SPREP PROE

Sustainable, transformative and resilient for a Blue Pacific

Inception report for the development of a data management and governance policy for the Vanuatu Meteorology and geohazards department

Prepared by CLIMsystems Ltd for SPREP & VMGD

Inception Report

for the Development

of a

Data Management and Governance Policy

for the

Vanuatu Meteorology and Geohazards Department

By

CLIMsystems Ltd

Project Name	Development of a Data Management and Governance Policy for the Vanuatu Meteorology and Geohazards Department
Prepared for	SPREP & VMGD

PREPARATION, REVIEW AND AUTHORISATION

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Acronyms

CISRD Climate Information Services for Resilient Development in Vanuatu

MOCC Ministry of Climate Change

VMGD Vanuatu Meteorological and Geohazard Department

SPREP Secretariat of the Pacific Environment Programme

1.0. Introduction

This inception report is prepared for the consultancy assignment titled "Development of a data management and governance policy for the Vanuatu Meteorology and GeoHazards Department". The assignment is part of the larger project "The Climate Information Services for Resilient Development in Vanuatu (CISRD) or Vanuatu Klaemet Infomesen blong redy, adapt mo protekt (Van-KIRAP)", a full-size Green Climate Fund project implemented through the Secretariat of the Pacific Environment Programme (SPREP)

This inception report is developed with the ultimate purpose of acting as a roadmap/guide for the development of the data management and governance policy. It constitutes and details the main methodological approaches that will be employed to achieve the scope of the assignment and its deliverables. Furthermore, the report highlights the assignment's main components, activities, and reporting frameworks. It sequentially details core activities that will be undertaken for the completion of the assignment. Key aspects that are described in this report include:

- The consultants' understanding and appreciation of the scope of work as detailed in the terms of reference.
- Methodological approaches to achieve the assignment's objectives and the expected outputs.
- The detailed work plan and schedule to effectively execute the assignment with clearly defined outputs and deliverables.
- Foreseeable challenges and the proposed mitigation measures, and
- An indication of activities undertaken to-date.

1.1. Background to the project

Climate change is at an advanced stage in the Pacific region, as evident from the increased frequency and intensity of climatic-related events such as hurricanes, tropical depressions, extreme precipitation and flooding, sea level rise and drought episodes (SPREP, 2016; MOCC, 2020). Additionally, in a seismically and volcanically active region, Vanuatu is highly exposed to geologic hazards, mainly volcanic eruptions, earthquakes, tsunamis, and landslides. Vanuatu is thus amid a combination of climatic and geological hazards.

Vanuatu Meteorological and Geohazard Department (VMGD) was established in 1989 under the Vanuatu Meteorological Service Act to address the generation of data for decision-making and planning around these climatic and geological hazards. Its core activities include climate data collection, database management, seasonal forecasting, technical analyses, and climate change prediction for decision-making and planning. An assessment by SPREP indicates that the VMGD uses state-of-the-art equipment, with the Vanuatu rainfall network providing

excellent coverage (SPREP, 2016). Furthermore, data quality is regularly checked, and databases are developed and well-managed under the CliDEsc software management systems.

The presence of climate change and geohazard events coupled with global economic challenges has spurred a rise in demand for climate and geohazard data to enhance the ability of decision-makers and planners to develop robust plans to adapt to these challenges. This demand for data is rising at an unprecedented rate due to the associated socio-economic benefits of using climate and geohazards data to inform decisions better and planning across economic and ecological sectors.

However, the rise in the demand for climatic and geohazard data to model and enhance planning poses the risks of producing low-quality data to keep up with demand. The users also face the danger of applying unauthorised data to address climate change risks and opportunities. The risk of users using unverified and unvalidated data is amplified by the proliferation of data on the internet, which can be of low quality, wrong orapplied inappropriately.

