Mid-term Evaluation of the Sustainable Spatial Planning and Development (S-SpaD2030) Project

Evaluation report

From January 2022 – June 2024

Dr. Mohab Elrefaie
Review Lead Consultant

Final Version

25th December 2024

Project and evaluation information details

Project/outcome Information		
Project/outcome title	Sustainable Spatial Planning and Development (S-SpaD2030)	
Atlas ID	Award ID.: 00136334	
Corporate outcome and output	The **S-SpaD2030 project** aims to enhance regional equity and sustainable development in Egypt by improving spatial planning, efficient resource allocation, and institutional capacity. It delivers three key outputs: the development of a Sustainable Spatial Development Map (SSDM) to enable evidence-based planning, the optimization of an enterprise-based GIS platform for integrated data-driven decision-making, and institutional support through capacity-building programs, including Strategic Environmental Assessment (SEA) and GIS training. These outputs collectively contribute to achieving the corporate outcome of promoting balanced urban and regional development, aligning with Egypt's Vision 2030 and the Sustainable Development Goals (SDGs).	
Country / Region	Egypt	
Date project document signed	December 2021	
Project dates	Start	Planned end
	January 2022	December 2026
Project budget	2,000,000.00 US$	
Project expenditure at the time of evaluation	738,313.72 US$	
Funding source	GOPP & UNDP	
Implementing party[1]	General Organization for Physical Planning	

Evaluation information		
Evaluation type (project/ outcome/thematic/country programme, etc.)	Mid-term report – evaluation	
Final/midterm review/ other	Midterm review	
Period under evaluation	Start	End
	January 2022	June 2024
Evaluators	Dr. Mohab Elrefaie	
Evaluator email address	Mohab.elrefaie@eng.asu.edu.eg, +20 122784 9029	
Evaluation dates	Start	Completion
	October 2024	December 2024

[1] It is the entity that has overall responsibility for implementation of the project (award), effective use of resources and delivery of outputs in the signed project document and workplan.

Disclaimer

assessment that highlights the project's significant progress in advancing sustainable spatial planning in Egypt. The evaluation celebrates the strides made in modernizing geospatial platforms, integrating gender equality, and fostering institutional capacity while offering valuable insights to guide the next phases of implementation. Although certain challenges were encountered, such as data limitations and time constraints, these were proactively addressed through robust mitigation strategies, including extensive stakeholder engagement, triangulated data analysis, and the prioritization of high-impact areas and activities.

The evaluation is a testament to the collaborative effort of all project stakeholders and reflects the project's strong alignment with national priorities and international goals, including Egypt Vision 2030 and the Sustainable Development Goals. It emphasizes actionable recommendations designed to enhance project efficiency, scalability, and sustainability. By leveraging its achievements and addressing opportunities for improvement, SPAD2030 is well-positioned to realize its transformative vision for inclusive, resilient, and equitable urban planning. This report serves as a constructive tool to build on the project's successes and catalyze impactful outcomes in the years ahead.

Acknowledgments

This final evaluation report for the “Sustainable Spatial Planning and Development (S-SpaD2030)” project was prepared by Prof. Mohab Elrefaie. The evaluator extends heartfelt gratitude to the following individuals and organizations whose invaluable contributions were instrumental to this evaluation.

Special thanks go to **Dr. Eng. Maha Faheem**, Chairman of the General Organization for Physical Planning (GOPP), for her leadership and invaluable technical insights that greatly enriched the evaluation process. The evaluator also expresses deep appreciation to **Mme. Madiha Mahmoud**, Project Manager, for her exceptional coordination efforts, facilitating access to critical data and stakeholder engagement within tight timeframes.

The evaluator acknowledges the significant input provided by **Prof. Dr. Eng. Hani Ayad**, Matrouh Governorate Planning Official, and **Dr. Eng. Alaa Alhefnawy**, General Manager of Environmental Studies and Researches at GOPP, whose expertise in their respective domains contributed to a deeper understanding of the project’s environmental and planning dimensions.

Acknowledgment is also due to the dedicated members of GOPP’s IT and planning teams from the National and Regional Plan Department, as well as the IT Department, whose technical expertise in GIS development and urban planning tools significantly informed the evaluation findings. Appreciation is further extended to **Eng. Hamdy Kamal** (General Manager, IT Department), **Eng. Mohammed Mostafa** (IT Engineer), and **Dr. Eng. Mohamed Said ElKhateeb** (Vice President, Technical Support), for their critical contributions to the development and analysis of technical outputs.

Additionally, the contributions of representatives from the **Ministry of Environment (MOE)** and the **Ministry of Planning (MOP)** are also acknowledged for their collaborative efforts.

The evaluator expresses gratitude to all individuals and departments who participated in interviews, shared insights, and supported the evaluation. Their collective efforts were essential to the successful completion of this report.

Table of Contents

List of Figures

List of Tables

Acronyms and Abbreviations

Abbreviation	Term
AWP	Annual Work Plan
ASUD	Achieving Sustainable Urban Development Priorities
CAPMAS	Central Agency for Public Mobilization and Statistics
CA	Contribution Analysis
CEA	Cost-Effectiveness Analysis
CPAP	Country Programme Action Plan
CPD	Country Programme Document
CRE	Culturally Responsive Evaluation
DAC	Development Assistance Committee
DRR	Disaster Risk Reduction
EC	Executive Committee
FGD	Focus Group Discussion
GIS	Geographic Information Systems
GMS	General Management Support
GoE	Government of Egypt
GOPP	General Organization for Physical Planning
HQ	Headquarters
ISS	Implementation Support Service
JMC	Joint Management Committee
KII	Key Informant Interview
LA	Local Authority
M&E	Monitoring and Evaluation
MEL	Monitoring, Evaluation, and Learning
MHUUC	Ministry of Housing, Utilities & Urban Communities
MOE	Ministry of Environment
MOFA	Ministry of Foreign Affairs
MOLD	Ministry of Local Development
MOP	Ministry of Planning
MPMAR	Ministry of Planning, Monitoring, and Administrative Reform
MYFF	Multi-Year Funding Framework
NEX	National Execution
NPD	National Project Director
NSDI	National Spatial Data Infrastructure
NUCA	New Urban Communities Authority
NUP	National Urban Policy
OECD	Organisation for Economic Co-operation and Development
OMA	Operational Management Agreement
OUDA	Operational Unit for Development Assistance
PE	Participatory Evaluation
PM	Project Manager
PMU	Project Management Unit
QC	Quality Control
RC / RPPC	Regional Center / Regional Physical Planning Center
SBAA	Standard Basic Assistance Agreement
SDG	Sustainable Development Goals
SDS	Sustainable Development Strategy
SEA	Strategic Environmental Assessment
SSDM	Sustainable Spatial Development Map

Abbreviation	Term
SUP	Strategic Urban Plan
ToC	Theory of Change
ToR	Terms of Reference
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UN-Habitat	United Nations Human Settlements Programme
UNPDF	United Nations Partnership Development Framework
UFE	Utilization-Focused Evaluation

1 Executive Summary

1.1 Project Background

The Sustainable Spatial Planning and Development (S-SpaD2030) project is a five-year initiative (2022–2026) aimed at modernizing Egypt's urban planning to align with Egypt Vision 2030 and the Sustainable Development Goals (SDGs). Jointly led by the General Organization for Physical Planning (GOPP) and the United Nations Development Programme (UNDP), the project addresses challenges like spatial disparities, environmental sustainability, and institutional capacity gaps. Building on prior initiatives, S-SpaD2030 integrates advanced tools such as GIS platforms and Strategic Environmental Assessments (SEA) to promote evidence-based decision-making. The project's collaborative framework involves key stakeholders: GOPP led implementation, UNDP provided technical and financial support, the Ministry of Environment integrated SEA expertise, and CAPMAS ensured data standardization. Regional centers and local authorities facilitated implementation and stakeholder engagement, advancing sustainable spatial planning aligned with national priorities.[2].

