

Building the Climate Resilience of Children and Communities through the Education Sector (BRACE)

Annex 21: Operations and Maintenance Plan

Accredited Entity: Save the Children Australia

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1. Scope for Operation and Maintenance Activities

The Operations and Maintenance (O&M) Plan for the Building the Climate Resilience of Children and Communities through the Education Sector (BRACE) project outlines the strategies and activities required to ensure the long-term sustainability and functionality of climate-resilient infrastructure implemented across Cambodia, South Sudan, and Tonga. This plan covers the management, maintenance, and operational tasks necessary for school facilities retrofitted with water, sanitation, and hygiene (WASH) systems, solar photovoltaic (PV) energy installations, Early Warning Systems (EWS), and other climate-adaptive components. The plan also ensures that schools and local communities are equipped with the knowledge, tools, and financial support needed to maintain these systems, well beyond the five-year project implementation period. By establishing clear roles and responsibilities, providing technical training, and securing financial resources, the O&M Plan is designed to enhance the resilience of schools and communities to climate impacts while ensuring the continuous delivery of quality education in climate-vulnerable regions.

The following activities involve installation and maintenance activities:

1.2 School Facilities Are Safer and Greener

- **Activity 1.2.2: Retrofit school facilities to strengthen climate resilience.**
 - **Sub-activity 1.2.2.1:** Install climate-resilient water, sanitation, and hygiene (WASH) systems in schools.
 - **Sub-activity 1.2.2.2:** Install solar photovoltaic (PV) systems to provide renewable energy for lighting and internet connectivity.
 - **Sub-activity 1.2.2.3:** Improve school ventilation and cooling systems in hot regions (e.g., South Sudan).
 - **Sub-activity 1.2.2.4:** Develop school gardens and plant drought-resistant trees to mitigate environmental risks.
 - **Sub-activity 1.2.2.5:** Install water-efficient irrigation systems to support school gardens.
- **Activity 1.2.3: Strengthen school communities to operate and maintain facilities.**
 - **Sub-activity 1.2.3.1:** Provide training for school staff, students, and local administrators to manage infrastructure and WASH facilities.
 - **Sub-activity 1.2.3.2:** Appoint maintenance focal points to oversee daily operations, ensuring upkeep and repairs.
 - **Sub-activity 1.2.3.3:** Develop e-learning modules for basic operations and maintenance (O&M) of infrastructure, WASH facilities, and solar PV systems.

1.3 School Safety and Educational Continuity Systems

- **Activity 1.3.4: Provide climate resilience tools and kits to schools.**

- **Activity 1.3.5: Strengthen access to Early Warning Systems (EWS) and Climate Information Systems (CIS) in schools.**
 - **Sub-activity 1.3.5.1:** Install and maintain EWS components, including radios, alarms, and other early warning communication tools.
 - **Sub-activity 1.3.5.2:** Develop and maintain an online dashboard and web-based platform to integrate climate information and early warning data into school operations.

2. Management System for Undertaking O&M Activities

The success of the BRACE Operations and Maintenance (O&M) Plan depends on the effective collaboration between a range of stakeholders at the national, sub-national, and community levels. Each group plays a specific role in ensuring the sustainability, functionality, and upkeep of the climate-resilient infrastructure installed across Cambodia, South Sudan, and Tonga.

The establishment of Operations and Maintenance (O&M) plans and systems is deeply integrated into the BRACE project design through carefully planned activities and sub-activities that address the need for sustained functionality of the infrastructure. The project's long-term success relies on the continued operation of climate-resilient school facilities, including WASH systems, solar photovoltaic (PV) installations, and Early Warning Systems (EWS). By embedding O&M within the core of the project's design, BRACE ensures that these investments are protected and functional long after the initial five-year implementation period, becoming a key mechanism for the sustainability of the project's outcomes.

A significant portion of the project activities is dedicated to the development of the systems and frameworks necessary for effective O&M. For example, **Activity 1.2.3** explicitly focuses on **strengthening school communities and education officials to operate and maintain school infrastructure and facilities**. Sub-activities under this component, such as **training school staff and School Management Committees (SMCs) in infrastructure management** and **appointing maintenance focal points within schools**, ensure that the knowledge and skills required for maintaining infrastructure are instilled at the local level. This capacity-building component of the project design ensures that schools are equipped to handle routine maintenance, anticipate infrastructure needs, and address minor repairs independently, fostering a sense of ownership within the school community.

