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# ENVIRONMENT AND SOCIAL MANAGEMENT PLAN

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FP035: Climate Information Services for Resilient Development project in Vanuatu/ Vanuatu Klaemet Infomesen blong Redy, Adapt mo Protekt (VAN-KIRAP) project

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SPREP

Vanuatu

# VAN-KIRAP: Environmental and Social Management Plan

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# VAN-KIRAP: Environmental and Social Management Plan

## 1. Introduction

The VAN-KIRAP project is intended to build the technical capacity in Vanuatu to (i) harness and manage all relevant climate data; (ii) develop and deliver practical climate information services (CIS) tools and resources at all levels of society; (iii) support enhanced coordination and dissemination of tailored climate-related information to a wide range of potentially vulnerable stakeholders; (iv) enhance and modernise Vanuatu's CIS information and technology infrastructure; and (v) support the application of relevant CIS through real-time development processes and case studies in 5 sectors, for more resilient outcomes. The sectors covered are water, agriculture, infrastructure, tourism and fisheries.

The main components of the project are:

1. Institutional strengthening and capacity development
2. Climate observations and monitoring
3. Develop information technology (IT) systems to support CIS data capture, storage and delivery
4. Conduct targeted research, modelling and prediction for Vanuatu
5. Develop a user interface platform that supports CIS data interpretation and application
6. Project management and development

The total project cost is US\$26.635 million, of which GCF provides a grant of US\$22.953 million, and the project duration is 4 years. A revised work plan for 2019-2022 is under preparation and this Environmental and Social Management Plan (ESMP) is based on the yet to be approved draft and is therefore subject to amendment.

At project approval, the project was categorised as C, i.e. with minimal environmental and social implications. During implementation, however, some specific environmental and social issues may need extra attention. This environmental and social management plan (ESMP) deals with these details that may emerge during implementation<sup>1</sup>. A separate Gender Action Plan has been drafted and for the sake of completeness the main aspects of that plan are included here. The section on monitoring and evaluation also needs to be reflected in the revised logframe and any budget implications need to be incorporated in the revised budget.

GCF requires the ESMP to “be designed such that the appropriate measures to address adverse environmental and social risks and impacts including health and safety, as well as opportunities to pursue and enhance positive environmental and social outcomes, are adequately described, roles defined, and the corresponding timelines and resources identified”. In addition, “the ESMP will be integrated into the overall planning, design, resourcing, and execution of the GCF-financed activities”.

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<sup>1</sup> GCF defines ESMP as “a document that contains a list and description of measures that have been identified for avoiding adverse environmental and social impacts, including, where appropriate transboundary risks and impacts, or minimising them to acceptable levels, or to mitigate and compensate them and [is] usually the main output of the [environmental and social impact assessment] ESIA process”.

International Finance Corporation Performance Standards on Environmental and Social Sustainability have been adopted by GCF as its interim environmental and social standards (<http://www.ifc.org/performancestandards>). Where national standards are not sufficient, or absent, the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) should be used.

Accredited entity guidance is provided by the Secretariat of the Pacific Regional Environment Programme (SPREP) Environmental and Social Management System (ESMS)<sup>2</sup>. SPREP requires an ESMP to be developed for all categories of project (A, B or C). The level of detail within the ESMP, however, will vary according to environmental and social risk and impact. The expected contents of the ESMP should cover:

- A summary of the overall approach to environmental and social risk and impact management;
- Detail of all identified environmental and social risks and impacts;
- Detail of mitigation measures which will be applied for each risk;
- Roles and responsibilities for management of risks and impacts;
- Monitoring and evaluation framework;
- Reporting requirements;
- Detail of the grievance mechanism; and
- Relevant annexes.

National guidance is provided by the Vanuatu National Environment Policy and Implementation Plan (2016-2030) and the National Waste Management, Pollution Control Strategy and Implementation Plan (2016-2020), and the National Sustainable Development Plan (2016-2030). Regional guidance is provided by the Pacific Regional Waste and Pollution Management Strategy 2016–2025 (Cleaner Pacific Strategy 2025) and the Pacific – European Union Waste Management Programme (PacWaste Plus), and the Pacific Leaders Gender Equality Declaration, among others. Support can also be expected from the Japanese International Cooperation Agency (JICA) Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries programme (JPRISM).