1.2 Evaluation Strategy

1.2.1 Scope and Geographic Coverage

The mid-term evaluation of the Sustainable Spatial Planning and Development (S-SpaD2030) project assesses its progress from inception in 2022 to mid-2024, focusing on the design, implementation, and outcomes of its three key outputs: (a) The development of the Sustainable Spatial Development Map (SSDM) for Egypt, (b) The optimization and dissemination of the enterprise-based geospatial urban planning platform (GIS Enterprise), and (c) Institutional support through capacity building, including training on Strategic Environmental Assessments (SEA) and GIS systems. The evaluation emphasizes progress toward achieving gender-sensitive planning, environmental sustainability, and inclusive growth while excluding long-term impacts and activities scheduled for later phases, such as atlas production and advanced GIS updates. The project's geographic coverage includes the New Administrative Capital for enterprise application and SEA implementation in pilot regions such as Matrouh, Ismailia, the Red Sea Governorates, El-Arish, and Siwa. A detailed review of Matrouh assessed localized implementation and scalability. The evaluation also analyzed regional GOPP centers' roles in capacity building, infrastructure readiness, and GIS tool usage, ensuring a thorough assessment of the project's geographic and operational progress[3].

1.2.2 Evaluation Objectives

The evaluation aims to assess the S-SpaD2030 project, focusing on the following key areas[4]:

a) Assess how the project aligns with Egypt's Vision 2030, SDGs, UNSDCF, and stakeholder needs.
b) Evaluate the incorporation of gender equality, environmental sustainability, socio-economic inclusion, disability inclusion, and rights-based approaches.
c) Review the creation and application of SSDM (Output 1), optimization and adoption of the GIS Enterprise Platform (Output 2), and capacity-building efforts including SEA guidelines (Output 3).
d) Analyze achievements, challenges, resource efficiency, and institutional coordination.
e) Assess the potential long-term impact of project outputs and the readiness of institutions to sustain and scale tools and methodologies.
f) Provide actionable recommendations for addressing challenges, scaling tools, integrating cross-cutting issues, and improving future spatial planning initiatives.

[2] *The information is sourced from the project document*.
[3] *The details are sourced from the project document and Project Progress Reports*.
[4] *The information is derived from the Evaluation Terms of Reference (ToR) and refined to align with the core project outputs*.

1.2.3 Evaluation Approach and Methods

The evaluation followed international standards (UNDP and OECD/DAC), integrating gender equity, environmental sustainability, and socio-economic inclusion across all stages. Key components included:

1 **Evaluation Framework**: Applied OECD/DAC criteria—Relevance, Coherence, Efficiency, Effectiveness, Impact, and Sustainability—tailored to the S-SPAD2030 context.

2 **Data Collection Methods**:

- Document Review: Analyzed project documents, progress reports, technical documents, and financial records.
- Stakeholder Consultations: Conducted interviews and focus groups with 21 personnel, including GOPP staff, MOE, and local planners.
- Quantitative and Qualitative Analysis: Evaluated metrics like budget utilization and GIS adoption while gathering contextual insights from stakeholders.
- Triangulation: Validated findings through multiple data sources to enhance reliability.

3 **Evaluation Approaches Applied**

The evaluation utilized a mix of methodologies to ensure comprehensive and practical analysis[5]. A Theory-Driven Evaluation validated the project's design by assessing the contribution of key components such as SSDM, GIS, and capacity-building efforts. Contribution Analysis examined the project's influence on outcomes while accounting for external factors, and Participatory Evaluation actively engaged stakeholders—including planners, policymakers, and beneficiaries—to gather diverse insights and ensure inclusivity. Additionally, Utilization-Focused Evaluation focused on providing actionable recommendations to support mid-term adjustments, while Cost-Effectiveness Analysis reviewed financial efficiency across key components. Finally, a Culturally Responsive Evaluation ensured alignment with regional and socio-economic contexts, tailoring findings to local needs and institutional priorities. Aligned with OECD/DAC criteria[6], these approaches assessed Relevance to national goals, Coherence of project outputs, Efficiency in resource use, Effectiveness in meeting targets, Impact on spatial planning and development, and Sustainability of outcomes. This integrated approach provided actionable insights to optimize performance and ensure long-term success.

1.2.4 Evaluation Process

The evaluation unfolded across four structured phases:

1 **Inception**: Framework, tools, and work plan were developed, with initial stakeholder consultations.
2 **Data Collection**: Field visits, document reviews, and interviews gathered key data.
3 **Data Analysis**: Qualitative and quantitative data were synthesized to assess performance.
4 **Reporting**: Findings were compiled into actionable recommendations for future planning.

1.2.5 Challenges, Implications, and Mitigation Strategies for Evaluation

The SPAD2030 evaluation faced data gaps, stakeholder bias, and resource constraints, limiting its scope and long-term impact analysis.

- Implications: Incomplete data reduced the ability to fully capture project performance and critical needs, potentially biasing recommendations, stakeholder bias and limited regional representation risked unbalanced conclusions, and time constraints hindered in-depth analysis of complex socio-economic and environmental diagnostics and long-term trends.
- Mitigation Strategies: Supplemented quantitative gaps with interviews and focus groups, enriching the analysis with context-specific insights, apply triangulation by collected diverse stakeholder inputs to balance biases and validate findings, prioritized high-impact activities,

[5] *The approach follows UNDP evaluation methods. For further details, refer to the UNDP Methods Center.*

[6] *The criteria are defined based on OECD/DAC guidelines. For more information, refer to the official publication: Applying Evaluation Criteria Thoughtfully.*

ensuring actionable insights while acknowledging the need for broader analysis, and leveraged virtual interviews and online surveys to optimize engagement despite logistical constraints.

