated areas. Such a master sample frame is very valuable because it increases the quality of sampling for surveys in Myanmar substantially. Previously, uncertainty about the quality of sampling frames has been an important factor negatively affecting the quality of data and data collection in the country. The master sample frame is already being used to conduct the Myanmar Poverty and Living Conditions Survey (MPLC), the Demographic and Health Survey (DHS) and the Labour Force Survey. These new data sources will be of great value for establishment of baselines and as indicators of change in the future.¹² The ceasefire agreement¹³ that is expected to be signed between the government and the opposition groups during spring 2015 will also contribute to better access to areas that have previously been difficult or impossible to cover in data collection initiatives.

Current and future data collection in Myanmar will most likely still be implemented together with, or under the supervision of, some government ministry, and be subject to the statistical laws in the country. Questions around definition of ownership to, use of, and willingness to share data will still be an important issue both for those initiating and funding data collection and those making use of these data.

Users of data in Myanmar have a particular responsibility to be aware of the quality of data, both with concern to design of data collection tools, how and where they are collected, and how they are presented. It is important to make sure that no particular group were excluded from data that claims to be representative. Such exclusions could happen if parts of the population were not included in the sample or if they were interviewed by enumerators that do not speak the local language or who are not trusted by the respondents¹⁴. Some statistics are also collected through reporting from administrative units on a lower level. Without well-designed and rigid systems for such reporting, this sometimes represents an important source of bias, in particular when incentives are given to report “good” data. Statistics are often highly political, and users of data have to take into consideration how their use of data can be interpreted in a political context; this includes both results and sources of data. In Myanmar users have to make particular efforts to evaluate the data they use in a conflict sensitive manner. Information collected by the central government and by ethnic groups may have very different results. One example would be data collected by then TBBC (Thailand Burma Border

¹¹ <http://unstats.un.org/unsd/dnss/docViewer.aspx?docID=201#start>

¹² The International Technical Advisory Board (ITAB) for the 2014 Census of Myanmar

¹³ Draft ceasefire agreement was signed late March <http://www.bbc.com/news/world-asia-32126918>

¹⁴ In the Census, enumerators in conflict areas were escorted by military to secure their safety, this could be creating much insecurity for the interviews.

Consortium¹⁵) and the first IHLCA (Integrated Household Living Conditions Assessment)¹⁶. Users of data have to understand the political aspect of their use of data, and should carefully evaluate this use in a conflict sensitive manner.

Particular focus must be given to promote international standards of Statistical Codes of Practice¹⁷ (Code of Conduct¹⁸). As the Central Statistical Organization (CSO) in Myanmar gains more experience and transforms its organization toward a more modern statistical office, more openness around data will hopefully follow. Until then, users of data need to pay special attention to the potential sources of bias mentioned above.

3.2. Existing and forthcoming sources of data

3.2.1. MIMU Datasets

The Myanmar Information Management Unit (MIMU) is a service to the UN Country Team and Humanitarian Country Team, under the management of the UN Resident and Humanitarian Coordinator. Its purpose is to improve capacity for analysis and decision making by a wide variety of stakeholders - including the United Nations, the Humanitarian Country Team, non-governmental organizations, donors and other actors both inside and outside of Myanmar, through strengthening the coordination, collection, processing, analysis and dissemination of information¹⁹.

MIMU contains data on 203 indicators which are broadly grouped under the headings: Agriculture, Climate, Demography, Economy, Education, Environment, Health, Information and communication, Nutrition, Protection (related to conflict), Transportation and Gender²⁰. However, the availability of data for these indicators varies. Some indicators have data down to township levels; some at regional/state levels while others at Union level. The earliest record for the indicators dates back to 2009 and the latest is information from the census that was incorporated into the database in 2014.

MIMU uses a wide variety of data sources. Some examples are data and publications from different UN agencies (UNFPA, UNICEF, UNAIDS, UNDP, UNSD, WHO); CSO's statistical year book; statistical year books from the Ministries of Education and Health; the World Development Report; the World Bank's Development Indicators Database; IMF's World Economic outlook; Asian Development Bank's reports and indicators; and ASEAN statistical yearbooks.

The main source of data for indicators at regional and township levels are the statistics year book and information gathered from the different Ministries. This has implications for the quality of the data and the availability of various socio-economic indicators. MIMU has no opportunity to do any quality assessment of the data. They have limited information regarding the processes of data production. In addition, they may not have indicators that are internationally recognized but will be dependent on

¹⁵ Now The Border Consortium <http://www.theborderconsortium.org/>

¹⁶ This report has some comparisons of data collected by TBBC and IHLCA, see particularly chart 10 <http://burmacampaign.org.uk/images/uploads/TBBC-Displacement-and-Poverty-in-South-East-Burma.pdf>

¹⁷ See for instance: <http://ec.europa.eu/eurostat/web/quality/european-statistics-code-of-practice>

¹⁸ [http://www.rss.org.uk/RSS/Join the RSS/Code of conduct/RSS/Join the RSS/Code of conduct.aspx?hkey=3170e215-12c6-4948-b023-e7253a4600a8](http://www.rss.org.uk/RSS/Join%20the%20RSS/Code%20of%20conduct/RSS/Join%20the%20RSS/Code%20of%20conduct.aspx?hkey=3170e215-12c6-4948-b023-e7253a4600a8)

¹⁹ <http://www.themimu.info/about-us>

²⁰ <http://www.themimu.info/baseline-datasets>

what is produced by the Ministries. With this caveat in mind, MIMU does an important job of gathering the data that is available on their servers and offer it free of charge to users. We made use of this data for our township level indicators.

3.2.2. Integrated Household Living Condition Assessment (IHLCA)

The government, in collaboration with the UNDP, published a series of reports in 2011/12 which included a poverty profile based on the 2009/10 IHLCA as well as comparisons between the 2004/5 and 2009/10 IHLCA results²¹. The IHLCA has a sample size of 18,660 and is one of the largest joint ventures between UNDP and the government of Myanmar. They covered the following thematic areas: Poverty and inequality, demography, economic activities, labor market, housing, water and sanitation, health and nutrition, and education. The IHLCA had nationwide coverage with the exception of ethnic areas (parts of Naga Self-Administered Zone and Chin State and the conflict affected areas)²².

Many questions were raised about IHLCA data and the official poverty statistics when the reports were released. In addition, there were certain statistics that seemed incorrect. For example, electrification rates were reported to be twice as high as the officially reported connections by Ministry of Electricity. Land ownership in rural areas was also surprisingly high along with high levels of calorie consumption, including for poor households. The reported Gini coefficient derived from the 2009/10 IHLCA was only .19, which was unusually low for the region (this would actually be one of the lowest in the World).

Due to the inconsistencies mentioned above, the IHLCA was seen by many as unreliable. There were claims that the process of data production and the quality of the data itself was very low. Some claimed that the data was fabricated in the field or it over represented the wealthy regions of the country. In 2013, the World Bank conducted an assessment of the data to determine its validity, and to update the poverty measurement methodology according to international best practice. No one except the UNDP/government team had worked with the IHLCA data before then. Although the government/UNDP agreed to release the IHLCA unit record data, they were not willing to release their consumption aggregates or the final (cleaned) data files. The unit record data was used to assess the overall quality of the data and to recalculate poverty measures and associated poverty profiles.

The WB findings show that the 2009/10 IHLCA data are of reasonable quality, but that the poverty analysis and measurement methodologies had some problems. Other inconsistencies were caused by inconsistent or unusual assumptions²³. In our study we make use of the updated poverty rates and poverty profiles where relevant.

²¹ <http://www.mm.undp.org/content/myanmar/en/home/library/poverty/mdgdatareport-ihlca-ii/>

²² http://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/documents/publication/wcms_346686.pdf

²³ For example, the widely criticized electrification rate of 50% in the official IHLCA report was due to combining public (power grid), private and informal sources of electricity in the aggregate statistic. When disaggregating this number, the resulting information matches that which was reported by the Ministry of Electric Power (that is, 25% of households in Myanmar connected to the public grid in 2009/10, which is consistent with other sources of data).

3.2.3. The Census

The Myanmar Census is the first Population and Housing census in 30 years. It was conducted in 2014, 29 March – 10 April by 100,000 teachers. The sampling frame is exhaustive and is being used by DHS, labor force surveys, and poverty and living conditions surveys. The census aimed to reach 12 million households and provides information on disability, migration (international and internal), education (literacy, school attendance, highest education achieved, drop out), labor force data (inactive, unemployed, employed) ethnic groups, nationality, age, sex, demographic indicators (mortality rates, fertility rates, maternal mortality rates), housing and household amenities (ownership, type of housing), source of water, source of energy (cooking, lighting), toilet facilities, communication, transport etc. The findings are representative at the regional/state level.

The census benefited from technical support from UNFPA and the US and financial support from Australia (AusAID) United Kingdom (DIFD), Switzerland, Norway, Finland, Germany, Italy and Sweden. Preliminary results were released in 2014. The main results were to be released in May 2015 with one report at the union level and one for each state/region.

The most important challenge to the census is the inaccessibility of certain areas of the country due to armed conflict. Particularly the states of Kayin, Kachin, Rakhine and Shan were difficult to access. In Kachin, the Myanmar army did not grant access to conduct the census. In Kayin, the armed group, the Karen National Union (KNU) administered the census after receiving training and instructions from the Census office. Rakhine is badly affected. The Rohingya either refused to be interviewed or were denied access to interviewers. In these areas where people could not be counted, an estimate was generated. Census figures will include these estimates to be representative at the Union level.

UNFPA consulted users of data (in particular, development partners, researchers and international organizations) and gathered a list of needs which was presented to the government. The government provided feedback clarifying which needs were to be met. Taking this dialogue into consideration, UNFPA will do a deeper analysis on 14 issues (some examples are fertility, mortality, education and analysis of socio economic data) after the main release of the census, currently scheduled for May 2015.

The Census data will be an important and substantial contribution to data in Myanmar. In addition to basic demographics, the census collected information on additional indicators, both with concern to socio-economic conditions and movement of people. The census data cover most of the country (see above) and provides representative data at all levels of aggregation. Census data should not be used as reference in areas not covered, but the overall quality of the data that exists is expected to be reliable.

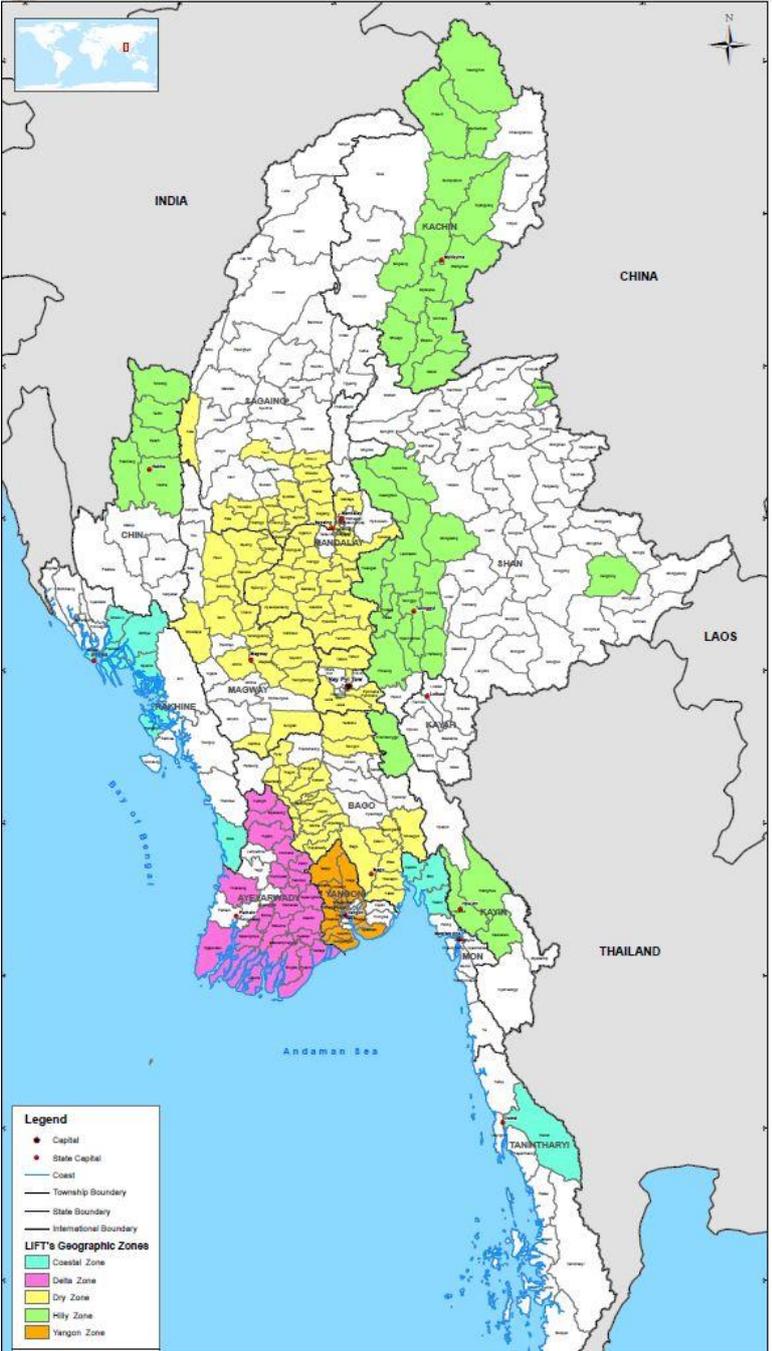
3.2.4. The Livelihoods and Food Security Trust Fund (LIFT)

The multi-donor Livelihoods and Food Security Trust Fund (LIFT) is a development programme that started operations in Myanmar in 2010²⁴, supporting various implementing partners to assist poor families to increase their food availability and incomes in three of the country's main agro-ecological zones: the hilly zone, the dry zone, and the delta zone. At present, the programme also covers Rakhine State in the coastal zone.

²⁴ Current governmental donors are Australia, Denmark, the European Union, France, Ireland, Italy, the Netherlands, New Zealand, Sweden, Switzerland, the United Kingdom and the United States of America.

As part of its evaluation strategy LIFT initiated a baseline household survey covering 252 villages spread across the agro-ecological zones in 2011 in order to develop a common results measurement system for all projects funded by the programme. Again in 2013, LIFT conducted a second household survey covering 200 villages²⁵. The total townships with villages covered by the two LIFT surveys are shown in map 3.1.

Map 3.1. Agro-ecological zones and townships covered by LIFT household surveys



Source: LIFT

²⁵ <http://www.lift-fund.org/lift-household-survey-2013>

LIFT surveys comprise three different data collection methods: 1) A household questionnaire survey; 2) Key Informants Interviews (KII) used to create village profiles, and 3) Focus group discussions (FGD). Data from the household questionnaire survey is available from LIFT's web pages, while the data from the FGDs and KIIs are basically used for internal programme planning. This information is available on request. The total sample of households (in LIFT project villages and control villages) covered in the questionnaire survey was 4.000 in 2011 and 3.200 in 2013, respectively.

Thematically, LIFT covers a wide range of aspects related to poverty and food security. This includes:

- Demographic information
- Household income
- Household expenditure
- Casual employment as a source of income for the household
- Employment of farm labour
- Food security
- Access to land for agriculture
- Crop production
- Rating of crop yields compared with the average season
- Constraints to crop production
- Marketing of crops
- Credit
- Ownership of livestock, agricultural equipment and other household assets

Data from the 2011 baseline survey is available as SPSS files on LIFT's web pages (<http://www.lift-fund.org/publications>), while data from both surveys are published in separate reports showing results by agro-ecological zones, but not by village or township. These data should however be available from LIFT.

We consider the LIFT datasets, and the LIFT data collection system, as one of the most promising data sources for establishing useful baselines for the ENRM interventions in Myanmar. The dataset covers only a limited number of the ENRM townships per date, but township coverage will be expanded as the LIFT programme expands. Townships to be covered in the data collection system are proposed by the programme implementers according to where new projects are planned and implemented. As such, the LIFT data collection system also serves as a model for how a good results measurement system can be established and managed.

3.2.5. The Demographic and Health Survey (DHS)

A Demographic and health survey (DHS) is currently being conducted in Myanmar. The data collection is implemented by the Department of Health. The fieldwork will last from February – July 2015. Although the Government of Myanmar has been collecting similar data under the name Fertility and Reproductive Health survey, this is the first DHS survey in Myanmar. The survey will cover 12750 households, 16575 women and 8280 men.

The DHS survey uses a nationally representative sample and is designed to provide information on fertility trends, maternal and child health, family planning, nutrition, and knowledge of AIDS and sexually transmitted diseases. The DHS includes several key fertility rates including the age specific

fertility rate, the general fertility rate, and the total fertility rate. It also provides information on infant and child mortality rates.

