NDC Capacity and Training Needs Assessment for Building and Strengthening Liberia's National Capacity to Implement the Transparency Elements of the Paris Climate Agreement

Training Needs and Capacity Assessment Report

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Abbreviations and Acronyms

AfT	Agenda for Transformation
CBIT	Capacity Building Initiative for Transparency
EIA	Environmental Impact Assessment
FDA	Forestry Development Authority
GHG	Greenhouse Gas
LCAA	Liberia Civil Aviation Authority
LiMA	Liberia Maritime Authority
LISGIS	Liberia Institute for Statistics and Geo-information Services
MoA	Ministry of Agriculture
MCC	Monrovia City Corporation
MME	Ministry of Mines and Energy
MoT	Ministry of Transport
MRV	Measure, Reporting and Verification
NDC	Nationally Determined Contributions
NPA	National Port Authority
PAPD	Pro-poor Agenda for Prosperity and Development
TWEAF	Transport, Waste, Energy, Agriculture and Forestry
UNFCCC	United Nations Framework Convention on Climate Change

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Introduction

This training and capacity needs assessment was conducted in August 2019 as part of a consultancy for building and strengthening Liberia's national capacity to implement the transparency element of the Paris climate agreement, under the auspices of Conservation International. It covers five institutions, known as hubs, from the transport, waste, energy, agriculture and forestry sectors. These hubs are the Ministries of Transport, Mines and Energy, and Agriculture; the Forestry Development Authority and the Monrovia City Corporation.

At each institution, a minimum of four staff was targeted. However, the MCC availed only two staff and this excludes its focal person. Interviewers sourced both qualitative and quantitative data having scanned policy documents of these sectors and the national development plan. They used face-to-face interviews, telephone conversations and email exchanges.

Questionnaires contained two broad categories: the general capacity and training needs assessment for all questionnaires and additional questions on sector-specific activities/needs. Beyond these were clusters of:

1. *Knowledge on sector, project and subject;*
2. *Information technology and data management skills;*
3. *Planning and management skills; and*
4. *Knowledge and skills on sector-specific activities*

From the results which are largely qualitative and presented in tables, statistical analysis were carried out on all training and capacity-related findings. Secondly, a statistical analysis was applied to a core group of focal persons from each hub. From these, it was established that the most critical competence areas lie within the limited capacity to undertake measuring, reporting and verification of sector-specific activities.

The results and conclusions of this study will, together with other products of this consultancy, form a basis for the programming and implementation of project activities.

This report is structured with the following sections: methodology, sample/participants, presentation and analysis of findings, discussions and conclusions, and recommendation/next steps.

Methodology

Data Collection

The Training and Capacity Needs Assessment was conducted with staff of the five hubs of the high emission sectors of Transport, Waste, Energy, Agriculture and Forestry (TWEAF). It began with assessing the overall training needs of each institution, followed by an evaluation of areas specific to each sector. As a first step, questionnaires were administered to each of the participants recommended for the study. Thereafter, follow-up interviews were made with some staff determined to be key informants.

Questions asked during the administration of the questionnaires included quantitative and qualitative. However, during the follow-up assessments, in-depth inquiries geared towards generating qualitative data were posed.

Additionally, some level of triangulation was carried out based on secondary data sourced from some the Agencies' strategic plans or even sectorial-level medium-term development programme. In review of these documents, emphasis was placed on summaries of existing capacities as well as components on capacity development.

To survey the national approach to capacity development, the previous national development plan – the Agenda for Transformation (AfT – 2012 -2017) – was also scanned. The current Pro-poor Agenda for Prosperity and Development (PAPD) was also amongst sources consulted, having reviewed the 2016 Household Income and Expenditure Survey conducted by the Liberia Institute for Statistics and Geo-Information Services (LISGIS) which has spotlights on what the national capacity looks like.[1]

Use of Survey Tools/Administration of Survey

For the administration of the questionnaires, face-to-face, online and telephone conversations were used to gather data from the study participants. In cases of follow-up, face-to-face and phone-based conversations were used.

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Sample/Participants

The five institutions known as hubs constituted the sampling frame. Based on consultation with Administration, Heads of Training and Strategic Planning (where possible), staff were designated to participate in the study. They include: training/HR officers, planning officers, data management staff, technical unit-based staff, and other administrative support staff. Focal persons were also included.