The following sections follow the phased sequencing of project activities, cutting across all components. The possible environmental and social implications of those activities are first identified, followed by practical mitigation measures. In general, the mitigation measures are the joint responsibility of the SPREP and Vanuatu Meteorological and Geohazard Department (VMGD) project management units (PMU), unless otherwise indicated. The revised work plan generally indicates when the mitigation measures need to be initiated.

## **2. Equipment Procurement**

### **2.1 Environmental Implications**

Care needs to be taken with imported equipment specifications. Generally, for equipment that is exposed to weather and other local conditions in the island environment, it should be climate proof,

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<sup>2</sup> [https://www.sprep.org/attachments/Publications/Corporate\\_Documents/SPREP-E&SManagementSystem-14Nov16.pdf](https://www.sprep.org/attachments/Publications/Corporate_Documents/SPREP-E&SManagementSystem-14Nov16.pdf)

robust, repairable, recyclable, and environmentally sound. While normal procurement rules must be followed<sup>3</sup>, sound specifications can ensure that the project does not end up with the cheapest available equipment that breaks down quickly, cannot be repaired, and ends up being discarded on the nearest landfill. As there is a significant quantity of quite sophisticated equipment being procured for this project (Table 1), environmental considerations should be built into all specifications.

**Table 1 Equipment Procurement Plan**

Procurement Item	Estimated Cost (US\$)
Sector case study equipment*	200,000
Community climate centres*	200,000
IT platform equipment	190,000
CLEWS back-up equipment	50,000
LIDAR and GPS	310,000
Stream monitoring equipment	57,000
Ocean monitoring equipment	353,301
Automated Weather Station and Automated Rain Gauges	404,320
Doppler radar	2,530,000
Laptops for VMGD and SPREP PMU	18,000
<b>Total</b>	<b>4,312,621</b>

*\*Note: The sector case studies and Climate Centres are unlikely to procure significant amounts of equipment, and these figures are likely to be overestimates.*

As this equipment will be shipped or flown from overseas, there will be considerable packaging involved, possibly in wooden crates, with plastic and/or cardboard wrapping, inside a shipping container. While the wooden crates may be useful locally, the plastic and cardboard wrapping is potentially recyclable. As there is no recycling capacity for most of this material in Vanuatu, it is likely to be burned in the open, with possible health implications for those in the vicinity, or just dumped in the nearest landfill.

## **2.2 Social Implications**

Although it is often easiest to arrange direct purchases from overseas suppliers, preference should be given to local equipment suppliers, wherever possible. Not only does this help the local economy, but repairs and maintenance may be more convenient. Local project staff should be trained in “green” procurement practices. There may be some misalignment with government procurement rules, which require “best value for money” and may need to be negotiated to demonstrate best value.

## **2.3 Mitigation Measures**

As indicated above, all equipment specifications should include environmental considerations, as well as issues of longevity, repairability, and weather resistance. For example, ocean buoys should not have fragile plastic components, like tethering points, that are likely to break off and add to the existing

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<sup>3</sup> “A Government contract which is funded by a foreign donor or another organisation is subject to the provisions of this Act or any regulations made under this or any other Act, unless it is inconsistent with any requirements of the funding agency” – Government Contracts and Tenders (Amendment) Act No. 40 of 2013.

problem of marine litter. Battery operated electronic equipment should allow battery replacement rather than having sealed battery compartments that require the whole item to be replaced.

The Government of Vanuatu has recently released the National Waste Management and Pollution Control Strategy (NWMPCS) (2016-2020), so the project should adopt the precautionary principle and not add to Vanuatu's existing waste management problems. In February 2018, under the National Waste Management Act 2014, the Government gazetted new regulations in relation to waste management (Waste Management Regulations Order No. 15 of 2018) which prohibit the manufacture and sale of disposable containers, single use plastic bags, and plastic straws. This heightened attention to plastic waste should also extend to packaging of imported equipment. Significant fines may be imposed for anybody littering the natural environment, with packaging specifically mentioned in the regulation. Waste incineration is also restricted to operators with a valid private waste operator's licence.