1.3 Design of the Project

The **S-SPAD2030 Project** has been extended to five years (2022–2026) to address challenges associated with the relocation to the New Administrative Capital. The project focuses on key outputs, including the SSDM, GIS platform optimization, pilot studies, and SEA refinement. Aligned with Vision 2030 & SDG 11.[7]

Key Outputs and Activities

1. Development of the SSDM (**Output 1**):
   - Activities: Create a sustainable planning framework, conduct spatial and socio-economic diagnostics, and prioritize actions for eco-urban development.
   - Indicators: Completion of the SSDM framework, pilots, and atlas production.
   - Budget: $386,682.36 (GOPP and UNDP).
2. GIS Enterprise Platform Optimization (**Output 2**):
   - Activities: Update GIS standards, upgrade functionality, and establish data-sharing systems.
   - Indicators: Increased GIS users, data-sharing agreements, and operational GIS tools.
   - Budget: $320,807.36 (GOPP and UNDP).
3. Institutional Support and Capacity Building (**Output 3**):
   - Activities: Train on SEA & GIS, foster inter-ministerial coordination, and define SEA guidelines.
   - Indicators: Number of trained staff, inter-ministerial agreements, and adoption of SEA guidelines.
   - Budget: $428,842.95 (GOPP and UNDP).

Risk and Mitigation Strategies

- Delays: Mitigated through stakeholder mapping and analysis for enhancing collaboration at the extension phase.
- Resistance to Change: Addressed via focused discussions, technical trainings and workshops.
- Institutional Gaps: Resolved through standardized protocols and improved monitoring systems.

1.4 Overall Achievements and Insights

The project has made notable progress in its key three outputs.[8]

1 Achievements

- **SSDM Development**:
  - ✓ Developed a comprehensive methodological framework incorporating Strategic Environmental Assessment (SEA) and resilience-based planning.
  - ✓ Produced draft SSDM outputs for pilot regions (Matrouh, El-Arish, and Siwa), integrating climate resilience, disaster risk reduction, trough SEA methodology.
  - ✓ Integrated environmental sustainability into strategic plans, aligning with Vision 2030.
  - ✓ Spatial diagnostics applied to pilots, with opportunities for deeper environmental integration.
  - ✓ The SSDM Atlas development is pending.

[7] *The details are sourced from the project document and Project Progress Reports*.

[8] The information presented has been extracted from the Project Progress Reports, technical documents, and training materials, and verified through Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) with stakeholders.

- ✓ **65%** female participation in **output 1** activities, prioritization of underserved regions, and mechanisms for long-term sustainability[9].

- **GIS Enterprise Platform Optimization**:
  - ✓ Achieved 70% technology upgrades, including GIS schema updates, metadata improvements, and platform modernization.
  - ✓ Increased user adoption from 4 to 70 planners mainly on utilizing the unified database, though full utilization remains a target.
  - ✓ Enhanced interoperability with national datasets, though protocols with CAPMAS are delayed.
  - ✓ Pending enhancements of public participation tools, and workflow refinements.
  - ✓ **70%** female representation in **output 2** related activities.

- **Institutional Support and Capacity Building**:
  - ✓ Trained over **200** participants on SEA, GIS, and resilience planning, with **68%** female participation in SEA training and **56%** in **GIS** training. Certified 7 advanced GIS trainers for knowledge transfer.
  - ✓ Delays in establishing collaboration frameworks, operational policies, and procedural integration of SEA into GOPP workflows.
  - ✓ **48%** female participation across **output 3** activities, ensuring inclusivity in institutional support.

- **Alignment with National and Global Priorities**:
  - ✓ Strong alignment with Egypt Vision 2030, National Urban Policy (NUP), and Sustainable Development Goals (SDGs), particularly SDG 11 (Sustainable Cities), SDG 13 (Climate Action), and SDG 10 (Reduced Inequalities).

2 Challenges

- Limited integration of **environmental and socio-economic diagnostics** and delays in multi-agency collaboration impacted scalability.
- Delays in formalizing **data-sharing agreements** and adopting advanced functionalities. Slow network connectivity affects the platform's utility and broader adoption.
- Need for **advanced training programs** and addressing insufficient infrastructure at regional centers. Delayed establishment of collaboration frameworks and operational policies.

3 Opportunities

- Scale SSDM to other regions and enhance socio-economic dimensions in spatial diagnostics.
- Strengthen inter-agency data exchange, integrate public participation tools, and enhance system infrastructure for better adoption.
- Institutionalize training programs and develop retention strategies to sustain expertise.

4 Project' Limitations

The SPAD2030 project had difficulties such as inadequate infrastructure, high personnel turnover, poor interministerial cooperation, limited enforcement authority for physical implementation, and changing political and economic environments. These problems affected the integration of important analyses, resulted in delays, and misused resources. Adaptive tactics, improved resource management, and enhanced coordination are required.

5 Project Management

The S-SPAD2030 project operates under a structured framework with a Project Board, Manager, National Director, and PMU to align activities with national strategies. Key achievements include delivering activities and improving budget utilization. Challenges such as delays in institutional

[9] *The list of training attendance sheets and project participants for each output was provided by the Project Manager.*

agreements and resistance to advanced GIS adoption were addressed through risk management strategies like enhanced stakeholder engagement, proactive budgeting, and capacity-building programs.

6 Monitoring and Evaluation

The M&E framework ensures progress tracking, risk identification, and alignment with project goals. Achievements include the use of SMART indicators, quarterly and annual reporting, and strong gender inclusion with 68% female participation in SEA training and 56% in GIS training. Challenges include limited qualitative indicators and insufficient intermediate milestones.

7 Overall Budget Utilization

The S-SPAD2030 project achieved a 65% overall spending rate, with mixed results across outputs:

- **Output 1 (SSDM Development)**: 50.8% utilization, impacted by delays in framework development and pilot testing.
- **Output 2 (GIS Optimization)**: Strong performance with 86.9% spending, reflecting progress in platform optimization.
- **Output 3 (Institutional Support)**: Moderate efficiency at 61.3%, hindered by delays in capacity-building initiatives.

Funding efficiency varied, with GOPP utilizing 63.6% of funds, while UNDP achieved 95.4% efficiency. Annual trends showed strong progress in 2022–2023 but a sharp decline in 2024 due to delays. Accelerating Outputs 1 and 3 and reallocating resources to priority activities are essential to meet project objectives.

1.5 Conclusions, Lessons Learned, and Recommendations

SPAD2030 project has made notable paces in advancing sustainable spatial planning in Egypt:

1. **Relevance**: Alignment with Egypt Vision 2030, SDGs, and equity goals is strong, particularly through tools like SSDM and GIS. However, socio-economic dimensions require deeper integration.
2. **Effectiveness**: Progress is significant in SSDM and GIS tool modernization. Over 200 participants were trained, but adoption of tools and cumulative risk assessment needs improvement.
3. **Efficiency**: GIS-related upgrades showed high resource efficiency, but delays in Outputs 1 (SSDM) and 3 (capacity building) led to underutilization of funds.
4. **Sustainability**: Knowledge transfer through Training-of-Trainer (ToT) programs and GIS scalability are key strengths, but institutional ownership and follow-up on training remain areas for improvement.
5. **Coherence**: Builds on SpaD and SpaD2020 effectively, but inter-agency agreements (e.g., with CAPMAS) and stakeholder collaboration require strengthening.