Moreover, the project includes the development of **Standard Operating Procedures (SOPs)** as a core element of the O&M framework, ensuring that clear guidelines are in place for managing and maintaining the new systems. These SOPs, developed in **Activity 1.2.3** and tailored to each specific type of infrastructure, ensure that school staff and local officials have a roadmap for regular inspections, preventive maintenance, and troubleshooting of equipment. By standardizing these procedures, the project minimizes the risk of neglect or improper use, enhancing the lifespan and functionality of the infrastructure.

In addition, **Activity 1.3.3** includes the **implementation of school-level climate-related safety plans**, which integrate disaster preparedness with routine maintenance of EWS and other critical infrastructure. By making infrastructure maintenance an integral part of the school's

climate resilience strategy, BRACE ensures that O&M is not seen as a separate task but as part of the school's everyday operations and safety protocols. This approach not only increases the likelihood of infrastructure longevity but also strengthens the schools' overall resilience to climate-related risks, a primary goal of the project.

Finally, the inclusion of O&M activities in school improvement plans, supported by local government offices and national ministries, as outlined in **Activity 1.2.3**, ensures that maintenance responsibilities are institutionalized within existing governance frameworks. By making O&M a formal part of education planning, the project embeds sustainability into the broader educational system, ensuring that maintenance activities are continuously funded and monitored. The BRACE project's focus on training, institutional support, and the development of O&M systems demonstrates its commitment to sustainability, with operations and maintenance serving as the linchpin for maintaining the long-term impact of the project.

The integration of O&M systems and plans into the project design ensures that operations and maintenance will be a fundamental mechanism for sustaining BRACE's outcomes. By building capacity, creating clear guidelines, and embedding maintenance into school and governance systems, the project lays the foundation for the continued success of climate-resilient infrastructure, long after the project's implementation phase concludes. This approach helps guarantee that schools and communities can continue to adapt to climate risks and ensure uninterrupted education for children in vulnerable regions.

3. Maintenance Plans

3.1 Cambodia Operations and Maintenance Plan

Key Items to Be Operated and Maintained

In Cambodia, the BRACE project will introduce a range of climate-resilient infrastructure to schools, aimed at enhancing educational outcomes while strengthening climate resilience. The key items that will need to be operated and maintained include:

- **Solar Photovoltaic (PV) Systems:** These systems will provide schools with renewable energy for lighting and powering educational tools, including internet connectivity, which is essential for modern learning environments and access to climate education platforms.
- **Water, Sanitation, and Hygiene (WASH) Systems:** These systems, including rainwater harvesting systems, filtration units, and sanitation facilities (latrines and handwashing stations), will ensure schools have a reliable, climate-resilient water supply and sanitary conditions for students and staff.
- **Early Warning Systems (EWS):** EWS will be installed to enhance schools' preparedness for climate-related disasters, including alarms, communication tools, and other safety equipment to alert schools and communities of impending floods, storms, or other extreme weather events.
- **School Gardens and Green Infrastructure:** In alignment with the project's focus on climate resilience, schools will establish climate-adaptive school gardens with drought-resistant plants, as well as other green initiatives such as tree planting for flood and heat mitigation.

Key Stakeholders and Their Role

Ministry of Education, Youth, and Sport (MoEYS)

The MoEYS will lead the national coordination of the O&M activities. They will be responsible for integrating O&M policies into the national education framework, ensuring that maintenance procedures are standardized and financed post-project. MoEYS will also oversee the training programs for school staff and local government officials on infrastructure maintenance.

Provincial Education Offices

Provincial Education Offices will monitor O&M activities at the local level, providing technical support and supervision to schools. They will coordinate between the schools and the MoEYS to ensure that maintenance issues are identified early and addressed efficiently. Provincial officers will play a key role in post-project monitoring and providing budgetary oversight for O&M needs.

School Management Committees (SMCs)

SMCs will manage the daily operations and maintenance tasks at the school level. These committees, composed of school staff, parents, and local community members, will be trained to oversee routine inspections and minor repairs, ensuring that WASH systems, solar panels, and EWS remain operational. They will be the first point of contact for reporting issues to provincial authorities.

