National Committee for Sub-National Democratic Development Secretariat (NCDDS)

Terms of Reference (ToR)

Spatial and Socioeconomic Data Analyst Consultant

Sustainable Climate-Resilient Accelerated Local Economic Development (SCALED) Project

Position : **Spatial and Socioeconomic Data Analyst Consultant**
Duty Station : NCDD Secretariat, Phnom Penh, Cambodia
Contract Duration : 50 working days, over the period from November 2026 to February 2027
Market Approach : National (Short-Term Individual Consultancy)
Expected Start Date : November 2026
Contract Type : Lump-sum contract
Grant Number : E748-KH

1. Background

The 10-Year National Programs on Sub-National Democratic Development, Phase 2 (NP2, 2021-2030), was designed to implement key decentralization and deconcentration policies, specifically the Law on the Management of the Capital, Provincial, Municipal, District and Khan Administrations (2008), Law on the Management of the Commune/Sangkat Administrations (2001). The NP2 aims at enhancing the delivery of public services and local development with mainstreaming of gender equality, social equity and inclusiveness and climate change adaptation through establishing the structures and governance systems of sub-national administrations to be modern, autonomous, efficient, transparent, and accountable in providing public services and local development. NP2 is implemented under leadership and management of the National Committee for Sub-National Democratic Development (NCDD) with assistance of NCDD Secretariat (NCDDS) for day-to-day management and implementation of the program.

The Royal Government of Cambodia (RGC), through NCDDS, is preparing the Sustainable Climate-Resilient Accelerated Local Economic Development (SCALED) Project to support implementation of the 10-Year National Program for Sub-National Democratic Development Phase 2 (NP2, 2021-2030). The project is expected to be implemented over a five-year period (2027-2031) with an indicative budget of US$80-100 million, primarily financed by the World Bank (WB) and other anticipated development partners.

The proposed Project Development Objective (PDO) focuses on three interrelated dimensions:

1. Strengthening subnational administrations' resilience systems and capacities;
2. Delivery of local economic and climate-resilient infrastructure; and
3. Promoting citizen participation, social accountability, and inclusive service delivery.

The project consists of four components:

- Component 1: Local Resilience Systems Strengthening;
- Component 2: Local Resilience and Economic Investments;
- Component 3: Innovation and Learning; and
- Component 4: Coordination, Policy and Implementation Support.

Cambodia’s districts and municipalities face varying climate hazards, including riverine and flash flooding, prolonged drought and dry spells, extreme heat, storm damage, and, in coastal areas, tidal flooding and sea-level rise. A credible, spatially explicit picture of which areas are most

exposed to these hazards and least able to cope with them is a foundational input to SCALED's geographic targeting, and it must be produced early enough to inform Year 1 investment decisions rather than only a downstream planning framework. As part of early preparation, the World Bank together with the RGC undertook a detailed knowledge Stocktake, from which a summary of findings relevant to this assignment is annexed below.

NCDDS therefore seeks to recruit a Spatial and Socioeconomic Data Analyst Consultant to produce this evidence base: georeferenced hazard maps, a climate vulnerability index and maps, and a maintained GIS database. These technical outputs are the foundation used by other SCALED consultants — the Climate Change Consultant, the Local Governance Consultant, and the Local Economic Development (LED) Consultant — to build climate screening tools, planning guidance, and the final geographic and investment prioritization. This assignment is deliberately scoped as a technical mapping and spatial-analysis role; it does not extend to designing the project-wide climate mainstreaming framework or combining climate vulnerability with economic potential into a final investment shortlist, which sit with those other assignments.

2. Objective of the Assignment

The objective of this assignment is to support SCALED's geographic selection framework and subsequent district/municipality (DM) and commune/sangkat (CS) planning through two linked workstreams: (a) consolidating and analyzing the climate, socioeconomic, administrative, and spatial data required to apply the province and DM selection criteria agreed between NCDDS and the World Bank, and presenting the results for the December 2026 preparation mission; and (b) consolidating and updating hazard maps, climate-vulnerability analysis, related GIS products, and simple, replicable data profile templates for use in DM and CS planning under SCALED and beyond, with final outputs completed by February 2027. By the December 2026 preparation mission, the consultant shall also identify and assess the available hazard maps, climate-vulnerability indexes, analytical tools, and related GIS products; determine which are fit for use in the selection analysis; and recommend which should subsequently be consolidated, adapted, or updated for DM/CS planning. NCDDS and the World Bank retain responsibility for interpreting the results and deciding geographic selection.

The work should build on and integrate with Cambodia's existing subnational data systems and planning processes. The outputs should be practical and easy for NCDDS and subnational administrations to understand, use, update, and apply in future planning and investment decisions, rather than becoming a separate one-off technical product.

This is a technical GIS and data analysis assignment; rather than a broader climate study or economic prioritization exercise. The outputs should also be completed in time to support NCDDS and the WB in informing Year 1 targeting and investment planning under Components 1 and 2.

3. Scope of Work

The consultant will prioritize the following key design questions:

1. What climate, socioeconomic, administrative, and spatial data are available and suitable for applying the province and DM selection criteria agreed by NCDDS and the World Bank?

2. How should these datasets and indicators be prepared, standardized, combined, and quality-assured so that NCDDS and the World Bank can apply the agreed criteria?
3. What results does the data analysis produce under the agreed criteria, including data limitations and sensitivity to alternative weights?
4. What hazard, vulnerability, and GIS products and simple DM and CS data profile templates are subsequently needed for DM/CS planning, and how can they build on existing systems?

