

Information Matters, Ghana:

Capacity Building for Ambitious Reporting and Facilitation
of International Mutual Learning through Peer-to-peer Exchange



REPORT ON THE TRAINING-WORKSHOP ON CLIMATE RELEVANT DATA MANAGEMENT

Capital View Hotel, Koforidua, Ghana, 17-18 September 2014



**ENVIRONMENTAL
PROTECTION
AGENCY, GHANA**

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

On behalf of:



Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety

of the Federal Republic of Germany

This project is part of the International Climate Initiative (ICI). The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) supports the initiative based on a decision by the German Parliament (Bundestag).

Published by:

German Society for International Cooperation (GIZ) GmbH



Information Matters Project:

<http://mitigationpartnership.net/information-matters>

Registered offices

Bonn and Eschborn, Germany

T +49 228 44 60-0 (Bonn)

T +49 61 96 79-0 (Eschborn)

Friedrich-Ebert-Allee 40

53113 Bonn, Germany

T +49 228 44 60-0

F +49 228 44 60-17 66

Dag-Hammarskjöld-Weg 1-5

65760 Eschborn, Germany

T +49 61 96 79-0

F +49 61 96 79-11 15

E info@giz.de

I www.giz.de

Authors and Responsible:

EPA

Photo credits:

GIZ

Ricardo-AEA

Copyright

GIZ

Accra, September 2014

Content

1.	Background Information.....	1
1.1	Introduction	1
1.2	Objectives.....	1
1.3	Scope of workshop.....	2
1.4	Participants	2
1.5	BMUB International Climate Initiative (IKI)	2
1.6	Relevant Questions Raised During the Workshop.....	3
2.	Summary of the Main Questions and Actual Situation for Data Collection	4
2.1	Questions/Worries and Expectations about Climate Relevant Data	4
2.2	Mapping of Data Flows	4
2.3	Applying QA/QC to Ghana’s Datasets and System	4
2.4	Using and Applying Data	5
3.	Summary of Workshop Presentations.....	6
3.1	Setting the Scene: About the Information Matters Project.....	6
3.2	Setting the Scene: Ghana’s vision for climate relevant data management system	6
4.	Summary of the Working Groups and Outcomes	8
4.1	Management and Sharing of Data	8
4.2	Data Quality and Control	8
4.3	Data Compilation	9
5.	Recommendation and Way Forward.....	10
6.	Annex.....	11
	Annex 1: Presentation	11

1. Background Information

1.1 Introduction

In 2013, Ghana launched a programme named “climate ambitious reporting (CARP)” which seeks to provide foundation for coordinating all climate reporting efforts. The aim of the CARP is to put in place an integrated national system that is capable of enabling Ghana to meet its international reporting obligations of (a) preparing National Communications (NATCOM) every four (4) years, (b) preparing Biennial Update Report (BUR) every two (2) years and (c) participate in international Consultation and Analysis (ICA) of the BUR and above all provide evidence to support climate mitigation planning at all levels.

The Environmental Protection Agency (EPA) has received support from the German Government through the GIZ Information Matters (IM) Project to contribute to the rolling-out of the CARP. The contributions from IM will help to create awareness and build capacities among key institutions that are involved in the preparation of the national greenhouse gas inventory, implementation actions and tracking of climate finance.

The GIZ on behalf of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) has initiated the “Information Matters: Capacity Building for Enhanced Reporting and Facilitation of International Mutual Learning through Peer-to-Peer Exchange” Project, which aims to provide technical support to Ghana through the Environmental Protection Agency (EPA) in building and improving climate information basis in order to be more able to plan and implement national low carbon development policies. These information bases include data collection of emissions inventories, emissions trends, emissions reduction potentials, ongoing mitigation actions, climate policies, financial, technology and capacity building support

needs and received support, international collaboration and international commitments, and established procedures and methodologies to monitor and collate these data. Ricardo-AEA, as a subcontractor of GIZ, provides the technical expertise for the capacity building missions to the EPA and sectoral lead agencies including backstopping support. The content of these CB workshops is decided in close consultation between GIZ and EPA. Prior to this, a gap analysis study on national climate reporting and a further stakeholder consultation were conducted.