The survey is conducted every five years and provides regional information on basic demographic characteristics of households between census takings. The published reports provide regional information on household size, gender of household head, levels of educational attainment, school attendance, and access to mass media. Information on the role and status of women including labor force participation, form of earnings, and occupation is also included. In addition, the survey collects information on the availability of electricity, source of drinking water, available sanitation facilities, materials used for building construction, persons per sleeping room, and mean persons per room.

3.2.5. The Statistical Year Book

The Central Statistical Organization (CSO) under the Ministry of National Planning and Economic development is responsible for conducting surveys and collecting data from different Ministries to produce the Statistical Year Book.

Myanmar has a decentralized statistical system (since 1972). Every Ministry gathers its own data for planning purposes and for reporting performance in annual reports. CSO has the mandate to request and compile data from these sources and publish the Statistical Year Book. In addition, each State and Region has its own data sources.

CSO also conducts the household income and expenditure survey every five years. The most recent survey is from 2012 and has to be adjusted to the new population size generated from the census. The household income and expenditure survey has a sample size of 32,000 households and includes household background information (although this information is not published). Household income is calculated from household expenditure data. CSO also produces consumer price index, industry surveys, trade data, education data, health data, and monthly selected economic indicators.

CSO is responsible for ensuring the quality and accuracy of statistics generated from the Ministries. There is no direct control of quality on the data coming from the Ministries. But if the data deviate too much from previous years, then CSO has the mandate to ask for clarification and can request for updated figures.

3.2.6. Myanmar Poverty and Living Conditions Survey (MPLCS)

Following from the IHLCA-I and IHLCA-II, the 2015 Myanmar Poverty and Living Conditions Survey (MPLCS) is jointly organized by Ministry of National Planning and Economic Development and World Bank. The survey will be conducted at 3,648 households from 203 townships and 16 towns in regions and states from 20 January to 10 April 2015. Based on this survey the Ministry of National Planning and Economic Development and the World Bank will conduct the IHLCA-III later in 2015 or during 2016. This will provide a good source for new and reliable data for social and economic indicators. Fafo has been given access to the questionnaire that is used in MPLCS and thus we have a good overview of indicators that will be produced by this survey.

3.2.7. Myanmar Labour Force Survey 2015

The Ministry of Labour, Employment and Social Security, in collaboration with the International Labour Organization (ILO), is at present conducting a nation-wide labour force, child labour and school-to-work transition survey. The survey is carried out in 350 townships, and is based on a

sample frame from the National Population Census. According to the plan, the field survey just ended in beginning of April 2015, and the results are planned being released in October.

The questionnaire used in the survey contains 169 questions and is thus far more extensive than a standard ILO labour force survey, covering a wide range of topics related to employment and work, including household income and other basic socio-economic data of the households.

Thematically the data collected in the labour force survey is very relevant for the ENRM interventions, but the exact geographical overlap and the representativeness of the data for the present ENRM impact areas is not yet known.

3.2.8. World Food Programme Datasets

The World Food Programme (WFP) collects and publishes a wide range of data related to food security in Myanmar, including data on health, nutrition, poverty and diseases. The organization manages the Food Security Monitoring System (FSMS²⁶), which collects data twice a year for 52 townships (at present), mainly in the Dry Zone (the middle) of the country.

The FSMS contains data on:

- Food Security in general
- Crop production
- Household food storage
- Marketed food storage
- Purchasing power
- Dietary diversity
- Hunger
- Acute malnutrition
- Diseases
- Natural disasters
- Migration
- Coping

In addition to the FSMS, WFP conducts Standardized and Monitoring Assessments for Relief and Transition (SMART) surveys in selected townships of the country. These surveys collect data representing children between 6 months and 5 years (the most vulnerable group with respect to Food Security) and mainly includes questions related to nutrition and health.

WFP has also conducted Food Security, Poverty and Nutrition survey, in collaboration with Save the Children and the Ministry of Livestock, Fisheries and Rural Development. The initial survey conducted in 2013 covered the dry zone of the country, but surveys have later been expanded to include Ayeryawady, Bago, Yangon, Chin, Kachin, Shan and north Sagaing.

The WFP datasets from these three sources is thematically relevant for the ENRM interventions, but only a limited number of townships overlap directly with the present ENRM portfolio.

²⁶ <http://www.fsinmyanmar.net/>

3.2.9. Opinion polling in Myanmar

Opinion polls can provide good indicators of people's opinions about current political processes and important issues with regards to conflict and relationships to the government. International Republican Institute released the results of Myanmar's first publicly reported opinion poll in April 2014.²⁷ The survey was conducted between December 24th 2013 and February 1st 2014 by Myanmar Survey Research and covered 3000 respondents age 18+, with a relatively good coverage of all areas in the country. The poll provides data on opinions on ethnic and religious conflicts and can be used as baseline indicator for conflict.

The Yangon School of Political Science (YSPS) is another actor that is working on developing skills for conducting survey research, particularly with regards to polls. They have been designated as the implementing partners for the Myanmar component of the Asia Barometer, but there has been no exact timeframe issued for implementation as of now²⁸. It will also be natural to think that in the near future the World Value Survey will be interested to implement their worldwide surveys in Myanmar. Both the above mentioned forthcoming initiatives will provide data that will be valuable for this project, even though they most often are not representative on a township level.

3.2.10. Data collected as part of the ENRM interventions

Establishment of data collection systems are also objectives and parts of some ENRM interventions. Data collection and monitoring systems are key components planned for the REDD+ programme and the National Heritage programme, and relevant baseline data can also be obtained from databases and laboratory tests (e.g. from the planned water lab) that are part of the capacity development interventions in the ENRM portfolio.

At present, useful data are being collected by Proximity Design and by RECOFTC as part of their interventions of distributing climate-smart products to rural households and development of community forestry, respectively. Proximity Design collects data on socio-economic aspects in villages within their target area, which by now covers about 80 per cent of the country, with the prime intention of measuring economic gains and improvements in living-conditions created by the use of their products. In addition they generate sales statistics and other key data from the product distribution process.

RECOFTC also collects socio-economic data from their target communities with the aim of measuring progress in living-conditions and household and community economy related to their community forestry projects.

Both these organizations have good competence in data collection and in establishing monitoring systems, and they seem to generate data in a highly professional manner. Hence, these data can be used directly in establishing baselines for these two interventions, and perhaps be used to establish baselines for other ENRM interventions where locations overlap.

²⁷

http://www.iri.org/sites/default/files/flip_docs/2014%20April%203%20Survey%20of%20Burma%20Public%20Opinion,%20December%202013-February%202014.pdf

²⁸ Some of the uncertainty is linked to internal conflicts at the YSPS during early 2015, several core researchers have chosen to leave the School, depleting the institution of core competence on public polling (ref: interview with source in Yangon).

3.2. The baseline indicator framework

As shown in the overview of Norwegian ENRM interventions provided in the previous chapter, the interventions can generally be divided into two main categories: 1) interventions with socio-economic development objectives, and 2) interventions with institutional capacity development objectives.

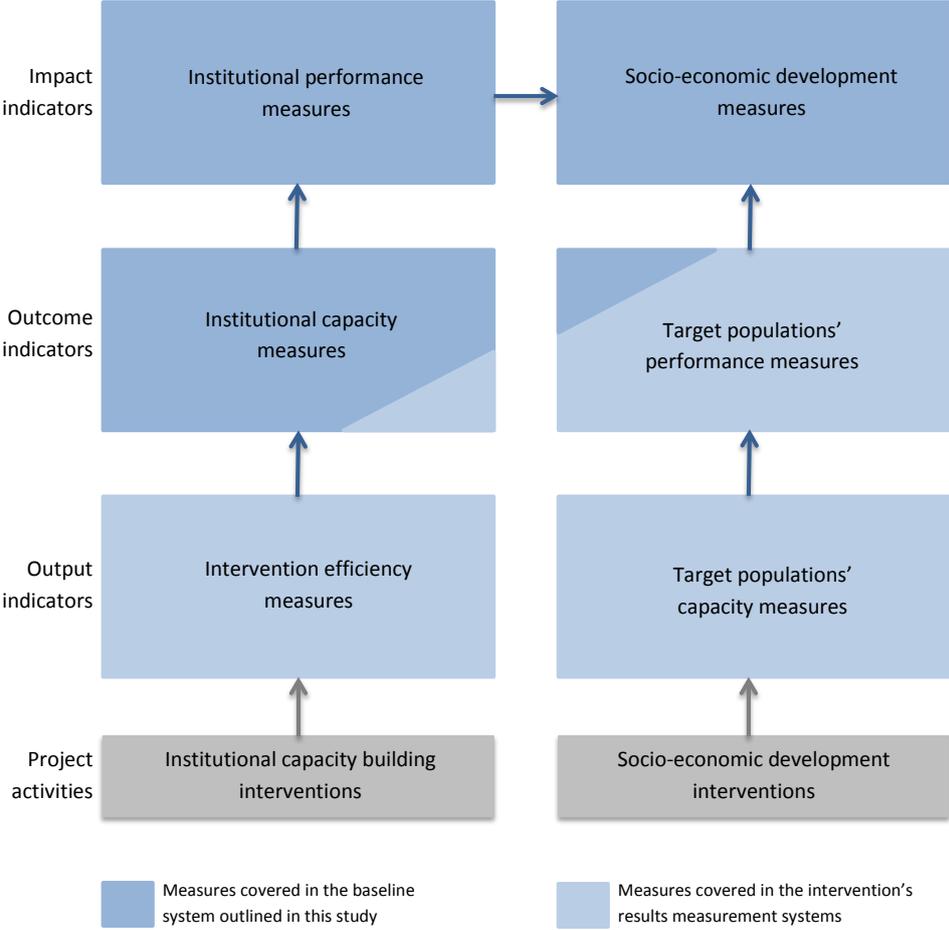
Many useful indicators are included in the results matrices of the individual interventions in the Norwegian ENMR portfolio. These indicators are, however, primarily measuring results at the output level, i.e. where the effects can be controlled by the project implementers, such as “number of staff trained”. The indicators included in the intervention’s results matrices are not included in the baseline indicator system outlined in this study, but may provide added information if seen in relationship to the outcome and impact level indicators presented in the framework, e.g. by being analysed as output-impact chains in Logical Frameworks. Due to the general scarcity of available data, we also suggest that some additional indicators are included in the intervention’s result matrices, and hence that data are collected as part of the intervention.

The baseline indicator framework presented in this chapter focuses on impact level indicators, and it should be noted that not all indicators are relevant for all interventions in the ENRM portfolio. For the socio-economic development interventions and activities this means socio-economic indicators, such as poverty rate, defined by development strategies and priorities by Myanmar, key priorities of Norwegian development cooperation, and by goals stated in the project documents of the interventions. For the institution building interventions impact indicators are defined by the institutions’ ability to carry out the tasks that they are established to carry out and to achieve the goals concerning their areas of responsibility. In addition, the ToR for the baseline study also requests a mapping of human resources and infrastructural capacity of the target institutions. Hence, a set of outcome level indicators is included in the baseline indicator system for the institutional capacity development interventions (see figure 3.1).

Ideally, indicators should be selected on the basis of their relevance to the stated goals and objectives of the various interventions. In addition, they should be representative for the geographical impact areas or the target populations of the intervention. Given the status of available data in Myanmar this is quite far from being a realistic ambition at present. Hence, we are not able to present a fully developed baseline framework with attributed data in this study. We rather propose types of data and indicators that should be part of a framework and point at potential sources of data for the indicators, basically from sources that will provide data in the near future.

Figure 3.1 shows a general baseline indicator framework for the ENRM interventions assessed in this study. The figure includes all indicators for which data is planned to be collected, including the output and outcome indicators proposed in the results matrices of the individual interventions. With respect to the indicator frameworks outlined in this chapter, both outcome and impact indicators are presented for the institutional capacity development interventions, while mainly socio-economic impact indicators are presented for the development interventions. Interventions categorized as development interventions do also include elements of capacity building, e.g. awareness raising, directed towards target populations such as communities. Output indicators of such activities are referred to as “target populations’ capacity measures” in the figure.

Figure 3.1: A general baseline indicator framework for measuring results of Norwegian ENRM interventions in Myanmar



3.3. Baseline study for institutional capacity development

The bilateral cooperation between Norway and Myanmar in the Environment and Natural Resource sector involves ongoing and planned collaboration between Norwegian and various governmental and non-governmental actors in Myanmar. The cooperation on environment was initiated after a letter of intent was drawn up that outlined such a cooperation. This was followed by a Memorandum of Understanding (MoU) between NVE and MOEP on hydropower development and an overall MoU between the Governments of Norway and Myanmar. The resulting projects, their objectives, goals and activities were developed through close dialogue between Norwegian research institutions, agencies and directorates and Myanmar ministries.

Significant components of these collaboration projects involve capacity development. In fact, for many this is the main component of the collaboration. Capacity development activities take the form of short-term courses and training, long term training/higher education, placement of resident advisors and in-house consultants in Myanmar institutions for longer periods and upgrading infrastructure or introducing new technology in Myanmar institutions. These capacity development activities contribute towards achieving a particular outcome; for example to implement laws and improve regulatory frameworks or improve management of natural resources.

3.3.1. Methodology

The baseline institutional capacity profile was established primarily using information gathered through interviews in Nay Pyi Taw, in Norway and from review of project documents.

We followed OECD/DAC's criteria for assessing capacity development around the question 'capacity for what?' This meant understanding the roles and responsibilities of the Myanmar Ministries involved in the collaboration; the goals they aim to achieve through these collaborations, the level of ownership they feel towards these projects and their challenges and opportunities in achieving these goals.

The OECD/DAC guidelines helped structure our interviews and document reviews. From the review of project documents we gathered information regarding project outputs, outcomes and impacts. Information about project outputs was adequate. However, information on outcomes and impacts were at times missing. In that case, we deducted the outcomes and impacts from planned outputs.

Through our interviews with Myanmar partners, we gathered information regarding the current status of capacity, the goals they would like to achieve from the collaborative projects and the challenges they see in achieving these goals. The information we gathered from the interviews informed our contextual analysis of capacity at the individual, organizational and enabling environment levels.

Document review and interviews with Myanmar and Norwegian partners informed our baseline of outcome indicators for capacity development in table 3.3.5. The baseline is constructed having the portfolio level in mind and may therefore not match directly the outcome indicators of each intervention. This is not problematic for if the outcome indicators in our study and in the interventions were identical, then the added value of our study would be limited.

To arrive at the baseline, we analyzed each project output and logically reasoned its likely outcome. We started out by asking ourselves 'what would this output achieve in the medium to long term?' We then formulated an indicator that would match this predicted outcome. The value for this indicator at the present time is the baseline. Sometimes, we did not have sufficient information to establish a baseline value. The reasons for this were that capacity needs assessments were not conducted; or the activities are at an initial stage so the information was not available; or we did not receive this information from Myanmar partners in time to be included in the report. In such cases, we recommended that the interventions gather this information when they implement their project activities. The advantage with starting the analysis from a project output is that each baseline outcome indicator can be directly linked to the respective intervention.

We also set out to understand the approach of Norwegian institutions in these projects and their understanding of the institutional and local context in which they operate. In addition, we studied capacity development gains for the Norwegian institutions when they engage in these collaborations. From this exercise, we developed a baseline for the capacity profile of Norwegian institutions (presented in table 3.3.7.)

Myanmar partner institutions

The Myanmar partner institutions that are involved in capacity development initiatives and are covered by our study are the Ministry of Environmental Conservation and Forestry (MOECAF), Ministry of Agriculture and Irrigation, Ministry of Transport and Ministry of Electric power.

Ministry of Environmental Conservation and Forestry (MOECAF) is the partner institution that is involved in most projects (please see table 3.3.1). MOECAF came into existence in 2011 as the focal and coordinating body for environmental management. Previously, it was named Ministry of Forestry but its mandate was expanded when the environment became an important focus area for the government and therefore, MOECAF came into being. Due to its recent history, MOECAF is weak in issues relating to environmental management but quite strong and competent in management of Forest resources. This is why the collaborative projects that address capacity development in environmental management are important to the Ministry. Under MOECAF, the Department of Forestry and Environmental Conservation Department are active partners in Norwegian interventions.

The Integrated Water Resources Management (IWRM) project involves at the minimum three Ministries: MOECAF, Ministry of Agriculture and Irrigation and Ministry of Transport. There is the possibility that other Ministries could be involved but currently, these are the most active Ministries. MOECAF serves as the focal point for the other partner Ministries in the project.

In addition, MOECAF is the main partner for the projects Management of Hazardous Waste in Myanmar, Safeguarding Natural Heritage in Myanmar within the World Heritage Framework, Conservation of Biodiversity and Improved management of Protected Areas in Myanmar. We acknowledge that there are other projects that partner with MOECAF and that aim to develop capacity at regional, district, municipal/township and community levels. However, our study did not have the resources to include these activities at lower administrative levels in our field study.