3.1 Hazard Mapping

- Review the existing Stocktake report and existing Cambodia climate, hazard, and geospatial datasets relevant to sub-national climate exposure (e.g., riverine and flash flooding, prolonged drought/dry spells, extreme heat, storm damage, and coastal flooding/sea-level rise where relevant);
- Review existing climate-related geospatial and data systems used by National level, NCDDS and subnational administrations, including the Commune/Sangkat Fund's data holdings, INFORM Risk Index inputs, and any Ministry of Environment/CCCSP tracking systems and identify how the hazard mapping and GIS outputs can build on, integrate with, or complement these systems rather than creating a separate or duplicate database;
- Prepare, for the December 2026 preparation mission, a consolidated inventory and assessment of available hazard maps, vulnerability indices, analytical tools, and GIS products, documenting coverage, resolution, currency, quality, and key gaps (with proposed proxies), and identifying which are most suitable for the agreed selection criteria and for later DM/CS planning;
- Coordinate with the Climate Change Consultant so that the hazard dimensions, indicators, and vulnerability framing are informed by their advice on climate criteria; the Data Analyst advises on data and GIS feasibility, not on climate policy or mainstreaming design;
- Conduct GIS-based spatial analysis of hazard exposure at district/municipal level, drawing on the best available hazard data;
- Following the December mission, consolidate and update georeferenced hazard maps for each priority hazard for use in DM/CS planning, with supporting technical annexes documenting data sources, methods, and assumptions.

3.2 Vulnerability Mapping and Climate Vulnerability Index

- Identify vulnerability indicators reflecting sensitivity and adaptive capacity;
- Prepare and analyze the data and indicators required to apply the agreed selection criteria, and produce transparent province and DM scores or comparative results, including sensitivity analysis and clear documentation of data limitations, for consideration by NCDDS and the World Bank at the December 2026 preparation mission;
- Assess existing climate-vulnerability indices, indicators, and classifications and determine, in consultation with NCDDS and the World Bank, whether an existing index can be used or adapted for the agreed selection criteria and subsequent DM/CS planning; where necessary, develop a transparent climate-vulnerability sub-index based on agreed indicators and available data, legible and actionable to both DMK administrations (who tend to frame climate risk through disaster coordination) and Commune/Sangkat councils (who tend to frame it through vulnerability reduction), given that the Stocktake found no single shared administrative definition of the climate function across these levels; and
- Following the December mission, refine the climate-vulnerability analysis and maps for SCALED-targeted districts/municipalities and communes/sangkats, distinct from and prior to any combination with economic potential, so the vulnerability evidence is clearly visible and independently usable in DM/CS planning.

3.3 Validation

- Validate the data inventory and selection analysis with NCDDS and the World Bank before and during the December 2026 preparation mission;
- Present the hazard maps, vulnerability index, and GIS database to NCDDS, the World Bank Task Team, and other stakeholders;
- In addition to technical validation with NCDDS and World Bank counterparts, test with a sample of DM/CS staff without specialist GIS training whether the maps, index, and accompanying guidance can actually be interpreted and used — consistent with the Stocktake's caution, echoed at the stakeholder validation workshop, that subnational-level materials should be simplified and made user-friendly rather than made more comprehensive;
- Revise the maps, index, and database based on Preparation Mission feedback and on the usability testing above;
- Conduct limited field verification of hazard and vulnerability data, coordinated where possible with other consultants' field visits, to ground-truth the outputs;
- Confirm with NCDDS how the GIS database and its outputs will be institutionally owned and updated after the Consultant's contract ends; including, where relevant, how they can feed into or help establish the unified subnational climate monitoring capability the Stocktake found is currently missing.

4. Expected Deliverables

No.	Deliverable	Indicative Timeline	Payment Schedule
1	Inception note confirming hazard/vulnerability mapping methodology, data source mapping, and workplan	Within 1 week of contract signing	20% upon acceptance of the inception note
2	Data inventory and geographic-selection analysis package, comprising: (i) a consolidated inventory and fitness-for-purpose assessment of climate, socioeconomic, administrative, and spatial datasets relevant to the agreed province and DM selection criteria (quality, resolution, currency, coverage, accessibility, gaps, proposed proxies), including an assessment of available hazard maps, vulnerability indices, and tools; and (ii) preparation and analysis of the relevant datasets and indicators under the agreed criteria, with transparent scores or comparative results, sensitivity analysis, and a statement of limitations, for consideration at the December 2026 preparation mission	December 2026	35% upon acceptance of Deliverable 2
3	Hazard, vulnerability, and GIS assessment and design package, comprising: (i) technical recommendations on the data sources,	January 2027	20% upon acceptance of Deliverable 3

	hazard maps, vulnerability products, and GIS tools to be used, adapted, updated, or developed for DM/CS planning, covering data availability, quality, resolution, currency, and technical feasibility, prepared in consultation with the Climate Change Consultant, who will provide substantive advice on climate criteria and their use in planning; and (ii) the proposed methodology, indicators, geographic resolution, data architecture, and draft formats for final maps, DM/CS profile templates, and the GIS database		
4	Final consolidated and updated hazard maps, climate-vulnerability analysis and maps, DM/CS data profile templates, and documented GIS database with data dictionary/user guide, revised following validation and usability testing, for incorporation into the Project Document	February 2027	25% upon acceptance of all final deliverables

5. Duration of the Assignment

The assignment is expected to be conducted over approximately 50 working days between November 2026 and February 2027, with level of effort to be determined by NCDDS. The data inventory and selection analysis shall be completed in time for the December 2026 preparation mission; final DM/CS planning products shall be completed by February 2027.

The Consultant may be required to travel to selected districts/municipalities and communes/sangkats to ground-truth hazard and vulnerability data.

6. Payments

The payment will be made on the basis of lump sums to be determined based on qualifications, deliverable outputs, and contract negotiation.

7. Reporting and Supervision

The Consultant will report directly to the Project Director and/or designated Project Manager of SCALED preparation, in coordination with the World Bank Task Team's climate focal points. For technical implementation, the consultant will closely collaborate and maintain regular coordination with:

- The Climate Change Consultant, who will provide substantive advice on climate criteria, hazard dimensions, and the use of climate information in selection and DM/CS planning, and who will use the outputs of this assignment to develop climate screening tools, the PIM climate chapter, and climate checklists. The Data Analyst advises on what data exists, how reliable it is, and how it can be technically processed, mapped, and maintained, while the

Climate Change Consultant leads on which climate considerations should be used and how they are applied in planning and investment design;
- The Senior Local Planning and Governance Consultant, who leads revision of district and commune planning guidelines, to ensure GIS hazard and vulnerability outputs are available in a form usable for planning;
- The Senior LED Consultant (A-1), who will combine the vulnerability index with economic opportunity mapping to determine final project investment priorities;
- The Senior Project Management Consultant, to ensure the hazard maps, vulnerability index, and GIS database are accurately and consistently reflected in the Project Appraisal Document and Project Implementation Manual (PIM);
- Relevant technical departments of NCDDS and members of the Inter-Ministerial Technical Working Group (TWG);
- The Senior Capacity Development Consultant;
- World Bank technical teams.