Below is a table of Participants:

Table 1: List of Participants/Respondents/Interviewees

Respondent Code	MoT	MCC	MME	MoA	FDA
1 (One)	Frederica Joe – HR Unit, Administration Department	Marthaline Munyeah – Data Clerk, Technical Audit & Supervision	Louis T. Greewon Juweh – Exploration and Environmental Science Research	Sam Yoryor – Food Security and Nutrition Unit, Department of Planning and Development	Emmanuel Lewis – Strategic Planning Unit;
2 (Two)	Alice Bombo – Planning and Policy	Dereck D. Perkins – Supervisor, Environmental Health and Safety	Mercy ZB Zeanboe – Exploration, Monitoring and Evaluation	Emmanuel D. Williams – Regional Development, Research and Extension	Vermon Sangah Lloyd – EIA Officer, Commercial Department
3 (Three)	Princess M. Tarpeh – Meteorology		Prince Nanlee Johnson – Energy Department	Francis J. Hne – Sector Coordination Unit, Department of Planning	Stephen Botoe – Commercial Department

4 (Four)	Albert M. Sherman – Meteorology		Tanyenon Jlateh – Mines Department	Venus W. McGill – Food Security and Nutrition Unit, Planning and Development Department	Konikay E. Nimely – Manager, EIA/Commercial Department

Presentation and Analysis of Findings

Presentation of Findings

Availability of training program at agencies

At the five institutions assessed, four informed[2] of the existence of some training program – either for the entire agency or for some units. At the MoA, in addition to the affirmative responses of all four interviewees to the question, it was confirmed during the follow-up key informant interviews, that there is a training unit within the HR section which manages both domestic and international training. Same was the case at the MoT, MCC and FDA. It was only the MME that reported 50% "YES" and 50% "NO" as responses to the said question.

Types of training

The questionnaires sought to establish the types of training at each agency – internal or external. At MoT, all respondents confirmed some level of in-house training. Additionally, one of the four indicated that some of the training received is external. At FDA, 75% of the interviewees responded to this question and all of them indicated that both in-house and external training have been received. For the MCC, only one of the two interviewees specified the type of training being received and it was confirmed as "in-house". At MoA, there are both internal and external forms of training as confirmed by all respondents'

[2] With all participants answering "YES".

questionnaires as well as the key informants' follow-ups. MME's case revealed that both external and internal are being received on a 50% basis.

Budget for training

Budget – which is a financial plan – was used as a way to confirm to a large extent the existence of some training program at these institutions. This is because while narratives containing schedules and priority training areas may be available, costing them and planning to source resources towards implementation may be a challenge.

From the responses, beginning with MME, there was no confirmation of an existing training budget. 75% of respondents said "NO" with the other respondent clicking the "N/A" – which could be assumed as *not knowledgeable* rather than *not applicable.* For MoT, all interviewees responded in the affirmative. For FDA, two of the interviewees gave no response. The rest provided a balanced response of "YES" and "NO". In the case of the MCC, both respondents confirmed the availability of a budget to fund training programs for staff. Finally, MoA respondents provided confirmation of the existence of training budget.

Knowledge on Sector and CBIT Project were also gauged. Below are results:

A second aspect of the assessment was based on respondents' knowledge on the subject, sector, project and even topic. It contained questions gauging their basic understanding of concepts of climate change, greenhouse gas emission, the United Nations Framework Convention on Climate Change, aspect of the Nationally Determined Contribution (NDC) and the Capacity Building Initiative for Transparency (CBIT) project. Reponses are detailed below:

Understanding of Climate Change and GHG emission

In response to the questions on individual knowledge on climate change, means of mitigation and adaptation to climate change, the causes of climate change, government's effort to address the effects of climate change most interviewees said "YES". At MoA, two of the four responded in the affirmative to all. The other two mostly said "NO" to the same questions. At MCC, respondents did not have any positive response to this set of questions except for one who said "YES" to the one on familiarity with *climate change*.

For MoT, respondent one confirmed knowledge on climate change and its causes but none on government's approach to addressing it as well as general mitigation and adaptation strategy. Respondents two, three and four reported and confirmed to some extent[3] some knowledge on all aspects except government's effort to addressing climate change. MME's case was similar to MoT, except that one of the respondents said there was some knowledge on what government was doing to address climate change. FDA's responses were all positive except for one respondent who did not know about mitigation and adaptation to climate change.

For the more specific aspects of carbon and GHG emission, questions were asked about knowledge on carbon, carbon emission, greenhouse gas, and greenhouse gas emission and contribution to climate change. As outlined below, understanding of these vary from individual to individual and from agency to agency.