Table 3.3.1 Overview of Myanmar partner institutions

Project	Myanmar Partner institution	Departments
Development of a Sustainable Framework for Hydropower Development	Ministry of Electric Power (MOEP)	Department of Hydropower Planning Department of Hydropower Implementation (DHPI) Department of Electric Power (DEP)
	Ministry of Transport	Department of Meteorology and Hydrology
Integrated Water Resources Management – Institutional Building and Training	Ministry of Environmental Conservation and Forestry	Forest Department Planning and Statistics Department
	Ministry of Agriculture and Irrigation	Irrigation Department
	Ministry of Transport	Directorate of Water Resources and Improvement of River System
Management of Hazardous Waste in Myanmar	Ministry of Environmental Conservation and Forestry	Environmental Conservation Department
Safeguarding Natural Heritage in Myanmar within the World Heritage Framework	Ministry of Environmental Conservation and Forestry	Forest Department
Conservation of Biodiversity and Improved Management of Protected Areas in Myanmar	Ministry of Environmental Conservation and Forestry	Forest Department

Ministry of Electric Power (MOEP) is the main partner in the project 'Development of Sustainable Framework for Hydropower Development'. MOEP also serves as a focal point for the Ministry of Transport and MOECA in this project. Ministry of Electric Power is responsible for the power sector of Myanmar. It came into existence in 2012 after the merger of two Ministries, MOEP1 and MOEP2. Although MOEP combines the expertise from the two previous Ministries, it has fallen behind the rest of the world when it comes to the technical, environmental and social aspects of hydropower development standards as a result of the prolonged isolation of the country. The infrastructural and human resources of the Ministry are in dire need of upgrading and for this reason the collaboration with Norway is given significant importance.

3.3.2. Approaches to capacity development in ENRM

The OECD (2006) defines capacity as 'the ability of people, organizations and society as a whole to manage their affairs successfully' and states that capacity development objectives should be pursued at three levels: individual, organizational and the enabling environment. Our study employs these three inter-dependent analytical levels. At the individual level, we gathered perceptions of key staff and management with respect to implementation capacity of the organizations and their employees. Capacity development at the individual level depends crucially on the organizations where people work. Capacity at the organizational level involves access to relevant infrastructure and human resource to facilitate implementation. Interviews with managerial level gave insights into capacity development objectives for the institutions. These interviews showed the importance of enhancing skills and knowledge at the individual level and improvement of infrastructure to improve institutional capacity. In turn, the operation of institutions/organizations is influenced by the enabling environment in which they are embedded. The enabling environment constitutes the institutional framework, the structures of power and influence and the national and international context individuals and organizations operate under.

We broadly group capacity development activities carried out in collaboration with Myanmar authorities into three: short term capacity development initiatives, medium-long term capacity development initiatives and initiatives aiming to improve infrastructural capacity. All of these initiatives have an impact on capacity development at the individual, organizational and enabling environment level. New skills and knowledge gained at the individual level will affect the organizational capacity. It will also have a long term influence towards improving the enabling environment.

3.3.3. Short term capacity development initiatives

Short term initiatives take the form of tailor-made technical training lasting a few days; on the job training, seminars, workshops and English proficiency courses. These courses are aimed at central government authorities in Nay Pyi Taw. However, Myanmar institutions stated during our interviews that they plan to use some of these courses as training of trainers. That is, they hope to initiate internal courses where these new skills get to reach a wider audience inside the institutions.

Almost all of these short term courses are subject oriented. That is, they focus directly on the thematic area that is being targeted by the project. The exception is English proficiency courses that are implemented as a step towards improving the chances of Myanmar participants to get accepted into University for higher education.

Table 3.3.2 Short term courses

Project	Short term Courses
Development of a Sustainable Framework for Hydropower Development	Tailor- made short term courses in Hydropower Development and Environmental/Social Impact Assessment
	Seminars, workshops and on-the-job training
	In-house consulting to conduct feasibility studies according to international best practice and to transfer these skills and knowledge
	English language proficiency training for students to get admitted to Universities
Integrated Water Resources Management – Institutional Building and Training	Short term training on Integrated Water Resources Management; seminars and workshops
Management of Hazardous Waste in Myanmar	Short term training on waste management
Safeguarding Natural Heritage in Myanmar within the World Heritage Framework	Short term training on natural heritage site management
Conservation of Biodiversity and Improved Management of Protected Areas in Myanmar	Training courses in nature management and basic field operations

Source: Project documents

Of the three different capacity development approaches (short term, medium-long term, infrastructural), short-term training is the least favored by institutions in Myanmar. Participants acknowledge that any collaboration that raises their skills and knowledge are precious opportunities. But they realize that change takes time. And after decades of isolation, they realize how far behind they are when it comes to international best practices in their respective fields. As a result, short-term training courses (lasting 2-3 days) leave them wanting for more.

To maximize the benefit of short term training initiatives, the preference is for those courses that are hands on and can directly be applied in their daily work tasks as opposed to sitting in a lecture room listening to a presentation.

3.3.4. Medium - long term capacity development initiatives

The medium- to long-term capacity development initiatives involve in-house consulting, placement of a resident advisor or facilitating higher education possibilities for Myanmar officials. These initiatives are more favored by the Myanmar partners because they either get a close follow up for longer periods, or staff takes part in an educational program that gives them a higher degree. The improved skills gained through close follow up and higher degrees are expected to contribute to improved institutional capacity.

In-house consultants and residents are expected to work closely with Myanmar personnel on a day to day basis and transfer knowledge and skills through working together. Higher education takes a few years and gives Myanmar partners the opportunity to gain highly needed skills and exposure to state of the art technology and knowledge.

Table 3.3.3 Medium to long-term initiatives

Project	Medium - long term
Development of a Sustainable Framework for Hydropower Development	Scholarships for government officials in Norway and elsewhere to take Master or PhD degrees in different fields

	In-house consulting to conduct feasibility studies according to international best practice and to transfer these skills and knowledge
	Resident advisor in MOEP
Conservation of Biodiversity and Improved Management of Protected Areas in Myanmar	Opportunity to be enrolled in a MSc-program at NTNU
Integrated Water Resources Management – Institutional Building and Training	PhD scholarship for government officials, including studies at UiO/NMBU

Source: Project documents

3.3.5. Development of infrastructural capacity

Infrastructural capacity development involves the upgrading or construction of technical facilities such as laboratories and weather measurement stations, establishment or improvement of databases and improvement of office facilities and premises. These are valuable contributions and will last over the long term. The advantages of this type of capacity will also accrue to other institutions such as partner Ministries, educational institutions, students and the larger society. For example, Ministry of Transport aims to be an active user of the laboratory that will be upgraded by the IWRM project in MOECAF's premises. In addition, MOECAF aims to make the laboratory available to other users from across the country and University students.

Development of infrastructural capacity also goes hand-in-hand with short and long term human resource capacity development initiatives which is crucial to make use of new and upgraded infrastructure.

Table 3.3.4 Infrastructural capacity development

Project	Infrastructural capacity development
Development of a Sustainable Framework for Hydropower Development	Modernisation and integration of hydrological and meteorological database.
	Upgrading and modernisation of MOEP and DMH river gauging network or constructing new stations
	Upgrading of facilities at the MOEP training centre and Laboratory
	Possible installation of automatic weather observation system
	Possible installation of automatic pressure sensor measurement
Integrated Water Resources Management – Institutional Building and Training	Upgrading of an existing laboratory for water quality analysis
	Considering to construct a new laboratory with proper equipment
	Establishing a database for water quality information (that is, monitoring and water management database)
Safeguarding Natural Heritage in Myanmar within the World Heritage Framework	Improve the facilities of offices that manage world heritage sites
Conservation of Biodiversity and Improved Management of Protected Areas in Myanmar	Renovated visitors Center

Source: Project documents

3.3.6 Baseline of outcome indicators for capacity development

Capacity development related activities, their outcome indicators and the baseline values for each indicator is presented in table 3.3.5. The baseline is constructed having the portfolio level in mind and may therefore not match directly the outcome indicators of each intervention. This is not problematic for if the outcome indicators in our study and in the interventions were identical, then the added value of our study would be limited.

During our fieldwork in Nay Pyi Taw, we talked to relevant key management staff and information officers that could provide baseline values for human resources and infrastructure of the relevant offices. What we found out is that there is limited overview of human and infrastructural resources for the relevant departments at this initial stage. The reasons for this were that capacity needs assessments were not conducted; or the activities are at an initial stage so the information was not available or we did not receive this information from Myanmar partners in time to be included in the report.

To arrive at the baseline, we analyzed each project output and logically reasoned its likely outcome. We started out by asking ourselves ‘what would this output achieve in the medium to long term?’ We then formulated an indicator that would match this predicted outcome. The advantage with starting from a project output is that each baseline outcome indicator can be directly linked to the respective intervention. These indicators describe the situation both qualitatively and quantitatively. There are indicators that could give important information but the values are not available at this point in time. For these indicators we have suggested how this information could be gathered in the future.

Table 3.3.5 Baseline of outcome indicators for capacity development initiatives

Project	Capacity development activities	Outcome Indicators	Description of baseline
Development of a Sustainable Framework for Hydropower Development Myanmar partner institution: Ministry of Electric Power (MOEP) and Ministry of Transport	Tailor- made short term courses in Hydropower Development and Environmental/Social Impact Assessment	Number of environmental and social impact assessments carried out or commissioned by relevant departments in MOEP	There is limited use of environmental and social impact assessments for hydropower projects in MOEP.
	Seminars, workshops and on-the-job training	Number of training courses given by NVE trained staff	Participants in courses and seminars are often expected to train other staff in Myanmar Ministries. It is currently too early in the project life to have concrete number of courses given by trained staff.
	In-house consulting to conduct feasibility studies according to international best practice and to transfer these skills and knowledge	Number of feasibility studies conducted or commissioned and assessed internally	Currently, there are no feasibility studies conducted or commissioned internally. Twelve employees of MOEP have so far participated in courses on feasibility studies. Their backgrounds are Bachelor degree in Civil, Mechanical and Electrical Engineering fields.
	English language proficiency training for students to get admitted to Universities	Number of staff receiving language proficiency training admitted into higher education institutions.	Applications to NTNU have been sent for the fall 2015 semester. Too early in the process to tell how many will be admitted.
	Resident adviser in MOEP	Number of staff working closely with the resident advisor able to do the tasks they were trained for	Description of the specific responsibilities and tasks of the internal resident advisor are not drawn up yet. The best way to assess the values for this indicator is by conducting a perception survey among staff in relevant departments that worked closely with the resident advisor.
	Scholarships for government officials in Norway and elsewhere to take Master or PhD degrees in different fields	Ratio of number of graduated staff working in MOEP out of a total number of staff that received scholarships to pursue higher education	It is too early in the process to say concretely but the plan is to have 4-5 officials enrolled in higher education.
		Number of graduates conducting tasks they are trained for	Too early in the process to say concretely.
	Modernization and integration of hydrological and meteorological database. Upgrading and modernization of MOEP and DMH river gauging network or constructing new stations	Amount and quality of hydrological data produced by the hydrological and meteorological stations Other users of the database (eg. Students, researchers..etc.)	MOEP has not conducted an assessment of current infrastructural capacity and was not able to provide information for current status. We recommend the project to incorporate these indicators as a baseline when they conduct their project activities.
	Upgrading of facilities at the MOEP training center and Laboratory	Availability of communications technology at the training center	Currently, the technological facilities of the training center are limited. We are waiting for response regarding the level

		Level of use of the training center and laboratory (for e.g. number of days and hours the training center and laboratory is being used)	of use of the laboratories. However, these indicators can form a part of the project baseline.
	Possible installation of automatic weather observation system	Level of use of automated weather observations system	Too early in the project to have concrete information.
	Possible installation of automatic pressure sensor measurement	Level of use of automated pressure sensor measurement	Too early in the project to have concrete information.
Integrated Water Resources Management – Institutional Building and Training Myanmar partner institutions: MOECAAF, Ministry of Agriculture and Irrigation, Ministry of Transport	Short term training on Integrated Water Resources Management; seminars and workshops	Share of MOECAAF staff stating that IWRM is an important part of their work tasks	Currently, this share is zero as the concept of IWRM is new to Myanmar. So far twenty civil engineers working in the Irrigation department of Ministry of Agriculture have participated in IWRM course and in Water quality monitoring and evaluation.
		Number of training courses given by trained staff in MOECAAF, Ministry of Agriculture and Irrigation, Ministry of Transport	Participants in courses and seminars are often expected to train other staff in Myanmar Ministries. It is currently too early in the project to have concrete numbers on courses given by trained staff.
	PhD scholarship for one person for studies related to development of water quality classification systems	PhD graduate conducting tasks he/she is trained for	Too early in the process. No PhD student is enrolled in any study yet.
	Establishing a database for water quality information	Amount and quality of data stored by the database	Currently, no such database exists.
		Other users of the database (e.g. Students, researchers...etc.)	The database will be established by the project. As a result, there are no outside users of database.
	Upgrading of an existing laboratory for water quality analysis in MOECAAF; Considering to construct a new laboratory with proper equipment in the premises of MOECAAF	Number of water quality analysis (physical, chemical and biological) conducted at the laboratory	Currently, there is no biological testing of water quality. Only limited physical and chemical tests are conducted.
Number of staff working in laboratories		The national water analysis laboratory is located in the premises of the Forest Research Institute (FRI). It is not operational yet. Three researchers from soil laboratory are currently assigned to work in this initial stage of preparing to set up the laboratory. In comparison, FRI has 173 staff including 53 researchers working in three divisions.	

		Number of water bodies tested regularly in the laboratories	The purpose of upgrading the laboratory at the Forest Research Institute in Nay Pyi Taw and the consideration to construct a new one at the same place is with the expectation that it will be accessible from any part of the country. This indicator will tell us if this is being realized.	
Management of Hazardous Waste in Myanmar Myanmar partner institution: MOECAF	Short term training on waste management	Number of trained staff giving internal training in MOECAF	Participants in courses and seminars are often expected to train other staff in Myanmar Ministries. It is currently too early in the project to have concrete numbers on courses given by trained staff.	
		Share of trained staff still working in the Ministry	The project has not started activity yet but the ability to retain trained staff in the Ministry improves the overall institutional capacity of the Ministry.	
Safeguarding Natural Heritage in Myanmar within the World Heritage Framework Myanmar partner institution: MOECAF	Improve the facilities of offices that manage world heritage sites	Satisfaction of staff using office facilities in the offices of World Heritage management sites	Activities have not started yet. Currently, the office facilities are basic and staff use personal facilities (for e.g. own cars) for work. This arrangement may work granted that the opinion of staff is communicated and there are other ways of compensating staff. More accurate information on this can be gathered through a perception survey among staff.	
		Short term training on natural heritage site management	Level of awareness about natural heritage sites	Activities have not started yet. The training courses on natural site management are aimed at raising awareness and the level of awareness can be gathered through perception surveys.
			Level of satisfaction with management of natural heritage sites	Activities have not started yet. One risk of conservation projects is interfering with livelihoods of local populations. If there is not enough awareness this could negatively affect people's attitudes towards the project and risk jeopardizing the project. Therefore, it is crucial to gather baseline data regarding the opinion of the local population towards such projects.
Conservation of Biodiversity and Improved Management of Protected Areas in Myanmar Myanmar partner institution: MOECAF	Training courses in nature management and basic field operations	Share of staff incorporating best practice in nature and protected area management in their work tasks	Currently, this share is zero as the level of capacity in protected area management is low.	
		Opportunity to be enrolled in a MSc-programme at NTNU	Ratio of number of graduated staff working in MOECAF out of a total number of staff that received scholarships to pursue higher education	It is too early in the process to say concretely but the plan is to have 5 students enrolled in higher education.

	Number of graduates conducting tasks they are trained for	Too early in the project to have concrete information.
Renovated visitors center	Level of satisfaction with management of protected areas	Current status can be identified through perception surveys of visitors and employees of these centers.

3.3.7 Contextual analysis of capacity development at the individual, organizational and enabling environment

In the following sections, we present common trends that we encountered in our study of the projects and during our field mission in Nay Pyi Taw and Yangon. Since many of the challenges and realities that the Ministries face are similar, we will present them in general terms. When a situation is specific to a particular Ministry, we will mention the concerned Ministry or department.

Capacity at the individual level

In the Myanmar institutions we studied, staff is capable and dedicated to their work. However, the country has been isolated from the rest of the world for decades and this has made the methods, tools and technologies they work with outdated. When they come into contact with new and state of the art technologies and best practice through collaborations with international partners, they realize the considerable gap that exists between the way they undertake their tasks and the way similar tasks are accomplished other places in the World particularly in the West.

The level of capacity varies from Ministry to Ministry and from department to department. For example, the Forest department can trace its history back almost a century. It used to be a Ministerial authority. This expertise is transferred to the relatively new Ministry, MOECAF (established in 2011). However, other departments in MOECAF such as the Environmental Conservation department (ECD) are only a few years old and lack the knowledge and expertise to cope with their new tasks. Most of the staff in ECD are forest experts and have been transferred to the new department. As a result, they are expected to quickly gain new skills and shift from the responsibilities and tasks they are used to undertaking to completely new ones. Such changes are likely to occur in other Ministries as the government is currently working to restructure the current Ministerial set up.