6. **Cross-Cutting Issues**: Although the national and regional planning levels lack explicit gender consideration in strategic frameworks, The SPAD2030 project has advanced gender integration at the operational level, incorporating a gender factor into the Enterprise database schema to support gender-sensitive planning. Women accounted for 50% of participants in project implementation and evaluation, with significant representation in capacity-building activities—68% in SEA training and 56% in GIS training, highlighting strong inclusion in technical roles. However, socio-economic considerations during the diagnosis phase require greater emphasis.

The lessons learned include:

1. Early involvement of stakeholders fosters better integration, collaboration, and sustainability.
2. Frameworks must balance environmental impacts with socio-economic aspects to ensure resilience.
3. Establishing formal data-sharing agreements and interoperable systems is crucial for informed decision-making and collaboration.
4. Capacity-building efforts need to include post-training support and practical applications.
5. Scalable IT systems and reliable networks are vital for efficient implementation of GIS Enterprise.
6. The project underscores the importance of promoting gender equality and socio-economic inclusivity to achieve equitable urban planning and development.

The recommendations and implementation responsibilities are defined as follows:

1. **Refine and Scale the SSDM Framework**
    - Recommendation: Strengthen the SSDM by incorporating environmental and socio-economic vulnerability assessments, risk indicators, and integrating National Urban Policy (NUP) principles to improve scalability.
    - Action: Conduct a comprehensive review of NUP to embed actionable elements into the SSDM. Refine tools for contextual hazard, vulnerability assessment and socio-economic diagnoses, to ensure region-specific frameworks.
    - Implementing Party: GOPP, MOE, MOP.

2. **Optimize GIS Enterprise Performance and Utilization**
    - Recommendation: Upgrade technical infrastructure and transition users to advanced tools (e.g., ArcGIS Pro) to maximize the GIS platform's efficiency and adoption.
    - Action: Improve network bandwidth, develop user-friendly web applications, and conduct advanced training programs with follow-up mentoring.
    - Implementing Party: GOPP IT Department, Regional Centers.

3. **Strengthen Institutional Collaboration and Data Governance**
    - Recommendation: Formalize inter-agency agreements for data sharing, ensure interoperability, and align GIS outputs with national planning initiatives (e.g., Egypt Vision 2030).
    - Action: Establish a joint task force with CAPMAS, MOE, MOP, and MOLD for collaborative workflows and data standardization.
    - Implementing Party: GOPP, CAPMAS, MOE, MOLD, MOP.

4. **Prioritize Capacity Building for Sustainability**
    - Recommendation: Institutionalize structured and continuous capacity-building programs to ensure long-term adoption of urban policies, strategies and available instruments developed at GOPP for regional and city resilience.
    - Action: Expand training curricula, introduce ToT (train-the-trainer) models, integrating tools, and monitor post-training skill application.
    - Implementing Party: GOPP Capacity-Building Unit, UNDP Technical Support Team.

5. **Enhance Monitoring, Evaluation, and Learning (MEL)**
    - Recommendation: Strengthen the MEL framework by integrating SMART indicators, gender-disaggregated data, and participatory monitoring processes.
    - Action: Implement real-time tracking tools, conduct regular reviews, create a repository of lessons learned for continuous improvement and develop archiving process for all related development projects.
    - Implementing Party: GOPP M&E Unit, Project Team.

6. **Improve Resource Efficiency and Financial Management**
    - Recommendation: Streamline resource allocation to focus on high-impact activities and ensure budget transparency.
    - Action: Conduct periodic resource audits and prioritize funds for critical components, such as infrastructure upgrades and stakeholder engagement.
    - Implementing Party: GOPP Finance Department, UNDP Project Management Team.

2 Introduction

This mid-term evaluation was conducted to assess the progress and performance of the **Sustainable Spatial Planning and Development (S-SpaD2030)** project midway through its implementation. The evaluation serves as a critical milestone for reviewing the project's alignment with its stated objectives, assessing its relevance, effectiveness, efficiency, coherence, impact, and sustainability. At this point in the project timeline, the evaluation is necessary to:

- Identify successes and challenges in implementing planned activities.
- Ensure alignment with the broader national agenda of **Egypt Vision 2030** and global sustainable development frameworks such as the **Sustainable Development Goals (SDGs)**.
- Provide evidence-based recommendations to optimize remaining activities and ensure that the project achieves its intended outcomes by the end of its lifecycle.

The evaluation addresses specific questions regarding the integration of social, environmental, and economic dimensions into spatial planning, the efficacy of innovative tools and methodologies deployed, and the project's institutional impact on improving decision-making processes.

2.1 Primary Audience and Users

The primary audience for this evaluation includes:

1. **General Organization for Physical Planning (GOPP)**: The project's implementing agency, which aims to strengthen planning processes and institutional capacities at the national / regional levels.
2. **GOPP Regional Centers**: Regional hubs that play a pivotal role in implementing the project's objectives at localized levels.
3. **United Nations Development Programme (UNDP)**: The project's development partner responsible for providing technical and financial support, as well as oversight and capacity-building assistance.
4. **Ministry of Planning, Economic Development and International Cooperation MOP**: A pivotal stakeholder tasked with developing fiscal strategies and allocating budgets for development initiatives, actively seeks to ensure the project's outputs align with national planning priorities.
5. **Ministry of Environment MOE**: Collaborates to embed environmental sustainability into spatial planning frameworks. Works to align development plans with national climate strategies while ensuring that vulnerable areas identified through regional strategic planning.
6. **Ministry of Local Development MOLD**: supports developing action and implementation plans for development projects, alongside establishing monitoring and evaluation mechanisms. MOLD focuses on localizing climate adaptation plans and resilience strategies through collaborative efforts with relevant development partners.
7. **Local Authorities**: Beneficiaries of the project's interventions who are expected to implement and adopt the project's outputs.

The evaluation was designed to provide these stakeholders with actionable insights into the project's implementation status, challenges, and opportunities.

2.2 The Intervention Being Evaluated

The **S-SpaD2030 Project** is a five-year initiative (2022–2026) aimed at advancing sustainable spatial planning in Egypt. The project seeks to address regional disparities and urban imbalances through innovative planning approaches that integrate social, economic, and environmental dimensions. It employs Strategic Environmental Assessment (SEA), GIS enterprise platforms, and other modern tools to develop data-driven, resilient, and equitable spatial plans. The intervention includes three main outputs:

1. **A Sustainable Spatial Development Map (SSDM)** for Egypt, which integrates SEA and resilience-based methodologies into planning frameworks.
2. **An Enterprise-Based Geospatial Urban Planning Platform**, enhancing data management and supporting decision-making across ministries and agencies.
3. **Institutional Support**, focusing on capacity-building, communication strategies, and strengthening institutional frameworks for sustainable planning.

2.3 Structure and Contents of the Report

This evaluation report is structured to meet the informational needs of its intended audience and ensure a comprehensive understanding of the project's progress. The report includes the following sections:

1. **Introduction**: Outlines the purpose, audience, and scope of the evaluation, along with an overview of the S-SpaD2030 project.
2. **Evaluation Methodology**: Details the evaluation framework, methods, and criteria used to assess the project.
3. **Findings**: Provides insights into the project's achievements, gaps, and challenges, focusing on its outcomes, outputs, and operational efficiency.
4. **Progress Analysis**: Reviews progress made under each project output and highlights significant milestones.
5. **Key Challenges, Lessons Learned, and Recommendations**: Identifies challenges encountered, lessons drawn from implementation, and actionable recommendations for the remaining period.
6. **Conclusions and Way Forward**: Summarizes key findings and provides a roadmap for achieving project objectives.
7. **Appendices:** Includes detailed tables, charts, and matrices. Provides sample questionnaires, interview protocols, and data collection instruments.