Thus, training-workshops on Measurement, Reporting and Verification (MRV) Domestic Architecture for IM were held on 15-17 July 2014. This activity aimed to build the capacities of the participants in developing and applying MRVs for emissions, mitigation actions and climate support.

In line with IM, the EPA organized a training workshop on Climate Relevant Data Management from 17-18 September 2014 at Capital View Hotel, Koforidua. The training workshop sought to deepen (a) understanding on institutionalization of data collection and management (b) understanding key data sets and its management (c) sensitize participants on the process of data storage. Accordingly, various institutions were invited to participate in the training programme.

1.2 Objectives

The objectives of the workshop were the following:

- The role and importance of data in supporting national and international reporting requirements, target tracking and the development, implementation and monitoring of climate change policies.
- The key principles of good data management, sharing and their importance. The application of data management to sector-specific data issues

and to understand how these may be addressed.

- The meaning of data management system/framework, how it operates within this and gain an overview of the online system being developed in Ghana (The Integrated National Reporting System).
- The principles and processes for ensuring data quality (TACCC and QA/QC) and how these can be applied to data sets.

The required data to support their work, whether this is currently available, and what needs to be done to improve the data management systems being developed.

1.3 Scope of workshop

The workshop adopted discussion-based, hands-on training approaches. It was guided by the information on Ghana's vision for climate relevant data management system, management and sharing of Data, Data Quality and Data Compilation provided by various presenters from GIZ, EPA and Ricardo-AEA. The workshop targeted at producing skilled experts on climate data management.

1.4 Participants

Thirty (30) participants from different sectors such as public and private sectors, NGOs and Universities attended the workshop.

1.5 BMUB International Climate Initiative (IKI)

Since 2008, the International Climate Initiative (IKI) of the German Federal Ministry for the

Environment, Nature Conservation, Building and Nuclear Safety (BMUB) has been financing climate and biodiversity projects in developing and newly industrializing countries, as well as in countries in transition. The IKI places clear emphasis on climate change mitigation, adaptation to the impacts of climate change and the protection of biological diversity. These efforts provide various co-benefits, particularly the improvement of living conditions in partner countries.

The IKI focuses on four areas: mitigating greenhouse gas emissions, adapting to the impacts of climate change, conserving natural carbon sink with a focus on reducing emissions from deforestation and forest degradation (REDD+), as well as conserving biological diversity.

Priority is given to activities that support the creation of international climate protection architecture, transparency, and innovative and transferable solutions that have impacts beyond the individual project. The IKI cooperates closely with partner countries and supports consensus building for a comprehensive international climate agreement and the implementation of the Convention on Biological Diversity (CBD).

BMUB IKI Homepage

www.international-climate-initiative.com

1.6 Relevant Questions Raised During the Workshop

No.	Question/Comment
1	Why is Kenya used as an example when it is not yet fully in place? Can we get examples of countries where we could learn lessons. What are the lessons learnt in Kenya?
2	Tap into what is already working in Ghana. This works well and reduces costs in the long run.
3	What is The Integrated National Reporting System (INRS)?
4	What is the extent of the statistical service so far on the project?
5	<ol style="list-style-type: none"> 1. Are there timelines for hosting the data on the hub? 2. If MOUs have been signed institution, why the need for informal contact/focal person at the institution? 3. Do we have policy makers buy-in?
6	At this point, the decision to use or not to use limited data is taken. Particularly taking into account issues of credibility and the fact that it is possible to under- or overestimate the emissions.
7	<p>Is it appropriate (good practices) to attempt to use incomplete data (i.e., by trying to fill in the gaps) and then use the data for evidence based decision making?</p> <p>Will such data be appropriate in academic exercises such as publications in journals, thesis, etc.?</p>
8	If you are dependent on data from another organization that collects its data independently, how would you ensure QA/QC? Will it be the case if your source is wrong that you are also wrong?
9	Is Ghana's QA/QC undertaken for the national communications to the UNFCCC consistent with the IPCC guidelines?