The consultant shall coordinate consultation planning and scheduling with the Senior Project Management Consultant and relevant consultants engaged under SCALED project preparation to align activities with Districts/Municipalities and Communes/Sangkats (DM/CS) councils and subnational staff, avoid duplication, and minimize consultation fatigue among stakeholders.

All deliverables shall be submitted in English. Khmer summaries may be requested where necessary.

The consultant is expected to:
- Participate in regular preparation meetings with the NCDDS project team and the World Bank Task Team, as required.
- Provide brief written progress updates to NCDDS upon request.
- Respond in a timely manner to review comments and requests for revisions from NCDDS and the World Bank Task Team.

8. Required Qualifications and Experience

Education

- Advanced university degree (master's degree or higher preferred) in Geography, Geographic Information Systems, Climate Science, Environmental Science, or a related field.

Professional Experience

- Minimum 7 years of relevant professional experience in GIS-based spatial analysis, climate hazard mapping, or climate vulnerability assessment;
- Demonstrated proficiency in GIS software and spatial database management, including integration of climate hazard, vulnerability, and socioeconomic datasets;
- Demonstrated experience constructing climate vulnerability indices using recognized frameworks (e.g., exposure–sensitivity–adaptive capacity or other IPCC-aligned approaches);
- Experience working with Cambodia climate, hazard, or socioeconomic datasets is highly desirable;
- Experience supporting donor-funded projects, preferably financed by the World Bank or other multilateral development partners.

Skills and Competencies

- Strong technical skills in GIS analysis, spatial database design, and spatial data visualization;
- Ability to document methods and datasets clearly enough for a non-specialist counterpart team to maintain them;
- Fluency in English and Khmer (written and spoken) is required.

9. Selection Method

The Consultant will be selected in accordance with the applicable procurement and consultant selection procedures of the World Bank and the Royal Government of Cambodia.

10. Ethical Considerations and Confidentiality

The Consultant shall:

- Maintain confidentiality of all project information and documents;
- Comply with applicable government and donor policies;
- Avoid conflicts of interest during the assignment; and
- Ensure that all outputs, including GIS analysis and datasets, are original and of professional quality.

11. Administrative Support

NCDDS will:

- Facilitate access to relevant documents, datasets, and stakeholders;
- Coordinate meetings with relevant ministries and sub-national administrations;
- Provide available project information and background materials;
- Review and provide feedback on deliverables in a timely manner; and
- Provide the Consultant with access to the SCALED Knowledge Stocktake, its underlying source documents, relevant government legal and policy instruments, and other available project preparation materials, subject to document availability and applicable confidentiality requirements.

ANNEX

Stocktake Synthesis: Climate Risk Targeting and Mainstreaming

SCALED Activity A-2 Design Questions

Version 3 | August 2026

Purpose and Status. *This document synthesizes findings from the SCALED knowledge Stocktake relevant to the two consultancies under GFPP Activity A-2. It is an analytical starting point for consultants, not a final design document. Each finding is followed by a design implication framed as a proposition to test, not a predetermined conclusion. Where a finding has direct implications for a specific SCALED component or for coordination with another GFPP assignment, this is flagged explicitly. The two consultant roles. Activity A-2 comprises two distinct consultancies with different technical profiles and different primary outputs. The Spatial and Socioeconomic Data Analyst Consultant (A2a, reworked) is responsible for taking an inventory of available climate and socioeconomic data, operationalizing the agreed SCALED selection index using that data, and developing simple data profile templates for DM and CS planning use. The Climate Change Consultant (A2c) is responsible for providing substantive expert input on climate criteria and considerations relevant to the selection framework, embedding climate information into DM and CS planning processes and guidelines, and developing the policy and technical basis for mainstreaming climate across the DM investment budget and Component 2 investment design. The two roles are complementary and have explicit coordination dependencies described under each design question. Neither consultant owns the selection criteria decisions, which will be agreed between NCDDS and the World Bank at the September 2026 preparation mission; both contribute to that process from different angles. Assignment of design questions. Design questions are labelled DQ-A (Spatial and Socioeconomic Data Analyst Consultant) or DQ-C (Climate Change Consultant). Where coordination is required, the dependency is noted. This assignment is intended to inform TOR structure, not to preclude joint working. Key documents reviewed. Climate Risk Country Profile — Cambodia (WB, 2024); Cambodia Country Climate and Development Report (WB, 2023); Cambodia Climate Change Institutional Assessment (WB, 2023); Scaling Up Locally-Led Climate Action in Cambodia (WB, 2024); Barriers and Opportunities for CCA and DRR at DMK and CS Levels (UN-Habitat, 2019); Guidelines for Integrating CC Considerations into CS Development Planning (MoE/NCDD, 2014); National Action Plan for Disaster Risk Reduction 2024–2028 (NCDM, 2024); Cambodia Secondary Cities Report (WB, 2026). Cross-referenced with: LED Stocktake Summary (A-1, August 2026); Local Planning Stocktake Summary (A-4, August 2026); SNA Fiscal Stocktake Summary (A-5b, August 2026); SCALED Identification Mission Aide Memoire (May 2026). A note on what the Stocktake reveals. The documents reviewed are predominantly analytical reports rather than operational manuals or regulatory instruments. Unlike most other SCALED preparation assignments — where the relevant tools, guidelines, and legal instruments already exist and need to be revised or updated — this assignment is operating in terrain where the operational link between climate data and DM/CS planning has been attempted but has not held, and where climate-resilient design standards for DM-level infrastructure have not been codified. The two consultants are not being asked to improve an existing system, but to create the substantive content that the Planning (A-4) and Fiscal (A-5b) assignments have already created an institutional home for.*

Framing

This synthesis is organized around five design questions: two assigned primarily to the Spatial and Socioeconomic Data Analyst Consultant (DQ-A1, DQ-A2), and three assigned primarily to the Climate Change Consultant (DQ-C1, DQ-C2, DQ-C3). A short section of background context on the geographic targeting process precedes the design questions.