3 Description of the Intervention

The **Sustainable Spatial Planning and Development (S-SpaD2030)** project is a five-year initiative launched in 2022, scheduled for completion in 2026. This program is implemented by the **General Organization for Physical Planning (GOPP)** in collaboration with the **United Nations Development Programme (UNDP)**. Its primary objective is to address regional disparities and urban imbalances in Egypt through the adoption of sustainable spatial planning methodologies that holistically integrate social, economic, and environmental dimensions.

The intervention is designed to benefit **policymakers, urban planners, local authorities, and communities** across national, regional, and local levels. Its ultimate goal is to create spatial plans that promote equity, environmental sustainability, and economic opportunity, contributing to the achievement of **Egypt Vision 2030** and the **Sustainable Development Goals (SDGs)**. The project addresses critical issues, including unbalanced urbanization, insufficient environmental integration in planning processes, and the absence of cohesive, data-driven decision-making tools.

Under the S-SpaD2030 framework, the **Sustainable Spatial Development Map (SSDM)** initiative serves as a flagship effort aimed at fostering sustainable urbanization throughout Egypt. The SSDM project incorporates **Strategic Environmental Assessment (SEA)** methodologies, enhances the capabilities of the **Geospatial Urban Planning Platform (GIS Enterprise)**, and develops a comprehensive SSDM to guide balanced regional and urban development. The project embeds environmental, social, and economic dimensions into strategic spatial planning processes, and its key objectives include:

- **SSDM Creation**: Developing a robust framework to integrate environmental and socio-economic vulnerabilities into land-use planning processes, ensuring sustainable and balanced growth.
- **GIS Platform Dissemination**: Expanding the functionality and accessibility of an enterprise-based GIS platform to support inter-ministerial data sharing and enable informed, data-driven decision-making.
- **SEA Guidelines Development**: Implementing SEA directives within regional and national planning frameworks, validated and refined through multiple pilot projects.

3.1 Expected Results Framework and Theory of Change

The project operates under a Theory of Change (ToC), driven by the belief that inclusive, data-driven, and environmentally sensitive spatial planning frameworks can address Egypt's urban and regional imbalances.

Table 1: Key Assumptions and Expected Results for Project Success

Assumptions	Expected Results
Institutional capacity-building enhances environmental and social integration in planning.	Development of a functional SSDM as a national planning framework.
GIS tools enable evidence-based and efficient planning processes.	Increased adoption of GIS tools and inter-ministerial collaboration.
Collaboration across national, regional, and local levels improves spatial planning outcomes.	Reduction of disparities and promotion of equitable urban development.

Key activities under each output:

1. **SSDM Development:**
   - Spatial diagnosis of environmental and socio-economic issues.
   - Integration of SEA methodologies.
   - Identification of sustainable land-use priorities.
2. **GIS Platform Optimization:**
   - Enhancements to GIS framework, data standards, and schema.
   - Establishment of interoperability mechanisms with CAPMAS and other entities.
   - Development of decision-support tools and public participation features.
3. **Institutional Support:**
   - Training on GIS and SEA tools.
   - Development of internal policies for data-sharing and collaboration.
   - Monitoring and evaluation frameworks for project outcomes.

3.2 Key Partners and Roles

The following table Identify the key partners involved in the implementation and their roles

Table 2: Key Partners and their roles

Partner	Role
GOPP	• Leads implementation, develops SSDM, oversees GIS optimization, and conducts capacity-building.
UNDP	• Provides technical and financial support, ensures alignment with international standards.
Ministry of Environment MOE	• Advises on environmental assessments and integration.
CAPMAS	• Ensures data interoperability and contributes to unified coding standards.
GOPP' Regional Centers	• Support data collection and facilitate stakeholder engagement at local levels.
Ministry of Planning MOP	• Ensures alignment with the national fiscal planning and the operational planning framework.
Local Authorities (Governorates)	• Collaborators and beneficiaries, implementing spatial plans and contributing local insights.
Ministry of Local Development	• Implementing strategic plans and the assigned development projects, alongside establishing monitoring and evaluation mechanisms

3.3 Scale and Resources of the Intervention

- **Components**: The project encompasses multiple activities under each output, with multiple sub-activities, pilot projects, and capacity-building programs.
- **Target Population**: Includes national-level policymakers, regional/city development planners, and local authorities across pilot areas such as Matrouh, Ismailia and the Red Sea Governorates besides ElArish, and Siwa cities.
- **Budget**: The project's total budget is **$ 2,000,000**, with allocations for staff costs, GIS technology upgrades, training programs, and stakeholder engagement.
- **Human Resources**: Includes technical consultants, trainers, and project staff supported by GOPP and UNDP teams.

3.4 Context and Challenges

The project operates within a complex environmental, socio-cultural and economic context:

- **Urbanization Trends**: Rapid urban growth and regional inequalities create challenges for balanced planning.
- **Environmental Pressures**: Climate vulnerabilities necessitate resilient and adaptive planning frameworks.
- **Socio-Economic Constraints**: Currency devaluation, and limited national resources, pose challenges for procurement and implementation.
- **Institutional Fragmentation**: Limited coordination among stakeholders complicates the integration of plans.

3.5 Design and Implementation Constraints

- **Design Weaknesses**: Although the Theory of Change is well-structured, delays in stakeholder engagement and gaps in environmental and socio-economic analyses undermine the effectiveness of the strategic plans' outputs, subsequently impacting the efficiency of the SEA process.
- **Resource Limitations**: Insufficient budget allocations for contingency planning and capacity retention besides inefficient competencies of technical human resources.

3.6 Opportunities

- **Technological Advances**: Use of GIS enterprise systems and SEA methodologies positions the project as a pioneer in modern spatial planning.
- **Stakeholder Engagement**: Participatory approaches strengthen institutional buy-in, synergies and sustainability.
- **Global Best Practices**: Alignment with international frameworks ensures relevance and replicability.

4 Evaluation Methodology

4.1 Evaluation Scope and Geographic Coverage

The evaluation focuses on the mid-term progress of the **Sustainable Spatial Planning and Development (S-SpaD2030)** project, spanning its activities from inception in 2022 to mid-2024.
The geographic scope of the evaluation encompasses the primary premises where the GIS enterprise is installed, in the New Administrative Capital of Egypt, along with its implementation across strategic pilot regions, including Matrouh, Ismailia, and the Red Sea Governorates, as well as El-Arish and Siwa Cities. A detailed review of the Matrouh pilot was conducted to evaluate localized implementation and potential scalability. Additionally, the evaluation scrutinized the contributions of regional GOPP centers, particularly in capacity building, infrastructure preparedness, and the application of GIS tools, delivering a comprehensive analysis of the project's geographic and operational progress

4.2 Components Assessed

1. **Output 1**: Development of the Sustainable Spatial Development Map (SSDM) for Egypt.
2. **Output 2**: Optimization and dissemination of the enterprise-based geospatial urban planning platform (GIS Enterprise).
3. **Output 3**: Institutional support through capacity building, training on SEA, and GIS systems.