2. Summary of the Main Questions and Actual Situation for Data Collection

2.1 Questions/Worries and Expectations about Climate Relevant Data

As a warm up exercise participants were asked to write down their questions/worries and expectations on Zop boards to refer back throughout the workshop. These questions were grouped under the following sections:

(a) Expectations;

- ❖ Does Ghana have the technical expertise for data management?
- ❖ Expect to have a better understanding of INRS.

(b) Worries;

- ❖ How do we make information on climate change into quantifiable data to influence policy formulation, monitoring & evaluation?
- ❖ How do you get policy makers to adopt data management?

(c) Questions;

- ❖ What is INRS?
- ❖ Can we maintain a reliable and regular source of data for the BUR system?
- ❖ What is the role of civil society organizations in the national MRV system?
- ❖ How does Ghana get a centralized data collection point?

2.2 Mapping of Data Flows

Participants were made to select one NAMA related to the GHG inventory and take it through the MRV system. Based on the participants present, three

groups were formed and they presented their results as follows:

(a) AFOLU National Forest Plantation Development Programme

1. Good financing structure
2. Wide consultation of stakeholders
3. Identification of tools for MRV
4. Need for broader understanding of GHG climate change mitigation
5. Use of available data/capacities
6. Creation of a common platform to engage all stakeholders

2.3 Applying QA/QC to Ghana's Datasets and System

Three groups were formed to ensure comprehensive and coordinated MRV for different themes on emissions, mitigation actions and support. Participants came out with the following:

(a) GHG Inventory Emissions – Key Areas of Improvement

Formalization is needed of the existing working groups on the several GHG inventory sectors. Also the Ghanaian Statistical Service (GSS) plays a crucial role as data keeper and data provide and their engagement needs to be more formal and with an official mandate. Quarterly meetings to review the work assigned to GHG inventory experts. Also a stock taking exercise to identify further areas for improvement is necessary.

(b) Plan on Mitigation

Institution & Roles	Reporting
MESTI	Activities and reporting should form part of daily operations of stakeholders
EPA	Data is collected and kept at the EPA with restricted access to stakeholders
Ministry of Energy & Petroleum	EPA needs funds to run a sustainable system
Economic Department of UG	Add GHG indicators to existing indicators of development projects
Ministry of Lands & Natural Resources	Quality steps should be applied to each indicator
Forestry Commission	Avoid political conflicts by ensuring consistency
Volta River Authority	-
Energy Center (KNUST)	-

(c) MRV of Support + M&E

Cooperation between the Ministry of Finance, Ministry for the Environment, Science, Technology and Innovation and EPA is needed to be formed.

The GSS needs to be involved in the development of a national MRV+E system and the national climate change data management system

2.4 Using and Applying Data

In working groups, the participants discussed the using and applying of data:

- Preparation of documents and reports
- Communication
- Trends
- Make data meaningful

Sources can be:

- Population data
- Census
- Projections
- GDP

Following data are needed:

- Drivers data
- Emission data
- Co-benefit data
- Finance data
- Green accounting
- Funding for climate change

3. Summary of Workshop Presentations

3.1 Setting the Scene: About the Information Matters Project

The presentation was held by Ms. Kirsten Orschulok, GIZ HQ, about IM on the global perspective. Her presentation was divided in three parts: a) Global structure, global goal and cooperation partners, b) project activities and the project countries and c) the first outcome of the project.

She stated that the project is supported by the German Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB). The participating countries include the Dominican Republic, Chile, Ghana and the Philippines. She is the coordinator for Ghana and the Philippines and Mr. Oscar Zarzo is the coordinator for Dominican Republic as well as Chile. The British consulting firm Ricardo-AEA provides technical expertise for the projects. She mentioned the project synergies with UNDP-LECB, West Africa GHG Project, UNEP in partner countries, as well as the WRI and the International Partnership on Mitigation and MRV.