The EHS Guidelines note that "if waste materials are still generated after the implementation of feasible waste prevention, reduction, reuse, recovery and recycling measures, waste materials should be treated and disposed of and all measures should be taken to avoid potential impacts to human health and the environment". SPREP's ESMS states that "SPREP will not support any projects which result in significant or unjustified waste generation". Furthermore, "where avoidance is not possible, SPREP expects that waste generation will be reduced, and that waste will be recovered and re-used in a manner safe for human health and the environment".

An alternative, albeit potentially costly, is to require the overseas suppliers to take back their packaging and either recycle or sustainably dispose of it. This requirement can be included in the equipment specification. As containers often return from Vanuatu empty, shipping costs may not be too expensive.

### **3. Installation**

#### **3.1 Environmental Implications**

The project will install automatic weather stations and automatic rain gauges, a radar installation, stream gauges, and whatever equipment is needed for the 5 sector case studies (if any), among others. While the installation phase is not expected to have major environmental implications, some minor impacts may be expected, as follows.

Although local procurement of materials is preferred in remote locations, such as locally sourced fence poles and rock, sand and gravel for concrete walls (e.g. for river gauging stations), care needs to be taken that these materials come from sustainable sources and not illegal logging or quarrying sites.

Site access can also cause minor environmental damage in remote areas, especially if a new track or road needs to be built to obtain access to a river gauging site or to a microwave transmission tower. When fencing around project sites for security reasons staff need to be aware of blocking any local access.

Minor vegetation clearance, for example to keep weather stations or rain gauges open and not encroached on by tree canopies, should be undertaken to the minimum level necessary. During operations, local labour can be employed to keep these sites open, for example by trimming overhanging branches.

Any earth disturbance, such as placing cables underground, can cause soil erosion and/or stream sedimentation, especially on steep slopes. Consideration needs to be given to downstream users of streams (possibly for drinking water) who may be affected by poor water quality.

In the marine environment, anchoring vessels to install monitoring buoys may damage coral reefs and/or disrupt local fishing practices. Care will need to be given to avoid permanent fish traps or fishing platforms.

### **3.2 Social Implications**

Entry into remote villages for installation of equipment will need to follow local traditional greetings with the village chief and elders, possibly with a kava ceremony or other local “kustom” such as small gifts. Each province in the project will have slightly different traditional requirements and these local customs need to be acknowledged and honoured.

Local employment in construction and installation activities is preferred, especially where unskilled labour is required. This not only provides cash compensation but also provides an opportunity to explain to local villagers what the equipment is intended to do and how it will help their future well-being and survival.

For marine operations, such as installing buoys or arranging access to weather stations via the sea, reef protection and the customary rights of local fishers need to be considered. Local fishers may need to be advised of exclusion zones around the buoys and discouraged from tying up boats or canoes to the buoys.

### **3.3 Mitigation measures**

The EHS Guidelines note that “hazardous waste materials are frequently generated in small quantities by many projects through a variety of activities such as equipment and building maintenance activities, [such as] spent solvents and oily rags, empty paint cans, chemical containers; used lubricating oil; used batteries (such as nickel-cadmium or lead acid); and lighting equipment, such as lamps or lamp ballasts”. In the absence of a qualified commercial or government-owned waste disposal operator, these should be handled by installing on-site treatment or stockpiling the waste until external commercial operations become available.

Timing of site access, to the extent possible, should be during dry weather to reduce damage to access roads into remote villages, especially if new tracks need to be constructed to get access to new river gauging sites. This will also help to reduce “down time” waiting for inclement weather to pass.

While use of local materials is preferred, instead of importing all construction materials, care must be taken to ensure that it is sustainably sourced. Project staff responsible for installation should take steps to avoid using illegally felled timber, or extraction of sand, gravel, and rocks that damages the local environment. Wooden fence posts may need to be protected against termite damage, with any pesticide containers returned for proper disposal.