The evaluation considers progress toward achieving the project's objectives, addressing aspects such as gender-sensitive planning, environmental sustainability, and inclusive growth. Certain long-term impacts and activities scheduled for later phases (e.g., atlas production, advanced GIS system updates) are excluded.

4.3 Evaluation Objectives

The primary objective of the evaluation is to assess the **relevance, effectiveness, efficiency, sustainability, and impact** of the SPAD2030 project. The evaluation aims to provide actionable insights, ensure accountability, and support decision-making for the project's remaining implementation period (2024–2026) and for future initiatives. Key objectives include:

- **Alignment with Frameworks:** Evaluate the alignment of project objectives and design with national priorities (e.g., Egypt's Vision 2030), international frameworks (e.g., SDGs), and stakeholder needs.
- **Integration of Cross-Cutting Themes:** Assess the incorporation of gender equality, women's empowerment, disability inclusion, and rights-based approaches into project design.
- Evaluate the **progress**, **effectiveness**, and **relevance** of key outputs:
  - The creation and application of the **Sustainable Spatial Development Map (SSDM)**, including alignment with Vision 2030 and SDGs.
  - Optimization of the **GIS Enterprise Platform** and its adoption by GOPP and regional planners.
  - Institutional capacity-building efforts, including the development of **Strategic Environmental Assessment (SEA)** guidelines and inter-ministerial coordination.
- **Performance Assessment:** Review the project's achievements, key accomplishments, and challenges encountered during implementation.
- **Resource Utilization:** Analyze the efficiency of resource allocation, including financial management and institutional coordination, in achieving project outputs.
- **Long-Term Outcomes:** Evaluate the potential and actual impact of project outputs on sustainable spatial planning and institutional capacity.
- **Sustainability of Results:** Assess the readiness of institutions to maintain and scale the project's tools, methodologies, and frameworks beyond its timeline.
- Evaluate how well the project addressed:
  - **Gender equality and women's empowerment**, especially in training, stakeholder engagement, and decision-making processes.
  - **Environmental sustainability** and **socio-economic inclusion** in project frameworks like SSDM and SEA.
  - **Disability inclusion** and the **rights-based approach**, with recommendations to strengthen inclusivity.
- **Guidance for Improvement:** Offer actionable recommendations to address challenges, optimize resource allocation, and refine methodologies for maximum impact.

- **Scaling and Integration:** Suggest strategies for scaling tools, enhancing stakeholder engagement, and integrating cross-cutting issues into future spatial planning initiatives.
- Document **lessons learned** and **best practices** to inform the design and implementation of future projects in sustainable spatial planning and institutional development.

4.4 Evaluation Criteria

The evaluation of the Sustainable Spatial Planning and Development (S-SPAD2030) project utilized OECD DAC criteria to deliver a comprehensive and structured assessment of its activities and outputs—SSDM, GIS platform, and institutional capacity. This criteria-based framework ensured alignment with SPAD2030's output-driven design and provided actionable insights into the project's performance:

1. **Relevance**: Evaluated alignment with Egypt Vision 2030, SDGs, and stakeholder needs, emphasizing tools like SEA and GIS to address urban challenges and incorporate gender-sensitive planning and socio-economic inclusion.
2. **Coherence**: Assessed internal consistency among project outputs and external alignment with national policies and international commitments, while avoiding duplication and promoting collaboration with stakeholders like CAPMAS and MOE.
3. **Effectiveness**: Measured the achievement of outputs, including SSDM development, GIS optimization, and institutional capacity-building, with a focus on practical applications and strategic goals.
4. **Efficiency**: Analyzed optimal resource utilization, adherence to budgets, timeliness, and cost-effectiveness, ensuring no redundancies while maximizing impact.
5. **Impact**: Examined long-term effects on stakeholders and systems, addressing urban planning challenges, enhancing institutional capacity, and fostering gender equity, environmental sustainability, and socio-economic inclusion.
6. **Sustainability**: Assessed the durability of benefits, institutionalization of tools, scalability of training, and the establishment of supportive policies and infrastructure.

This integrated evaluation approach ensured robust insights to guide project improvement and alignment with Egypt's strategic development objectives

4.4.1 Integration of Cross-Cutting Issues

The evaluation process of SPAD-2030 prioritized cross-cutting issues, offering an in-depth analysis of gender equity, environmental sustainability, socio-economic inclusion, and vulnerability reduction, integrating these themes into all evaluation criteria and project outputs.

1. **Gender Equity**: Ensured gender-sensitivity in the spatial analysis needed to formulate the SSDM, and its representation in work groups' structure and training under all outputs. Training programs addressed barriers to women's participation, enhancing their skills and contributions to spatial planning. Gender-sensitive indicators tracked progress in participation and equity integration.
2. **Environmental Sustainability**: Incorporated Strategic Environmental Assessments (SEA) and GIS tools to enhance climate resilience and environmental diagnostics. Outputs like the SEA Guidelines and Matrouh Sustainability Assessment promoted sustainable urban planning.
3. **Socio-Economic Inclusion**: Focused on reducing regional disparities by designing tools like SSDM and GIS to ensure equitable resource allocation and prioritizing planners from underserved regions in capacity-building initiatives.
4. **Vulnerability Reduction**: Addressed the needs of deprived areas and populations, including people with disabilities, by making planning tools and proposed development programmes accessible and inclusive, fostering responsive solutions for vulnerable regions.

This integrated approach ensured a comprehensive evaluation, emphasizing inclusivity and sustainability while aligning with project objectives

The Cross-cutting issues were systematically analyzed within the framework of the **OECD/DAC criteria** to ensure a holistic understanding of the project's performance:

- **Relevance:** Assessed alignment with Egypt's Vision 2030, SDGs, and NUP, focusing on gender equity, environmental resilience, and social inclusion.
- **Coherence:** Examined synergies between cross-cutting themes and project outputs, ensuring that gender equity, socio-economic inclusion, and environmental sustainability were integrated into planning tools and methodologies.

- **Efficiency:** Evaluated resource allocation to address cross-cutting themes, including investments in gender-sensitive training and environmentally sustainable planning tools.
- **Effectiveness:** Assessed the tangible outcomes of cross-cutting efforts, such as improved gender representation in decision-making and the practical application of SEA methodologies.
- **Impact:** Evaluated the broader effects of project activities on reducing disparities, empowering women, and addressing environmental vulnerabilities.
- **Sustainability:** Examined the long-term viability of cross-cutting achievements, such as the institutionalization of gender equity practices and the integration of SEA tools into planning processes.

This dual-layered approach ensures that cross-cutting issues are addressed comprehensively while allowing stakeholders to locate detailed analyses of their relevance and impact across the project's overall performance. By embedding these themes into the project's implementation and evaluation, the SPAD-2030 project has contributed to advancing equitable, inclusive, and sustainable development in Egypt.