FDA's respondents one and four had some knowledge on each of the questions. For respondent two, there was no knowledge on GHG and how they contribute to climate change. Respondent three had no other understanding except being familiar with the term "greenhouse gas". At MCC, respondent one reported knowledge on all except "carbon"[4]. In the case of the second interviewee, it is considered that there is not basic understanding even though he responded in the affirmative to question two, having responded negatively to question one[5].

At MoA, respondent one understood the term "carbon" as well as "greenhouse gas". The second respondent didn't. For three and four, they individually didn't have knowledge on GHG, though they knew what the term "carbon" meant. At MoT, while respondent three and four had ideas of what the both terms meant, respondent one had no idea. For respondent two, there was some knowledge on the former but not the latter. For MME, all respondents had some level of familiarity with the term "carbon". However, respondents one and four had no knowledge of GHG.

[3] Confirmation was made by respondent four who explained some of the ideas on climate change mitigation ("lowering risk") and adaptation ("adjust").
[4] Said responses are taken but with some caution, given that knowledge on carbon emission should include some understanding/familiarity with the first – carbon
[5] Same as above – one provides basis for two. Hence, some caution is applied here in considering response to two, given the first response.

Understanding of the UNFCCC and NDC

To test the understanding of the overarching framework on climate change, a question was posed to participants on their knowledge of the United Nations Framework Convention on Climate Change (UNFCCC). Also, questions testing participants' knowledge on aspects of *nationally determined contribution* (NDC) and how it works in Liberia were also included. Below are results:

All participants from the MoA were not aware of the UNFCCC and also had no idea on the NDC. At MoT, only the fourth respondent had some understanding on both the UNFCCC and NDC, with the first three having no idea on both. For MME, respondents one, two and four informed that they had no understanding of both. However, respondent three had some knowledge on the UNFCCC and the NDC.

FDA's interviewees had some level of familiarity with the UNFCCC. However, only respondent four had knowledge on the NDC. At MCC both respondents had no idea on the NDC, even though the second respondent had some understanding on the UNFCCC.

Information Technology and Data Management Skills

To ascertain the information technology skills of participants which should somewhat be a reflection of staff capacity at the entities, a question on computer literacy was asked at the three line ministries. There, all twelve participants informed that they had basic computer literacy skills. In a general follow-up question on what training program would they like added to a training package, the responses from MCC centered on data management (collection, analysis and reporting) and computer (IT) skills. For FDA, it revolved around the same data management system. Use of software, to collect, record, analyze and reports were specifically indicated.

Planning and Management Skills

The assessment[6] also included an inquiry on the regularity of participants' team (unit/department) developing an annual/quarterly work plan. Nine of the twelve respondents from the line ministries stated that there existed some periodic plan in their unit/department. The first three from MoT, however, said none of such planning was done in their respective units/departments.

[6] Especially for the line ministries: MME, MoA and MoT

Agency-based Training/Capacity Needs

Knowledge on how each sector contribute to GHG emission as well as capacity of each sector was gauged in addition to the general training needs assessment questionnaire considered above. A cursory look of what obtained from each hub follows in tables:

Transport

Table 2: Training and Capacity Needs Assessment - Transport

Consolidated Inquiry	***Analyzed Response***
Knowledge of how Transport contributes to GHG emission as a sector?	On participants' awareness of how the transport sector contributes to GHG emission, 75% stated that they had some understanding. They mentioned vehicle[7] exhaustive waste as means through which the sector contributes to GHG emission;
Estimation/Collection of Data from other sector-based institutions (LCAA, NPA, LiMA and MoT)	Responses to the questions on whether MoT collects/estimates emission data from the above named institutions were all negative.
Existence of MRV System, NDC policy/planning documents and Low Mobility-emission Strategy	Except for respondent four who said s/he had accessed documents (strategy, policy, plan, guidelines) relating to the NDC, all other three respondents had never seen any such document; neither did they know of an existing MRV system for the sector. On the availability of low mobility emission strategy, all respondents said "No".