At each site, a small amount of soil work is expected, for example for underground cabling. Care needs to be taken to stockpile topsoil, back fill, and revegetate disturbed areas. Necessary erosion prevention measures and minimal clearing of vegetation should be practiced. A grass cover should be maintained around the automated weather stations, with a local person employed to mow the grass periodically.

River gauging may take place at existing locations or preferably further up the catchment to allow for more timely early warning systems. For these new sites, sedimentation control, revegetation of river banks, and protection of downstream users from damaged water quality need to be undertaken.

From a social perspective, project staff need to take security issues seriously. For example, fencing needs to be sufficiently robust that thieves and animals will find it difficult to enter. The location of stations needs to be discussed with the village chiefs and/or sector agencies to find the optimal locations, not just from a technical perspective but also in consideration of local social behaviour (e.g., locations next to schools are often a problem as children like to throw stones at solar panels). Depending on the local security situation and the remoteness of the stations, local guards may need to be employed.

Access to land is a serious concern as land tenure and security is always an issue in Vanuatu. While the preference will be to locate stations on land already controlled by different government agencies, these locations might not be the most suitable from a technical point of view. Where land needs to be procured or leased, documentation needs to be watertight, so that changes in the village chief or other local conditions don't set off a new round of negotiations and demands for greater compensation.

An important activity in the installation phase is socialisation in each project site. Project staff will need to make sure the local villagers are fully aware of what the equipment does and why it needs to be installed in that location, as well as any penalties for interfering with the equipment. They need to be convinced that this equipment will ultimately help them, for example with early warning systems and advanced notification of changes in seasonal conditions.

While the project should use local unskilled labour, including women, for the installation, care must be taken to avoid any child labour and ensure that payment accords with Vanuatu's labour law (Employment Act 1983, amended).

## **4. Operation**

### **4.1 Environmental Implications**

During the operational phase, multiple visits will be made to the various project sites. The guiding principle should be to avoid any unnecessary trips, both domestically and internationally. Not only does this reduce the project costs, but also minimises greenhouse gas (GHG) emissions.

Replacement of materials such as batteries or tapes, and any disposable items like cleaning rags, or pesticide containers, should not be dumped in the local landfill if it is not properly managed.

While electricity consumption should be relatively minor at each site, the plan to use diesel back up generators should be reconsidered. These are not only noisy and disruptive at night but also release GHGs and can be a fire hazard. Solar panels and power walls or batteries may be a better alternative.

Apparently, the radiosonde balloons are not routinely recovered and many of them probably end up in the sea. Recent evidence suggests that balloons if ingested by marine fauna almost always result in death of the animal. Therefore, additional measures may be necessary to track and recover the balloons.

While the ocean monitoring buoys are soundly tethered, they may break loose during extreme weather events. If this happens, they need to be tracked and recovered as soon as possible to avoid damage to reefs or impede shipping.



## **4.2 Social Implications**

Visits to monitoring sites should follow the same protocols as the installation phase. Local champions will be employed by the project and they can alert project staff to any social issues that arise during this phase. As indicated below, a project level grievance mechanism can help stave off any emerging social conflicts.

The specific roles of local labour and other villagers during the operation phase needs to be made clear so that there are no unrealistic expectations.

## **4.3 Mitigation Measures**

As for the installation phase, conducting site visits in wet weather should be avoided, partly to reduce any access damage but also to avoid “down time” and waiting for the weather to clear. Visits to monitoring sites should also minimise noise and other local disruptions.

For most materials, such as paper, tapes, disposables, pesticide cans etc., it may be necessary to bring these items back to base or dispose of in an environmentally sound way.

It is strongly recommended that the project should consider using solar panels and power walls/batteries instead of grid electricity and diesel or petrol back-up generators. While there may be some incremental cost considerations, the security of a constant supply of electricity is important for data collection, especially during extreme weather events when grid electricity may be disrupted. These data points during extreme weather events may be the most important data for input to climate change models.

Collection of radiosonde balloons should be attempted, acknowledging that no one really knows where these balloons go after their release. Posting contact information on the balloons and providing a small recovery fee for anyone finding a used balloon may help to increase the number of used balloons recovered.

Maintenance of buoys should be scheduled to ensure that all the equipment is working properly, and the tethers are still sound. Visits to the buoys, however, should avoid damage to reefs and local fishing areas.