Background — Geographic Targeting: The criteria for SCALED's province/DM selection framework will be agreed between NCDDS and the World Bank at the September 2026 preparation mission. The Climate Change Consultant provides upstream expert input on what climate criteria and considerations should be included (DQ-C1). The Spatial and Socioeconomic Data Analyst Consultant operationalizes the agreed criteria using available data (DQ-A1 and DQ-A2). Neither consultant makes the selection criteria decisions.

DQ-A1 — Data Inventory: What spatial, climate, and socioeconomic data is available at DM and CS level to operationalize the agreed SCALED selection criteria, and what are the gaps?

DQ-A2 — Index Operationalization and Planning Profiles: How should the selection index be operationalized using available data, and what simple data profile templates can be developed to inform DM and CS planning?

DQ-C1 — Climate Criteria for the Selection Framework: What climate hazard, exposure, vulnerability, and adaptive capacity considerations should inform the SCALED selection framework, and how should they relate to socioeconomic factors?

DQ-C2 — Climate Information in Planning: How can climate information realistically be embedded in revised DM and CS planning processes and guidelines?

DQ-C3 — Climate-Resilient LED Infrastructure and Budget Mainstreaming: What do existing policy, tools, and lessons tell us about how climate should be mainstreamed across the DM investment budget, and what does climate-resilient LED infrastructure look like in the Cambodian DM context?

Background: Geographic Targeting

The criteria for SCALED's province/DM selection framework will be agreed between NCDDS and the World Bank at the September 2026 preparation mission. The Stocktake findings below are provided as background context for that discussion. They inform both the Climate Change Consultant's advisory input (DQ-C1) and the Data Analyst's operationalization work (DQ-A1, DQ-A2).

What exists. Two instruments cover the full national DM geography and represent the most credible off-the-shelf inputs for a selection index. The NCSD Vulnerability Index provides a multi-hazard composite (flood, storm, drought) used previously for LoCAL/LGCC PBCRG district eligibility. The World Bank Economic Potential Index (EPI, Cambodia Secondary Cities Report, 2026) covers all 210 districts across three pillars — Natural Endowments, Local Infrastructure, and Agglomeration Advantages — and already incorporates a climate anomalies sub-indicator. Neither was designed for SCALED's specific purpose, but both are sufficiently robust to serve as a foundation. If a separate climate hazard dimension is included in the selection index, the EPI's climate anomalies sub-indicator should be examined for potential double-counting.

What the Stocktake flags for the September mission. Poverty geography and climate exposure only partially overlap in Cambodia: flood exposure is concentrated along the Mekong and Tonle Sap floodplains; drought is highest in the southeast; extreme heat is nationwide but most acute for outdoor agricultural laborers; and the deepest poverty is concentrated in the northeast and southwest. A selection index that weights only hazard exposure will systematically underweight the poorest areas; one that weights only poverty will miss high-exposure agricultural districts. If fiscal or administrative capacity is included as a selection criterion, the index should be designed so that districts with higher climate exposure and weaker fiscal capacity rank higher — not lower — to avoid investment drifting toward better-resourced areas.

Design Questions for the Spatial and Socioeconomic Data Analyst Consultant

DQ-A1: What spatial, climate, and socioeconomic data is available at DM and CS level to operationalize the agreed SCALED selection criteria, and what are the gaps?

Primary consultant: Spatial and Socioeconomic Data Analyst Consultant

Finding A1.1 — Available climate data exists at national and provincial resolution but is not currently disaggregated to or formatted for district-level decision-making

The Climate Risk Country Profile (2024) draws on CMIP6 (0.25° × 0.25° gridded resolution), ERA5 reanalysis, and CHIRPS/CHIRTS precipitation and temperature data. MOWRAM's Department of Meteorology generates hydro-meteorological station data, seasonal forecasts, and flood early warning bulletins. The NCSD manages the Vulnerability Index dataset updated through 2022. The NCDM manages the DMIS and CAMDI disaster occurrence databases. None of these systems currently produce district- or commune-level climate information in a standardized, accessible format suited to planning or index construction.

The 2019 UN-Habitat study identified "lack of access to science-based climate change scenarios and high-resolution hydro-meteorological data for site-specific planning" as a binding constraint at DM level. The 2014 MoE/NCDD guidelines worked around this by using proxy indicators — Commune Data Books, IDPoor, local flood records. The same limitation has persisted across successive planning reform cycles, suggesting the constraint is structural, not incidental.

Design implication for consultant to test: Whether existing government data sources — the NCSD VI by hazard type, MOWRAM seasonal bulletins, NCDM disaster records, the cDB, IDPoor, and MEF/NCDDS fiscal and budget execution data — are individually fit-for-purpose against each agreed selection criterion, and whether the data gaps identified require proxy substitution or should be flagged as limitations on the index's precision. A clear

documentation of what each source covers, at what administrative resolution, and how recently it was updated is the minimum output of this phase. Where data is not accessible at district level, this should be stated as a gap and recommended for the Component 4 policy workstream, not resolved through assumptions.

Coordination note: The Climate Change Consultant (DQ-C1) will provide substantive input on which climate criteria matter and why, prior to or concurrent with the data inventory. The Data Analyst should receive the Climate Change Consultant's advisory note on selection criteria as a briefing input before finalizing the data inventory scope, to ensure the inventory targets the right variables rather than all available climate data.

Component linkage: Component 4 — the TWG (NCDDS, MOI, MEF, MOE, MOWRAM) should receive the data inventory as an early input to the policy and guideline development workstream. A specific recommendation on whether NCDM should be added to the TWG, given its custodianship of the most operationally relevant disaster occurrence data, is a bounded and actionable output of this deliverable.