Suppliers and Contractors

Suppliers will provide technical support during and after installation, ensuring that extended warranties and repair services are available for key infrastructure. They will offer on-site training to school staff and local technicians, equipping them with the skills needed to maintain the systems.

Community Adaptation Committees

In some rural areas, Community Adaptation Committees will support schools by helping maintain infrastructure, particularly when it benefits both the school and the surrounding community, such as in the case of shared water resources or disaster preparedness tools. These committees will collaborate closely with SMCs to ensure climate-resilient systems are effectively maintained.

Typical Maintenance Tasks

The table below outlines the key maintenance tasks for the critical infrastructure in Cambodia, along with the responsible party, the frequency of the tasks, and the post-project responsibility.

Item	Maintenance Task	Responsible Party	Frequency	Post-Project Responsibility
Solar PV Systems	Cleaning of solar panels to ensure efficiency	School Management Committees (SMCs)	Monthly	MoEYS/Provincial Education Office/SMCs

	Inspection of batteries and inverters for wear	Provincial Education Office	Quarterly	MoEYS/Provincial Education Office/Technicians
	Replacement of damaged panels or components	Suppliers/SMCs	As required	Local government budget/MoEYS
WASH Systems	Cleaning and inspecting rainwater storage tanks	SMCs/Community Adaptation Committees	Quarterly	MoEYS/SMCs/Community Adaptation Committees
	Monitoring and maintenance of handwashing stations	SMCs	Monthly	SMCs/Community Adaptation Committees
	Checking filtration systems for blockages and efficiency	SMCs	Bi-monthly	SMCs/Provincial Education Office
Early Warning Systems	Testing alarm systems, radios, and communication tools	SMCs/Local Government	Monthly	Provincial Education Office/Local Government
	Replacing damaged components	Suppliers/SMCs	As required	MoEYS/Provincial Government
School Gardens	Watering and monitoring drought-resistant plants	SMCs/Students	Weekly	SMCs/Community Adaptation Committees
	Maintaining irrigation systems	SMCs/Provincial Office	Monthly	MoEYS/Provincial Education Office

Estimated Lifespan and Replacement Assumptions

To ensure long-term sustainability, the project will establish clear estimates for the lifespan of critical infrastructure. Below is a summary of the expected useful life of each key component and replacement assumptions that will guide budgetary planning post-project.

Item	Expected Lifespan (Years)	Replacement Assumptions
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Solar PV Systems	10	Replacement of panels, batteries, or inverters at year 9-10, to be included in provincial or school budgets. Collaboration between MoEYS and local government for financing.
WASH Systems	10	Rainwater harvesting and filtration systems will require replacement of filters or tanks at year 9-10. These costs should be included in MoEYS's long-term budgeting.
Early Warning Systems	8-10	Equipment such as radios, alarms, and communication tools will need replacing at the end of their lifespan. MoEYS and local government should assume financial responsibility.
School Gardens	8-10	Maintenance of irrigation systems and plant replenishment should be ongoing, with major upgrades planned for year 8-10, funded through local community or school budgets.

Lifespan and Replacement Assumptions

The estimated lifespan of the key infrastructure ranges from 8 to 10 years. During the project, regular preventive maintenance will be performed to maximize the longevity of these systems. For solar PV systems, a 10-year lifespan is anticipated for the panels, with inverters and batteries likely needing replacement after 9 years. WASH systems, including rainwater tanks and filtration units, will also have a similar lifespan, but filters may need to be replaced more frequently depending on usage and water quality. Early Warning Systems (EWS) are expected to last 8 to 10 years, with radios and alarms requiring replacement towards the end of the period.

Post-project, the replacement of these items will require financial planning at both the provincial and national levels. The MoEYS will need to incorporate these costs into annual budgeting, with contributions from local government and school management committees where appropriate. Additionally, collaboration with suppliers and local technicians will be essential to ensure the availability of replacement parts and repair services. By planning for these eventual replacements, Cambodia can sustain the positive impacts of the BRACE project well beyond its initial implementation phase.