Lastly, increased demand for climate and geoscience data will have cost implications for these climate services. Systems **and** regulations must be implemented to safeguard data quality and regulate the use of climate and geohazard data. Fundamentally, the rise in the demand for climate and geological risk data will have economic costs, which calls for cost-recovery measures. Price is critical for data quality, as high-quality data can be expensive. There is a need to implement cost-recovery measures to invest in high-quality data processes.

Consequently, to address the potential challenges of data quality, regulation of data use, and cost implication, there is a need to develop a legal framework in the form of policy that will regulate data use and enhance quality for improved decision-making and planning by all stakeholders. The need for the development of a data management and governance policy is in response to priorities identified in the Vanuatu Framework for Climate Services (2016) and the VMGD Strategic Development Plan 2014–2023, developed through a national consultation and design process.

It is thus against this backdrop that this inception report is developed for data management and governance development.

2.0. The objective of the assignment

The overall objective of the assignment is to develop data management and governance for VMGD.

2.1. Scope of the assignment

The scope of the assignment, as defined by the specific objectives, are:

- Review the current processes and institutional arrangements for using weather, climate, and geoscience data, and develop options and recommendations for VMGD consideration.
- Develop a new VMGD data management and governance policy.
- Review the current weather, climate and geoscience data cost-recovery structure, and develop options and recommendations for VMGD consideration.
- Work with VMGD to internalise the new policy within the VMGD and external stakeholders through orientation and training.

Subsequently, the above specific objectives can be divided into five thematic areas, as follows:

- Situational analysis on the process and institutional arrangements on climate and geoscience data utilisation and recommendation.
- Development of a data management and governance policy.
- Development of cost-recovery structure model for climate and geoscience data.
- Development of data management and governance policy implementation plan.
- Capacity building for the stakeholders to implement the developed policy.

The method and approaches to achieve the thematic areas and their deliverables is presented below.

3.0. Methods and approaches

Various methods will be employed to achieve the assignment's scope and develop a comprehensive and robust data management and governance policy. These methods include 1) desk reviews, 2) consultation and validation workshops, 3) cost analysis, 4) training, and 5) report writing.

These methods are discussed under the thematic areas of the assignment to demonstrate how each thematic area will be achieved. Activities and expected outputs are also highlighted.

3.1. Inception report phase

The inception report phase is the first thematic area of the assignment and the most critical phase, as it indicates that the work has commenced. This stage involves developing the

inception report with detailed timelines and preliminary annotated data management and governance policy structure outline. Thus, at this phase, an inception report detailing methods and work plan is produced and submitted to the client SPREP and VMGD for approval. Furthermore, this stage involves an inception workshop where a common understanding between the consultants and the client is reached on the scope of the assignment.

Table 1 shows the project phases, including the mobilisation and inception phase activities and timelines.

Table 1: Planned activities for the inception phase

No	Activity	Current status	Due date
1	Contract signed	Completed	13 June 2023
2	Development of inception report	Completed	16 June 2023
3	Submission of draft inception report	Completed	27 June 2023
4	Final inception report submission	Pending	1 July 2023

Expected Outputs:

An inception report detailing methodologies and timelines and envisaged challenges

3.2. Situational analysis of the process and institutional arrangements on climate and geoscience data utilisation and recommendations

The situational analysis is the entry point for the development of a data management and governance policy. It involves situational analysis of the current climate, geoscience data management, governance processes, and procedures. It will involve institutional arrangements that facilitate collecting, analysing, distributing, and exchanging climate and geoscience data. Furthermore, this thematic area will apply legal frameworks that are in place to regulate the use of the data. Based on the situational analysis of current arrangements, recommendations will be made which will contribute to the development of the policy. A situational analysis will involve desk review and consultation with stakeholders.

Desk/literature review is the overarching method that will be employed to achieve the objective of this thematic area. This method will involve identifying and collecting all the relevant documents on current processes and institutional arrangements for the storage and application of weather, climate and geoscience data. All relevant existing documents that guide the data management and sharing protocols will be identified and reviewed to gain an understanding of the institutions involved in data collection, processing, storage and dissemination of the data to the end users. Secondly, through desk review, an existing

arrangement of the processes involved in data acquisition, sharing and exchange will be evaluated, and the institutions involved.