The Global Project Goals are as listed:

- Identification of specific needs and priorities of the MRV systems and GHG monitoring in the partner countries.
- Strengthen in-country capacities for enhanced reporting (BURs and NCs) of climate relevant information to UNFCCC.
- Provision of tailored-made capacity-building trainings and workshops (in-country).
- Support the process through peer-to-peer exchange and generation of lessons learnt.

She talked about some of the roles and responsibilities for the various project partners such

as BMUB IKI, GIZ, Ricardo-AEA, UNDP, WRI and the UBA. She explained that the projects started with a kick-off workshop, which is followed by two (2) capacity building in-country workshops and a final peer-to-peer exchange workshop in Germany. Pictures for some of the organized workshops were displayed.

Ms. Kirsten Orschulok followed her presentation with the workshop experience in Ghana and Philippines.

3.2 Setting the Scene: Ghana's vision for climate relevant data management system

Mr. Opong-Boadi, EPA Climate Change unit leader and UNFCCC focal point, presented Ghana's approach to address the issues of climate change data management system.

Ghana has set out to put in place an integrated climate data management. The purpose of the latter is to provide reliable basis for climate change planning, provide a framework for MRV and also integrate climate data into national statistics platform.

Ghana envisions data management as continuous data generation, its infrastructure and application, documentation and archiving and establishes a network sharing and clearing house.

Currently, we have identified existing national data generation platform and develop on-line climate data hub.

There is another electronic system, named the Domestic Electronic Registry System (DERS), for climate change and related initiatives in Ghana. It also contains sources of support tracking, assesses impacts and disclosure to the general public on bi-quarterly basis. Another web-based dataset is the

Dashboard on climate policy and measures that in the productive sectors of the Ghanaian economy. The above dataset will assist Ghana to provide information on the country's national contributions.

Ghana has developed data documentation and archiving. The data management is simple but dynamic. Institutions have been given defined roles and responsibilities. The vision is to improve continuously over time. It was started with simple documentation, continuous improvement with good supervision and with a QA/QC plan in place.

Some challenges that we face are slow pace in the establishment of the data sharing network, data funding for data collection and data confidentiality.

4. Summary of the Working Groups and Outcomes

4.1 Management and Sharing of Data

Data sharing and access are essential since they enhance good relationships among organizations.

Data access is hampered by protectionism, single ownership, lack of understanding about the final use of data and non-availability in the electronic form which assist in easy sharing of data.

In order to address the above barriers, the use of data has to be clarified. Again, trust among MDAs enhances the access and sharing of data. There should be the need of putting in systems to dealing with sensitive data. The establishment of clear roles and responsibilities in the management of data is essential to ensure the MRV of data.

Most countries have national MRV steering committees which oversee various working groups such as indicators and baselines, QA/QC and technical analysis groups. For example, a national body has been set up in Kenya to oversee coordination of all volume of climate data.

Data management and governance is about people and processes and it is supported by seven (7) solutions. Some of the main elements of data management and governance are:

1. Governance
2. Policy
3. Capturing
4. User needs
5. Improve data quality

The presenter showed the example of South Africa's data sharing arrangement for the energy sector. Institutions involved are National Clear Production Centre, Eskom – a national Electricity Company,

Clean Development Mechanism and National Business Initiative and Business Unity in South Africa.

4.2 Data Quality and Control

Quality is defined by a set of principles that can be applied to a very wide range of issues. Quality control (QC) is a system of routine technical activities to ensure data integrity, coherency and completeness. The essential elements of QC include identifying and addressing errors and omissions. Documentation and archiving also form part of the elements.

Quality Assurance (QA) is defined as a planned system of reviews conducted by those that are involved in the compilation/development process of data sets. Verification on the other hand has a different meaning. It refers to the collection of activities and procedures conducted during the planning and development. Verification in inventory can help to establish its reliability for the intended application after completion of the inventory. The importance of QA/QC is to produce high quality and reliable sets of information to take decisions.

According to the IPCC QA/QC should be transparent, complete, consistent, comparable and accurate (TCCCA).

The QA/QC system involves planning, implementation and documentation, archiving and reporting. The planning phase involves the activation and the process and documentation of all data sources.