3.2 South Sudan Operations and Maintenance Plan

Key Items to Be Operated and Maintained

In South Sudan, the BRACE project will introduce climate-resilient infrastructure in schools to support educational outcomes and enhance the resilience of schools and communities to climate impacts. The key items requiring operation and maintenance include:

- **Solar Photovoltaic (PV) Systems:** These systems will provide essential renewable energy to schools, powering lighting, educational tools, and internet connectivity in remote areas where grid electricity is unreliable or unavailable.
- **Water, Sanitation, and Hygiene (WASH) Systems:** These systems will include rainwater harvesting equipment, water filtration systems, and sanitation facilities,

providing students with clean water and safe hygiene practices, which are critical for health and attendance, particularly in regions affected by water scarcity.

- **Early Warning Systems (EWS):** Schools will be equipped with EWS, including alarms and communication tools, to improve preparedness for climate-related disasters, such as floods and droughts, which frequently affect South Sudan.
- **Improved Cookstoves and Agricultural Tools:** Climate-resilient livelihoods will be supported in schools with improved cookstoves for school kitchens and agricultural tools like treadle pumps and solar dryers for use in school gardens or agricultural clubs.

Key Stakeholders and Their Role

Ministry of General Education and Instruction (MoGEI)

MoGEI will lead the coordination of O&M activities at the national level. Their role will include integrating O&M policies into the education sector and ensuring schools have access to the necessary technical and financial support to maintain their infrastructure. MoGEI will also oversee the training of school management and local education authorities on O&M best practices.

Local Government Education Offices

Local government offices will serve as the main point of contact for schools, providing technical support and ensuring O&M plans are implemented. These offices will monitor the condition of infrastructure, coordinate with MoGEI, and facilitate the procurement of necessary parts and repairs.

School Management Committees (SMCs) and Parent-Teacher Associations (PTAs)

SMCs and PTAs will be responsible for the daily operation and basic maintenance of the climate-resilient infrastructure within schools. Trained by the project, these committees will conduct routine inspections and manage minor repairs, ensuring that WASH facilities, solar panels, and EWS remain functional. They will also be responsible for managing school gardens and agricultural tools.

Suppliers and Contractors

Suppliers will provide technical support during and after the installation of equipment, including training local technicians on maintenance and offering extended warranties for solar PV systems, WASH systems, and improved cookstoves.

Community Adaptation Committees

In rural areas, Community Adaptation Committees will collaborate with schools to maintain shared resources like water systems and agricultural tools. These committees will assist schools in managing infrastructure that also benefits the broader community, such as rainwater harvesting systems or EWS.

Typical Maintenance Tasks

The table below outlines the key maintenance tasks for critical infrastructure in South Sudan, along with the responsible party, the frequency of tasks, and post-project responsibility.

Item	Maintenance Task	Responsible Party	Frequency	Post-Project Responsibility
Solar PV Systems	Cleaning of solar panels to ensure efficiency	SMCs/PTAs	Monthly	MoGEI/Local Education Office/SMCs
	Inspection of batteries and inverters for wear	Local Government Education Office	Quarterly	MoGEI/Local Education Office/Technicians
	Replacement of damaged panels or components	Suppliers/SMCs	As required	MoGEI/Local Government Budget
WASH Systems	Cleaning and inspecting rainwater storage tanks	SMCs/Community Adaptation Committees	Quarterly	MoGEI/SMCs/Community Adaptation Committees
	Monitoring filtration systems for blockages or malfunctions	SMCs	Monthly	SMCs/Local Government Education Office
	Repairing or replacing latrines and handwashing stations	SMCs/PTAs	As required	SMCs/MoGEI
Early Warning Systems	Testing alarms, radios, and other communication tools	SMCs/Local Government	Monthly	Local Government Education Office
	Replacing damaged EWS components	Suppliers/SMCs	As required	MoGEI/Local Government
Improved Cookstoves	Cleaning and inspecting cookstoves in school kitchens	SMCs/PTAs	Weekly	SMCs/PTAs

	Replacing worn-out parts	SMCs/Suppliers	As required	SMCs/PTAs/Local Government
Agricultural Tools	Maintenance of treadle pumps and solar dryers	SMCs/PTAs	Quarterly	MoGEI/SMCs

Estimated Lifespan and Replacement Assumptions

The following table outlines the estimated lifespan of key infrastructure in South Sudan and the replacement assumptions that will guide long-term planning for O&M.