Waste

Table 3: Training and Capacity Needs Assessment - Waste

Consolidated Inquiry	***Analyzed Response***

[7] Respondent four listed cars, ships, and aircrafts as contributing vehicles to GHG emission

Knowledge on how Solid/Organic Waste Contributes to GHG emission	None of the two respondents had knowledge on solid and organic waste contribution to GHG emission. They both responded in negative to the two questions.
Knowledge on Managing Waste properly to avoid emission, and also transforming waste into usable products for humans	The first respondent affirmed that s/he had some understanding on the two questions on waste management. The colleague, however, didn't have such understanding;
Self-awareness of waste recycling program, availability of training/public awareness on recycling, and waste characterization program at MCC.	Both respondents indicated that they were aware of waste recycling program. However, they confirmed that there were no public awareness raising and waste characterization programs at the MCC;
Volume of the total waste produced in Monrovia and MCC's waste management (collection) capacity	64,820 kg was the reported quantity for the month of June 2019;
Availability of programs to consider gender components to waste production and management	None is available, per the responses from the participants;
Self-awareness of Landfill Concept, MCC's management of landfilled waste, and Measuring emission profile of landfill	Both respondents had some understanding of the landfill concept. They also confirmed that the MCC manages a landfill at Whein Town (Paynesville). However, they advised that there was no institutional capacity to measure emission profile of the landfill;

Energy

Table 4: Training and Capacity Needs Assessment - Energy

Consolidated Inquiry	***Analyzed Response***

Capacity of Energy Generated and Percentage of Renewable Energy	50% of respondents stated that total energy generated is 124.8MW, with 88.4 MW being renewable;
Availability of Fossil-fuel Dependent Energy Sources and record on emission level	50% stated that there were energy sources depending on fossil-fuel; however, all of the respondents said there was no record to estimate their emission level;
Existence of Unit to calculate emission profile of all energy sources	"No" was the response all interviewees gave;
Familiarity with concept of biomass, and solar energy and its associated benefits	50% of respondents[8] had some knowledge on biomass; however, all of the participants acknowledged some level of understanding of solar energy;
Potential for developing biomass and solar energy in Liberia, and entity's plan to engage in the two energy sources	All of the responses[9] to the two questions were positive;
Training of employees on carbon emission tracking and mitigation, and familiarity with other sources of emission from traditional energy use	"NO" was the response all participants gave to the training of employees on carbon emission; In terms of knowing emission contribution of traditional energy sources, 50% of respondents stated "YES". They named *wood burning* and *oil burning* as traditional energy sources;
Thought on ban of charcoal production and knowledge on initiative to provide traditional eco-stove to community members	All participants thought that banning charcoal production was not necessary; 50% suggested that they were aware of initiative to provide traditional eco-stove to community members;

[8] One of the two respondents said s/he was "partly" familiar
[9] The first aspect on "potential" had only three responses;

Agriculture

Table 5: Training and Capacity Needs Assessment - Agriculture

Consolidated Inquiry	***Analyzed Response***
Self-awareness of agricultural contribution to GHG emission, and MoA's estimation/collection of data on emission from sector institution;	50% was aware of agriculture contribution to GHG emission; however, all of the four respondents indicated that there was no ongoing collection/estimation of data from sectorial institutions;
Gathering of specific data on enteric fermentation, animal waste, rice cultivation, field burning and land degradation and their contribution to GHG emission, and specific data on CO2-low emission;	"NO" was the response all of the participants gave to both questions;
Existence of MRV System and access to documents on NDC	All of the responses to these were in the negative;
Awareness of sustainable (GHG emission-free) agricultural practices that can be cultivated	None seemed aware.
Consideration of gender contribution to GHG-emission based agricultural activities	No such consideration is given at the moment;

Forestry

Table 6: Training and Capacity Needs Assessment - Forestry

Consolidated Inquiry	***Analyzed Response***
Self-awareness that forestry-based activities contribute to GHG emission and existence of an MRV system	All respondents said they are aware of forestry contribution to GHG emission; they all also responded with "NO" to the availability of an MRV system to track;
Data on total forest area (means of collection) and consideration of gender contribution to forest-sourced GHG emission;	There is no data on total forest area, per participants responses; Also, consideration has

	not been given to gender aspects of the GHG-emission of forest-based activities;
Gathering specific data on *pit-sawing, mining, hunting* and how they contribute to GHG emission, and conduct of training by FDA on GHG emission data	50% indicated that specific data are collected on the mentioned forestry-based activities; All respondents said "NO" to question on FDA training on gathering and reporting data;
Self-awareness of sustainable ways to conserve forest without compromising livelihoods of dependent communities, and thought on improving training package on conservation and community forest	All respondents said "YES" to being aware of sustainable ways to conserve forest and maintain community livelihoods; also, 50% of the respondents recommended inclusion of *co-management practices* in training package;

Statistical Analysis

Based on all the above findings, a statistical analysis was applied on the knowledge and skills-based aspects of the assessment as well as institutional capacity, using weights and frequency of response. For the weight, knowledge most directly related to the tasks of measuring, reporting and verifying GHG-emission data was ranked highest (@1.5pt). They include one's understanding of the sector, project, and topic and is complemented by understanding of sector-specific activities. This is because, this is the foundation to understanding the required MRV tasks and specific roles. Skills in data management (gathering, analysis, reporting, and sharing) are quite general and ranks next (@1pt). Planning and Management skills then follow in a broad form (@.5pt).