In documentation and archiving the institutional arrangements in place and their roles and responsibilities have to be considered. Furthermore,

the choice of the methods and estimation parameters need to be considered. There is a need to lay emphasis on activity data to ensure that the used data could be followed up to reference source.

Regarding the archiving, practical consideration there is a need to focus on the strategy and approach. The data to archive and time of doing so is something to be considered. Information may be electronically or in the hard form.

Therefore, to develop QA/QC system it is useful to consider the availability of resources and expertise, QA requirements, accuracy and uncertainty reduction. Time lines and cost effectiveness to build up such a system is one area where attention needs to be paid in order to address the issue of gaps and inconsistencies in data. Data gaps may arise due to several reasons such as new dataset which lack historical trend, non-availability of data, and periodic collection of data as well as when there is a change in activity data. One method used to improve data quality is the splicing techniques.

The latter involves the continuation or joining the more than one method to form a complete time series. There are overlap, surrogate, interpolation and extrapolation. Overlaps involve comparability of two datasets over a time series.

The surrogate involves using a dataset that is indicative of changes or trends and 'fill in' data gaps. Interpolation on the other hand focuses on filling gaps within datasets by estimating trends between two or more data points, e.g. intermediate years where no data is available. Extrapolation data for the base year or the most recent year are not available. There can be forward or backward extrapolation.

It is essential to apply QA/QC principles in the working procedures since it will help increasing confidence and reliability of the reported information and outcomes.

4.3 Data Compilation

Data could be collected from various approaches and from different sources. This could be collected through the web, surveys, national statistics, etc. In order to easily collect data, certain mechanism could be put in place that is through gentleman's agreement, data supply and legal agreements.

There are various barriers of obtaining data. This may include lack of awareness of what data might be available, lack of structures of data sharing processes and sensitivity.

The above presentations are issues that were discussed: the availability of data, gaps and where data is lacking comprehensiveness. The above issues could be addressed through the splicing techniques where data has gaps. This does not mean that it has no purpose. It could be used and later be improved using various methods.

In collecting data consideration should be given to what is the use that will be given to the data. In certain cases data could be numeric, spatial non-electronic formats.

The quality of data is affected by time series. In some cases old data sets may not exist or may have poor quality. Date types are linked to international and national obligations that Ghana agrees to. It will determine the extent of data, format of data, timeframe and time series.

There are many different methods of data collection that are likely to involve a wide range of stakeholders. In fact data collection is the foundation upon which large scale on data management systems or framework is based. Therefore the quality of data that goes in directly affects the sustainability and robustness of data that is available for reporting, target tracking or support policy.

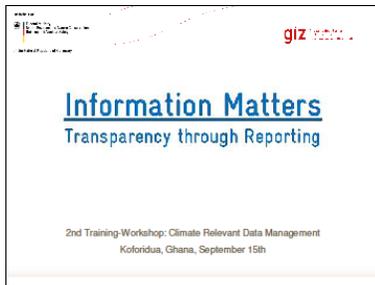
5. Recommendation and Way Forward

- Consultation and collaboration among MMDAs is needed after the workshop to help in management of quality data. The MESTI should assist by writing to MMDAs to release non-sensitive data without cost to the project.
- Revisit the recommendations in the Back to Back workshop on sustainable GHG Data Mgt. and Establishment of MRV Data sharing network in Ghana.
- Share the recommendations with climate change experts in Ghana.
- There should be formal engagement with the Ghana Statistical Service
- Formalize the GHG working groups in Ghana.
- Quarterly meetings should be organized to review the work assigned to GHG experts.