If repairs can be done locally, there is no need to travel to the location. Back up supplies and training of local champions or other villagers in simple repairs can avoid sending an expert from Port Vila only to find that a fuse or a battery needs to be replaced.

In addition, consider using local employment, especially women, in simple operations like manual confirmation of rain gauge readings.

## **5. Repair, Replacement, and Disposal**

### **5.1 Environmental Implications**

Equipment procured will include weather radar equipment, automatic weather stations (AWS) (8), automatic rainfall gauges (8), wave buoys (2), tide sensors (12), river gauge (1), global positioning system (2), and a drone/LIDAR (1) system. It is inevitable in the course of the project that some of the equipment will break down and may need to be repaired or replaced. Where this happens, either some parts (like batteries) or the whole unit may need to be disposed of. Of course, if this is a simple matter of replacing a light bulb, battery or fuse, then it is important for a stock of spare parts to be available locally. From a budget perspective, provision should be made for the items that are known

to require replacement within a relatively short time frame, and these need to be securely stored close to the equipment site.

Scheduled maintenance visits and clear instructions to local champions (such as regular cleaning of solar panels or fumigating equipment boxes) will help to minimise the frequency of these breakdowns but cannot avoid them entirely.

For parts of the equipment or whole units that must be repaired or replaced, these items should be brought back to base and appropriate waste disposal approaches will be needed. Old mercury-based thermometers should also be treated as hazardous waste. Rarely will local disposal be a satisfactory option.

## **5.2 Social Implications**

Apart from the above protocols about visiting villages, employing local labour, and acknowledging and honouring traditional “kustom”, there are no major social implications envisaged due these activities.

## **5.3 Mitigation Measures**

The EHS Guidelines note that “hazardous waste materials are frequently generated in small quantities by many projects through a variety of activities such as equipment and building maintenance activities, [such as] spent solvents and oily rags, empty paint cans, chemical containers; used lubricating oil; used batteries (such as nickel-cadmium or lead acid); and lighting equipment, such as lamps or lamp ballasts”. In the absence of a qualified commercial or government-owned waste disposal operator, these should be handled by installing on-site treatment or stockpiling until a commercial operator becomes available.

The private sector has been actively engaged in recycling pilot projects on e-waste and lead acid batteries in the completed PacWaste project. PacWaste Plus intends to build on this pilot programme, so there may be scope for greater private sector involvement in the waste management sector.

Local repair capacity and training is preferred to constantly sending out experts from Port Vila for minor repairs. The project should train local people, especially women, in simple repair activities, and ensure they are adequately compensated for these roles. Spare parts stocks should be maintained in a secure location, with a regular inventory. Maintenance schedules should be routine, so that local champions and locally employed labour know when to be available.

As battery and solar panel replacement is inevitable, a plan needs to be in place for recycling used batteries and solar panels, among other used items that cannot be repaired. For batteries, the local car companies should be asked how they treat used batteries. For example, Toyota has already engaged a local recycler<sup>4</sup> who accumulates car batteries and other recyclables and routinely sends a container load back to Australia. Solar panels are more recent innovations and it may be difficult to find a firm that is already engaged in this recycling activity. One alternative may be to repurpose the panels, such as roofing material, if no recycler can be identified. This will be one area that the new PacWaste Plus employee to be co-located in the SPREP office could be tasked to research.

As damaged electronic equipment cannot be recycled in Vanuatu, it must be sent overseas (at present), while other materials may be reused. The extent to which electronic equipment, like laptops,

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<sup>4</sup> <https://recyclevanuatu.com/2018/06/25/recycle-corp-vanuatu/>

can be repaired locally needs to be ascertained. Project staff should always be encouraged to consider the waste hierarchy.

An interesting alternative that is worth pursuing is the idea of repurposing waste materials by local villagers, such as using plastic twine or bags to make shopping string bags. These could find a ready market in Vanuatu where single-use plastic bags have been banned. Other innovative uses of waste materials to make handicrafts that might appeal to the cruise ship tourists can also be explored.