4.5 Evaluation Questions

The evaluation framework is based on a structured matrix that organizes questions around six OECD-DAC criteria: **Relevance**, **Coherence**, **Effectiveness**, **Efficiency**, **Impact**, and **Sustainability**. Each criterion is analyzed for the project's three main outputs—**SSDM Development (Output 1)**, **GIS Enterprise Optimization (Output 2)**, and **Institutional Support (Output 3)**—to ensure comprehensive coverage of the project's objectives and outcomes.

The evaluation questions were derived from the **Terms of Reference (TOR)**, reviewed, and refined to align with the project's specific context and the overarching evaluation objectives. These refinements were made to enhance clarity, address cross-cutting issues, and provide actionable insights. This process and its outcomes are detailed below.

Table 3: Matrix for Evaluation Criteria and Key Questions

Criteria	Output	Key Questions
Relevance Examines the alignment of project objectives, tools, and methodologies with national and international priorities	SSDM Development (Output 1)	• Are the SSDM framework and methodologies aligned with Egypt Vision 2030, SDGs, and regional priorities?
		• How well do the identified tools (e.g., SEA, resilience frameworks) reflect the environmental and socio-economic challenges in Egypt?
		• Are the spatial and socio-economic analyses addressing the critical needs of vulnerable groups, including women and marginalized populations?
	GIS Enterprise (Output 2)	• Does the GIS platform meet the specific needs of GOPP planners for decision-making?
		• How relevant are the interoperability protocols with CAPMAS and other national entities?
	Institutional Support (Output 3)	• Are the SEA and GIS training programs designed to address key capacity gaps in spatial and environmental planning?
		• Do the institutional support activities reflect stakeholder priorities (e.g., local authorities, ministries)?
Coherence Evaluates the compatibility of project interventions with existing	SSDM Development (Output 1)	• How consistent are the SSDM methodologies with existing urban planning policies and frameworks?
		• Are the participatory approaches fostering cross-sectoral collaboration and ensuring representation of diverse stakeholders, including women and vulnerable groups?
	GIS Enterprise (Output 2)	• How well does the GIS platform integrate with other planning processes and data sources?

Criteria	Output	Key Questions
policies and programs		• Do the defined policies and data-sharing agreements support inter-agency collaboration?
	Institutional Support (Output 3)	• Are the capacity-building activities aligned with the broader institutional frameworks and GOPP's strategic objectives?
		• Do the monitoring and evaluation systems provide actionable insights for improving project outputs?
Effectiveness Assesses the extent to which project objectives and outputs have been achieved	SSDM Development (Output 1)	• Have the SSDM framework and pilot studies achieved their planned milestones (e.g., spatial diagnostics, risk assessments)?
		• To what extent have SSDM tools and maps been utilized for planning decisions at national and regional levels?
	GIS Enterprise (Output 2)	• Has the GIS system been successfully upgraded to improve data quality and decision-making efficiency?
		• How effectively are the developed indicators (e.g., data interoperability) supporting spatial planning decisions?
	Institutional Support (Output 3)	• How many planners trained on SEA and GIS enterprise are applying their knowledge to improve planning processes?
		• Have the SEA guidelines been integrated into regional and national planning efforts?
Efficiency Examines the optimal use of resources to achieve outputs.	SSDM Development (Output 1)	• Were the activities (e.g., spatial diagnostics, SEA assessments) completed within the planned timelines and budget allocations?
		• Were resources allocated effectively to prioritize high-impact geographic areas?
	GIS Enterprise (Output 2)	• How efficiently were the GIS upgrades and interoperability protocols developed and implemented?
		• Were financial and human resources optimized for the development of the GIS framework?
	Institutional Support (Output 3)	• Are the raining programs implemented within the allocated budget and timeframes?
		• How efficiently are monitoring and evaluation findings being used to improve project implementation?
Impact Evaluates the broader, long-term effects of the project	SSDM Development (Output 1)	• How has the SSDM framework influenced regional planning and spatial equity in pilot areas?
		• Are the SEA guidelines reducing environmental risks and improving resilience in urban planning?
	GIS Enterprise (Output 2)	• To what extent has the GIS platform enhanced data-driven planning and inter-agency collaboration?
		• How have GIS tools and applications contributed to addressing urban imbalances?
	Institutional Support (Output 3)	• How have the training programs and capacity-building initiatives improved institutional decision-making?
		• What tangible improvements can be observed in disaster risk management and resilience planning?
Sustainability Assesses the likelihood of project benefits enduring beyond its lifecycle	SSDM Development (Output 1)	• How likely are the SSDM tools and methodologies to be sustained and scaled beyond the project lifecycle?
		• Are the participatory approaches fostering long-term ownership among stakeholders?
	GIS Enterprise (Output 2)	• Are the GIS frameworks, tools, and agreements designed for long-term usability and adaptability?

Criteria	Output	Key Questions
		• How sustainable are the GIS maintenance strategies to ensure continued functionality?
	Institutional Support (Output 3)	• Are the SEA and GIS training programs fostering institutional capacities for independent implementation post-project?
		• What mechanisms are in place to ensure the long-term relevance of monitoring and evaluation systems?

These questions form the backbone of the evaluation process, helping assess each output comprehensively while ensuring alignment with project goals, stakeholder needs, and national priorities.

5 Evaluation Approach and Methods

The evaluation employed a comprehensive, evidence-based methodology aligned with international standards. This approach ensured an inclusive and holistic understanding of the SPAD-2030 project, integrating cross-cutting themes such as **gender equity**, **environmental sustainability**, **socio-economic inclusion, and vulnerability reduction**. It utilized robust frameworks, diverse data collection techniques, and mixed-methods analysis to provide actionable insights and support decision-making for the project.

5.1 Key Components of Evaluation

By combining a robust evaluation framework, diverse data collection methods, and mixed-methods analysis, the approach aimed to capture the project's multidimensional nature and its impact on spatial planning and development in Egypt. Key components of the evaluation included the application of tailored OECD/DAC criteria, integration of participatory and theory-driven approaches, and a strong focus on cross-cutting issues. These components were essential to delivering a holistic understanding of the project's performance and ensuring actionable recommendations for stakeholders.

5.1.1 Evaluation Framework

The evaluation framework applied internationally recognized criteria and tailored them to the unique objectives of the SPAD-2030 project. It was designed to provide a structured and holistic analysis of the project's performance.

- **OECD/DAC Criteria:** The evaluation utilized six criteria—Relevance, Coherence, Efficiency, Effectiveness, Impact, and Sustainability
- **Focus Areas:** Specific emphasis was placed on assessing the project's activities and outputs in the three main outputs—SSDM development, GIS platform optimization, and institutional capacity building—while highlighting gender-sensitive planning, socio-economic inclusion, vulnerability reduction and environmental resilience.