Furthermore, the legal framework that governs the use of the country's weather, climate and geoscience data will be evaluated. This will involve reviewing acts, policies, and strategies the government has in place to facilitate the use and exchange of information and data. Moreover, desk review will be extended to the international best practices regarding best practices on data management, exchange and sharing. Furthermore, the climate data management practices recommended by governing bodies, such as the WMO Resolution 40 will be reviewed to ensure the recommendations are aligned.

The existing climate database (CliDe) operations and procedures will be reviewed to determine the extent to which data management and governance principles and practices are adhered to.

Some of the documents that will be reviewed include the following:

- Vanuatu Framework for Climate Services (VFCS) (2016).
- VMGD Strategic Development Plan 2014–2023.
- Meteorology, Geological Hazards and Climate change Act of 2016
- Vanuatu Meteorological Service Act.
- Vanuatu's Climate Change and Disaster Risk Reduction Policy 2016 to 2030.
- Vanuatu National Communications to UNFCCC.
- Climate service information systems reports.
- National Geospatial Data Policy.
- Vanuatu Meteorology and Geo-Hazards Department- Country report : Reporting on National Priority Actions of the Pacific Islands Meteorological Strategy (PIMS).
- WMO Resolution 40

Consultation with key stakeholders is another method that will be employed for situational analyses on the processes, procedures and institutional arrangements on climate and geoscience data management and governance. The starting point will be stakeholder mapping. This activity will involve identifying all possible stakeholders engaged in generating the climate and geoscience data, its distribution and utilisation and regulations of its uses. This will be done in association with the VMGD and SPREP. The list of all stakeholders (institutions and the lead personnel) will be compiled and consulted.

The consultation will be based on the guiding questionnaire. The questionnaire will cover all the aspects of the thematic areas as follows:

- Current institutional arrangement in data management and exchange.

- Roles and responsibilities of the institutions identified.
- Current data management and governance processes and procedures are in place within each institution.
- Challenges of current data management and governance practices.
- Best practices in data management and governance.
- Recommended optimal institutional arrangements.
- Recommended strategic activities for improving data sharing and exchange, and storage.

Following the approval and finalisation of the questionnaire with the technical reference group, the consultant will conduct interviews/consultations with the stakeholders based on the agreed questionnaire.

Table 2 shows the planned activities, deliverables and timelines for situational analysis on data management and governance and institutional arrangements for climate and geoscience data.

Table 2: Planned activities for situational analysis on processes and institutional arrangements for data

No	Activity	Current status	Due date
1	Development of a questionnaire for consultation	Completed	27 June 2023
2	Desk review for relevant documents on current science and geoscience data management and governance, including institutional arrangements	On-going	5 July 2023
3	Stakeholder mapping	Pending	10 July 2023
4	Stakeholder consultations	Pending	24-28 July 2023
5	Report write-up	Pending	4 July 2023
6	Submission of the situational analysis on data management and governance	Pending	4 August 2023

Expected Outputs

Literature review and stakeholders report.

Expected roles of SPREP and VMGD

It is envisaged that VDGD will assist in identifying the stakeholders and organising consultation meetings with them.

3.3. Develop a new VMGD data management and governance policy

This is the overarching objective of the assignment, and it calls for the development of a data management and governance policy. Data management and governance are generally used interchangeably despite being markedly different. Data management refers typically to organising, storing, and using data for planning and decision-making. On the one hand, data governance is defining and implementing policies, strategies and procedures on data management and utilisation. Thus, it entails regulations on the management and use of data. To develop a comprehensive data management and governance policy, the following methods and activities will be implemented.

Desk/literature review will be undertaken to identify the common aspects that are included in a policy. Based on the desk review, the annotated table of contents has been drafted (annex 1), which will guide the data management and governance policy. Consequently, an intense desk review will be undertaken to determine international best practices for developing a policy. Based on the drafted annotated table of contents, desk review will be used to populate some of the aspects of the policy.