In this pre-election period, the work load is quite high. Staff in MOECAF, MOEP and Ministry of Transport stated that their work load has increased as a result of the revision of laws currently taking place in Parliament. In addition, there are a number of capacity development initiatives from different donors and countries that they have to take part in.

In such a reality, there is a strong preference for medium to long term capacity development initiatives. The staff we interviewed state that short term courses do not provide an opportunity to properly develop the required knowledge particularly when it comes to applying it to their local context. Capacity development initiatives need to be adapted to the reality on the ground to bring about lasting change and that requires an investment in terms of time and close collaboration.

Capacity at the organizational level

Capacity at the organizational level involves access to relevant infrastructure and human resources to facilitate implementation of work related tasks. The infrastructure in Myanmar institutions is currently at a bare minimum. In some cases, it can even be risky and unsafe. Laboratories are not of the standard to conduct best practice tests. There is no information center or library to store and disseminate knowledge and build institutional memory. In some projects, staff have to use own resources (for example, own vehicles) for their work related tasks. There is, in general, limited infrastructural capacity.

Capacity at the organizational level also depends on a pool of capable and skilled staff. Myanmar institutions recognize that there is a significant need for new skills if they are to be at par with the rest of the World in their respective fields. But they are severely limited when it comes to financial resources for capacity development. There is limited budgetary support to participate in regional seminars and workshops to build network and learn from experiences elsewhere. As a result, the type of assistance provided through Norwegian interventions aimed at capacity development fill an important gap. To maximize the benefits of new skills being acquired through these interventions, Myanmar institutions aim to use the courses and training activities as training of trainers to spread the knowledge internally to other staff. Currently, training of trainers is low both because the projects are at an initial stage and because the institutions are burdened with too many tasks that there is limited opportunity to spare time for internal training sessions.

An important element that helps to maximize the benefits of capacity development initiatives is the active use of capacity needs assessments. Capacity needs assessments help an organization to identify gaps, design a strategy to fill these gaps and initiate activities related to the strategy. A number of the Norwegian project documents we studied reflect the importance of such a process before designing courses and training activities. However, this does not seem to be the practice at the moment. In addition to the work load, there seems to be a limited culture of conducting capacity needs assessments. At the initial stage of development that Myanmar is in right now, any capacity development activity is accepted with open arms and any small initiative goes a long way. However, in the long run the value of capacity needs assessments cannot be overestimated.

One way this lack of strategy manifests itself is when trained personnel are not replaced in the positions they are trained for but end up doing other tasks. This can eventually rob the internal enthusiasm for these capacity development activities. We recognize that some shift of staff is unavoidable and that presence of trained staff in the Ministries, in general, will have a positive influence. However, the lack of a strategy for capacity development can endanger the success of capacity development initiatives in the short to medium term.

Staff turnover is a reality many of the Norwegian interventions address as one risk factor for the success of the projects. It also came up as a challenge during our interviews with NGOs and CSOs in Myanmar that closely work with government authorities. Shifts of staff in Myanmar institutions can be attributed to promotion, demotion, a new office/division opening etc or it could be a personal decision of staff to leave these institutions. The internal culture of the organization can be stifling (discussed in the next section as hierarchical culture and generational gap) and lead skilled staff to leave to work in other organizations, particularly NGOs, to further their personal development. Another factor is the location of Ministerial offices. The administrative capital, Nay Pyi Taw is relatively new and many have their personal networks in other places in the country. Yangon is where most other organizations are located and this contributes to attracting staff away from Nay Pyi Taw. These issues that influence the capabilities of the Ministries to retain skilled staff need to be taken into consideration by the Norwegian interventions.

The enabling environment

The enabling environment constitutes the institutional framework (i.e. the rules and regulations that influence the way organizations and individuals work and behave), the structures of power and influence and the national and international context individuals and organizations operate under.

The working environment in Myanmar is hierarchical. Decision making power is concentrated high in the system. A good example is the number of working groups and committees that are chaired by the Vice President of the country. The downside of such a centralized system of decision-making is that it increases bureaucracy and reduces efficiency. There will be complicated systems in place to avoid making mistakes and suffering the consequences. The sacrifice here will be the productivity and efficiency of the institute in place of simpler ways of conducting business that is more accepting of mistakes.

Norwegian partners here have a role to play by encouraging decentralization and delegation of power to improve productivity and efficiency. This contributes to empowering younger generations. In many of our interviews 'generational gap' is mentioned as one impediment to bring about progress. Generational gap has many implications. Older generations in high managerial positions have significant decision-making power while medium and lower level managerial positions have limited decision making power. This inhibits efficiency in undertaking tasks. Generational gap also implies different ways of conducting business and a gap in knowledge (older generation has accumulated experience while younger generation are interested to adapt newer ways of working and technologies). Norwegian interventions can contribute by encouraging a delegation of power to the younger generation while facilitating utilization and dissemination of knowledge from the older generation to the new.

One cannot ignore conflict when discussing the enabling environment in Myanmar. The regions and states of Myanmar have slightly different governance structures. The presence of armed groups in States dominated by ethnic minorities pose a complex environment to engage in. The fact that there are armed groups that have not signed peace agreements with the government and the recent flaring up of violent clashes in the North and North Eastern part of the country introduce instability to the working environment. This requires a keen understanding of the political situation both for the purposes of safety and to improve the sustainability of the projects. The projects will have significance above and beyond their immediate goals if they contribute towards encouraging positive developments in the political sphere. There is, of course, a limit to what degree one can influence these external processes. However, a number of the projects have the aim to involve local communities and stakeholders as many of these projects will influence the livelihoods of ordinary Myanmar citizens. It is probably here the positive impacts can be maximized as Norwegian partners have a valuable degree of influence. In this regard, it is important to collaborate with institutions and resource persons that can bring in valuable knowledge and perspective regarding the context in Myanmar to improve the sustainability of the projects.

3.3.8. Gender in capacity development activities

The projects have taken gender into consideration when designing activities in the projects. Attention is paid towards achieving a gender balance in courses, training sessions, seminars and workshops. In addition, gender is again addressed in long term capacity development activities such as higher education for Myanmar staff. There is an underrepresentation of women in managerial levels and in the more technical and higher paying positions in Myanmar. The fact that Norwegian projects take this into consideration and aim to have a gender balance in their capacity development activities will contribute to improving the imbalance in higher positions.

Another approach to incorporating gender in the collaborative projects is by looking at the difference in the impacts of the projects. Some projects take the extra step of acknowledging that unless taken into consideration, the impacts of the projects can contribute to widening a gap between the genders.

3.3.9. Capacity development gains for Norwegian institutions

Norwegian institutions also stand to gain from the collaborative projects. Although capacity development for Norwegian institutions is not directly addressed in the project documents, the institutions have put some thought into this.

Norwegian institutions profile themselves internationally when they participate in bilateral collaborative projects (Please see table 3.3.7 for an assessment of the profile of Norwegian institutes). They increase their technical knowledge in their field of expertise by applying it in a new country and context. Such added knowledge and experience makes these institutes internationally competitive and makes them attractive for promising new talents.

In addition, there are concrete gains such as additions to databases with data and information coming from Myanmar. Some institutes aim to improve their internal competence through PhD scholarships for their own staff linked to the activities in Myanmar.

Table 3.3.7 Profile of Norwegian institutions

Qualitative indicators	Short description of the current situation
Level of scientific knowledge to develop capacity in Myanmar institutions	Norwegian institutions have the scientific knowledge to participate in collaborative projects that aim to develop capacity. They have skilled staff knowledgeable in international best practice in their respective fields. In addition, they have the possibility of linking up with other institutions (educational, consultancy and research institutions) in Norway they can draw upon in transferring skills and knowledge to Myanmar institutions.
Level of infrastructural capacity	Norwegian institutions have access to up-to-date infrastructure that reflects the state of the art technological developments and the knowledge. They also have the possibility to collaborate with other institutions if and when the need arises.
Experience in operating in a conflict affected area/contextual understanding	There is limited knowledge about implementing projects in conflict affected areas. In this regard, Norwegian institutions can develop close working relations with other institutions in Norway (for example, Norad, the Norwegian Embassy, and the Ministry of Foreign Affairs) or with resource persons knowledgeable in implementing projects to improve skills in this regard. It could also be possible to improve the level of capacity in project management and implementation in conflict areas through short term training.
New knowledge and skills gained through the collaboration	Norwegian institutions gain the experience of working in fragile countries/conflict areas. There are also plans by some institutes to undertake PhD studies related to the activities in Myanmar. In addition, the engagement in Myanmar improves the profile of Norwegian institutes and makes them attractive to new employees.

The main challenge for Norwegian institutes is to apply the thematic knowledge they have in their respective fields to the local context in Myanmar that is characterized by political instability and conflict. Here we see a role for institutions such as the Ministry of Foreign Affairs, the Royal Norwegian Embassy and Norad to assist in integrating local contextual analysis into the overall project design and planned activities. The projects can benefit from a thorough analysis and assessment of the political situation, the different stakeholders and the role their collaborative project will play in the political scenario in the country. They can also gain this insight through collaborations with institutes and resource persons that specialize in such assessments or they can plan for internal courses for staff on these topics. We believe this will have an important role to play in the sustainability of the projects.

3.4. A baseline framework for socio-economic impact

This section outlines a framework of indicators that can be used to measure socio-economic impact of Norwegian ENRM interventions in Myanmar. At present, it is not practical to attribute existing data to these indicators. This has two main reasons: Firstly, the present availability and quality of data is not good enough to meet the requirements of a useful baseline, and secondly, the geographical boundaries of many of the Norwegian ENRM interventions are not sufficiently defined yet. Given the large amount of data expected to be available by the end of 2015, e.g. data from the census and the Labour Force Survey, we strongly recommend making the attribution of data once these sources have become available. Examples of presently existing socio-economic data that are available for target townships mentioned in the project documents assessed in this study are given in appendix 2. It should be noted that not all indicators presented in this section are relevant for all interventions in the ENRM portfolio.

3.4.1. Identification of indicators

Identification of appropriate indicators for measuring socio-economic impacts of the Norwegian ENRM interventions has been constrained by lack of an explicit overall strategic goal behind the interventions. Hence, identification of indicators has primarily been based on general strategic priorities outlined in Myanmar development strategies, priorities and strategies and priorities of Norwegian development cooperation, including particular strategic priorities for cooperation with Myanmar, and development impact goals stated explicitly or implicitly in the ENRM project documents reviewed in this study.

The main references for these sources were given in paragraph 2.6.1 for the Myanmar priorities, while the main references for the Norwegian priorities have been: White Paper (Stortingsmelding) 21 (2011-2012): Norwegian Climate Policy (Norsk Klimapolitikk), Stortingsproposisjon 1 S (2013-2014) / "Budgetary proposition to the Storting/Cabinet" 1 S (2013-2014), and the Norwegian Action Plan for Environment in Development Cooperation.

Key priorities of relevance for socio-economic indicator identification listed in the Myanmar strategic documents are all related to the Millennium Development Goals (MDG)/Sustainable Development Goals (SDG), with particular reference to poverty reduction (MDG 1/SDG 1 and 2), gender equality (MDG 3/SDG 5), health (MDG 4, 5, and 6/SDG 2 and 3), and environmental sustainability (MDG 7/SDG 14, 15 and 16). Special attention is also given to equal sharing of resources, both geographically and socially, which can be related to conflict sensitivity issues and the peace process.

Key priority areas outlined in Norwegian strategy documents, including the MoU signed between Norway and Myanmar in December 2014, are: Gender equality and women’s rights, poverty reduction, health improvement, human rights (with particular focus on women), peacebuilding and security/safety, and environmental sustainability (with special reference to MDG 7/SDG 14, 15 and 16), clean energy, clean water, and clean environment (with particular reference to hazardous waste).

Based on these priorities, we have used the SDGs as a core of the proposed baseline framework for measuring socio-economic impacts of the Norwegian ENRM interventions in Myanmar. The SDGs cover all priorities listed in both the Myanmar as well as the Norwegian strategy documents, and they are and will be used as a reference for key data collection activities, which will contribute to ensure present and future availability of data.

The SDGs include some aspects of key cross-cutting areas of special priority, but it is recommended to give more explicit attention to such areas in the indicator framework. Cross-cutting areas of particular relevance for Myanmar are: social and geographical inequality, gender equality, human rights, and peacebuilding. Indicators attributable to these areas are important for measuring the distribution of benefits related to development achievements, but also for monitoring risks or threats associated with the effects of development on the particularly the peace process and human rights issues in Myanmar. The phenomenon of “land grabbing”, inclusion of ethnic groups, and corruption are examples of issues that should be included in the ENRM indicator framework.

At present it is difficult to disaggregate data on gender and other social groups of interest based on the existing data sources. However, some of the key data sources that should be available by the end of 2015, particularly the census but also to some degree the labour force survey, contain data that are representative at all geographical levels and can be disaggregated by gender, ethnicity, age, economic status, educational status, religion, and other social classes, as well as by geographical location. Table 3.4.2 outlines a set of proposed indicators for measuring impacts of Norwegian ENRM interventions in Myanmar. Since the forthcoming census data can be disaggregated at any geographical level, we have included an overview of these data that are attributable to the full list of SDGs used as basis for the indicator framework. In addition we outline additional indicators that may be included and some possible data sources for these indicators.

Table 3.4.2 Proposed indicators and data sources for measuring socio-economic impacts of Norwegian ENRM interventions in Myanmar

Sustainable development goals	Indicators derived from census data	Additional indicators from other data sources
1) End poverty in all its forms everywhere	Basic needs poverty scale can be constructed	Poverty rates (IHLCA-III)
2) End hunger, achieve food security and improved nutrition, and promote sustainable agriculture		Anthropometric data (e.g. from MICS, DHS, nutrition surveys), Food consumption (IHLCA-III), Access to land, water, and other natural

		resources (Lift/WFP)
3) Ensure healthy lives and promote wellbeing for all at all ages	1) Under five mortality rate (estimated from Children ever born/Children surviving)	
4) Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	1) Proportion literate	Enrolment rate (MPLCS)
	2) Net enrolment primary (approximate)	
	3) Proportion with secondary education	
5) Achieve gender equality and empower all women and girls	1) Female/Male employment ratio in wage labour	
	2) Female/Male enrolment ratio for 5-12 year olds	
	3) Female/Male ratio of completed secondary education	
6) Ensure availability and sustainable management of water and sanitation for all	1) Percent with improved source of drinking water	
	2) Percent with Flush toilet or Improved Latrine	
7) Ensure access to affordable, reliable, sustainable and modern energy for all	1) percent with electricity from grid	
8) Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all	1) Employment rate	Wages, Working conditions (Labour Force Survey), Income, household assets and wealth (IHLCA-III)
	2) Proportion of households reporting relatives abroad (indication of insufficient work)	
9) Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation		Available public services, Access to markets (Lift)
10) Reduce inequality within and among countries	a) Construct wealth index b) Use wealth index to construct bivariate inequality measures	Perceptions of inequality, Perceptions of fairness (IRI)
	1) Concentration index for access to improved drinking water	
	2) Concentration index for electricity	

	3) Ratio of lowest to highest quintile of child mortality	
11) Make cities and human settlements inclusive, safe, resilient and sustainable	1) percent slum dwellers (as defined by UN Habitat)	
12) Ensure sustainable consumption and production patterns		Project monitoring data
13) Take urgent action to combat climate change and its impacts		Use of solar energy (but weak indicator), Project monitoring data
14) Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Not relevant	
15) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation, and halt biodiversity loss		Project monitoring data
16) Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels		Indicators on trust in institutions (Asia Barometer) ²⁹ , Perceptions of security (IRI)
17) Strengthen the means of implementation and revitalise the global partnership for sustainable development	Not relevant	

3.4.2 A socio-economic profile based on presently available data

We have explored different datasets that can match the list of indicators listed in table 3.4.2, and the main conclusion is that the datasets presently available in Myanmar do not cover what is required to establish a useful baseline for the Norwegian ENRM interventions at the moment. Hence, the main purpose of this section, including the list of data provided in appendix 2, is to highlight the gap between the indicators proposed in table 3.4.2 and the presently available data on socio-economic conditions related to the Norwegian ENRM interventions.

Of the different data sources we explored, the MIMU datasets contain baseline values that match the townships where there are on-going and planned activities by Norwegian interventions. However, as mentioned above, many of the data are not sufficiently valid to be used as indicators for the priority areas listed in table 3.4.2. It is also to be noted that the list of identified townships are not exhaustive and there are interventions that have yet to find out townships/areas where they will implement their activities.

²⁹ The Asia Barometer poll is planned to be conducted in Myanmar (by YSPS), but there is no given time frame for this and due to the political sensitivity of some of these questions it is difficult to know when they will be available

The data we found are under the categories: demography, education, environment, health and nutrition (table 3.4.3). The baseline profile of the townships for these categories is listed in Appendix 2. As can be seen in table 3.4.3, the indicators under each category are not exhaustive and will only partially answer to the strategies and overarching goals of the ENRM portfolio. The data on demography contains the latest information from the preliminary results of the Census. It contains information on population size, population density, sex ratio and population growth rates.