A table portraying this is presented below:

Table 7: Statistical Analysis of Training and Capacity Needs of All Hubs

Competence Area	Number Expressing Need (lack of or limited knowledge/skills and/or capacity/means)	Number of Respondents	Assigned Weight	Final Score/Priority
Knowledge on Sector, Project and Subject				
Understanding of Climate Change	9	18	1.5	0.75
Understanding of GHG Emission	8	18	1.5	0.67
Understanding of UNFCC	11	18	1.5	0.92
Understanding of NDC	15	18	1.5	1.25
Information Technology and Data Management				
Computer Literacy and Knolwedge on Data Collection, Analysis, Reporting and Sharing	6	18	1	0.33
Planning and Management Skills				
Development and Existance of Work Plan	3	18	0.5	0.08
Sector-based Competence				
Transport				
Sectorial Contribution to GHG emission	1	4	1.5	0.38
Estimation/Collection of data from other sector-based institutions	4	4	1.5	1.50
Access to and Understanding of National Policy/Planning Documents on low-emission strategy	3	4	1.5	1.13
Waste				
Sectorial Contribution to GHG emission	2	2	1.5	1.50
Managing Waste properly to avoid emission and transforming waste into usable products	1	2	1.5	0.75
Public Awareness on Waste Recycling	2	2	1.5	1.50
Capacity of MCC to Manage Waste	2	2	1.5	1.50
Means of Consideration of Gender Components on Waste Production	2	2	1.5	1.50
Measuring Emission Profile of Landfill	2	2	1.5	1.50
Energy				
Capacity of Energy Generated and Percentage of Renewable Energy	2	4	1.5	0.75
Recording Emission level of fossil fuel	4	4	1.5	1.50
Calculation of Emission Profile of all Energy Sources	4	4	1.5	1.50
Familiarity with Concept on Biomass	2	4	1.5	0.75
Knowledge on Carbon Emission Tracking and Mitigation	4	4	1.5	1.50
Familiarity with other sources of emission from traditional energy use	2	4	1.5	0.75
Agriculture				
Self-awareness of agricultural contribuition to GHG emission data	2	4	1.5	0.75
Estimation/Collection of data from sectorial institutions on emission	4	4	1.5	1.50
Gathering of specific data on enteric fermentation, animal waste, rice cultivation, field burning and land degradation and their contribution to GHG emission, and specific data on CO2-low emission;	4	4	1.5	1.50
Awareness of Cultivatable Sustainable (emission-free) Agricultural Practices	4	4	1.5	1.50
Means of Consideration of gender contribution to GHG emission using agrictultural activities	4	4	1.5	1.50
Forestry				
Means of collecting data on total forest area	4	4	1.5	1.50
Collection (Means) of data on gender contribution to GHG emission	4	4	1.5	1.50
Means of collecting specific data on pit-sawing, mining, and hunting and how they contribute to GHG emission	2	4	1.5	0.75
Conduct of training by FDA on GHG emission	4	4	1.5	1.50
Need to improve training package on conservation and community forest	2	4	1.5	0.75

Discussions and Conclusion

Overall Study (All Participants)

The clusters originally developed for of questionnaires were maintained during the analyses. As structured above, they include: *knowledge on sector, project and subject; information technology and data management skills; planning and management skills; and knowledge and skills on sector-specific activities.* Table 7 (above) groups results per cluster. However, to inform the preparation of a training program, a second table (8) is presented below. In this one, *competence* areas are listed according to rank. The first set colored orange contains areas that emerged as *high* priority with a final score/priority at 1.25 or more. The next portion contains results that are termed *moderate* in terms of priority and it reflects those ranging from 0.75 to 1.24. Finally all other results[10] are considered *low* priority and are together colored grey. See Table 8 below:

[10] Above 0 and below 0.75, given that the scale contained only positive integers

Table 8:Statistical Analysis of Training and Capacity Needs for All Assessed Hubs in Order of Priority/Ranking