Disposal sites and management in remote areas, if they exist at all, are little better than open dump sites. Do not rely on local landfills that are not well managed. Certified waste management operators must be used, with proper documentation and tracking of wastes.



## **6. Climate Centres**

### **6.1 Environmental Implications**

The project intends to use existing buildings for the Climate Centres, so no major environmental implications associated with building construction or refurbishment are expected from their establishment.

During the operation phase, posters and other outreach material will be located in these centres. Appropriate arrangements need to be made for their disposal whenever they are replaced or no longer needed.

If major dissemination events are conducted in, or from, these Climate Centres then there is a likelihood of significant amounts of waste, such as food containers or disposable cups. Appropriate waste management procedures need to be in place to deal with such waste.

If the Climate Centres are community-run facilities, there may be opportunities to provide enhancements to the facilities rather than paying a cash rental fee (e.g. providing rooftop solar panels).



## **6.2 Social Implications**

The Climate Centres may also be used for broad-based climate change information, such as information on adaptation options, information about climate resistant crop hybrids, or personal health and safety issues in heatwaves etc.

## **6.3 Mitigation Measures**

If existing buildings are to be used as the 10-12 Climate Centres, make sure that they are fit for purpose and follow the same environmental and social safeguards as the PMU facilities.

Where outreach materials are prepared for the climate centres make sure that they are recyclable and/or reusable and avoid plastic packaging.

Timing of outreach events should take into account convenient time when people (especially women) are most likely to be available, thus ensuring full inclusiveness of all interested parties, including children.

Opportunities for broader climate change and adaptation measures can be facilitated by the climate centres and local champions, by involving schools, faith-based organizations, NGOs and other civil society organizations.

Waste management, especially after large events, needs careful attention (e.g. water containers should not be plastic bottles and use washable cups and cutlery not disposable cups and plastic spoons). For food containers try to avoid cling wrap, which cannot be recycled.

## **7. Case Studies**

Five sector case studies are proposed:

- Fisheries – Influence of increasing SST on fisheries in Vanuatu
- Tourism – Using CIS for tourism operators to prepare and plan for climate hazards.
- Water – Monitoring flood prone area(s) of the Sarakata catchment, Santo Island.
- Infrastructure – Use of LIDAR data to revise the design standards for coastal infrastructure.

- Agriculture – climate sensitivity, potential impacts and vulnerability of food crops (taro, yam, cassava, sweet potato, banana) and cash crops (kava, cocoa and coffee) in Vanuatu.

The fisheries sector case study focuses on the increasingly important issue of coral bleaching due to climate change and other factors. Three sites will be selected in North, Central, and South Vanuatu, representing different sea surface temperatures. The objective is to identify the impacts of increasing temperature on fish catches and develop a fishing calendar that details the movement of fish in each month.

The tourism case study will focus on identifying climate change related natural disasters affecting tourism products on the East Coast of Santo. The potential impact of climate change on selected tourism businesses in terms of physical damage, flow of visitors, loss of income and employment, will be analysed and potential responses identified. New measures and tools to help operators mitigate the negative impacts of climate change will be provided.

For the water sector case study, this will involve monitoring of floodwater during Vanuatu's wet season, cyclonic events, ENSO, and short-term intense rainfall events. The main objective is to determine the changes in, and extent of, floodwater for use in early warning systems, advisory services and awareness of the local community in the Sarakata-Solwe area on how to use the CIS.

For the infrastructure case study, Lidar data collection will contribute to predesign analysis for certain road sections, especially pinpointing topography where there are vulnerable areas, such as wetlands, flood plains, coastal areas or unstable slopes potentially subject to climate impacts and therefore requiring an adaptation response. The Lidar data will be input to CAD software for road designs to resist extreme weather events due to climate change.

The agriculture sector case study will undertake a threshold analysis using a climate model for cash and food crops on identified sites within the country to look at the suitability of growing conditions related to temperature, rainfall, humidity, and other climate variables under future climate change conditions. Using suitable crop models such as Decision Support System for Agrotechnology Transfer (DSSAT), the study will undertake a more detailed analysis to link climate information and crop model outputs to provide more tailored information to the agriculture sector to avoid potential risks in food and cash crop production.