Education indicators do not have the most widely used indicators (for example, illiteracy rates, dropout rates, repetition rates and highest education achievement). Instead we find pupil-teacher ratios for different school levels. This gives us information on the supply of educational services compared to the demand for the service. But it says little regarding the quality of the education sector. We do not know how well students do in school. And that is an indicator of the capability of the township to produce effective human capital. It gives information on the ability of the local authorities to provide basic services to the local population.

Table 3.4.3 List of indicators with presently available data at township level

Category	Indicators	Data source
Demography	Average annual population growth rate	Myanmar Information Management Unit (MIMU), UN
	Population density	
	Sex ratio	
	Population size (Male)	
	Population size (Female)	
	Population size (Total)	
Education	Pupil-teacher ratio (High schools)	Myanmar Information Management Unit (MIMU), UN
	Pupil-teacher ratio (Primary schools)	
	Pupil-teacher ratio (Secondary schools)	
	Pupil-teacher ratio (Middle schools)	
Environment	Proportion of population with access to improved sanitation	Myanmar Information Management Unit (MIMU), UN
	Area	
Health	Maternal mortality ratio	Myanmar Information Management Unit (MIMU), UN
	Infant mortality rate	
	Under-five mortality rate	
Nutrition	Malnutrition under one year	Myanmar Information Management Unit (MIMU), UN
	Malnutrition under three years	
	Severe malnutrition under three years	
	Proportion of infants with low birth weight	

Available data for indicators on environment are access to improved sanitation and the geographic size of the township. The larger MIMU dataset has information on natural disasters, source of fuel for

cooking, access to electricity, access to improved water, different land uses (forestry, agriculture, meadows, pasture, etc.), protected areas, threatened species, resource extraction (for example, extraction of timber) and carbon dioxide emissions. But these indicators do not have data at the township level.

Data on health are to be found for the indicators: maternal mortality ratio, infant mortality rate and under-five mortality rate. These are important indicators of general wellbeing and gender issues. Infant and under-five mortality rates inform us about environmental conditions, political and medical infrastructure. It also informs us about the mother's level of education. Maternal mortality ratio is an indicator of the level of services target towards women's health. It informs us about access to resources and income level as significant indicators of maternal outcomes.

Data on nutrition cover: malnutrition under one year, malnutrition under three years, severe malnutrition under three years and proportion of infants with low birth weight. These are indicators of under-nutrition when there is not enough of high quality food. These are strong indicators of poverty. Malnutrition at such an early age has significant consequences for the mental and physical development of the child. These indicators are also indicators that show significant improvement when poverty levels reduce. As a result we have included them as a part of our socio-economic indicators.

3.5. Filling gaps and further development of the baseline indicator framework

As indicated by the discrepancies between the proposed indicators and the indicators possible to produce today on basis of the present availability of data, we strongly recommend to further develop the proposed indicator framework when intervention plans have been consolidated and geographical locations have been finally selected, as well as to make use of the new datasets expected to be available by the end of 2015. However, some data on key priorities of Norwegian and Myanmar development strategies, particularly on cross-cutting themes related to risks/threats such as "land grabbing", corruption, inclusion, and potential conflict, will not covered by existing or forthcoming data sources.

There are primarily two main ways of obtaining these data. The first is by collecting primary data either by the ENRM partners as part of their interventions, by establishment of separate data collection activities or monitoring systems coordinated with the interventions, or by buying into existing data collection systems and surveys. A second measure is to put more pressure on the Myanmar authorities to release and make available existing data, primarily as part of an international "campaign" in the country. In fact, it may be argued that access to existing data for measuring results of development interventions funded by international actors should be provided by the Myanmar authorities according to the "national ownership" principle of effective aid, and could e.g. be included as a specific point in Memorandums of Understanding (MoU) and other agreements of development cooperation.

The majority of the indicators listed in the proposed indicator framework may be provided in future surveys. But as of now, it is important to have a realistic expectation of what data will be available. It is indeed very promising that a wide range of new data collection initiatives are being implemented and planned in Myanmar, but there are also some reasons to lower the expectations with regards to

some types of data. This is particularly true for information about conflict issues and about the general legitimacy of the current government. Questions about trust in the current government has to date not been allowed to ask even though several international actors have urged the government to allow this. There is also uncertainty as to whether the data on religious affiliation and ethnic identity will be released from the Census data in May 2015. Several observers have pointed to reasons why the government hesitates to allow for these data to be collected and published, with already very serious conflicts between religious and ethnic groups and deep mistrust within society, the government see such results as potential triggers of conflict, particularly in the run up to the forthcoming elections in November 2015 – the first democratic elections in Myanmar for decades^{30,31}.

4. Conclusions and recommendations

4.1 General conclusions

The Norwegian portfolio of interventions within ENRM in Myanmar has great potential for contributing to further development in Myanmar. The interventions are well aligned with Myanmar needs and requests, as well as with Norwegian key priorities of development cooperation. Furthermore, the implementing partners have good professional competence and experience, which is believed to ensure good results from the interventions. The interventions are also generally well harmonized internally, although the picture is a bit more complex when external development interventions are taken into account. Hence a main impression from the study is that the portfolio has potential for contributing to development in Myanmar according to key needs and priorities.

Realizing the full potential of the ENRM interventions, however, requires systematic planning in accordance to good practices of development cooperation. At present, many of the project documents indicate some weaknesses in this respect, and a general picture is that the international NGOs and UN-REDD are more professional when it comes to project planning and documentation compared to their Norwegian counterparts. Particularly for the institutional capacity development interventions there is a lack of baselines and needs assessments conducted as basis for project planning and for enabling monitoring activities.

Another weakness in many of the present project documents is a lack of contextual considerations, including conflict sensitivity and institutional culture aspects. The latter aspect could have been improved by carrying out more structured and extensive baseline studies and needs assessments. Furthermore, it seems like the strong alignment of the ENRM interventions with Myanmar strategies and priorities, and the fact that most interventions are based on clear requests from Myanmar authorities, have reduced the focus on Theories of Change (ToC) considerations in project planning. In fact, such considerations can at best be said to be implicit in most project documents and planning processes. With respect to capacity development, we believe the effects of the interventions could be further secured by more contextual exploration prior to the selection of activities, e.g. by including institutional culture and behaviour aspects in the planning of activities

³⁰ <http://www.dn.no/meninger/debatt/2014/10/08/2200/Politikk/farlig-folketelling>

³¹ <http://www.crisisgroup.org/en/publication-type/alerts/2014/myanmar-conflict-alert-a-risky-census.aspx>

The level of competence in Myanmar institutions is varied. Ministries and departments have established good knowledge and networks internally in Myanmar while there are large gaps when it comes to international best practice. However, the level of resources for developing capacity in Myanmar institutions is very limited. As a result, the collaborative projects fill an important gap.

There are some challenges in these collaborative projects that need to be addressed. The most important challenge is the apparent lack of capacity needs assessment before project activities are initiated. A number of the project documents state the importance of identifying capacity needs before designing courses and training activities. At the initial stage of development that Myanmar is in right now, any capacity development activity is accepted with open arms and any small initiative goes a long way. However, in the long run the value of capacity needs assessment cannot be overestimated.

The collaborative projects can have a positive impact by introducing improvements to contextual and cultural elements that may impede creativity and innovation. These can be the detrimental effect of generational gap; lack of delegation of power and a bureaucratic system that can negatively influence efficiency and productivity. Through the collaborative projects, Norwegian partners can contribute with positive influence on the enabling environment.

Norwegian partners also stand to gain from these collaborations. They increase their experience in working in different contexts. However, the projects need to reflect better the politically unstable nature of Myanmar and include a reflection on the direct and indirect impact their project can have on the local context. This requires a keen understanding of the political situation to improve the sustainability and the long-term impact of the projects. A number of the projects aim to involve local communities and stakeholders because they will have an impact on local livelihoods. It is probably here the positive impacts can be maximized as Norwegian partners have a valuable degree of influence.

It seems especially pertinent that ENRM interventions should promote inclusion of diverse stakeholders in policy-making and implementation in ENMR, making decentralization, participation, transparency and accountability into key concerns and indicators for assessing the results of interventions. Such considerations are generally poorly developed in the Norwegian interventions within ENRM in Myanmar. We consider this as deeply problematic as it raises the risk for conflict escalation and reduce the likelihood of positive impacts of interventions in terms of conflict transformation and peace building.

The study has identified substantial gaps in data availability with respect to establishing a baseline for the Norwegian ENRM interventions at present. A key challenge is that the location specific ENRM interventions are spread around the country and cover relatively small geographical areas, requiring data representative for low geographical units such as townships or even villages. There are, however, a few major on-going data collection initiatives that have the potential of covering many of the gaps.

It is difficult to see any other option than initiating some additional data collection activities to supplement the existing and forthcoming sources of data, to be able to establish a thematically and geographically targeted baselines and results measurement systems for the ENRM interventions. Such activities can be organized in different ways. One way could be to include more data collection

activities with focus on outcome and impact measures as part of the individual interventions, as done by Proximity Design and RECOFTC. A second option is to establish a common results measurement system for the ENRM portfolio or Norwegian development interventions in Myanmar as a whole, e.g. with LIFT as a model. A third option is to coordinate data collection with existing surveys or M&E systems, e.g. by collaboration with international actors or by buying into existing surveys.

In general, all of these options require some degree of involvement from Norwegian authorities, i.e. Norad or donor ministries. The first option requires the least direct involvement from these actors, but would probably require development of guidelines and templates on inclusion of impact level indicators at project level, as well as some additional and earmarked funding for the activity. The second and the third options should probably be organized and funded as a separate project with the sole objective of supporting projects in M&E on portfolio-wide level.

4.2. Recommendations

We believe that many of the weaknesses and gaps described in this report can be improved by increased harmonization and coordination of some key activities of vital importance for both project planning as well as for measurement and monitoring of results. The recommendations given below point to various stages in the project cycle: From the need for an overall and explicit political strategy and theory of change (ToC) for the ENMR interventions, via inclusion of more contextual analyses and considerations in project and programme development, to establishment of data collection and monitoring systems. It is difficult to prioritize among the recommendations, but we see the three first as vital for improving future project planning.

Develop an explicit theory of change and coordinate the planning process of the ENRM interventions

Our impression is that each individual ENRM partner institution struggles with many of the same challenges as the other. Hence, more active and coordinated guidance from e.g. the funding agencies would be beneficial for all. Examples of activities that could be coordinated are the development of result matrices for the different interventions, including linking the project matrices to portfolio/programme-wide impact indicators; screening of conflict sensitivity aspects; and other priority topics to be covered by all interventions, such as gender and rights considerations. Moreover, development of an explicit theory of change for the ENRM portfolio is a fundamental premise for maximizing the usefulness of these activities.

Although having the necessary knowledge and capacity to deal with the challenges can be seen as the responsibility of the implementing partners or receivers of funding, higher level actors, e.g. the funding agencies or the embassy/MFA, should be involved in activities linking the individual interventions with overall goals, priorities, and particular contextual considerations such as conflict sensitivity aspects.

Share contextual knowledge and build capacity of Norwegian partner organizations

One particular challenge among the Norwegian partner institutions is linking their interventions with the contextual reality of Myanmar. Myanmar is particularly challenging in this respect, and some contextual links, e.g. to a quite complex political picture (including rights and conflict sensitivity aspects) are beyond what can be expected to be handled by the partners institutions alone. To some

degree this challenge is also related to the cross-sector priorities of gender and environment (climate) aspects, which it is required to clarify in project proposals.

Hence, it is recommended that the Norwegian authorities (MFA/the embassy, or Norad) take responsibility for sharing contextual information to Norwegian partner institutions, and provide necessary capacity building as part of project planning. Priority should be given to presenting the complexity of relevant contextual aspects and the different views and perspectives of actors involved or influenced by ENRM interventions in Myanmar.

Allocate funds and establish separate data collection activities and results measurement systems at programme level

It should be considered to establish data collection activities and monitoring systems, e.g. with LIFT as model, as separate projects aimed at supporting all interventions within the ENRM portfolio or even at a higher level directed towards all interventions funded by Norway in Myanmar. Existing and, in particular, forthcoming data may cover many of the priorities and needs for monitoring data, but collection of primary data for key aspects of Norwegian involvement within the ENRM sector in Myanmar (e.g. gender, rights and conflict sensitivity measures) may substantially improve the usefulness of a results measurement system. As with most recommendations from this study, establishment of such a data collection systems depends on development of an explicit theory of change for the ENRM interventions.

Conduct systematic and coordinated mapping and needs assessment activities prior to interventions

A fundamental component of a good planning process is the initial mapping of needs and situation analysis. A clear impression from the study is that activities are being planned and implemented without sufficient initial mapping and assessments. This is not only the case at the individual interventions level, but also at the portfolio/"programme"-level, i.e. related to the lack of an explicit and overall theory of change (ToC) behind the ENRM interventions. Hence, it is difficult to point at one single actor being responsible for providing proper "maps", as both project partners, funding agencies, MFA/the embassy, and recipient institutions could play useful roles in an initial mapping and assessment phase.

However, due to the similarity of many ENRM interventions when it comes to activities and target populations (such as institutional capacity building within ministries), we believe that a stronger and more formalized coordination of the mapping and needs assessment phase would be beneficial, and that this initial activity could be carried out as a separate project. One could also argue for appointing a designated "programme" coordinator for the ENRM interventions (and other similar portfolios), as proper planning and coordination in many cases require time and resources beyond what is possible as part of the daily tasks of e.g. the embassy or another responsible institution.

Include institutional culture and other "non-technical" aspects into capacity development interventions

Another aspect of the lack of ToC considerations in project planning processes is that interventions become dominated by "business as usual" activities based on universal assumptions. This tendency is

also enforced by the lack of proper needs assessments and assessments of institutional dynamics, including culture and informal power relations, prior to selecting intervention activities.

Knowledge of institutional culture is important for two main reasons: 1) it may ensure that investments in certain activities are sustainable, i.e. that the outputs are aligned with functional aspects of the institution (e.g. the internal system of personnel rotation described in the report), and 2) it may point at certain cultural or functional aspects of the institution that should be changed in order to increase effectiveness. In general, addressing aspects of institutional culture and behaviour has the potential of improving the overall effects of institutional capacity development.

Promote national ownership in the intervention planning process

Myanmar partner institutions, with special reference to government ministries, should become more actively involved in the project planning process beyond just defining priority interventions. This could highly improve the underlying information of the activities and help developing activities that address various aspects of capacity development needs in a better way. More specifically, Myanmar authorities and institutions should take stronger part in developing an explicit theory of change for the interventions; take more responsibility for establishing results measurement systems, including provision of existing data; and take more responsibility for conducting proper needs assessments prior to interventions and selection of specific intervention activities.

Coordinate development of results matrices and data collection activities across interventions

As with other aspects of the intervention planning process, there are large potential gains in coordinating development of results measurement systems and data collection activities across the ENRM interventions. Such coordination would help ENRM partners to establish good results measurement systems as well as harmonize indicators and systems across the interventions, which in turn would provide more comprehensive pictures of the effects of the ENRM interventions.

Put more pressure on Myanmar authorities to make existing national data sources available for donors and development partners

Much existing data in Myanmar are held back by national laws and regulations, including data relevant for monitoring development effects. Given the amount of development support provided by the international community to Myanmar, the authorities should be approached by the international donors with the aim of releasing relevant data for measuring the effects of the funded development interventions.

Explore options to obtain data by supporting existing data collection systems

A cost-efficient way of obtaining new data is to co-fund existing surveys to include geographical areas or topics that are of relevance to the ENRM interventions. There are a number of existing and forthcoming surveys in Myanmar that can be open for this option.

References

Asian Development Bank (2014) 'Capacity Development and Institutional Support: Power Sector Advisor to the Myanmar Ministry of Electric Power. Final Report and Knowledge Statement. Volume 2 Training', Myanmar.

BBC (2015) 'Myanmar army and rebels sign draft ceasefire agreement'
<http://www.bbc.com/news/world-asia-32126918>.

Butcher, David (2014) 'Training Needs – MOEP and associated businesses', David Butcher and Associates.

Carter, Murray and Proctor (2012) 'Myanmar: Strategic Conflict Assessment', Integrity Research and Consultancy.

Det Kongelige Utenriksdepartement (2014) 'Prop. 1S (2013-2014) Proposisjon til Stortinget (forslag til stortingsvedtak). For budsjettåret 2014' Oslo, Norway.

DFID (n.d.) 'Working effectively in conflict-affected and fragile situations. Summary Note',
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/67696/summary-note-briefing-papers.pdf.

ILO (2015) 'ASEAN Community 2015: Managing integration for better jobs and shared prosperity in Myanmar' http://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/documents/publication/wcms_346686.pdf.