Item	Expected Lifespan (Years)	Replacement Assumptions
Solar PV Systems	10	Solar panels, batteries, and inverters will need replacement after 9-10 years. Replacement costs should be incorporated into the budgets of MoGEI and local government offices.
WASH Systems	8-10	Rainwater storage tanks, filters, and sanitation facilities will require repairs or replacement after 8-10 years. MoGEI and local government must budget for these expenses.
Early Warning Systems	8-10	Radios, alarms, and communication tools will need replacing after 8-10 years. MoGEI will need to assume financial responsibility for this equipment.
Improved Cookstoves	5-7	Cookstoves in school kitchens will have a lifespan of 5-7 years, requiring periodic maintenance or replacement funded by the school or local government.
Agricultural Tools	8	Treadle pumps, solar dryers, and other agricultural tools should be replaced every 8 years, with costs incorporated into school budgets or local government plans.

Lifespan and Replacement Assumptions

In South Sudan, the lifespan of critical infrastructure is generally expected to range from 8 to 10 years. Regular preventive maintenance will be essential to maximizing the functionality of these systems. Solar PV systems are expected to last around 10 years, though batteries and inverters may require replacement as early as year 9. WASH systems, including rainwater harvesting and sanitation facilities, will similarly have a lifespan of up to 10 years, with water filtration components likely needing replacement earlier depending on usage and water quality. Early Warning Systems, which play a critical role in disaster preparedness, are also expected to last

around 8 to 10 years, though communication devices may need more frequent updates or repairs.

Post-project, MoGEI and local government authorities will be responsible for budgeting for the replacement of this infrastructure. This includes planning for the procurement of new solar panels, WASH system components, and EWS tools as needed. Schools and local communities, through the School Management Committees and PTAs, will manage routine maintenance and minor repairs, while larger-scale replacements will be the responsibility of the national and local government, with financial support planned through annual budgets and contributions from the education sector. By establishing clear replacement timelines and integrating these needs into long-term financial planning, South Sudan can ensure that the benefits of the BRACE project continue to be realized well beyond its initial implementation phase.

3.3 Tonga Operations and Maintenance Plan

Key Items to Be Operated and Maintained

In Tonga, the BRACE project will implement a variety of climate-resilient infrastructure in schools to enhance education and improve resilience to climate impacts. The following key items will need ongoing operation and maintenance:

- **Solar Photovoltaic (PV) Systems:** These systems will provide renewable energy to schools, powering essential services such as lighting and internet connectivity, particularly in outer islands where electricity access is limited or unreliable.
- **Water, Sanitation, and Hygiene (WASH) Systems:** Schools will receive upgraded WASH facilities, including rainwater harvesting systems, water filtration units, and sanitation facilities like latrines and handwashing stations, which are crucial for maintaining a healthy school environment.
- **Early Warning Systems (EWS):** Tonga is highly vulnerable to extreme weather events such as cyclones and tsunamis. Schools will be equipped with EWS, including alarms, radios, and communication tools, to alert students and staff of impending disasters and coordinate emergency responses.
- **Green Initiatives and School Gardens:** The BRACE project will establish climate-adaptive school gardens and plant drought-resistant trees, helping schools to mitigate heatwaves, manage stormwater runoff, and engage students in environmental stewardship.

Key Stakeholders and Their Role

Ministry of Education and Training (MET)

MET will oversee the national coordination of O&M activities. It will be responsible for integrating O&M protocols into the national education framework and ensuring that schools have the technical and financial resources to sustain the infrastructure. MET will also facilitate training programs for school staff and provincial authorities on maintaining climate-resilient infrastructure.

Provincial Education Offices

Provincial Education Offices will provide technical supervision and support to schools, ensuring that O&M plans are implemented effectively. They will monitor infrastructure performance,

coordinate with MET, and assist in resolving maintenance issues that require more technical expertise.

School Management Committees (SMCs)

SMCs, composed of school staff, parents, and community members, will manage the daily operation and maintenance of the school's infrastructure. These committees will be trained to conduct regular inspections and minor repairs, ensuring that WASH systems, solar panels, and EWS remain functional. SMCs will also oversee the maintenance of school gardens and green initiatives.