It is important for each of these case studies that they don't become associated with projects that may have significant environmental and social impacts. Even indirect association could jeopardise the environmental categorisation of the VAN-KIRAP project, as shown in the following guidance from GCF. Based on a preliminary analysis of the case studies there does not appear to be any significant environmental or social risk, but this aspect should be kept under review as the details of the case studies are fleshed out.

"In screening activities, GCF will require that risks and impacts are considered and will include direct and indirect, induced, long-term and cumulative impacts, potential environmental and social risks to the activities, and will take into account the activities' areas of influence including associated facilities and third-party impacts. In screening activities, the environmental and social risks and impacts, as well as the nature, magnitude, and complexity of these risks, the specific characteristics of the influence area including risks of displacement, involuntary resettlement and to indigenous peoples, and legal and policy contexts will be considered."

## **8. Social Management and Gender Action Plan**

A gender action plan has been prepared and requires all activities to be examined through a gender lens. Where appropriate, such as for workshops, gender quotas may be needed to ensure that such events are gender neutral and all voices are heard.

For any land procurement and/or leasing, to avoid social conflict, care must be taken in arranging land for weather stations, river gauges or other CIS equipment. While the intention is to use government-controlled land wherever possible, technical considerations may mean that more remote locations need to be acquired.

Local employment should be the first option considered, especially for unskilled labour, but appropriate Labour Laws and local practices must be followed.

Access to villages may require some traditional gifts or ceremonies or other access rituals, as indicated above.

Traditional culture may have subtle differences across the different provinces in the project and these should be acknowledged and honoured.

Indigenous knowledge on environment is an essential part of the project design and should be documented carefully and sensitively. Any local taboo issues may not be appropriate for wider dissemination.

Compensation may be needed if any damage is caused by the project during installation or operations.

Grievance mechanisms need to be in place so that anyone who feels that the project has caused some damage or other problems has ready access to a problem-solving approach and potential compensation if the problem can't be solved to their satisfaction. The official government conflict resolution avenue is through the Office of the Ombudsman<sup>5</sup> under the Ombudsman Act of 1998 and the Leadership Code. During the socialisation process at the installation stage, local villagers should be made aware of the grievance mechanism provided by the project and try to avoid having complaints directed through the Minister or local member of parliament.

## **9. Project Management Units Office Management**

As the region's foremost environmental agency, SPREP has a unique responsibility to demonstrate leadership in environmental management, including in all its project offices. It is acknowledged that the influence of the VMGD PMU over the broader Ministry and the sector agencies covered by the case study coordinators may be more problematic, but best effort should be encouraged. Some of the activities that should be ensured in both PMUs are as follows:

Travel – international and domestic travel should be minimized to the extent possible. Consideration may be given to offsetting GHG emissions, with local reforestation or other carbon sequestration projects.

Energy and lighting management – LED lights to replace fluorescents (but think about disposal of waste globes as well), motion activated light switches, computers and photocopiers turned off at lunch and at night. While the office may be rented, there is still scope for some of these changes to be made.

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<sup>5</sup> <https://ombudsman.gov.vu/>

Sustainable procurement of supplies – while local suppliers may not initially have sustainable office supplies, they should be encouraged to move in that direction. Often, they have not even been asked to source sustainable materials.

Reduce, Reuse, Recycle (3Rs) – the waste hierarchy should be the key management principle, especially knowing that landfill management is still quite weak in Vanuatu.

Temperature control – air conditioning in offices and workshops is often excessively cold and uses excessive amounts of energy, so control the temperature and encourage appropriate clothing like shorts.

Training of new staff in the environmental principles followed in the office and on site should be carried out whenever new staff join the project. Copies of this ESMP should be available to all staff.

It should be reiterated that local labour laws, immigration and customs procedures must be followed, acknowledging that these procedures can be rather time consuming.

## **10. Monitoring and Evaluation**

“GCF requires the accredited entities to maintain effective due diligence, including participatory monitoring approaches, to address unanticipated developments in the activities or to reflect improved techniques and technologies for addressing environmental and social risks and impacts and meeting the environmental and social safeguards requirements pursuant to the ESS standards of GCF”.