Furthermore, a consultation will be undertaken with the stakeholders that would have been identified under thematic 1 (Review the current arrangements, processes, and procedures for the use of weather, climate and geoscience data). The consultation will be on developing the various aspects of the policy, such as the development of the objectives, policy statements, policy vision, and strategic activities for implementation, amongst others. The consultation will be based on structured questions.

Table 3 shows the envisaged activities, deliverables and timelines for developing data management and governance policy.

Table 3: Planned activities for development of data management and governance policy

No	Activity	Current status	Due date
1	Development of a questionnaire for consultation	Completed	27 June 2023
2	Desk review for relevant documents on science and geoscience data management and governance, including institutional arrangements	Pending	10 July 2023
3	Stakeholder consultation	Pending	24-28 July 2023
4	Report write-up	Pending	18 August 2023
5	Submission of the draft data management and governance policy	Pending	18 August 2023
6	Submission of the final data management and governance policy		21 August 2023

Expected output.

- Comprehensive Data Management and Governance Policy

3.4. Development of cost-recovery structure model for climate and geoscience data

This thematic area will involve the development of a data cost-recovery model for the VMGD, which will be used to mobilise resources to finance its climate services of generating data. Cost-recovery is simply recouping recovering the full or partial cost of data management, and it involves charging the data users for accessing the data. It can include both the fixed and operational costs of data management. Various models can be implemented for data cost-recovery, such as price differentiation in the "Ramsey model of pricing (Chandras et al., 2009). In this model, users with high affordability levels are assigned a larger share of the costs than groups with low affordability. Other cost-recovery models include a partial 'cost-recovery' model. This is where the marginal and a variable fraction of fixed costs are recouped from end-users (Chandras et al., 2009).

This starting point in developing the data cost-recovery model will be a situational analysis of current initiatives. The assessment will determine the existence of such an initiative in Vanuatu within the government departments and the Pacific Island. This will be followed by assessing the feasibility of operationalising the model. Thus, achieving this objective will involve cost analysis of the weather, climate and geoscience data, demand for the data, and willingness to pay by the users. The following methods will be employed in developing a data cost-recovery model for the VMGD.

Consultation will be undertaken with the VMGD and the data users. These discussions will determine the feasibility of establishing a data cost-recovery model. This will involve assessing the demand for the data, willingness to pay for the data, and the affordability of the users. These are some of the factors that determine the feasibility of operationalising a data cost-recovery model. Therefore, a questionnaire will be developed, which will be used to collect the parameters that determine the feasibility of establishing a data cost-recovery model. Furthermore, the data provider, VMGD will be consulted on the cost of data management from collection, analyses and storage.

Based on the feedback from the consultation on the demand, willingness-to-pay, and cost of data management, a data cost analysis will be undertaken by determining the total cost of providing data to the end users. This will be done based on the total fixed and variable cost of data provision. Ultimately, the cost per unit (Gb, Mb) will be estimated and be used to develop the data cost-recovery model.

Furthermore, extensive literature review will be undertaken to inform the design of the data recovery model. Case studies on data cost-recovery model will be analysed, as their challenges, success and modalities to improve their success.

Table 4 shows the envisaged activities and their timelines for developing the the data cost-recovery model.

Table 4: Planned activities for the development of a data cost-recovery model

No	Activity	Current status	Due date
1	Development of a questionnaire for consultation	completed	27 June 2023
2	Desk review for data cost-recovery models	Pending	21 July 2023
3	Stakeholder consultation	Pending	24-28 July 2023
4	Report write-up	Pending	21 August 2023
5	Submission of an options paper on potential future cost-recovery options for the use of weather, climate and geoscience data	Pending	21 August 2023

The output

- An options paper on potential future cost-recovery options for the use of weather, climate and geosciences data.

3.5. Delivery of user guidelines and data management procedures

Users' guidelines and data management procedure is a document that operationalises the data management and governance policy. The user guidelines and procedures will thus detail the activities to guide the stakeholders to implement the data management and governance policy.