Finding A1.2 — The socioeconomic data landscape is richer but also needs systematic assessment for district-level fitness-of-purpose

The Commune Database (cDB), managed by NCDDS and updated annually, provides commune-level indicators across demographics, infrastructure, poverty, health, and education. IDPoor provides commune-level poverty mapping. MEF's GDSNAF holds DM-level fund receipt and budget execution data. The 2022 Economic Census and NIS 2019 Population Census underpin the EPI's agglomeration and infrastructure pillars. These sources are generally more accessible than climate data but their fitness for purpose against specific SCALED selection criteria — economic potential, administrative capacity, own-source revenue — has not been systematically assessed at district level.

Design implication for consultant to test: Whether the cDB and IDPoor, aggregated to the district level, provide a sufficient proxy for socioeconomic vulnerability and adaptive capacity without requiring new primary data collection, and whether the annual cDB update cycle allows the profile templates to remain current over the SCALED implementation period. Data quality across districts should be screened, since the cDB relies on self-reporting by commune councils and quality varies systematically with administrative capacity — the same districts that are most likely to be priority SCALED targets.

Coordination note: The Fiscal Consultant (A-5b) holds district-level DM Fund receipt rate and budget execution data that is directly relevant to any "administrative capacity" or "fiscal capacity" criterion in the selection framework. The Data Analyst should coordinate with A-5b to obtain this data in a usable format before finalizing the index inputs.

DQ-A2: How should the selection index be operationalized using available data, and what simple data profile templates can be developed to inform DM and CS planning?

Primary consultant: Spatial and Socioeconomic Data Analyst Consultant

Finding A2.1 — Prior targeting exercises in Cambodia have produced ranked lists without decision rules, limiting operational uptake

The LoCAL PBCRG experience — the closest Cambodian precedent for vulnerability-based district targeting — demonstrates that a ranked eligibility list alone is insufficient to drive quality investment. The UN-Habitat (2019) assessment found that even eligible districts failed to implement technical services sub-projects because financial and procedural barriers at district level had not been resolved. The "Scaling Up" report (2024) found that less than 1% of commune/sangkat fund budgets go to climate action despite stated eligibility, with bottlenecks originating upstream in the planning and design cycle, not in treasury payment. The selection index for SCALED should therefore be designed to generate not just a ranking but a usable decision-support product.

Design implication for consultant to test: Whether the index operationalization can produce three distinct outputs rather than a single ranked list: (a) a scored and ranked district list, applying the agreed criteria to available data, with an accompanying sensitivity analysis showing how the ranking shifts under modest changes in weighting — so that NCDDS and the Bank can make an informed selection decision rather than treating the ranking as a black box; (b) a brief data quality and coverage note for each criterion, flagging where data limitations constrain the ranking's precision; and (c) a short district-type summary for the highest-priority tier, describing the typical hazard and socioeconomic profile, which feeds directly into the Climate Change Consultant's planning integration work and the Planning Consultant's (A-4) guidelines revision.

Coordination note: Output (c) — the district-type summary — is the primary handoff from this consultant to the Climate Change Consultant and the Planning Consultant (A-4). It should be delivered before the Climate Change

Consultant finalizes the district climate profile template under DQ-C2, since the profile template needs to reflect the actual hazard context of priority SCALED districts rather than a generic national profile.

Component linkage: Component 2 — the single investment window PIM will need to cross-reference the district tier assignments produced by this consultant, so that fund flow modalities and minimum conditions are calibrated to the district profile. This should be coordinated with the Fiscal Consultant (A-5b) during PIM design.

Finding A2.2 — Simple, government-system-grounded data profiles are more likely to be used in DM/CS planning than technically sophisticated climate tools

The 2014 MoE/NCDD commune planning guidelines, the 2017 Climate Resilience Technical Manual, and the VRA methodology have all attempted to introduce climate information into subnational planning. None has achieved sustained, routine use. The Planning Stocktake (A-4) attributes this primarily to two factors: the tools require data that planners do not have access to, and they sit outside the mandatory planning steps rather than being embedded within them. A profile template that draws exclusively on data available in existing government systems — and that is designed to be completed by a DM planning officer without specialist assistance — is significantly more likely to be integrated into the revised planning guidelines than a tool that requires external data inputs.

Design implication for consultant to test: Whether a one-page district-level data profile template and a companion one-page commune/sangkat-level template — both drawing exclusively on sources confirmed accessible in the data inventory — can provide the climate and socioeconomic information that DM and CS planning officers need for the situation analysis phase of the planning cycle. The templates should be designed to be updated annually using the cDB cycle, not require periodic specialist revision. Draft templates should be tested in at least two contrasting district contexts (e.g., a flood-exposed Tonle Sap district and a drought-prone plateau district) before being finalized.

Coordination note: The profile templates are the primary joint output between this consultant and the Climate Change Consultant (DQ-C2). The Climate Change Consultant will advise on how the templates should connect to the revised DM planning guidelines and the Component 2 investment screening process. The sequencing recommended is: Data Analyst finalizes templates based on confirmed available data → Climate Change Consultant reviews for planning usability and integration → Planning Consultant (A-4) embeds templates in revised guidelines. This shared milestone should be reflected in all three TOR deliverable schedules.

Component linkage: Component 1 — participatory risk diagnostic tools to be strengthened under Component 1 should build on, not duplicate, these profile templates. Component 4 — the TWG should endorse the templates as the standard district and commune climate and socioeconomic data input to the planning cycle.

Design Questions for the Climate Change Consultant

DQ-C1: What climate hazard, exposure, vulnerability, and adaptive capacity considerations should inform the SCALED selection framework, and how should they relate to socioeconomic factors?