Incorporation of this ESMP into the project logframe, annual workplans, and budgets should be carried out and provided to GCF as part of an integrated package of documents.

Environmental and social indicators in the logframe may need further clarification, partly drawing from the summary of mitigation measures outlined in Table 2 below.

The frequency and specific staff responsibilities for M&E need to be specified in the annual work plans and individual terms of reference. Staff responsibilities for M&E need to be defined at SPREP headquarters also, particularly if no dedicated M&E specialist is included in the project team.

A mid-term audit of environmental and social safeguards should be included in the interim project evaluation, to be carried out by an independent qualified professional.

## **11. Reporting and Budgeting**

GCF requires “the accredited entity to take all necessary measures to ensure that the executing entities fulfil the activity-level ESMP requirements, and the accredited entity will conduct the necessary due diligence and oversight to ensure that these requirements are fulfilled”. The accredited entity should also submit annual performance reports and interim evaluation and final evaluation reports.

Quarterly and annual reports should document specific activities that have been undertaken to protect the environment and safeguard against any social concerns. Any complaints, social or environmental issues should be flagged immediately, and the action taken reflected in the quarterly reports.

The mid-term report should include an environmental and social safeguard audit, undertaken by a qualified professional.

Annual budgets should include provisions for all the mitigation measures outlined above, plus a price and physical contingency budget, especially for unavoidable equipment failures.

Case study reports should contain sections on environmental and social safeguards and how they were handled in these sub-projects.

## 12. Conclusions and Recommendations

Project stakeholders may think the environmental and social implications of this project are minimal (after all it is just climate information) but all activities should be looked at through environmental and social lenses to see how the VAN-KIRAP project can contribute to improved environmental and social management in Vanuatu and ensure that no harm is caused.

**Table 2 Summary of Recommended ESMP Mitigation Measures**

Project activity	Mitigation Measures	Implementation Responsibility	Means of Verification	Timing	Monitoring Responsibility	Reports
Procurement	“Green” specifications Take back provisions Recycling packaging	SPREP PMU	Equipment specifications	Q2 2019	SPREP HQ/PCU	Quarterly reports
Installation	Access, use of local sourced materials, site works, social awareness, local labour	VMGD PMU	Site visit notes and photos	Q4 2019	VMGD Senior Management	Back to office reports
Operation	Monitoring visits, back up electricity, balloon collection, back up supplies, local labour	VMGD PMU	Database of climate information generated	Q4 2019 to 2021	VMGD Senior Management	Quarterly report Interim Report
Repair, Replacement and Disposal	Local repair capacity, spare parts, maintenance schedules, recycling, reuse and repurposing waste	VMGD PMU	Equipment inventory	Q4 2019 to 2021	VMGD Senior Management	Quarterly report Interim Report
Climate Centres	Fit for purpose buildings, outreach materials, climate information, waste management	VMGD PMU	Event documents	2020 to 2021	VMGD Senior Management	Quarterly reports
Case Studies	Details pending, ESS considerations to be kept under review	Sector Coordinators	Case study design and operation plans	Q3 2019	Sector agencies, CSIRO, SPREP	Case study reports



Social Management and Gender	Gender neutrality, land procurement, local employment, traditional culture, access to villages, indigenous knowledge, grievance mechanism	PMUs	Gender Action Plan Annual work plans	Q2 2019 to 2021	SPREP, VMGD Senior Management	Gender and social sections of quarterly reports
Project Management Units	Energy management, green supplies, recycling, temperature control, staff training	PMUs	Office procurement and energy bills	Q2 2019 to 2021	SPREP, VMGD Senior Management	Quarterly annual, interim reports
Monitoring and Evaluation	ESMP into logframes, work plans and budgets, additional ESS indicators, frequency and responsibility for M&E	SPREP	Quarterly, annual, interim reports	Q2 2019 to 2021	SPREP, VMGD Senior Management	Quarterly annual, interim reports
Reporting and Budgeting	Quarterly, annual, mid-term, and completion reports to document ESS actions.	SPREP VMGD	Quarterly, annual, interim reports	Q2 2019 to 2021	SPREP PMU	Quarterly annual, interim reports