Table 5 shows the envisaged activities and their timelines for drafting guidelines and data management procedures.

Table 5: Planned activities for the development of guidelines and data management procedures

No	Activity	Current status	Due date
1	Drafting the guidelines and data management procedures	Pending	27 August 2023
2	Submission of the guideline and data management procedures	Pending	27 August 2023

The output

- Drafted guidelines and data management procedures.

3.6. Training of the VMGD personnel and stakeholders in the policy and implementation

This thematic area will involve training the VMGD personnel and the selected stakeholders on the policy and its implementation plan. It will entail the development of the training material in the form of notes, highlighting policy statements, strategic activities for implementation to achieve the policy objectives, institutional arrangements, data management and governance principles and procedures. Based on the lecture notes, a powerpoint presentation will be developed to deliver the lecturer sessions. The lecture sessions will be highly interactive. It is envisaged that the training will take a week depending on the material produced.

Table 6 shows the envisaged activities and their timelines for drafting guidelines and data management procedures.

Table 6: Planned activities for the development of guidelines and data management procedures

No	Activity	Current status	Due date
1	Development of the training material	Pending	27 August 2023
2	Training the VMGD and stakeholders	Pending	30 August 2023
3	Submission of the training report	Pending	30 August 2023

The output

- Training materials.
- Training reports detailing trainees evaluation, recommendations, names of the attendees, etc.

4.0. Envisaged challenges and mitigation

Undertaking the various activities of the assignment, mainly consultation with the stakeholders and holding workshops, could face some challenges. The major challenge could emanate from Covid 19 regarding uncertainties regarding future outbreaks and travel restrictions. Consequently, this presents a significant risk in completing the assignment. Table 6 below depicts the possible risks, potential impact on the project, their significance and possible mitigation.

Table 7: Challenges and proposed mitigation measures

Challenges	Impact on the project	Significance	Proposed mitigation
Consultant unable to conduct face-to-face consultation with the stakeholders due to travel restriction	Delay the project completion	High	Develop a questionnaire and send it to the stakeholders
Non-responsiveness of the stakeholders to the sent questionnaire	Delay the project completion time	High	Follow up with the stakeholder through telephone and other communication means
Stakeholders are not able to complete the forms due to a lack of internet access	Delay the completion of the project	High	Wait until the lockdown restriction is easy
Unavailability of the stakeholders for consultation due to commitments	Delay the completion of the project	Medium	Circulate the meetings and consultations schedule on time

5.0. Project management

CLIMsystems aims to employ best project management practices to guarantee the successful delivery of the assignment deliverables through reports, in line with the client's expectations. The following project governance framework will be utilised:

I. Project Inception report

The key objective of the inception report is to reach cohesion and agreement between the client and CLIMsystems and have a common understanding of the scope of work and deliverables. The areas of commitment documented in the inception report include the methodological approaches, project deliverables, and work plan.

II. Project Management (PM) Plan

Following the inception report, CLIMsystems will be in place to execute the assignment following the project plan. During this phase, milestones in the inception report are further distilled into a detailed work plan to allow for better time management and accountability and establish a schedule baseline against which progress shall be evaluated.

III. Quality assurance

To ensure quality control, the consultants will select experienced professionals not directly involved in the initial review process as and when necessary to act as a technical review group. The consultants will work closely with the client (SPREP and VMGD) to ensure close

assignment monitoring. Furthermore, weekly virtual meetings will be held with the client to update.

IV. Project team

Sennye Masike and Peter Urich undertake the project as the project manager.

6.0. Progress to-date

Upon signing the contract, a project mobilisation initiative has been undertaken. This included the inception report write-up and commencement of identification of the relevant documents for review. Furthermore, the proposed outline for the data management and governance policy has been drafted together with questionnaire to guide consultations with stakeholders.

An inception report has been prepared, which gives a strong indication that the project has commenced. The inception report was prepared after meticulously reviewing the Terms of Reference.