Competence Area	Number Expressing Need (lack of or limited knowledge/skills and/or capacity/means)	Number of Respondents	Assigned Weight	Final Score/Priority
Awareness of Cultivatable Sustainable (emission-free) Agricultural Practices	4	4	1.5	1.50
Calculation of Emission Profile of all Energy Sources	4	4	1.5	1.50
Capacity of MCC to Manage Waste	2	2	1.5	1.50
Collection (Means) of data on gender contribution to GHG emission - Forestry	4	4	1.5	1.50
Conduct of training by FDA on GHG emission	4	4	1.5	1.50
Estimation/Collection of data from other sector-based institutions - Transport	4	4	1.5	1.50
Estimation/Collection of data from sectorial institutions on emission - Agriculture	4	4	1.5	1.50
Gathering of specific data on enteric fermentation, animal waste, rice cultivation, field burning and land degradation and their contribution to GHG emission, and specific data on CO2-low emission;	4	4	1.5	1.50
Knowledge on Carbon Emission Tracking and Mitigation - Energy	4	4	1.5	1.50
Means of collecting data on total forest area	4	4	1.5	1.50
Means of Consideration of Gender Components on Waste Production	2	2	1.5	1.50
Means of Consideration of gender contribution to GHG emission using agrictultural activities	4	4	1.5	1.50
Measuring Emission Profile of Landfill	2	2	1.5	1.50
Public Awareness on Waste Recycling	2	2	1.5	1.50
Recording Emission level of fossil fuel	4	4	1.5	1.50
Sectorial Contribution to GHG emission - W	2	2	1.5	1.50
Understanding of NDC	15	18	1.5	1.25
Access to and Understanding of National Policy/Planning Documents on low-emission strategy - Transport	3	4	1.5	1.13
Understanding of UNFCC	11	18	1.5	0.92
Capacity of Energy Generated and Percentage of Renewable Energy	2	4	1.5	0.75
Familiarity with Concept on Biomass	2	4	1.5	0.75
Familiarity with other sources of emission from traditional energy use	2	4	1.5	0.75
Managing Waste properly to avoid emission and transforming waste into usable products	1	2	1.5	0.75
Means of collecting specific data on pit-sawing, mining, and hunting and how they contribute to GHG emission	2	4	1.5	0.75
Need to improve training package on conservation and community forest	2	4	1.5	0.75
Self-awareness of agricultural contribuition to GHG emission data	2	4	1.5	0.75
Understanding of Climate Change	9	18	1.5	0.75
Understanding of GHG Emission	8	18	1.5	0.67
Sectorial Contribution to GHG emission - Tr	1	4	1.5	0.38
Computer Literacy and Knolwedge on Data Collection, Analysis, Reporting and Sharing	6	18	1	0.33
Development and Existance of Work Plan	3	18	0.5	0.08

From the said table, it is established by this study that most of the needs to be prioritized the most (category one) are those on developing knowledge and skills to account for sector-specific activities. The only other general area that needs to be prioritized similarly is enhancing agencies' staff knowledge on the subject of *nationally determined contribution* which is again a reinforcement of the sector-specific activities since the latter feeds in to the former.

The table also presents access to and understanding of the overarching *policy framework* as well as knowledge on *climate change* and its *United Nations Framework (UNFCCC),* as moderately needed. In between these, are some sector-specific concepts, and means to source and share information on some sector-specific activities.

Finally, other general skills of IT/data management and planning rank lowest on the needs' list tabled above.

Taking it from the cluster angle, *sector-specific activities* would rank most. This would be closely followed by the *sector/subject/project cluster*. Thirdly, the *IT/data management* and *planning* skills are ranked.

Core Group (Focal Persons)

In addition to this, we also took into consideration the needs of all focal points at each entity. This led to a creation of a core group of four (4)[11] from the total of eighteen (18) study participants. For the core group, the general training needs highlighted by all participants (detailed above) were used for statistical analysis. The same weights were applied. From the said analysis, Table 9 below was derived:

[11] There was no data for the MCC focal point and the Lead Consultant informed that s/he was not available during the process of data collection.

Table 9: Statistical Analysis of Training and Capacity Needs for Core Group (focal persons of Hubs)