International Dialogue on Peacebuilding and State building (2015) 'A New Deal for engagement in fragile states', <http://um.dk/da/danida/det-goer-vi/udv-strat-indsats/stabil/skroebeligestater/~media/502932B2CD29496390CECB833F2D30A6.ashx>

International Republican Institute (2014) 'Survey of Burma Public Opinion, December 24, 2013 - February 1, 2014'
http://www.iri.org/sites/default/files/flip_docs/2014%20April%203%20Survey%20of%20Burma%20Public%20Opinion,%20December%2024,%202013-February%201,%202014.pdf.

Isabel Vogel (2012) 'Review of the use of Theory of Change in international development' UK Department of International Development.

Ministry of Environmental Conservation and Forestry, Forest department and Wildlife Conservation Society – Myanmar Program (2014) 'Natural Resources Assessment for Socio-economic Development and Environmental Conservation along Ban Chaung, Dawei Township, Taninthayi Region'.

Ministry of Forestry (2009) 'National Sustainable Development Strategy for Myanmar', Myanmar.

Ministry of Transport (2014) 'Myanmar National Water Policy' Yangon, Myanmar.

Myanmar Information Management Unit (MIMU) 'About the MIMU'
<http://www.themimu.info/about-us>.

Myanmar Information Management Unit (MIMU) 'Baseline datasets'
<http://www.themimu.info/baseline-datasets>

NORAD (2014) 'Myanmar' <http://www.norad.no/landsider/asia-og-oseania/myanmar/>.

Norway official site in Myanmar (2014) 'Development cooperation' in <http://www.myanmar.norway.info/NorwayMyanmar/DevelopmentCooperation/#.VR61-2Y4W70>.

Norwegian Ministry of Foreign Affairs (2006) 'Norwegian action plan for environment in development cooperation' Oslo, Norway.

OECD (2006) The Challenge of Capacity Development. Working towards good practice. <http://www.oecd.org/development/governance-development/36326495.pdf> Paris, France.

Open Society Foundations (2015) 'From Novelty to Normalcy – Polling in Myanmar's Democratic Transition', <http://www.opensocietyfoundations.org/publications/novelty-normalcy-polling-myanmar-s-democratic-transition>.

Ovesen, Vidar (2014) 'Fact Finding Mission Myanmar. Oil for Development Programme. 13-24 October 2014'.

Oxfam (2012) 'Busan in a nutshell. What next for the Global Partnership for Effective Development Cooperation?' <http://www.oxfamamerica.org/static/media/files/busan-in-a-nutshell.pdf>.

Rieffel and Fox (2013) 'Too Much, Too Soon? The Dilemma of Foreign Aid to Myanmar/Burma', <http://www.brookings.edu/~media/research/files/reports/2013/03/foreign-aid-myanmar-burma-rieffel-fox/03-foreign-aid-myanmar-burma-rieffel-fox-2.pdf>.

The Republic of the Union of Myanmar (2011) 'National Biodiversity Strategy and Action Plan', Myanmar.

UNDP (2011) 'Integrated Household Living Conditions Survey in Myanmar (2009-2010) - MDG Data', <http://www.mm.undp.org/content/myanmar/en/home/library/poverty/mdgdatareport-ihlca-ii/>.

UNDP (2013) 'Democratic Governance in Myanmar. Current trends and implications', UNDP Myanmar.

UNFPA (2015) 'ITAB statement of February 11, 2015' http://countryoffice.unfpa.org/myanmar/2015/02/11/11452/itab_statement_of_february_11_2015/

UN-REDD Programme (2013) 'Myanmar REDD+ Readiness Roadmap' Myanmar.

UNSD (2015) 'The Central Statistical Authority Act, 1952', <http://unstats.un.org/unsd/dnss/docViewer.aspx?docID=201#start>.

Appendices

Appendix 1 List of meetings

Meetings in Yangon

Institution	Participants	Position	Meeting date and time
UNESCO	Clara Rellensmann	Technical Consultant	17 February 10:00-11:00
EcoDev	U Win Myo Thu	Director	17 February 13:00-14:30
Recoftc	Dr Maung Maung Than	Country Program Coordinator	18 February 10:00-11:30
UNDP	Lat Lat Aye	Team Leader, Disaster Risk Reduction, Environment and Energy	18 February 14:00-16:00
World Bank	Ana Núñez Sánchez	Environmental Specialist	19 February 10:00-11:20
	Andrea Woodhouse	Senior Social Development Specialist	19 February 11:30-12:30
Myanmar Survey Reserach	San Tun Aung	Research Director	19 February 08.30-09.30
Enlightened Myanmar Research	Myat The Thitsar	Executive Director	20 February 10:00-11:00
MIMU	Nway Aung, Htun Lynn, Shon Cambell	GIS manager, Data analyst, Manager	26 February 10.00-11.00
World Food Programme (WFP)			26 February 11.00-12.00
Proximity Designs	Phyu Hninn Nyein	Knowledge and social impact manager	26 February 13.00-14.00
UNOPS/Lift	Don Townsend	Monitoring and evaluation officer	26 February 14.30-16.30

Meetings in Nay Pyi Taw

Institution	Departments	Participants	Position	Meeting date and time
Ministry of Environmental Conservation and Forestry (MOECAAF)	Forest Department	Dr. Nyi Nyi Kyaw	Director General	23th February 10:00–11:00
		U Bo Ni	Director	
		U Win Naing Thaw	Director	
	Planning and Statistics Division	U Khin Maung Oo	Director	23th February 11:00–11:30
		Dr. Myat Su Mon	Assistant director	
		Franz Arnold	UNREDD, Consultant	

Institution	Departments	Participants	Position	Meeting date and time
	Training and Research Development Division	U Tint Swe	Director	23th February 11:30–12:30
	Watershed Management division	U Bo Ni	Director	23th February 12:30–13:30
	with Nature and Wildlife Conservation Division	U Win Naing Thaw	Director	23th February 13:30–14:30
		Dr. Tin Zar Kywe	Staff officer	
		U Pyi Soe Aung	Range officer	
	Forest Research institute	Dr. Thaug Naing Oo	Director	23th February 16:30–17:30
		U Myint Aung	Deputy Director	
		Daw Yi Yi Han	Deputy Director	
		Dr. Yar Zar Min	Staff	
		4 Researchers from FRI	Researchers	
	Environmental Conservation Department	U Hla Maung Thein	Deputy Director General	24 February 10:00–12:00
		Dr. San Oo, Director	Staff	
		U Kyaw San Naing	Deputy Director	
	Census Project, UNFPA	Mr. Fredrick Otieno Okwayo	Chief technical Advisor	24 February 14:00–15:00
Ministry of Environmental Conservation and Forestry (MOECA)	Forest Working Plan Section of Planning and Statistics Division	U Khin Maung	Deputy Director	24 February 15:30-16:00
		U Saw Deniel	Assistant Director	
		U Phone Htut	Staff Officer	
MOEP	Design Branch, Department of Hydropower Implementation	U Min Khaing	Director	24 February 17:00-18:30
Meeting with Ministry of Agriculture and Irrigation	Design Branch, Irrigation Department	U Zaw Lwin Htun	Director	25 February 10:00-12:00
	Planning Division, Irrigation Department	Daw Aye Aye Hlaing	Deputy Director	
	Design Branch, Irrigation Department	Daw Kyaut Kyaut	Assistant Director	
Meeting with Ministry of Transport	Directorate of Water Resource and Improvement of River Systems	U Sein Htun	Director	25 February 15:00-17:00
Ministry of Planning and Economic Development	Central Statistical Organization	U San Myint	Acting Director General	26 February 10:00-11:30
		Daw Marlar Aung	Deputy Director General	
		U Kyi Soe	Deputy Director	

Meetings in Oslo

Institution	Participants	Meeting date and time
Rainforest Foundation	Siri Damman	12 February 14:00 -15:00
NIVA	Bente Wathne	20 March 10:00 - 11:30
NVE	Morten Johnsen	23 March 09:00 - 10:00
Oil for Development	Annie Magnus	26 March 15:00 - 15:20 (phone conversation)
NEA	Kristin Eine	20 March 11.00-12.30
Charles Petrie		11 March 10.00-12.00

Meetings conducted in the inception phase

Norway

Meetings and interviews in the inception phase in Norway	Kolonne1	Kolonne2
Institution	Name	Meeting date and time
NVE	Morten B. Johnsen	11 November kl 13 - 14
NIVA	Bente Wathne	03 December kl 10 - 11
Norad	Hans Inge Corneliussen	11 Desember kl 11 - 12
Norad	Inger Anette Sandvand Dahlen	11 Desember kl 13-14
Norad	Helle Biseth	11 Desember kl 10 - 11
Norad	Harald Birkeland	11 Desember kl 13 - 14
Norad	Annie Magnus	Phone interview on 15 December
Regnskogsfondet	Siri Dammam	17. desember kl 10 - 11

Myanmar

Institution	Name	Meeting status
Norwegian embassy Yangon	Marte Briseid	Interview 9th December
Enlightened Myanmar Research	Myat The Thitsar	Meeting 10th December
UNDP	Lat Lat Aye	meeting 12th December
UNESCO	Alam, Sardar Umar	meeting 12th December
Proximity	Debbie aung din	meeting 11th December
World Bank	Andrea Fitri Woodhouse	meeting 11th December
RECROFTC	Maung Maung Than	meeting 12th December
Proximity data	Phyu Hninn	meeting 12th December

Appendix 2: List of presently available socio-economic indicators and measures for proposed ENRM target Townships (Source: MIMU)

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Ayeyarwady	Pyapon	Demography	Average annual population growth rate	Total	Percent		1.10	1.30			
Ayeyarwady	Pyapon	Demography	Population density	Total	Number per square kilometer			356.64			
Ayeyarwady	Pyapon	Demography	Population size	Male	In thousand						155.72
Ayeyarwady	Pyapon	Demography	Population size	Female	In thousand						158.34
Ayeyarwady	Pyapon	Demography	Population size	Total	In thousand						314.06
Ayeyarwady	Pyapon	Demography	Sex ratio	Total	Percent						0.98
Ayeyarwady	Pyapon	Education	Pupil-teacher ratio (High schools)	Total	Number					24.76	
Ayeyarwady	Pyapon	Education	Pupil-teacher ratio (Middle schools)	Total	Number					50.34	
Ayeyarwady	Pyapon	Education	Pupil-teacher ratio (Primary schools)	Total	Number					40.75	
Ayeyarwady	Pyapon	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					42.01	
Ayeyarwady	Pyapon	Environment	Area	Total	Square kilometer			874.83			
Ayeyarwady	Pyapon	Environment	Proportion of population with access to improved sanitation	Total	Percent		79	64			
Ayeyarwady	Pyapon	Health	Infant mortality rate	Total	Deaths per 1000 live births		5.30	5.90			
Ayeyarwady	Pyapon	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.70	2.20			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Ayeyarwady	Pyapon	Health	Under-five mortality rate	Total	Deaths per 1000 live births		9.20	9.90			
Ayeyarwady	Pyapon	Nutrition	Malnutrition under one year	Total	Percent		2.00	1.50			
Ayeyarwady	Pyapon	Nutrition	Malnutrition under three years	Total	Percent		2.30	1.60			
Ayeyarwady	Pyapon	Nutrition	Proportion of infants with low birth weight	Total	Percent		0.70	1.20			
Ayeyarwady	Pyapon	Nutrition	Severe malnutrition under three years	Total	Percent		0.30	0.10			
Bago (East)	Bago	Demography	Average annual population growth rate	Total	Percent		1.50	1.50			
Bago (East)	Bago	Demography	Population density	Total	Number per square kilometer			142.23			
Bago (East)	Bago	Demography	Population size	Male	In thousand						235.61
Bago (East)	Bago	Demography	Population size	Female	In thousand						255.52
Bago (East)	Bago	Demography	Population size	Total	In thousand						491.13
Bago (East)	Bago	Demography	Sex ratio	Total	Percent						0.92
Bago (East)	Bago	Education	Pupil-teacher ratio (High schools)	Total	Number					22.85	
Bago (East)	Bago	Education	Pupil-teacher ratio (Middle schools)	Total	Number					34.09	
Bago (East)	Bago	Education	Pupil-teacher ratio (Primary schools)	Total	Number					29.12	
Bago (East)	Bago	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					30.54	
Bago (East)	Bago	Environment	Area	Square kilometer	Total			2,905.07			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Bago (East)	Bago	Environment	Proportion of population with access to improved sanitation	Percent	Rural		85	85			
Bago (East)	Bago	Environment	Proportion of population with access to improved sanitation	Percent	Total		91	88			
Bago (East)	Bago	Environment	Proportion of population with access to improved sanitation	Percent	Urban		98	91			
Bago (East)	Bago	Health	Infant mortality rate	Total	Deaths per 1000 live births		9.60	11.70			
Bago (East)	Bago	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.20	0.60			
Bago (East)	Bago	Health	Under-five mortality rate	Total	Deaths per 1000 live births		12.90	15.20			
Bago (East)	Bago	Nutrition	Malnutrition under one year	Total	Percent		3.40	2.60			
Bago (East)	Bago	Nutrition	Malnutrition under three years	Total	Percent		2.80	2.00			
Bago (East)	Bago	Nutrition	Proportion of infants with low birth weight	Total	Percent		0.90	0.60			
Bago (East)	Bago	Nutrition	Severe malnutrition under three years	Total	Percent		0.10	0.10			
Bago (East)	Kawa	Demography	Average annual population growth rate	Total	Percent		1.50	1.30			
Bago (East)	Kawa	Demography	Population density	Total	Number per square kilometer			132.03			
Bago (East)	Kawa	Demography	Population size	Male	In thousand						93.65
Bago (East)	Kawa	Demography	Population size	Female	In thousand						103.10

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Bago (East)	Kawa	Demography	Population size	Total	In thousand						196.75
Bago (East)	Kawa	Demography	Sex ratio	Total	Percent						0.91
Bago (East)	Kawa	Education	Pupil-teacher ratio (High schools)	Total	Number					20.64	
Bago (East)	Kawa	Education	Pupil-teacher ratio (Middle schools)	Total	Number					40.62	
Bago (East)	Kawa	Education	Pupil-teacher ratio (Primary schools)	Total	Number					32.32	
Bago (East)	Kawa	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					34.44	
Bago (East)	Kawa	Environment	Area	Square kilometer	Total			1,677.49			
Bago (East)	Kawa	Environment	Proportion of population with access to improved sanitation	Percent	Rural		78		74		
Bago (East)	Kawa	Environment	Proportion of population with access to improved sanitation	Percent	Total		78		74		
Bago (East)	Kawa	Environment	Proportion of population with access to improved sanitation	Percent	Urban		80		80		
Bago (East)	Kawa	Health	Infant mortality rate	Total	Deaths per 1000 live births		24.50		11.60		
Bago (East)	Kawa	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		2.20		0.80		
Bago (East)	Kawa	Health	Under-five mortality rate	Total	Deaths per 1000 live births		29.10		15.20		
Bago (East)	Kawa	Nutrition	Malnutrition under one year	Total	Percent		0.90		0.60		
Bago (East)	Kawa	Nutrition	Malnutrition under three years	Total	Percent		0.60		0.50		

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Bago (East)	Kawa	Nutrition	Proportion of infants with low birth weight	Total	Percent		2.40	1.70			
Bago (East)	Kyaukkyi	Demography	Average annual population growth rate	Total	Percent		1.70	1.40			
Bago (East)	Kyaukkyi	Demography	Population density	Total	Number per square kilometer			52.38			
Bago (East)	Kyaukkyi	Demography	Population size	Male	In thousand						54.41
Bago (East)	Kyaukkyi	Demography	Population size	Female	In thousand						58.90
Bago (East)	Kyaukkyi	Demography	Population size	Total	In thousand						113.31
Bago (East)	Kyaukkyi	Demography	Sex ratio	Total	Percent						0.92
Bago (East)	Kyaukkyi	Education	Pupil-teacher ratio (High schools)	Total	Number					25.82	
Bago (East)	Kyaukkyi	Education	Pupil-teacher ratio (Middle schools)	Total	Number					40.70	
Bago (East)	Kyaukkyi	Education	Pupil-teacher ratio (Primary schools)	Total	Number					22.24	
Bago (East)	Kyaukkyi	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					36.72	
Bago (East)	Kyaukkyi	Environment	Area	Square kilometer	Total			2,023.85			
Bago (East)	Kyaukkyi	Environment	Proportion of population with access to improved sanitation	Percent	Rural		91	85			
Bago (East)	Kyaukkyi	Environment	Proportion of population with access to improved sanitation	Percent	Total		91	86			
Bago (East)	Kyaukkyi	Environment	Proportion of population with access to improved sanitation	Percent	Urban		93	100			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Bago (East)	Kyaukkyi	Health	Infant mortality rate	Total	Deaths per 1000 live births		20.60	13.80			
Bago (East)	Kyaukkyi	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.70	4.10			
Bago (East)	Kyaukkyi	Health	Under-five mortality rate	Total	Deaths per 1000 live births		27.90	19.90			
Bago (East)	Kyaukkyi	Nutrition	Malnutrition under one year	Total	Percent		2.50	2.60			
Bago (East)	Kyaukkyi	Nutrition	Malnutrition under three years	Total	Percent		2.10	1.60			
Bago (East)	Kyaukkyi	Nutrition	Proportion of infants with low birth weight	Total	Percent		2.00	1.60			
Bago (East)	Kyaukkyi	Nutrition	Severe malnutrition under three years	Total	Percent		0.20	0.20			
Bago (East)	Thanatpin	Demography	Average annual population growth rate	Total	Percent		1.50	1.70			
Bago (East)	Thanatpin	Demography	Population size	Male	In thousand						69.06
Bago (East)	Thanatpin	Demography	Population size	Female	In thousand						75.94
Bago (East)	Thanatpin	Demography	Population size	Total	In thousand						145.00
Bago (East)	Thanatpin	Demography	Sex ratio	Total	Percent						0.91
Bago (East)	Thanatpin	Education	Pupil-teacher ratio (High schools)	Total	Number					18.56	
Bago (East)	Thanatpin	Education	Pupil-teacher ratio (Middle schools)	Total	Number					39.50	
Bago (East)	Thanatpin	Education	Pupil-teacher ratio (Primary schools)	Total	Number					38.08	
Bago (East)	Thanatpin	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					33.11	