7.0. Conclusions

This inception report has been prepared to develop a data management and governance policy for VGMD. It is designed and created with the ultimate vision of enhancing the ability of decision-makers, development partners, communities and individuals across five target sectors (agriculture, fisheries, infrastructure, tourism and water) to plan for and respond to the long- and short-term impacts of climate variability and change.

This inception report draws attention to the consultants' understanding of the scope of work, methods and approaches that will be employed to execute the assignment's objectives and deliverables successfully. Preparation of the inception report was guided by the assignment's scope of work as reflected in the terms of reference. Achieving all the deliverables might go beyond the assignment contract period due to unforeseen events and the challenges posed by events outside the consultant's control. Preparation of the inception report and collection of relevant documents indicates to the client that the assignment has already commenced.

8.0. Reference

SPREP (2016) Vanuatu Framework for Climate Services.
https://library.sprep.org/content/vanuatu-framework-climate-services

SPREP (2014) VMGD Strategic Development Plan 2014 - 2023
https://pacificdata.org/data/tr/dataset/44051b86-9b0f-4532-b722-609618b1ed2a/resource/39ec6205-783b-4fd3-895e-83f2a264c076?activity_id=f28c698b-15af-448f-b45a-5348403b9850

Chandras, C., Weaver, T., Zouberakis, M., Smedley, D., Schughart, K., Rosenthal, N., Hancock, M.J., Kollias, K., Schofield, N. P., and Aidinis V (2009) Models for financial sustainability of biological databases and resources. Database, Vol. 2009, Article ID bap017, doi:10.1093/database/bap017

MOCC (2020). The Republic of Vanuatu Third National Communication to the The United Nations Framework Convention on Climate Change. Ministry of Climate Change Government of Vanuatu Port Vila, Vanuatu

Annex 1: annotated outline of the data management and governance policy

1.0. Introduction
2.0. Background
3.0. Policy objectives
    3.1. Vision
    3.2. Mission
    3.3. Objectives
4.0. Legal and policy framework
5.0. Guiding principles
    5.1. data management
    5.2. data governance
6.0. Data protection, classification and sharing models
7.0. Policy statements
8.0. Strategic activities to achieve policy statement
9.0. Institutional arrangements
10.0. Cross cutting issues
11.0. Financing and resource mobilisation
12.0. Monitoring and evaluation
13.0. Implementation plan

Annex 2: Questionnaire for consultation with stakeholders on the development of the Data management and governance policy

This questionnaire is designed for the development of a data management and governance policy for the Vanuatu Meteorology and Geohazards Department (VMGD). Consultation is a critical process that is essential for the development of a national policy. It aims to gather stakeholder input on various policy components to ensure ownership and buy-in during implementation. Consequently, the stakeholders' inputs will result in the policy's development. The view and opinions of the stakeholders consulted will be treated with the utmost confidentiality.

1. Name of the organisation/department_____
2. Name of the representative_____
3. Contact details of the representative_____
4. Kindly state your organisation mandate_____
   _____
5. Kindly describe what the vision of the policy should entail/include _____
   _____
6. Kindly indicate some of the aspects of data management and governance that the objectives of the policy should capture _____
   _____
7. What guiding principles of data management should be emphasised_____
   _____
8. What guiding principles of data governance policy should be emphasised_____
   _____
   _____
9. Kindly list the strategic activities that should be implemented to achieve the policy objectives and statements_____
   _____
   _____
10. Kindly indicate the institutions that should be involved in the implementation of the policy
    _____
    _____
11. Indicate the institutional arrangements for the policy_____
    _____
    _____
12. What should be the roles of these institutions_____
    _____
13. What are some of the ways in which resources can be mobilised to implement and operationalise the policy_____
    _____
14. Kindly list some of the existing legal frameworks that would support the policy_____

_____
_____

Kindly indicate how the policy should be monitored and evaluated over time and the reporting_____
_____

Annex 3: Questionnaire for consultation with stakeholders on the situational analysis processes and institutional arrangement on climate change geoscience data management and governance