6. Annex

Annex 1: Presentation

(they will open as pdf with a double click on the picture)



9/18/2014



1

1

Information Matters
Transparency through Reporting

Management and Sharing of data

Training Workshop on Climate Relevant Data Management
17-18 September 2014

Ross Hunter and Gill Wilkins

Information Matters
Transparency through Reporting

Data Quality

Training Workshop on Climate Relevant Data Management
17-18 September 2014

Ross Hunter and Gill Wilkins

Information Matters
Transparency through Reporting

What will this session cover

- What are the key aspects?
- Overview of INPS architecture (Ghana EPA)
- The current reality
- Management of data
- Who is good practice?
- Working efficiently and learning from the mistakes of others
- Case studies
- Showing a range of possible approaches to the management of data

giz
RICARDO-AEA

Information Matters
Transparency through Reporting

Quality – defined by a set of principles that can be applied to a very wide range of issues

- Tracking emissions accurately
- Helping create effective climate policy
- Giving climate transcends the confidence to invest
- Keeping track of internal contributions and their delivery
- Quality
- Cost
- Time
- Effort
- Accuracy
- Taking the right mitigation actions
- Taking the right adaptation actions

giz
RICARDO-AEA

1

1

Information Matters
Transparency through Reporting

Data Compilation

Training Workshop on Climate Relevant Data Management
17-18 September 2014

Dr Ross Hunter and Gill Wilkins

Information Matters
Transparency through Reporting

Training Workshop on Climate Relevant Data Management

Create roadmap for implementation of climate relevant data management system

Capital View Hotel, Koforidua. 17 – 18 September, 2014

Gill Wilkins and Ross Hunter

Information Matters
Transparency through Reporting

Overview of this Presentation

giz
RICARDO-AEA

Information Matters
Transparency through Reporting

This presentation “sets the scene” for the breakout session

- We look back at the key lessons learnt
- We then look forward to the breakout session to help with defining a climate data management system that Ghana may choose to use
- OR
- a range of climate data management systems that might be used – either separate systems, or integrated

giz
RICARDO-AEA

1

1

TRAINING-WORKSHOP ON CLIMATE RELEVANT DATA MANAGEMENT

Koforidua, Capital View Hotel, Ghana 17-18 September 2014

Objectives:

- Participants to understand the role and importance of data in supporting national and international reporting requirements, target tracking and the development, implementation and monitoring of climate change policies.
- Participants to understand the key principles of good data management and sharing and why this is important. Also to have applied this to Ghana and sector-specific data issues and to understand how these may be addressed
- Participants to understand what is meant by a data system/framework, how data flows operate within this and gain an overview of the online system being developed in Ghana (the Integrated National Reporting System).
- Participants to be familiar with the principles and processes for ensuring data quality (TACCC and QA/QC) and how these should/can be or are applied to datasets that they work with or manage.
- Participants to understand what data they require to support their work, whether this is currently available and their role in ensuring that this happens.

AGENDA

Time	Activity / Topic	Discussant
Wednesday, 17 September 2014		
AM	<p>Ghana’s vision for a climate relevant data management system</p> <ul style="list-style-type: none"> • What is Ghana’s vision/ambition for climate relevant data management? What activities are under way, supported by other initiatives/programmes? • Overview of the Integrated National Reporting System (INRS) 	<ul style="list-style-type: none"> • EPA
AM	<p><i>Plenary Discussion: Why is data important and what is it used for?</i></p> <ul style="list-style-type: none"> • Facilitated discussion to identify how delegates use data or may want to use it and why this important • Delegates to think about the role of data in supporting international reporting requirements, tracking targets, 	<ul style="list-style-type: none"> • Whole group discussion facilitated by Ricardo-AEA

Time	Activity / Topic	Discussant
	developing, implementing and monitoring the effectiveness of policies <ul style="list-style-type: none"> • What would happen if data were not available or used? 	
AM	Management and Sharing of Data <ul style="list-style-type: none"> • Principles and methods for sharing data • Typical barriers to data access • Identify sensitive data sets and barriers to access/sharing of data • Current practices on management of sensitive data and considerations for improving this • Some solutions and best practice for enhancing sharing of and access to data – data supply agreements, enhancing organisation relationships, secure data flow systems etc. • Principles and practices for Managing data • Types and formats of data platforms • Overview of INRS architecture • Case study examples of data system/framework – UK National Atmospheric Emissions Inventory, South Africa M+E Framework, Kenya MRV+ System 	<ul style="list-style-type: none"> • Ricardo-AEA
PM	Breakout Session A: Mapping of data flows <ul style="list-style-type: none"> • In diagrammatic format outline key organisations and datasets and how data flows between these • Are there any key barriers to setting up these data flows? • Are these datasets and flows represented in the INRS? If not how could they be included? If so are the identified flows correct or do they need to be altered? • Report back and present diagrams to plenary, and discussion 	<ul style="list-style-type: none"> • Breakout groups
PM	Data Quality <ul style="list-style-type: none"> • Principles of data quality – TACCC • Achieving the highest possible standards of data quality – QA/QC 	<ul style="list-style-type: none"> • Ricardo-AEA