Suppliers and Contractors

Suppliers will play a key role in providing technical support for the installed infrastructure, including solar PV systems and WASH facilities. They will offer extended warranties and train local technicians and school staff on routine maintenance tasks.

Community Adaptation Committees

In rural and outer island communities, Community Adaptation Committees will support schools in maintaining infrastructure such as rainwater harvesting systems and EWS. These committees will collaborate with SMCs to ensure that shared community resources are well-maintained and serve both schools and local residents.

Typical Maintenance Tasks

The table below details the key maintenance tasks required for Tonga's climate-resilient school infrastructure, along with the responsible party, frequency, and post-project responsibility.

Item	Maintenance Task	Responsible Party	Frequency	Post-Project Responsibility
Solar PV Systems	Cleaning of solar panels to ensure optimal performance	SMCs	Monthly	MET/Provincial Education Office/SMCs
	Inspection of batteries and inverters for efficiency	Provincial Education Office	Quarterly	MET/Provincial Education Office/Technicians
	Replacement of damaged panels or batteries	Suppliers/SMCs	As required	MET/Local Government
WASH Systems	Cleaning and inspecting rainwater storage tanks	SMCs/Community Adaptation Committees	Quarterly	MET/SMCs/Community Adaptation Committees

	Checking filtration systems for blockages	SMCs	Bi-monthly	SMCs/Provincial Education Office
	Maintenance of latrines and handwashing stations	SMCs	Monthly	SMCs/Provincial Education Office
Early Warning Systems	Testing alarms, radios, and communication tools	SMCs/Local Government	Monthly	Provincial Education Office/Local Government
	Replacing broken or outdated EWS components	Suppliers/SMCs	As required	MET/Provincial Education Office
School Gardens	Watering and maintaining drought-resistant plants	SMCs/Students	Weekly	SMCs/Community Adaptation Committees
	Maintenance of irrigation systems	SMCs/Provincial Office	Monthly	MET/Provincial Education Office

Estimated Lifespan and Replacement Assumptions

Below is a summary of the expected lifespan of key infrastructure components in Tonga, along with assumptions about when replacement will be needed and how these replacements will be financed.

Item	Expected Lifespan (Years)	Replacement Assumptions
Solar PV Systems	10	Solar panels, batteries, and inverters will need to be replaced after 9-10 years. The cost of replacements will be incorporated into MET and local government budgets.
WASH Systems	8-10	Rainwater harvesting systems and water filtration units will require repairs or replacement at year 9-10. Provincial budgets will be responsible for these costs, with potential support from MET.
Early Warning Systems	8-10	EWS components, such as radios and alarms, will need to be replaced after 8-10 years. MET and local authorities should plan for these costs in their annual budgets.

School Gardens	8-10	Irrigation systems and plants will need maintenance and possible replacement after 8-10 years. SMCs and local communities will need to secure funding for these updates.
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Lifespan and Replacement Assumptions

The estimated lifespan of key infrastructure in Tonga is expected to range from 8 to 10 years, assuming proper maintenance and upkeep are conducted during the project period and post-project. Solar PV systems, which are critical for powering schools in outer islands, have a projected lifespan of 10 years, with batteries and inverters potentially needing replacement after 9 years. Similarly, WASH systems, including rainwater harvesting equipment and filtration systems, are expected to last up to 10 years, though regular inspections and maintenance will be necessary to ensure their longevity.

Early Warning Systems (EWS), a crucial component of Tonga's disaster preparedness strategy, will also require replacements after 8 to 10 years. Radios, alarms, and other communication tools will need to be updated regularly to ensure their reliability in the event of an emergency. School gardens and other green infrastructure will require ongoing maintenance, with major upgrades or replacements needed after 8-10 years to ensure they continue to mitigate climate impacts effectively.

The replacement of infrastructure post-project will require a concerted effort by the Ministry of Education and Training (MET), local government authorities, and school management committees (SMCs). Financial planning for these replacements should be incorporated into annual provincial and national budgets. Schools will rely on MET to provide technical and financial support, while local government offices and communities will play a key role in ensuring that smaller maintenance tasks are carried out regularly. By planning for these future costs, Tonga can ensure that the benefits of the BRACE project are sustained well into the future, providing a resilient educational environment for its students.