This questionnaire is designed for the development of a data management and governance policy for the Vanuatu Meteorology and Geohazards Department (VMGD). It is aimed at gathering information on the current practises regarding climate and geoscience data management and governance. Furthermore, the questionnaire aims at gathering information on costs incurred in data management by VMGD, whether there are cost-recovery measures in places and the appropriate/suitable cost-recovery model that could be implemented. It is divided into sections 1 and 2. Section 1 for the data owner (VMGD) and section 2 is for the data users. The information gathered through this questionnaire will contribute to the development of the data management and governance policy. The information gathered will be treated with the utmost confidentiality.

15. Name of the organisation/department_____
16. Name of the representative_____
17. Contact details of the representative_____
18. Kindly state your organisation mandate_____
    _____
19. Kindly state the data management procedures and protocols that are in place on the following aspects:
    a. Data collection_____
    b. Data quality_____
       _____
    c. Data storage_____
       _____
    d. Data management plan/system _____
       _____
    e. Data policy_____
       _____
    f. Data exchange with digital services_____
       _____
    g. Data ownership_____
       _____
    h. Procedures and guidelines in place to avoid misuse and unauthorised use of the data___
    _____
    i. Defined structure within the organisation in terms of data stewardship_____
       _____
20. Do you have data management strategies in place _____
    _____
21. Do you have a data storage platform(s) Yes___/No_____

22. If yes, please explain the operational procedures for the data storage platform_____
_____
_____
23. Do you adhere to any international standards, classifications, and methods (including peer agreed) guiding data production_____
_____
24. Kindly explain procedures and processes of data usability (data accessibility, dissemination, Metadata, open data platforms at sectors)_____
_____
25. Kindly state the current arrangement for data exchange_____
_____
26. Kindly state the institutional arrangement in place for data for data generation and exchange / dissemination_____
_____
_____
27. What are the current challenges that your organisation faces regarding data management
_____
_____
28. What are some of the recommendations to overcome the challenges_____
_____
29. Do you charge for the data that you generate Yes_____/No_____
30. If Yes, how much do you charge per unit_____
31. Kindly itemise the expenses associated with data management from collection to storage_____
_____
32. Can you estimate the cost of these activities and equipment_____
_____
_____
33. If you were to recover the cost of data that your department incurs, what would be the best model, e.g. partial cost-recovery, full cost-recovery, price differentiation _____
_____

Questionnaire for data users

1. Name of the organisation/department_____
2. Name of the representative_____
3. Contact details of the representative_____
4. Kindly state your organisation mandate_____
   _____
5. Do you obtain data from VMGD Yes_____/No_____
6. What do you use the data for_____
   _____
7. Kindly indicate the following arrangement
   a. arrangement in place for data acquisition_____
      _____
   b. arrangement in place for data exchanges_____
      _____
   c. procedures in place to ensure that the data you are acquiring is of good quality standards_____
      _____
   d. arrangements in place to safeguard the data and avoid sharing with third parties_____
      _____
   e. institutional arrangements in place to facilitate data exchange_____
      _____
   f. policy in place that regulates how you use the data acquired_____
      _____
   g. internal procedures in handling third party data_____
      _____
8. Kindly indicate the easiness of acquiring data from VMGD_____
   _____
9. Kindly explain procedures and processes of data usability (data accessibility, dissemination, Metadata, open data platforms at sectors)_____
   _____
10. What is the level of confidence in the data that you obtain form VMGD_____
    _____
11. What are the main challenges that you face in data acquisition from the data owners_____
    _____
12. What are some of the recommendations that could solve the stated challenges_____
    _____
13. What role does your organisation have in ensuring that the data obtained is of good quality and meets your standards_____
    _____
14. Do you pay for the data that you get from the VMGD Yes_____/No_____
15. If yes, how much_____

16. If No, would you be willing to pay for the data _____
17. Are there instances, where your organisation has paid for data from other than VMGD Yes___/No_____
18. If yes, how much did you pay for the data_____