Time	Activity / Topic	Discussant
	<p>processes</p> <ul style="list-style-type: none"> • Addressing poor quality data – QA/QC plans • Coping with data gaps and changes 	
PM	<p><i>Breakout Session B: Applying QA/QC to Ghana datasets and systems</i></p> <ul style="list-style-type: none"> • Review two key datasets within your sector • Are there any QA/QC processes in place for these? If there are do you think these are good enough or do they need expanding/improving? If so in what way? • If no QA/QC processes are in place devise a basic QA/QC plan that can be applied. What processes would be applied, by who and when? • Report back to plenary to present QA/QC plans, and discussion 	<ul style="list-style-type: none"> • Breakout groups
Thursday, 18th September 2014		
AM	<p><i>Breakout Session C: Key data sharing and data quality Issues for Ghana</i></p> <ul style="list-style-type: none"> • Building upon discussion and information provided so far identify your 'top 2' data sharing issues and 'top 2' data quality issues for your sector • In no more than three brief bullet points identify key actions that are needed to address these and by whom 	<ul style="list-style-type: none"> • Breakout groups
	<p>Data Compilation</p> <ul style="list-style-type: none"> • Making the most of existing available data • Gathering new data • Combining multiple datasets into database – principles and processes • Case Study: Welsh Government Emissions Reduction Indicator Framework 	<ul style="list-style-type: none"> • Ricardo-AEA

Time	Activity / Topic	Discussant
	<ul style="list-style-type: none"> • Overview of how the INRS has been developed 	
AM	<p><i>Breakout Session D: Using and applying data</i></p> <ul style="list-style-type: none"> • What are the key things that you need data for in your sector? This should include supporting national and international reporting requirements, target tracking and policy development/implementation/tracking • In what format do you need this data and when? • Do you think this will be available from the INRS at the moment? If not what is required to resolve this (e.g. additional data made available to the INRS, additional data flows and organisations to be involved, data gathering) • What are the key steps to making this happen? 	<ul style="list-style-type: none"> • Breakout groups
PM	<p>Create roadmap for implementation of climate relevant data management system</p> <ul style="list-style-type: none"> • The bigger picture – whole data management system • Build on the INRS structure and illustrated examples of data frameworks and systems (UK National Atmospheric Emissions Inventory, South Africa M&E Framework, Kenya data management platform, Welsh Government Emission Reduction Indicator Framework) • Identify key actions to establish and maintain the climate relevant data management system • Agree who needs to undertake the activities • Plan a timeline for delivery 	<ul style="list-style-type: none"> • EPA
PM	<p><i>Breakout Session E: Roadmap and critical success factors</i></p> <ul style="list-style-type: none"> • Discuss key considerations for Ghana in the design of a data management system (success factors) • Identify key actions to establish and maintain the climate relevant 	<ul style="list-style-type: none"> • Breakout groups

Time	Activity / Topic	Discussant
	data management system <ul style="list-style-type: none"> • Who to undertake them and by when. <i>Plenary</i> <ul style="list-style-type: none"> • Presentations from each group on the roadmap • Plenary discussion 	<ul style="list-style-type: none"> • EPA/Moderator

Mr. Oppong-Boadi, EPA
Moderator

Registered offices
Bonn and Eschborn, Germany
T +49 228 44 60-0 (Bonn)
T +49 61 96 79-0 (Eschborn)

Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
T +49 61 96 79-0