Primary consultant: Climate Change Consultant

Finding C1.1 — Cambodia's multi-hazard profile requires a composite climate criterion that goes beyond flood and drought, but must remain tractable at DM level

Cambodia faces a spatially differentiated multi-hazard landscape. Riverine flooding affects the Mekong and Tonle Sap floodplains most severely, recurring on average every five years and affecting areas where 80% of the population lives. Drought exposure is highest in the southeast and Pailin. Extreme heat is a nationwide and growing risk — Cambodia ranks among the top 23 countries globally for acute heat exposure, with projected temperature increases of up to 1.24°C by 2040–2059 under SSP3-7.0 — and is particularly severe for outdoor agricultural laborers. Coastal inundation from sea-level rise threatens four coastal provinces. Climate projections point to wetter wet seasons, drier dry seasons, and more frequent extreme 5-day precipitation events, particularly in northern provinces.

Previous subnational targeting exercises in Cambodia — including the LoCAL/LGCC PBCRG mechanism and the NCSD VI — have focused almost exclusively on flood and drought, partly because those are the hazards with the most accessible data and the most direct precedent in PBCRG investment menus. The UN-Habitat (2019) study explicitly notes this narrow focus as a barrier to comprehensive climate mainstreaming. SCALED's selection framework has an opportunity to incorporate heat stress and multi-hazard compound risk as criteria, provided the data exists to operationalize them.

Design implication for consultant to test: Whether a multi-hazard climate exposure criterion — incorporating at minimum flood, drought, and heat stress — can be proposed for the September mission as a feasible addition to the

selection framework, with an honest assessment of what data is available to operationalize each hazard dimension and where the Data Analyst is likely to encounter gaps. This advisory input should be framed as a set of options with data feasibility notes, not a predetermined recommendation. The Climate Change Consultant should provide this input before or concurrent with the Data Analyst's inventory, so that the inventory is scoped to the right variables from the outset.

Coordination note: This deliverable is the primary upstream input from the Climate Change Consultant to the Data Analyst's work. Early coordination between the two consultants — ideally in the first two weeks of their respective assignments — is recommended to align on which climate variables the inventory should prioritize.

Component linkage: Component 1 — the participatory risk diagnostics to be strengthened under Component 1 should reflect the same hazard dimensions that the selection framework uses, so that district-level targeting and commune-level planning tools are internally consistent.

Finding C1.2 — Adaptive capacity is as important as hazard exposure in the selection framework, and the fiscal dimension is its most tractable proxy

The CCDR (2023) and the Climate Risk Country Profile (2024) both demonstrate that climate vulnerability in Cambodia is not simply a function of hazard intensity. Adaptive capacity — the capacity of households, communities, and governments to respond — varies significantly across districts and is correlated with but not reducible to poverty. The Fiscal Stocktake (A-5b) establishes that capital expenditure across all SNAs is projected at only 5.6% of budgets in 2025, with 97% of DM finances dependent on central transfers and personnel costs consuming nearly 60% of DM expenditure. This fiscal constraint is structural, not temporary, and means that districts with high hazard exposure and low fiscal capacity have the least ability to self-finance climate-resilient investment — making them the strongest candidates for SCALED investment, not weaker ones.

Design implication for consultant to test: Whether a concise note on the relationship between climate vulnerability, adaptive capacity, and fiscal capacity — drawing on the CCDR, CCIA, and Fiscal Stocktake findings — can frame the September mission discussion on how adaptive capacity should be weighted in the selection framework. The key proposition to advance is that selection criteria that favour administratively stronger or fiscally better-resourced districts will reproduce the same spatial concentration of investment that existing SNA fiscal transfers already exhibit, rather than directing SCALED toward the districts where the investment gap is greatest.

Coordination note: This finding directly informs the Data Analyst's operationalization work (DQ-A1, DQ-A2). If fiscal capacity is agreed as a selection criterion at the September mission, the Data Analyst will need MEF DM fund data to operationalize it; the Climate Change Consultant's framing note should include a data availability signal to help the mission discussion stay grounded in what can actually be measured.

DQ-C2: How can climate information realistically be embedded in revised DM and CS planning processes and guidelines?

Primary consultant: Climate Change Consultant

Finding C2.1 — Climate planning tools have repeatedly failed to take hold at DM/CS level because they require data planners cannot access and sit outside mandatory planning steps

The 2014 MoE/NCDD commune planning guidelines, the 2017 Climate Resilience Technical Manual (with its four tools: disaster risk mapping, trend analysis, H-Form, disaster ranking), and the VRA methodology represent successive attempts to introduce climate considerations into subnational planning. None has achieved sustained routine use. The Planning Stocktake (A-4) attributes this to two structural causes: the tools require data that planners do not have access to, and they are positioned as supplementary instruments rather than mandatory steps in the core planning process.

The CCIA (2023) adds an institutional dimension: the national Climate Change Technical Working Group meets only twice a year, climate information "frequently fails to reach local authorities," and there is no integration point between the four agencies that hold relevant data (MOWRAM, NCSD, NCDM, and NCDDS). The Planning Stocktake (A-4) has already recommended absorbing climate tools into mandatory revised planning steps. The substantive question this consultant must answer is what climate content should fill that structural slot.

Design implication for consultant to test: Whether a brief, standard climate risk summary — drawn from the district-level data profile template developed by the Data Analyst — can serve as the mandatory starting point for the situation analysis phase of the revised DM Development Plan, replacing the current optional and data-intensive VRA-based approach. The test is whether DM planning officers can complete the relevant section using the profile template alone, without specialist assistance. The Climate Change Consultant should also advise on whether the existing VRA

methodology should be retained for commune-level participatory processes (where it retains value as a community engagement tool) while the district-level situation analysis relies on the profile template, creating a nested rather than duplicated approach.

Coordination note: This deliverable depends on receiving the district-level data profile template from the Data Analyst before it can be finalized. The Climate Change Consultant can begin preparatory work — reviewing the existing planning guidelines structure, meeting with MOI DM Affairs and Planning Consultant (A-4), and drafting the guidance language — before the template is available, but the final integration recommendation requires the template. This dependency should be reflected in both TOR deliverable schedules with an explicit shared milestone.

Component linkage: Component 4 — the TWG-led guideline development function is the institutional home for endorsing the climate content of revised DM planning guidelines. Component 1 — participatory risk diagnostic tools should be coherent with the planning integration approach recommended here, so that DM-level situation analysis and CS-level participatory planning use consistent climate information.