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Bago (East)	Thanatpin	Environment	Area	Square kilometer	Total			997.12			
Bago (East)	Thanatpin	Environment	Proportion of population with access to improved sanitation	Percent	Rural		75	76			
Bago (East)	Thanatpin	Environment	Proportion of population with access to improved sanitation	Percent	Total		81	77			
Bago (East)	Thanatpin	Environment	Proportion of population with access to improved sanitation	Percent	Urban		89	82			
Bago (East)	Thanatpin	Health	Infant mortality rate	Total	Deaths per 1000 live births		14.40	8.60			
Bago (East)	Thanatpin	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.20	1.40			
Bago (East)	Thanatpin	Health	Under-five mortality rate	Total	Deaths per 1000 live births		15.60	10.60			
Bago (East)	Thanatpin	Nutrition	Malnutrition under one year	Total	Percent		1.00	0.50			
Bago (East)	Thanatpin	Nutrition	Malnutrition under three years	Total	Percent		0.90	0.40			
Bago (East)	Thanatpin	Nutrition	Proportion of infants with low birth weight	Total	Percent		1.00	0.90			
Bago (East)	Thanatpin	Nutrition	Severe malnutrition under three years	Total	Percent		0.10				
Bago (East)	Waw	Demography	Average annual population growth rate	Total	Percent		1.60	1.50			
Bago (East)	Waw	Demography	Population density	Total	Number per square kilometer			528.36			
Bago (East)	Waw	Demography	Population size	Male	In thousand						83.83

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Bago (East)	Waw	Demography	Population size	Female	In thousand						92.20
Bago (East)	Waw	Demography	Population size	Total	In thousand						176.02
Bago (East)	Waw	Demography	Sex ratio	Total	Percent						0.91
Bago (East)	Waw	Education	Pupil-teacher ratio (High schools)	Total	Number					19.89	
Bago (East)	Waw	Education	Pupil-teacher ratio (Middle schools)	Total	Number					39.95	
Bago (East)	Waw	Education	Pupil-teacher ratio (Primary schools)	Total	Number					32.11	
Bago (East)	Waw	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					34.50	
Bago (East)	Waw	Environment	Area	Square kilometer	Total			376.70			
Bago (East)	Waw	Environment	Proportion of population with access to improved sanitation	Percent	Urban		71	70			
Bago (East)	Waw	Health	Infant mortality rate	Total	Deaths per 1000 live births		12.00	13.30			
Bago (East)	Waw	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.20	0.50			
Bago (East)	Waw	Health	Under-five mortality rate	Total	Deaths per 1000 live births		16.30	15.50			
Bago (East)	Waw	Nutrition	Malnutrition under one year	Total	Percent		16.40	1.30			
Bago (East)	Waw	Nutrition	Malnutrition under three years	Total	Percent		8.10	0.90			
Bago (East)	Waw	Nutrition	Proportion of infants with low birth weight	Total	Percent		1.20	0.30			
Bago (East)	Waw	Nutrition	Severe malnutrition under three years	Total	Percent		0.30	0.10			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Bago (West)	Paukkhaung	Demography	Average annual population growth rate	Total	Percent		1.20	1.00			
Bago (West)	Paukkhaung	Demography	Population size	Male	In thousand						60.97
Bago (West)	Paukkhaung	Demography	Population size	Female	In thousand						63.57
Bago (West)	Paukkhaung	Demography	Population size	Total	In thousand						124.54
Bago (West)	Paukkhaung	Demography	Sex ratio	Total	Percent						0.96
Bago (West)	Paukkhaung	Education	Pupil-teacher ratio (High schools)	Total	Number					12.45	
Bago (West)	Paukkhaung	Education	Pupil-teacher ratio (Middle schools)	Total	Number					41.10	
Bago (West)	Paukkhaung	Education	Pupil-teacher ratio (Primary schools)	Total	Number					17.88	
Bago (West)	Paukkhaung	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					28.57	
Bago (West)	Paukkhaung	Environment	Area	Square kilometer	Total			1,907.57			
Bago (West)	Paukkhaung	Environment	Proportion of population with access to improved sanitation	Percent	Rural		86	85			
Bago (West)	Paukkhaung	Environment	Proportion of population with access to improved sanitation	Percent	Total		89	87			
Bago (West)	Paukkhaung	Environment	Proportion of population with access to improved sanitation	Percent	Urban		92	99			
Bago (West)	Paukkhaung	Health	Infant mortality rate	Total	Deaths per 1000 live births		19.10	14.40			
Bago (West)	Paukkhaung	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		3.60	2.30			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Bago (West)	Paukkhaung	Health	Under-five mortality rate	Total	Deaths per 1000 live births		21.70	18.50			
Bago (West)	Paukkhaung	Nutrition	Malnutrition under one year	Total	Percent		4.60	2.40			
Bago (West)	Paukkhaung	Nutrition	Malnutrition under three years	Total	Percent		5.20	3.20			
Bago (West)	Paukkhaung	Nutrition	Proportion of infants with low birth weight	Total	Percent		2.90	1.80			
Bago (West)	Paukkhaung	Nutrition	Severe malnutrition under three years	Total	Percent		0.40	0.40			
Chin	Kanpetlet	Demography	Average annual population growth rate	Total	Percent		2.10	2.10			
Chin	Kanpetlet	Demography	Population density	Total	Number per square kilometer			8.62			
Chin	Kanpetlet	Demography	Population size	Male	In thousand						10.18
Chin	Kanpetlet	Demography	Population size	Female	In thousand						11.08
Chin	Kanpetlet	Demography	Population size	Total	In thousand						21.26
Chin	Kanpetlet	Demography	Sex ratio	Total	Percent						0.92
Chin	Kanpetlet	Education	Pupil-teacher ratio (High schools)	Total	Number					15.32	
Chin	Kanpetlet	Education	Pupil-teacher ratio (Middle schools)	Total	Number					33.14	
Chin	Kanpetlet	Education	Pupil-teacher ratio (Primary schools)	Total	Number					18.32	
Chin	Kanpetlet	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					26.59	
Chin	Kanpetlet	Environment	Area	Total	Square kilometer			2,496.30			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Chin	Kanpetlet	Environment	Proportion of population with access to improved sanitation	Total	Percent		65	62			
Chin	Kanpetlet	Health	Infant mortality rate	Total	Deaths per 1000 live births		31.10	24.30			
Chin	Kanpetlet	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		7.80	3.70			
Chin	Kanpetlet	Health	Under-five mortality rate	Total	Deaths per 1000 live births		48.60	41.00			
Chin	Kanpetlet	Nutrition	Malnutrition under one year	Total	Percent		8.10	9.60			
Chin	Kanpetlet	Nutrition	Malnutrition under three years	Total	Percent		8.70	7.40			
Chin	Kanpetlet	Nutrition	Proportion of infants with low birth weight	Total	Percent		1.20	1.00			
Chin	Kanpetlet	Nutrition	Severe malnutrition under three years	Total	Percent		1.90	1.30			
Kachin	Mohnyin	Demography	Average annual population growth rate	Total	Percent		1.40	1.50			
Kachin	Mohnyin	Demography	Population density	Total	Number per square kilometer			30.93			
Kachin	Mohnyin	Demography	Population size	Male	In thousand						101.77
Kachin	Mohnyin	Demography	Population size	Female	In thousand						107.30
Kachin	Mohnyin	Demography	Population size	Total	In thousand						209.07
Kachin	Mohnyin	Demography	Sex ratio	Total	Percent						0.95
Kachin	Mohnyin	Education	Pupil-teacher ratio (High schools)	Total	Number					29.38	

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Kachin	Mohnyin	Education	Pupil-teacher ratio (Middle schools)	Total	Number					37.89	
Kachin	Mohnyin	Education	Pupil-teacher ratio (Primary schools)	Total	Number					26.66	
Kachin	Mohnyin	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					35.33	
Kachin	Mohnyin	Environment	Area	Total	Square kilometer			6,678.35			
Kachin	Mohnyin	Environment	Proportion of population with access to improved sanitation	Total	Percent		92	94			
Kachin	Mohnyin	Health	Infant mortality rate	Total	Deaths per 1000 live births		18.40	12.70			
Kachin	Mohnyin	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.50	0.70			
Kachin	Mohnyin	Health	Under-five mortality rate	Total	Deaths per 1000 live births		24.70	16.50			
Kachin	Mohnyin	Nutrition	Malnutrition under one year	Total	Percent		2.50	1.60			
Kachin	Mohnyin	Nutrition	Malnutrition under three years	Total	Percent		2.20	1.80			
Kachin	Mohnyin	Nutrition	Proportion of infants with low birth weight	Total	Percent		0.60	1.70			
Kachin	Mohnyin	Nutrition	Severe malnutrition under three years	Total	Percent		0.10	0.10			
Magway	Myaing	Demography	Average annual population growth rate	Total	Percent		1.00	1.00			
Magway	Myaing	Demography	Population density	Total	Number per square kilometer			124.80			
Magway	Myaing	Demography	Population size	Male	In						100.97

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
					thousand						
Magway	Myaing	Demography	Population size	Female	In thousand						124.66
Magway	Myaing	Demography	Population size	Total	In thousand						225.63
Magway	Myaing	Demography	Sex ratio	Total	Percent						0.81
Magway	Myaing	Education	Pupil-teacher ratio (High schools)	Total	Number					34.35	
Magway	Myaing	Education	Pupil-teacher ratio (Middle schools)	Total	Number					43.66	
Magway	Myaing	Education	Pupil-teacher ratio (Primary schools)	Total	Number					27.76	
Magway	Myaing	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					41.40	
Magway	Myaing	Environment	Area	Square kilometer	Total			2,034.86			
Magway	Myaing	Environment	Proportion of population with access to improved sanitation	Percent	Urban		49	85			
Magway	Myaing	Environment	Proportion of population with access to improved sanitation	Percent	Rural		50	74			
Magway	Myaing	Environment	Proportion of population with access to improved sanitation	Percent	Total		50	75			
Magway	Myaing	Health	Infant mortality rate	Total	Deaths per 1000 live births		60.30	25.40			
Magway	Myaing	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		5.10	2.30			
Magway	Myaing	Health	Under-five mortality rate	Total	Deaths per 1000 live births		70.10	30.30			
Magway	Myaing	Nutrition	Malnutrition under one	Total	Percent		3.60	3.30			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
			year								
Magway	Myaing	Nutrition	Malnutrition under three years	Total	Percent		3.00	2.70			
Magway	Myaing	Nutrition	Proportion of infants with low birth weight	Total	Percent		2.10	2.50			
Magway	Myaing	Nutrition	Severe malnutrition under three years	Total	Percent		0.40	0.30			
Mandalay	Kyaukpadaung	Demography	Average annual population growth rate	Total	Percent		0.90	0.90			
Mandalay	Kyaukpadaung	Demography	Population density	Total	Number per square kilometer			404.54			
Mandalay	Kyaukpadaung	Demography	Population size	Male	In thousand						117.06
Mandalay	Kyaukpadaung	Demography	Population size	Female	In thousand						144.74
Mandalay	Kyaukpadaung	Demography	Population size	Total	In thousand						261.80
Mandalay	Kyaukpadaung	Demography	Sex ratio	Total	Percent						0.81
Mandalay	Kyaukpadaung	Education	Pupil-teacher ratio (High schools)	Total	Number					34.94	
Mandalay	Kyaukpadaung	Education	Pupil-teacher ratio (Middle schools)	Total	Number					33.23	
Mandalay	Kyaukpadaung	Education	Pupil-teacher ratio (Primary schools)	Total	Number					21.72	
Mandalay	Kyaukpadaung	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					33.62	
Mandalay	Kyaukpadaung	Environment	Area	Square kilometer	Total			758.35			
Mandalay	Kyaukpadaung	Environment	Proportion of population with access to improved sanitation	Percent	Rural		84	90			
Mandalay	Kyaukpadaung	Environment	Proportion of population with access	Percent	Total		85	91			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
			to improved sanitation								
Mandalay	Kyaukpadaung	Environment	Proportion of population with access to improved sanitation	Percent	Urban		93	100			
Mandalay	Kyaukpadaung	Health	Infant mortality rate	Total	Deaths per 1000 live births		23.50	11.70			
Mandalay	Kyaukpadaung	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		2.60	0.90			
Mandalay	Kyaukpadaung	Health	Under-five mortality rate	Total	Deaths per 1000 live births		28.60	14.40			
Mandalay	Kyaukpadaung	Nutrition	Malnutrition under one year	Total	Percent		4.50	4.00			
Mandalay	Kyaukpadaung	Nutrition	Malnutrition under three years	Total	Percent		4.00	3.90			
Mandalay	Kyaukpadaung	Nutrition	Proportion of infants with low birth weight	Total	Percent		2.20	2.60			
Mandalay	Kyaukpadaung	Nutrition	Severe malnutrition under three years	Total	Percent		0.10	0.20			
Rakhine	Gwa	Demography	Average annual population growth rate	Total	Percent		1.00	1.00			
Rakhine	Gwa	Demography	Population density	Total	Number per square kilometer			27.08			
Rakhine	Gwa	Demography	Population size	Male	In thousand						32.58
Rakhine	Gwa	Demography	Population size	Female	In thousand						33.35
Rakhine	Gwa	Demography	Population size	Total	In thousand						65.94
Rakhine	Gwa	Demography	Sex ratio	Total	Percent						0.98