Column1	Column2	Column3	Column4	Column5
Competence Area	**Number Expressing Need (lack of or limited knowledge/skills and/or capacity/means)**	**Number of Respondents**	**Assigned Weight**	**Final Score/Priority**
Understanding of Climate Change				
Understanding of GHG Emission				
Understanding of UNFCCC	1	4	1.5	0.38
Understanding of NDC	1	4	1.5	0.38
Computer Literacy and Knolwedge on Data Collection, Analysis, Reporting and Sharing				
Development and Existance of Work Plan				
Sectorial Contribution to GHG emission - Transport				
Estimation/Collection of data from other sector-based institutions - Transport	1	1	1.5	1.50
Access to and Understanding of National Policy/Planning Documents on low-emission strategy - Transport				
Sectorial Contribution to GHG emission - Waste	NA	NA	NA	NA
Managing Waste properly to avoid emission and transforming waste into usable products	NA	NA	NA	NA
Public Awareness on Waste Recycling	NA	NA	NA	NA
Capacity of MCC to Manage Waste	NA	NA	NA	NA
Means of Consideration of Gender Components on Waste Production	NA	NA	NA	NA
Measuring Emission Profile of Landfill	NA	NA	NA	NA
Capacity of Energy Generated and Percentage of Renewable Energy				
Recording Emission level of fossil fuel	1	1	1.5	1.50
Calculation of Emission Profile of all Energy Sources	1	1	1.5	1.50
Familiarity with Concept on Biomass				
Knowledge on Carbon Emission Tracking and Mitigation - Energy	1	1	1.5	1.50
Familiarity with other sources of emission from traditional energy use				
Self-awareness of agricultural contribuition to GHG emission data				
Estimation/Collection of data from sectorial institutions on emission - Agriculture	1	1	1.5	1.50
Gathering of specific data on enteric fermentation, animal waste, rice cultivation, field burning and land degradation and their contribution to GHG emission, and specific data on CO2-low emission;	1	1	1.5	1.50
Awareness of Cultivatable Sustainable (emission-free) Agricultural Practices	1	1	1.5	1.50
Means of Consideration of gender contribution to GHG emission using agrictultural activities	1	1	1.5	1.50
Means of collecting data on total forest area	1	1	1.5	1.50
Collection (Means) of data on gender contribution to GHG emission - Forestry	1	1	1.5	1.50
Means of collecting specific data on pit-sawing, mining, and hunting and how they contribute to GHG emission	1	1	1.5	1.50
Conduct of training by FDA on GHG emission	1	1	1.5	1.50
Need to improve training package on conservation and community forest				

As one will note, most of the areas in the overall assessment do not reflect in the core group – hence the table above has more blanks spaces depicting that there is no "need". This demonstrates that the focal points are mostly equipped with knowledge and skills than an average non-focal point staff at these agencies[12]. This second set of analysis gives a better appreciation of the capacity gaps between a focal point and a typical staff.

Hence, it will be appropriate were training packages to be tailored for the core group as well as another for overall improvement on the level of awareness on climate change, GHG gas emission, the UNFCCC and the nationally determined contribution. Also, while enhancement of data management and planning/management skills is necessary at this point and subsequently on a periodic basis, this assessment did not find an absolute lack of such skills amongst the focal persons.

Recommendations/Next Steps

Recommendations

Premised by the findings above, the following are recommendations:

1. That a training program be developed to cover the general needs and also the sector-specific needs;
2. That periodic refresher (in-service) sessions be conducted for these and all other agencies in the GHG emission sectors;
3. That support be sourced and availed to enhance the capacities of GHG emission institutions to support the NDC processes;

Next Steps

1. The development and tailoring of a Training Manual to this report and the two other products (data management needs assessment report and data sharing guide) of this consultancy to reflect both the general competency areas as well as the areas specific to each sector;
2. Use of said manual (when developed) and this assessment report as well as the data management assessment report and data management sharing guides, upon validation, as foundation for the development of training programs and all other capacity-enhancement initiatives under this project and other programmatic interventions

[12] All but MCC since the focal person could not be accessed, despite being sampled.

Appendices

Appendix One: TNA Questionnaires

Training Needs Assessment

Entity:_____

Date:_____

A) Staff profile for identifying gaps

Name	Department/Section	sex	Position	Present aca qualificatior

B) **<u>Training Needs assessment questionnaires (General)</u>**

1. Is there a training/skills development program in your entity, dept.?
2. If yes, please describe briefly the program including selection process, frequency, nature, scale, etc
3. How is this being achieved? a. on the job_____ b. external_____
4. Is there a budget or plan for external short-term courses for employees?
5. How is your training and professional development needs assessed? A. myself:___ b. my manager:___ c.
6. Identify areas in your dept. that needs training: section;_____ units_____
7. How many females in your dept._____, section_____
8. How many males in your dept._____, section____
9. Are you familiar with climate change?
10. Are you aware of the programs undertaken by the government towards addressing climate change?
11. Do you know what is meant by climate change mitigation and adaption?
12. Do you know the causes of climate change?