3.4 Project Dedicated Transportation

Vehicles are a crucial component of the BRACE project's logistics and implementation, especially in supporting field activities, material transport, and the monitoring of remote school infrastructure. The following outlines the operations and maintenance (O&M) plan for the vehicles purchased in **Cambodia, South Sudan, and Tonga**. Each country will require regular vehicle maintenance to ensure that the project staff can access schools and communities, monitor infrastructure, and respond to urgent maintenance needs effectively.

Vehicles to Be Operated and Maintained

Cambodia

- **Fleet Vehicles:** These vehicles will primarily be used for transporting project staff and materials needed for retrofitting school infrastructure, such as solar panels and WASH systems, in both urban and remote locations.

South Sudan

- **4x4 Land Cruisers:** Given South Sudan's challenging terrain and the remoteness of project sites, Land Cruisers will be purchased to facilitate transportation of materials and staff for infrastructure maintenance and monitoring. These vehicles are essential for navigating poor road conditions and accessing remote communities.

Tonga

- **Vehicles:** In Tonga, vehicles will be purchased to transport project staff and materials across islands, supporting school infrastructure monitoring and disaster preparedness activities. Vehicles will ensure the timely transport of materials, such as solar panels and water systems, and enable response to school needs on outer islands.

Key Stakeholders and Their Role

During the life of the project, **Save the Children** will be the key stakeholder responsible for the operation and maintenance of the vehicles in Cambodia, South Sudan, and Tonga. Save the Children will manage the day-to-day use, servicing, and upkeep of the vehicles to ensure project activities run smoothly and efficiently. Save the Children will oversee regular maintenance, repairs, and ensure proper use of the vehicles across the three countries. Suppliers and Contractors will provide initial technical support, vehicle servicing, and warranties.

Typical Maintenance Tasks

The table below outlines the key maintenance tasks for vehicles purchased under the BRACE project, specifying the responsible parties, the frequency of maintenance, and who will assume responsibility for these tasks post-project.

Vehicle Type	Maintenance Task	Responsible Party	Frequency	Post-Project Responsibility
Fleet Vehicles (Cambodia)	Routine servicing (oil changes, tire checks, etc.)	Local Education Offices	Monthly/As required	Ministry of Education, Youth, and Sport (MoEYS)
	Inspection for wear and tear (engine, brakes, tires)	Local Education Offices	Quarterly	MoEYS/Local Government
	Replacement of damaged vehicle components	Local Education Offices/Suppliers	As required	MoEYS/Local Government
4x4 Land Cruisers (South Sudan)	Routine vehicle servicing (oil, filters, tires, etc.)	Local Government Education Offices	Monthly/As required	Ministry of General Education and Instruction (MoGEI)
	Preventive maintenance (brakes,	Local Government Education Offices	Quarterly	MoGEI/Local Government

	suspension, transmission)			
	Replacement of damaged components (tires, engine parts)	Suppliers/Local Education Offices	As required	MoGEI/Local Government
Vehicles (Tonga)	Routine vehicle maintenance (oil changes, tire rotations)	Provincial Education Offices	Monthly/As required	Ministry of Education and Training (MET)
	Vehicle inspections (engine, transmission, safety checks)	Provincial Education Offices	Quarterly	MET/Local Government
	Replacement of vehicle parts (tires, brakes, etc.)	Suppliers/Provincial Education Offices	As required	MET/Local Government

Estimated Lifespan and Replacement Assumptions

Vehicle Type	Expected Lifespan (Years)	Replacement Assumptions
Fleet Vehicles (Cambodia)	10-15	Replacement of critical parts (engine, suspension) after 8-10 years. MoEYS and local government should budget for replacements in their long-term planning.
4x4 Land Cruisers (South Sudan)	10+	Heavy usage in remote areas may lead to earlier replacement of certain components, but with proactive maintenance replacement will be planned for after year 10. MoGEI and local governments should plan for future fleet upgrades or replacements.
Vehicles (Tonga)	10-15	Vehicles should be replaced after 8-10 years due to wear and tear from extensive island use. MET and local government offices should prepare to finance vehicle replacements at the end of their lifespan.