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Rakhine	Gwa	Education	Pupil-teacher ratio (High schools)	Total	Number					12.16	
Rakhine	Gwa	Education	Pupil-teacher ratio (Middle schools)	Total	Number					23.29	
Rakhine	Gwa	Education	Pupil-teacher ratio (Primary schools)	Total	Number					17.16	
Rakhine	Gwa	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					19.34	
Rakhine	Gwa	Environment	Area	Total	Square kilometer			2,292.43			
Rakhine	Gwa	Environment	Proportion of population with access to improved sanitation	Total	Percent		78	68			
Rakhine	Gwa	Health	Infant mortality rate	Total	Deaths per 1000 live births		19.40	6.40			
Rakhine	Gwa	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		2.00	3.20			
Rakhine	Gwa	Health	Under-five mortality rate	Total	Deaths per 1000 live births		28.60	11.70			
Rakhine	Gwa	Nutrition	Malnutrition under one year	Total	Percent		2.80	1.30			
Rakhine	Gwa	Nutrition	Malnutrition under three years	Total	Percent		2.00	1.00			
Rakhine	Gwa	Nutrition	Proportion of infants with low birth weight	Total	Percent		1.60	2.70			
Rakhine	Gwa	Nutrition	Severe malnutrition under three years	Total	Percent		0.20	0.20			
Rakhine	Thandwe	Demography	Average annual population growth rate	Total	Percent		0.90	0.90			
Rakhine	Thandwe	Demography	Population density	Total	Number per square			89.17			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
					kilometer						
Rakhine	Thandwe	Demography	Population size	Male	In thousand						65.17
Rakhine	Thandwe	Demography	Population size	Female	In thousand						68.15
Rakhine	Thandwe	Demography	Population size	Total	In thousand						133.31
Rakhine	Thandwe	Demography	Sex ratio	Total	Percent						0.96
Rakhine	Thandwe	Education	Pupil-teacher ratio (High schools)	Total	Number					19.14	
Rakhine	Thandwe	Education	Pupil-teacher ratio (Middle schools)	Total	Number					25.77	
Rakhine	Thandwe	Education	Pupil-teacher ratio (Primary schools)	Total	Number					17.83	
Rakhine	Thandwe	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					23.72	
Rakhine	Thandwe	Environment	Area	Total	Square kilometer			1,381.00			
Rakhine	Thandwe	Environment	Proportion of population with access to improved sanitation	Total	Percent		110	106			
Rakhine	Thandwe	Health	Infant mortality rate	Total	Deaths per 1000 live births		10.30	16.50			
Rakhine	Thandwe	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.10	1.50			
Rakhine	Thandwe	Health	Under-five mortality rate	Total	Deaths per 1000 live births		13.60	19.10			
Rakhine	Thandwe	Nutrition	Malnutrition under one year	Total	Percent		1.30	0.70			
Rakhine	Thandwe	Nutrition	Malnutrition under three years	Total	Percent		1.20	0.70			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Rakhine	Thandwe	Nutrition	Proportion of infants with low birth weight	Total	Percent		4.00	2.10			
Rakhine	Thandwe	Nutrition	Severe malnutrition under three years	Total	Percent		0.10	0.10			
Sagaing	Kanbalu	Demography	Average annual population growth rate	Total	Percent		1.40	1.30			
Sagaing	Kanbalu	Demography	Population density	Total	Number per square kilometer			40.00			
Sagaing	Kanbalu	Demography	Population size	Male	In thousand						140.07
Sagaing	Kanbalu	Demography	Population size	Female	In thousand						155.43
Sagaing	Kanbalu	Demography	Population size	Total	In thousand						295.50
Sagaing	Kanbalu	Demography	Sex ratio	Total	Percent						0.90
Sagaing	Kanbalu	Education	Pupil-teacher ratio (High schools)	Total	Number					30.97	
Sagaing	Kanbalu	Education	Pupil-teacher ratio (Middle schools)	Total	Number					35.96	
Sagaing	Kanbalu	Education	Pupil-teacher ratio (Primary schools)	Total	Number					28.96	
Sagaing	Kanbalu	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					34.93	
Sagaing	Kanbalu	Environment	Area	Total	Square kilometer			6,635.58			
Sagaing	Kanbalu	Environment	Proportion of population with access to improved sanitation	Total	Percent		89	89			
Sagaing	Kanbalu	Health	Infant mortality rate	Total	Deaths per 1000 live births		7.70	15.80			
Sagaing	Kanbalu	Health	Maternal mortality ratio	Total	Deaths per 1000		1.00	1.20			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
					live births						
Sagaing	Kanbalu	Health	Under-five mortality rate	Total	Deaths per 1000 live births		12.60	19.70			
Sagaing	Kanbalu	Nutrition	Malnutrition under one year	Total	Percent		3.30	2.60			
Sagaing	Kanbalu	Nutrition	Malnutrition under three years	Total	Percent		3.50	2.70			
Sagaing	Kanbalu	Nutrition	Proportion of infants with low birth weight	Total	Percent		0.70	0.70			
Sagaing	Kanbalu	Nutrition	Severe malnutrition under three years	Total	Percent		0.30	0.10			
Shan (North)	Muse	Demography	Average annual population growth rate	Total	Percent		1.10	1.20			
Shan (North)	Muse	Demography	Population density	Total	Number per square kilometer			93.14			
Shan (North)	Muse	Demography	Population size	Female	In thousand						82.65
Shan (North)	Muse	Demography	Population size	Male	In thousand						88.08
Shan (North)	Muse	Demography	Population size	Total	In thousand						170.73
Shan (North)	Muse	Demography	Sex ratio	Total	Percent						1.07
Shan (North)	Muse	Education	Pupil-teacher ratio (High schools)	Total	Number					21.66	
Shan (North)	Muse	Education	Pupil-teacher ratio (Middle schools)	Total	Number					38.86	
Shan (North)	Muse	Education	Pupil-teacher ratio (Primary schools)	Total	Number					33.96	
Shan (North)	Muse	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					33.97	
Shan (North)	Muse	Environment	Area	Total	Square			1,503.67			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
					kilometer						
Shan (North)	Muse	Environment	Proportion of population with access to improved sanitation	Total	Percent		81	84			
Shan (North)	Muse	Health	Infant mortality rate	Total	Deaths per 1000 live births		18.80	6.90			
Shan (North)	Muse	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.50	0.50			
Shan (North)	Muse	Health	Under-five mortality rate	Total	Deaths per 1000 live births		20.80	12.90			
Shan (North)	Muse	Nutrition	Malnutrition under one year	Total	Percent		9.10	5.00			
Shan (North)	Muse	Nutrition	Malnutrition under three years	Total	Percent		6.80	5.00			
Shan (North)	Muse	Nutrition	Proportion of infants with low birth weight	Total	Percent		4.10	4.50			
Shan (North)	Muse	Nutrition	Severe malnutrition under three years	Total	Percent		0.50	0.30			
Shan (North)	Namhkan	Demography	Average annual population growth rate	Total	Percent		1.60	1.50			
Shan (North)	Namhkan	Demography	Population density	Total	Number per square kilometer			87.69			
Shan (North)	Namhkan	Demography	Population size	Male	In thousand						51.34
Shan (North)	Namhkan	Demography	Population size	Female	In thousand						55.67
Shan (North)	Namhkan	Demography	Population size	Total	In thousand						107.01
Shan (North)	Namhkan	Demography	Sex ratio	Total	Percent						0.92

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Shan (North)	Namhkan	Education	Pupil-teacher ratio (High schools)	Total	Number					18.63	
Shan (North)	Namhkan	Education	Pupil-teacher ratio (Middle schools)	Total	Number					34.30	
Shan (North)	Namhkan	Education	Pupil-teacher ratio (Primary schools)	Total	Number					30.16	
Shan (North)	Namhkan	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					30.51	
Shan (North)	Namhkan	Environment	Area	Total	Square kilometer			1,209.15			
Shan (North)	Namhkan	Environment	Proportion of population with access to improved sanitation	Total	Percent		90	88			
Shan (North)	Namhkan	Health	Infant mortality rate	Total	Deaths per 1000 live births		4.20	2.60			
Shan (North)	Namhkan	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		2.80				
Shan (North)	Namhkan	Health	Under-five mortality rate	Total	Deaths per 1000 live births		6.60	4.20			
Shan (North)	Namhkan	Nutrition	Malnutrition under one year	Total	Percent		107.20	6.40			
Shan (North)	Namhkan	Nutrition	Malnutrition under three years	Total	Percent		30.70	4.70			
Shan (North)	Namhkan	Nutrition	Proportion of infants with low birth weight	Total	Percent		1.70	2.70			
Shan (North)	Namhkan	Nutrition	Severe malnutrition under three years	Total	Percent			1.00			
Shan (South)	Kalaw	Demography	Average annual population growth rate	Total	Percent		1.50	1.40			
Shan (South)	Kalaw	Demography	Population density	Total	Number per square			108.20			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
					kilometer						
Shan (South)	Kalaw	Demography	Population size	Female	In thousand						92.93
Shan (South)	Kalaw	Demography	Population size	Male	In thousand						93.09
Shan (South)	Kalaw	Demography	Population size	Total	In thousand						186.02
Shan (South)	Kalaw	Demography	Sex ratio	Total	Percent						1.00
Shan (South)	Kalaw	Education	Pupil-teacher ratio (High schools)	Total	Number					28.98	
Shan (South)	Kalaw	Education	Pupil-teacher ratio (Middle schools)	Total	Number					35.78	
Shan (South)	Kalaw	Education	Pupil-teacher ratio (Primary schools)	Total	Number					26.38	
Shan (South)	Kalaw	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					33.78	
Shan (South)	Kalaw	Environment	Area	Total	Square kilometer			1,507.71			
Shan (South)	Kalaw	Environment	Proportion of population with access to improved sanitation	Total	Percent		92	87			
Shan (South)	Kalaw	Health	Infant mortality rate	Total	Deaths per 1000 live births		16.20	16.40			
Shan (South)	Kalaw	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.70	1.00			
Shan (South)	Kalaw	Health	Under-five mortality rate	Total	Deaths per 1000 live births		21.90	35.50			
Shan (South)	Kalaw	Nutrition	Malnutrition under one year	Total	Percent		1.60	2.00			
Shan	Kalaw	Nutrition	Malnutrition under	Total	Percent		1.30	2.30			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
(South)			three years								
Shan (South)	Kalaw	Nutrition	Proportion of infants with low birth weight	Total	Percent		2.40	2.00			
Shan (South)	Kalaw	Nutrition	Severe malnutrition under three years	Total	Percent		0.10	0.10			
Shan (South)	Nyaungshwe	Demography	Average annual population growth rate	Total	Percent		1.20	1.30			
Shan (South)	Nyaungshwe	Demography	Population size	Male	In thousand						93.93
Shan (South)	Nyaungshwe	Demography	Population size	Female	In thousand						94.67
Shan (South)	Nyaungshwe	Demography	Population size	Total	In thousand						188.60
Shan (South)	Nyaungshwe	Demography	Sex ratio	Total	Percent						0.99
Shan (South)	Nyaungshwe	Education	Pupil-teacher ratio (High schools)	Total	Number					27.77	
Shan (South)	Nyaungshwe	Education	Pupil-teacher ratio (Middle schools)	Total	Number					37.47	
Shan (South)	Nyaungshwe	Education	Pupil-teacher ratio (Primary schools)	Total	Number					22.42	
Shan (South)	Nyaungshwe	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					34.67	
Shan (South)	Nyaungshwe	Environment	Area	Total	Square kilometer			1,454.05			
Shan (South)	Nyaungshwe	Environment	Proportion of population with access to improved sanitation	Total	Percent		66	73			
Shan (South)	Nyaungshwe	Health	Infant mortality rate	Total	Deaths per 1000 live births		18.80	15.70			
Shan (South)	Nyaungshwe	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		1.20	1.50			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Shan (South)	Nyaungshwe	Health	Under-five mortality rate	Total	Deaths per 1000 live births		24.50	18.60			
Shan (South)	Nyaungshwe	Nutrition	Malnutrition under one year	Total	Percent		3.90	3.40			
Shan (South)	Nyaungshwe	Nutrition	Malnutrition under three years	Total	Percent		3.30	3.30			
Shan (South)	Nyaungshwe	Nutrition	Proportion of infants with low birth weight	Total	Percent		2.50	3.20			
Shan (South)	Nyaungshwe	Nutrition	Severe malnutrition under three years	Total	Percent		0.20	0.10			
Tanintharyi	Yebyu	Demography	Average annual population growth rate	Total	Percent		2.70	0.70			
Tanintharyi	Yebyu	Demography	Population density	Total	Number per square kilometer			188.80			
Tanintharyi	Yebyu	Demography	Population size	Female	In thousand						59.96
Tanintharyi	Yebyu	Demography	Population size	Male	In thousand						62.15
Tanintharyi	Yebyu	Demography	Population size	Total	In thousand						122.11
Tanintharyi	Yebyu	Demography	Sex ratio	Total	Percent						1.04
Tanintharyi	Yebyu	Education	Pupil-teacher ratio (High schools)	Total	Number					16.14	
Tanintharyi	Yebyu	Education	Pupil-teacher ratio (Middle schools)	Total	Number					56.18	
Tanintharyi	Yebyu	Education	Pupil-teacher ratio (Primary schools)	Total	Number					33.82	
Tanintharyi	Yebyu	Education	Pupil-teacher ratio (Secondary schools)	Total	Number					41.69	
Tanintharyi	Yebyu	Environment	Area	Square kilometer	Total			784.00			

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Tanintharyi	Yebyu	Environment	Proportion of population with access to improved sanitation	Percent	Rural		80	75			
Tanintharyi	Yebyu	Environment	Proportion of population with access to improved sanitation	Percent	Total		80	76			
Tanintharyi	Yebyu	Environment	Proportion of population with access to improved sanitation	Percent	Urban		80	93			
Tanintharyi	Yebyu	Health	Infant mortality rate	Total	Deaths per 1000 live births		6.10	5.20			
Tanintharyi	Yebyu	Health	Maternal mortality ratio	Total	Deaths per 1000 live births		0.50				
Tanintharyi	Yebyu	Health	Under-five mortality rate	Total	Deaths per 1000 live births		8.20	9.10			
Tanintharyi	Yebyu	Nutrition	Malnutrition under one year	Total	Percent		17.30	4.60			
Tanintharyi	Yebyu	Nutrition	Malnutrition under three years	Total	Percent		8.30	3.50			
Tanintharyi	Yebyu	Nutrition	Proportion of infants with low birth weight	Total	Percent		0.80	0.80			
Tanintharyi	Yebyu	Nutrition	Severe malnutrition under three years	Total	Percent		0.30	0.50			

Appendix 3 Conflict relevant indicators

State/Region	Township Name	Sector	Indicator	Indicator Type	Unit	2009	2010	2011	2012	2013	2014
Bago (East)	Kyaukkyi	Protection	Internally displaced people	Ceasefire Areas	Number		0				
Bago (East)	Kyaukkyi	Protection	Internally displaced people	Hiding Sites	Number		12,300				
Bago (East)	Kyaukkyi	Protection	Internally displaced people	Population displaced in past 12 months	Number		17,000				
Bago (East)	Kyaukkyi	Protection	Internally displaced people	Relocation Sites	Number		20,150				
Bago (East)	Kyaukkyi	Protection	Internally displaced people	Total	Number		32,450				
Bago (East)	Kyaukkyi	Protection	Internally displaced people	Total	Number	25,800					
Kachin	Mohnyin	Protection	Internally displaced people	Total	Number						150
Shan (North)	Muse	Protection	Internally displaced people	Total	Number						1,267
Shan (North)	Namhkan	Protection	Internally displaced people	Total	Number						1,844
Tanintharyi	Yebyu	Protection	Internally displaced people	Hiding Sites	Number		4,100				
Tanintharyi	Yebyu	Protection	Internally displaced people	Population displaced in past 12 months	Number		6,000				
Tanintharyi	Yebyu	Protection	Internally displaced people	Ceasefire Areas	Number		6,500				
Tanintharyi	Yebyu	Protection	Internally displaced people	Relocation Sites	Number		16,200				
Tanintharyi	Yebyu	Protection	Internally displaced people	Total	Number		26,800				
Tanintharyi	Yebyu	Protection	Internally displaced people	Total	Number	17,200					

Appendix 4 Interview guide on institutional capacity building

This interview guide is directed towards middle and higher level management. These individuals are assumed to have a more holistic picture of the processes and activities carried out in the organization.

In this interview guide, we first map the process that is carried out in the institute (q.1). Then we locate where the Norwegian collaboration intends to bring change (q.2). In q.3, we map the current professional and infrastructural capacities to implement the activities in question. We will then ask what the respondent's understanding of the outcome of the collaboration will be (q.4). The last few questions (q.5-7) address the roles of Myanmar institutions, their internal cultures that will affect success and the initiatives they have taken internally to make sure capacity development is integrated in their system; important points addressed in OECD's good practice document.

To Myanmar institutions

1. What are the main activities carried out by your institute? Please elaborate.
 - a. Where is the contact between you and your customers/target population? (input)
 - b. What activities do you undertake after your initial contact with your customers? (Process)
 - c. What is the final product you deliver? (output)
 - d. What goal do you aim to achieve with your service? (Outcome)
 - e. What is your institution's long term vision? (impact)
2. From the above listed levels of activities, where is the contribution of the Norwegian collaboration towards developing capacity?
3. What are the professional and infrastructural capacities of the institute at the moment where the Norwegian collaboration is expected to bring about change?
4. What do you expect to be the outcome of the collaboration?
5. Did you take an active part in determining this outcome? Please elaborate your role.
6. Were there any organizational assessments in your institute before starting the collaboration?
7. What are the organization's formal and informal characteristics/aspects that may affect performance (challenges and opportunities)? What would be the effect of the capacity development project on these?
8. What provisions and assessments are made to ensure that individual skills and the organizational settings in which they can be put effectively to work are created simultaneously?

Appendix 5 Questionnaire on institutional capacity building

This questionnaire is directed towards middle and higher level management. These individuals are assumed to have a more holistic picture of the processes and activities carried out in the organization.

Please copy the questions and answer for each collaboration separately.

1. In total, how many projects and activities receive support from Norwegian partners in your division? _____
2. Please answer the following questions for each collaboration.

Name of collaboration project _____

Starting date _____

Myanmar partner _____

Norwegian partner _____

Other Partner _____

Who initiated this activity? _____

9. The following questions will explore the professional and infrastructural capacities of your division for the above activity.

Professional capacity

- a. Have you conducted an assessment of already existing professional capacity before the Norwegian collaboration?
 - i. Yes
 - ii. No
- b. How many staffs are involved in the above activity?

- c. What is their educational/professional level?
- d. What new skills/professional capacity have you gained from this collaboration so far?
- e. What new skills/professional capacity do you expect to gain from this collaboration?
- f. How will the new skills be used in your division?

Infrastructural capacity

- g. Have you conducted an assessment of already existing infrastructure before the collaboration?
- h. What kind of infrastructure is involved in the above collaboration? (e.g. laboratories, GIS, etc.)
- i. What new infrastructure do you expect to gain from this collaboration?
- j. Who initiated this collaboration?

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