1. What, in your understanding, is referred to as carbon?
2. What do you know about carbon emission?
3. Have you heard and/or familiar with the term greenhouse gases (GHG)?
4. Are you familiar with how GHG cause climate change?
5. Are you familiar with the term nationally determined contributions or NDC?
6. Are you familiar with the United Nations Framework Convention on Climate Change

Waste Sector

1. Do you know that solid wastes generated around the country can produce GHG?
2. If yes, which GHG (s) are produced from solid or organic wastes?
3. Do you know that emissions can be avoided from managing waste properly?
4. Do you know that GHGs from waste can be produced successfully for human use?
5. Are you aware of the recycling process of waste?
6. If yes, is there any training program or awareness campaign from your entity targeting waste recycling?
7. Is there a waste characterization program in your entity?
8. Do you know of the total volume of waste produce in Monrovia (Paynesville and Browerville)?
9. What is the collection capacity of your entity?
10. Are there any program to consider gender components of waste management?
11. What training will you recommend to be added to your entity training program?
12. Are you aware of the concept of landfill?
13. Does your entity manage any landfill?
14. If yes, do you measure the emission profile of the landfill?

Energy

1. What is the total capacity of energy that is being generated under or through your entity?
2. How many of these are renewable energy?
3. Are there any fossil fuel-dependent source of energy?
4. If yes, is there a record estimating the emission level?
5. Is there a dedicated department calculating the emission profile of all energy sources under your entity?
6. Are you aware of the GHG generated by fossil fuel energy source?
7. Are you familiar with the concept of biomass?
8. Do you think there are potential for such in Liberia?
9. Are you familiar with the concept of solar energy and the associated benefits?
10. Is your entity developing plans to engage in solar or biomass?
11. Does the entity train its employees on carbon emission tracking and mitigation?
12. Are you familiar with other sources of emission from tradition energy use?
13. If yes, name them
14. Do you think there should be a ban on charcoal production?
15. Are you aware of any initiative to provide traditional ecostove for community members?

Agriculture

1. Are you aware that agriculture contributes to GHG?
2. If so, how does agriculture contribute?
3. Is there an MRV (monitoring, reporting and verification) system of Co2 emission for the sector?
4. Does MoA estimate and report on agricultural activities that contribute to GHG?

5. If so, which unit undertakes the gathering and reporting of statistics?
6. Does the unit consider the contribution of women and men to GHG emission-based agricultural activities?
7. Are there specific data gathered on enteric fermentation, animal waste, rice cultivation, savannah burning, field burning of agricultural and land degradation and how did contribute to GHG emission?
8. Does the MoA conduct training on gathering GHG emission data?
9. Are there specific training needs that you will want to highlight?
10. Are you aware of sustainable (GHG-emission free) agricultural practices that can be cultivated?
11. If so, how do you think these can be included in the training program at your ministry?

Forestry

1. Are you aware that forestry-based activities contribute to GHG emission?
2. Is there an MRV system that tracks how the use of the forest contributes to GHG emission?
3. Do you have any current data about the total forest area in the Country?
4. If so, how regularly is stock taken and what was the outlook of the Liberian forest?
5. Does the unit consider contribution of males and females to forest-sourced GHG emission?
6. Are there specific data gathered and reported on forest-based activities like: pit sawing, mining, hunting, agriculture and how they contribute to GHG emission?
7. Does the FDA conduct training on gathering and reporting GHG emission?
8. Are the specific training needs at the FDA and other sector institutions that you will want to highlight?
9. Are you aware of sustainable ways through which the forest can be conserved without compromising livelihood sustenance of dependent communities?
10. How do you think the training package can be improved on to cover activities of both community forestry and conservation?

Transport

1. Are you aware that transport in all its forms (land, air, sea and railway) contribute to GHG emission?
2. If so, how does transport contribute?
3. Does the MoT estimate or collect from other sector institutions (e.g. LCAA, LiMA, Land and Rail Department – MoT)
4. If so, which unit undertakes the gathering and reporting of such data?
5. Are there specific data collected on Co2-low aviation, Co2 emissions reduction from ships, road sector emission, Co2-free city logistics?
6. Do you conduct periodic training/workshops on GHG emission?
7. If yes how often is this done?
8. Have you accessed any NDC document (strategy, policy, plan, guidelines) for the transport sector in regards to GHG emission?
9. Is there an MRV (monitoring, reporting and verification) system of Co2 emission for the sector?
10. Is there any low emission mobility strategy in your institution?
11. Are you aware of any specific training needs at MoT and in other sector institutions?
12. If so, how can those related to MRV of GHG emission data be included in your training program?