4. Project Disbursement Plan Development

In the final year of the BRACE project, a plan will be developed to manage the disbursement of all project assets to relevant project partners, including vehicles, office equipment, solar systems, WASH infrastructure, educational materials, and any other project assets critical to sustaining the project's outcomes. This plan will ensure that the assets are allocated to entities best positioned to maintain and use them effectively to continue supporting the climate resilience and education goals of the BRACE project.

4.1 Development of the Asset Disbursement Plan

Save the Children, as the lead entity during the BRACE project, will collaborate with project partners in **Cambodia, South Sudan, and Tonga** to create a detailed asset disbursement plan. This plan will outline the criteria for asset allocation and ensure that each asset is distributed to entities that can effectively manage, operate, and maintain the items post-project. The main steps in developing the plan are:

Needs Assessment

A needs assessment will be conducted to evaluate the post-project needs of local partners, ministries, schools, and community organizations. The assessment will include:

- **Identification of Key Partners:** Determining which entities (e.g., Ministries of Education, local education offices, School Management Committees, community organizations) will benefit most from each type of asset.
- **Asset Utilization:** Evaluating how each partner can utilize the assets to further the project's goals, such as maintaining school infrastructure, improving disaster preparedness, or continuing education activities.
- **Capacity to Maintain Assets:** Assessing the ability of each partner to manage and maintain the assets over time, including financial, technical, and logistical considerations.

Consultation with Partners

Key project stakeholders, including **Ministries of Education, local education offices, School Management Committees (SMCs), and Community Adaptation Committees**, will be consulted to ensure their input is reflected in the disbursement plan. This consultation process will help to:

- Identify specific needs and priorities for asset disbursement.
- Ensure alignment with local capacity and infrastructure to maintain and operate assets.
- Foster local ownership and sustainability of project outcomes.

Criteria for Asset Allocation

The disbursement plan will include clear criteria for asset allocation, ensuring transparency and fairness. Criteria will include:

- **Criticality to Project Continuity:** Assets that are essential for maintaining project outcomes (e.g., solar systems, WASH facilities) will be prioritized for allocation to partners that are directly responsible for infrastructure upkeep.

- **Geographic Considerations:** In remote or underserved regions, priority will be given to partners that need additional support to continue operating infrastructure.
- **Technical Capacity:** Partners with the capacity to manage complex assets, such as vehicles or solar PV systems, will be allocated these items to ensure their continued use and maintenance.

Sustainability Strategy

The plan will include provisions to ensure the sustainability of the assets post-project. This will involve:

- **Maintenance Plans:** Establishing clear maintenance protocols for all assets, particularly technical infrastructure like solar systems and vehicles.
- **Training Programs:** Providing partners with necessary training on how to maintain and operate the assets effectively.
- **Financial Responsibility:** Ensuring that receiving partners have the financial capacity to handle ongoing maintenance costs, including establishing budget lines for asset upkeep.

4.2 Approval by the Accredited Entity

Once the disbursement plan is finalized, it will be submitted to the **Accredited Entity (Save the Children Australia)** for review and approval. This approval process ensures that all legal, financial, and sustainability considerations are addressed before the assets are transferred. The accredited entity will assess the plan based on the following:

- **Alignment with Project Goals.** The accredited entity will ensure that the disbursement of assets aligns with the overall goals of the BRACE project, particularly the continued support of climate-resilient infrastructure, educational continuity, and disaster preparedness.
- **Compliance with Procurement Policies.** The disbursement plan will need to comply with the procurement and asset transfer guidelines established by the Green Climate Fund (GCF) and Save the Children, ensuring transparency in the asset transfer process.
- **Financial and Legal Considerations.** The accredited entity will verify that the partners receiving the assets have the legal authority and financial capacity to maintain them. This includes ensuring that future operational and maintenance costs are included in local budgets and that partners can cover these costs.

Training and Capacity Building

Training will be provided to receiving partners on how to operate and maintain the assets. This will be particularly important for technical equipment such as solar systems, vehicles, and WASH facilities, which require specialized knowledge to operate and maintain. Save the Children will facilitate this capacity-building effort to ensure that all transferred assets continue to function effectively post-project.