Finding C2.2 — The institutional architecture for climate data has four separate owners with no subnational integration point; the TWG is the practical coordination mechanism but has a membership gap

MOWRAM generates meteorological data; the NCSD manages the Vulnerability Index; the NCDM manages disaster occurrence records; and NCDDS manages the VRA and cDB. These four systems operate in separate governance tracks. The CCIA (2023) identifies this fragmentation as binding, with the Climate Change Technical Working Group meeting too infrequently and with insufficient mandate to resolve it. The SCALED TWG (NCDDS, MOI, MEF, MOE, MOWRAM), as constituted in the Aide Memoire (para 21), does not include NCDM — which manages the most operationally relevant disaster occurrence data for subnational planning.

Design implication for consultant to test: Whether a minimal, functional data-sharing protocol — identifying one routinely updated and accessible data point from each of the four agencies — can serve as the practical basis for the district climate profile without requiring new inter-ministerial agreements. The consultant should also recommend specifically whether NCDM's inclusion in the SCALED TWG is warranted, framing this as a bounded and actionable recommendation for the September preparation mission rather than a broader institutional reform proposal.

Coordination note: The data-sharing protocol recommendation complements the Data Analyst's inventory findings (DQ-A1). The two consultants should coordinate on this deliverable to ensure the protocol draws on confirmed accessible data rather than aspirational data.

Component linkage: Component 4 — the TWG policy development function. The NCDM inclusion recommendation is a time-sensitive input: if it is to be acted on, it needs to reach the TWG before the October–November 2026 preparation phase, not after the guidelines revision is underway.

DQ-C3: What do existing policy, tools, and lessons tell us about how climate should be mainstreamed across the DM investment budget, and what does climate-resilient LED infrastructure look like in the Cambodian DM context?

Primary consultant: Climate Change Consultant

Finding C3.1 — Climate is currently siloed in the SSES budget component; the fiscal and policy framework to mainstream it into the Local Development component already exists but has not been operationalized

The Fiscal Stocktake (A-5b) identifies a critical structural problem: Joint Circular 007 places climate-related infrastructure under the Social Services and Environmental Sanitation (SSES) component of the DM fund, which is fixed at a nominal ceiling and does not grow with national revenue. Sub-Decree 152 (Art. 7), however, permits DMs to finance expenditures of any component from transferred resources if approved in the annual budget. The legal barrier to treating climate as a cross-cutting design standard within the Local Development component — which does grow with national revenue — is therefore lower than commonly assumed. The barrier is operational and normative, not legal.

The LED Stocktake (A-1) reinforces this: climate resilience is currently "fiscally located within social welfare envelopes rather than integrated into economic development functions." The CCDR (2023) notes that current road and irrigation design standards are not calibrated to projected climate conditions, meaning prior DM investments may already embed maladaptation risk.

Design implication for consultant to test: Whether a concise policy note — drawing on Sub-Decree 152 Art. 7, the flexibility provisions within Joint Circular 007, and the NAP-DRR 2024–2028 — can establish the legal and policy basis for repositioning climate as a design standard applied across the Local Development component rather than as a separate SSES expenditure category. This is not a new regulation; it is a clarification and reframing of existing instruments that the TWG could endorse. The consultant should test this interpretation with MEF's GDSNAF and MOI before committing it to a written recommendation, since MEF is the custodian of the budget classification system.

Coordination note: The Fiscal Stocktake (A-5b) has already identified this repositioning as a design implication but has deferred the substantive content — what climate standards would apply — to this assignment. The Climate Change Consultant should receive the A-5b summary as a briefing input and treat the fiscal architecture as settled context, not a question to re-examine. The output that feeds A-5b is the climate design standard specification, not a fiscal or legal opinion.

Component linkage: Component 2 — the single investment window PIM needs to specify, for each investment category in the eligible menu, what climate-resilient design standard applies. This policy note is the foundation for that specification.

Finding C3.2 — Cambodia has a well-documented pattern of climate investment that is narrow, infrastructure-heavy, and insufficiently climate-proofed; the opportunity is to diversify and standard-proof, not to add a new category

The "Scaling Up" report (2024) documents that Performance-Based Climate Resilience Grants have historically gone 76% to irrigation and 19% to transport, with only 5% to social capital or livelihood investments. The CCDR (2023) finds that every USD 1 spent on climate adaptation yields approximately USD 3 in avoided losses on average, but returns vary significantly by investment type and location — meaning the current concentration is not optimal. The UN-Habitat (2019) study notes that planners focus almost exclusively on flood and drought because those are the only hazards covered by available tools, reinforcing investment concentration.

The core problem is not absence of investment but absence of climate-responsive design. Roads are being built without drainage standards calibrated to projected precipitation intensity changes. Irrigation is being rehabilitated without accounting for changed seasonal flow patterns. The CCDR also finds that climate change could lower labor productivity by 8–20% by midcentury through heat stress — suggesting that heat-adaptive investments (shade structures, water access at worksites, market shelter design) have significant adaptation value but are essentially absent from the current DM investment menu.

Design implication for consultant to test: Whether a short, practical "climate-resilient design checklist" — organized by the main infrastructure types in the current DM investment menu (rural roads, drainage, small irrigation, market infrastructure, water supply) — can specify minimum climate-responsive design modifications that DM engineers can apply without specialist assistance. The checklist should be organized by the district's hazard tier from the selection index, so that flood-exposed districts apply flood-proofing standards to road drainage while drought-exposed districts apply water-efficiency standards to irrigation — creating a simple, hazard-differentiated tool rather than a generic one. The checklist should be piloted with DM engineers and MOE technical staff before being finalized.

Coordination note: The LED Stocktake (A-1) identifies the Component 2 investment menu as an open design question, noting the need to move beyond irrigation dominance toward a more diversified menu. The Climate Change Consultant should treat the Senior LED Consultant's investment menu recommendations as the starting list against which climate design standards are specified, rather than independently generating an investment typology. A joint mid-assignment review — after the LED menu draft and the climate design checklist draft are both available — is recommended before either is finalized.

Component linkage: Component 1 — the climate design checklist should be incorporated into DM training curricula through NASLA. Component 2 — the checklist should appear in the PIM as a mandatory step in the technical design phase of the investment cycle.

Finding C3.3 — The fiscal constraint is structural and the climate design standard must be calibrated to it; a phased approach is more realistic than a uniform requirement

The Fiscal Stocktake (A-5b) establishes that average DM development budgets are approximately USD 35,000 per year, with capital expenditure declining as a share of SNA budgets. Personnel costs consume nearly 60% of DM expenditure. Climate design standards that require expensive specialist studies or additional procurement rounds will either not be implemented or implemented as paperwork compliance. The CCDR's finding that adaptation returns

average USD 3 per USD 1 spent is compelling nationally, but does not resolve the affordability constraint at DM level.

Design implication for consultant to test: Whether each proposed design standard in the checklist can be explicitly rated for implementation cost and DM staffing requirements, and whether a two-tier approach — a minimal mandatory standard applicable to all investments, and enhanced standards available where SCALED Component 1 technical assistance is deployed — is more realistic than a single uniform requirement. Standards requiring specialist inputs should be flagged as Component 1 TA-dependent, not left to DMs to procure independently.

Coordination note: The Planning Stocktake (A-4) has identified that the planning and design preparation process itself currently has no dedicated budget line at DM level. Any standard that adds materially to preparation workload must identify a funding source or be designed to work within existing staffing. The Climate Change Consultant should coordinate with the Planning Consultant (A-4) on this constraint before the checklist is finalized.

Component linkage: Component 1 — technical assistance to DMs for climate-proofing investment designs. Component 4 — the TWG should include a recommendation on whether the minimum climate-proofing standard should eventually be embedded in the revised DM PIM as a government requirement beyond SCALED, once the standard has been tested and NASLA training capacity is in place.

Summary: Assignment of Design Questions

DQ	Finding	Primary Consultant	Coordination Dependency
DQ-A1	A1.1: What climate data is available at DM/CS level and is it fit for purpose against selection criteria?	Spatial and Socioeconomic Data Analyst	Climate Change Consultant: receive criteria advisory note before finalizing inventory scope; A-5b (Fiscal): obtain DM Fund data
DQ-A1	A1.2: What socioeconomic data is available and fit for purpose at DM/CS level?	Spatial and Socioeconomic Data Analyst	A-5b (Fiscal): DM budget execution data; NCDDS: cDB access
DQ-A2	A2.1: How should the selection index be operationalized, and what does the district ranking look like?	Spatial and Socioeconomic Data Analyst	Climate Change Consultant: district-type summary (output c) feeds DQ-C2 profile template; A-5b (Fiscal): coordinate on PIM cross-reference
DQ-A2	A2.2: What simple DM and CS data profile templates can be developed from available data?	Spatial and Socioeconomic Data Analyst	Climate Change Consultant: joint review before templates finalized; A-4 (Planning): templates embedded in revised guidelines
DQ-C1	C1.1: What multi-hazard climate criteria should be proposed for the selection framework?	Climate Change Consultant	Spatial and Socioeconomic Data Analyst: advisory note on criteria to be shared before inventory is scoped
DQ-C1	C1.2: How should adaptive capacity and fiscal constraint be framed as selection criteria?	Climate Change Consultant	A-5b (Fiscal): coordinate on fiscal capacity framing; September mission: input to criteria discussion
DQ-C2	C2.1: How should climate information be embedded in mandatory DM planning steps?	Climate Change Consultant	Spatial and Socioeconomic Data Analyst: depends on district profile template; A-4 (Planning): shared

			milestone for guidelines integration
DQ-C2	C2.2: What data-sharing protocol and TWG membership adjustments are needed?	Climate Change Consultant	Spatial and Socioeconomic Data Analyst: coordinate on protocol; TWG: NCDM inclusion recommendation
DQ-C3	C3.1: What is the legal/policy basis for repositioning climate in the Local Development component?	Climate Change Consultant	A-5b (Fiscal): treat fiscal architecture as settled; deliver design standard specification
DQ-C3	C3.2: What does a climate-resilient LED infrastructure design checklist look like?	Climate Change Consultant	A-1 (LED): align checklist to investment menu; joint mid-assignment review
DQ-C3	C3.3: How should the design standard be calibrated to DM fiscal constraints?	Climate Change Consultant	A-4 (Planning): unfunded planning process; Component 1: identify TA-dependent standards

Suggested Assignment Flow

The standard SCALED GFPP assignment flow is: Stocktake synthesis → preliminary long-list of operational recommendations → expert and beneficiary consultations → draft findings note → integrated stakeholder workshop → final findings note. The following sequencing modifications apply to these two assignments.

For the Spatial and Socioeconomic Data Analyst Consultant: The data inventory (DQ-A1) is the time-critical first deliverable and must be completed before the index operationalization (DQ-A2) begins and before the Climate Change Consultant can finalize the district climate profile template. Expert consultations should include MOWRAM's Department of Meteorology, MOE's Climate Change Department, NCSD, and NCDM to confirm what data is actually available in accessible formats at district level. The preliminary long-list deliverable should present a draft selection index applied to all eligible districts with a sensitivity analysis, alongside draft profile templates. The draft ranking and templates should be shared with the Climate Change Consultant and the Planning Consultant (A-4) before either is finalized.

For the Climate Change Consultant: The criteria advisory note (DQ-C1) should be the first deliverable, timed to inform both the September preparation mission and the Data Analyst's inventory scoping. Work on DQ-C2 and DQ-C3 can begin concurrently. The preliminary long-list deliverable should include a draft climate-resilient design checklist organized by investment type and hazard tier, and an initial policy note on the legal basis for mainstreaming climate into the Local Development component. Expert consultations should include DM-level engineers and planning officers — not only national officials — to ground-truth the checklist's implementability. The joint mid-assignment review with the Senior LED Consultant (A-1) should occur before the draft findings note is prepared. The stakeholder workshop can be combined with the Planning Consultant's (A-4) workshop, since the primary audience — MOI DM Affairs, MEF GDSNAF, NCDDS, and DM practitioners — is the same.