5.1.2 Data Collection Methods

The evaluation utilized a comprehensive approach, integrating both qualitative and quantitative methods to ensure data reliability and validity:

a) **Document Review**: Analyzed key project documents to assess design, progress, and outcomes:
   - SPAD-2030 Project Document: Provided baseline data, stakeholder roles, and insights into resource allocation, M&E, and sustainability. Used to evaluate relevance, coherence, and effectiveness.
   - Progress Reports: Highlighted achievements, challenges, and delays. Used to track effectiveness and validate findings.
   - Evaluation Reports of Previous SPAD Projects: Offered historical insights and lessons for evaluating sustainability and recurring challenges.
   - SEA Guidelines Booklet: Evaluated integration of environmental sustainability into spatial planning tools.

- Matrouh Sustainability Assessment: Assessed spatial planning challenges and scalability.
- Technical System Documents: Informed assessments of GIS platform efficiency and scalability.
- Training Documentation: Provided insights into training impacts, gender equity, and effectiveness.
- Financial Records: Enabled analysis of cost-efficiency and resource utilization.

b) **Stakeholder Consultations**: Engaged 21 stakeholders through interviews and focus groups, including GOPP staff, planners, and beneficiaries. Gathered qualitative insights on implementation and cross-validated data from document reviews.
c) **Quantitative Analysis**: Assessed financial and operational metrics:
   - Budget Utilization: Analyzed efficiency.
   - GIS Adoption Rates: Measured effectiveness in workflows.
   - Training Outcomes: Evaluated participation and application.
d) **Qualitative Analysis**: Captured stakeholder perspectives and field observations to explore relevance, coherence, and project's activities impact.
e) **Triangulation**: Cross-validated data from all sources to enhance reliability and address biases.

5.1.3 Mixed-Methods Approach

A mixed-methods approach was adopted to provide a balanced and comprehensive evaluation by integrating qualitative and quantitative data.

- **Quantitative Data:** Budget analysis, GIS platform utilization metrics, and training impact statistics provided measurable insights.
- **Qualitative Data:** Stakeholder interviews, focus group discussions, and field observations informed the evaluation with contextual and experiential insights.
- **Integration:** Combined financial metrics, adoption data, and stakeholder feedback to ensure a nuanced and holistic analysis.

5.1.4 The Applied Evaluation Approaches

To comprehensively evaluate SPAD-2030, multiple evaluation approaches were applied to address the project's complexity and provide actionable insights for stakeholders:

a) Theory-Driven Evaluation: Examined the project's Theory of Change (ToC) by analyzing causal pathways, verifying assumptions, and identifying gaps between planned and actual outcomes.
   - Procedure**:** Assessed how SSDM, GIS platform optimization, and institutional capacity-building activities contributed to intended results, and evaluated alignment with national priorities (e.g., Vision 2030, SDGs). Rationale**:** Ensured the project's design and implementation were aligned with its overarching goals.

b) Contribution Analysis (CA): Tested how project interventions contributed to observed outcomes while accounting for external factors.
   - Procedure**:** Examined the project's role in advancing GIS adoption and institutional capacity-building, and identified external factors influencing outcomes, such as funding constraints and institutional delays. Rationale**:** Provided evidence-based insights into the project's impact and accountability.

c) Participatory Evaluation (PE): Engaged stakeholders throughout the evaluation process to ensure inclusivity and ownership of findings.
   - Procedure**:** Facilitated workshops, interviews, and discussions with planners, policymakers, and local authorities to co-develop actionable recommendations. Rationale**:** Promoted transparency and relevance by involving those impacted by the project.

d) Utilization-Focused Evaluation (UFE): Focused on generating findings and recommendations tailored to support decision-making.
   - Procedure**:** Provided practical recommendations for mid-term adjustments, such as enhancing training programs and optimizing resource allocation. Rationale**:** Ensured findings were directly applicable to improving project outcomes.

e) **Cost-Effectiveness Analysis (CEA):** Analyzed the efficiency of resource utilization by comparing costs to achieved outcomes.
   - Procedure**:** Evaluated the cost-effectiveness of GIS upgrades, SSDM implementation, and training programs. Rationale**:** Identified inefficiencies and ensured optimal resource use.

f) **Culturally Responsive Evaluation (CRE):** Addressed cultural, social, and institutional contexts to enhance the relevance and applicability of evaluation findings.
   - Procedure**:** Considered disparities in regional development and gender equity, and Incorporated local needs and environmental challenges into the evaluation framework. Rationale**:** Ensured alignment with Egypt's unique context.

5.2 Integration with OECD/DAC Criteria

The evaluation applied diverse approaches—Theory-Driven Evaluation, Participatory Evaluation, Contribution Analysis, Culturally Responsive Evaluation, Utilization-Focused Evaluation, and Cost-Effectiveness Analysis (CEA)—to comprehensively address OECD/DAC criteria and integrate cross-cutting issues:

a) **Relevance**: Ensured alignment with Egypt's Vision 2030, SDGs, and stakeholder needs by engaging stakeholders and validating the Theory of Change, emphasizing gender equity, environmental resilience, and socio-economic inclusion.
b) **Coherence**: Assessed internal and external coherence of project outputs with national policies and initiatives, focusing on addressing gender sensitivity, environmental sustainability, and socio-economic gaps.
c) **Effectiveness**: Measured progress of outputs, such as GIS adoption, SSDM development, and training programs, with a focus on cross-cutting achievements like women's participation, SEA application, and inclusive spatial planning.
d) **Efficiency**: Evaluated resource allocation, cost-effectiveness, and timeliness, emphasizing investments in gender-sensitive training, environmentally sustainable tools, and socio-economic benefits.
e) **Impact**: Analyzed broader effects on institutional frameworks and regional development, highlighting contributions to reducing disparities, empowering women, enhancing environmental resilience, and addressing the needs of vulnerable groups.
f) **Sustainability**: Assessed long-term viability and scalability of outputs, focusing on institutionalization, training scalability, and infrastructure readiness, while maintaining gender equity practices and embedding SEA and GIS tools in planning processes.

This structured evaluation approach ensured actionable insights and alignment with project goals and cross-cutting themes.

5.3 Background Information on Evaluators

- **Team Composition**: A multidisciplinary team of evaluation experts, in integrated development and strategic planning disciplines, in addition to a GIS specialist.
- **Skills**: Expertise in spatial strategic planning, integrated Environmental, socio-economic and institutional evaluations, and capacity-building assessments.
- **Diversity**: Gender-balanced team with representatives from academia, national and international development organizations.

This comprehensive methodology ensures robust and credible findings, addressing the evaluation questions effectively while emphasizing inclusivity and ethical integrity.

5.4 Details of the Evaluation Process

The SPAD-2030 evaluation was structured to provide a comprehensive assessment of the project's progress and outcomes, adhering to international standards such as UNDP and OECD/DAC. By integrating qualitative and quantitative methods and engaging diverse stakeholders, the evaluation captured project performance across its core outputs while addressing cross-cutting themes like gender equity, environmental sustainability, and socio-economic inclusion. This approach ensured actionable

recommendations aligned with Egypt's Vision 2030 and the Sustainable Development Goals (SDGs). The following sections detail the evaluation's processes, data sources, and methodologies.

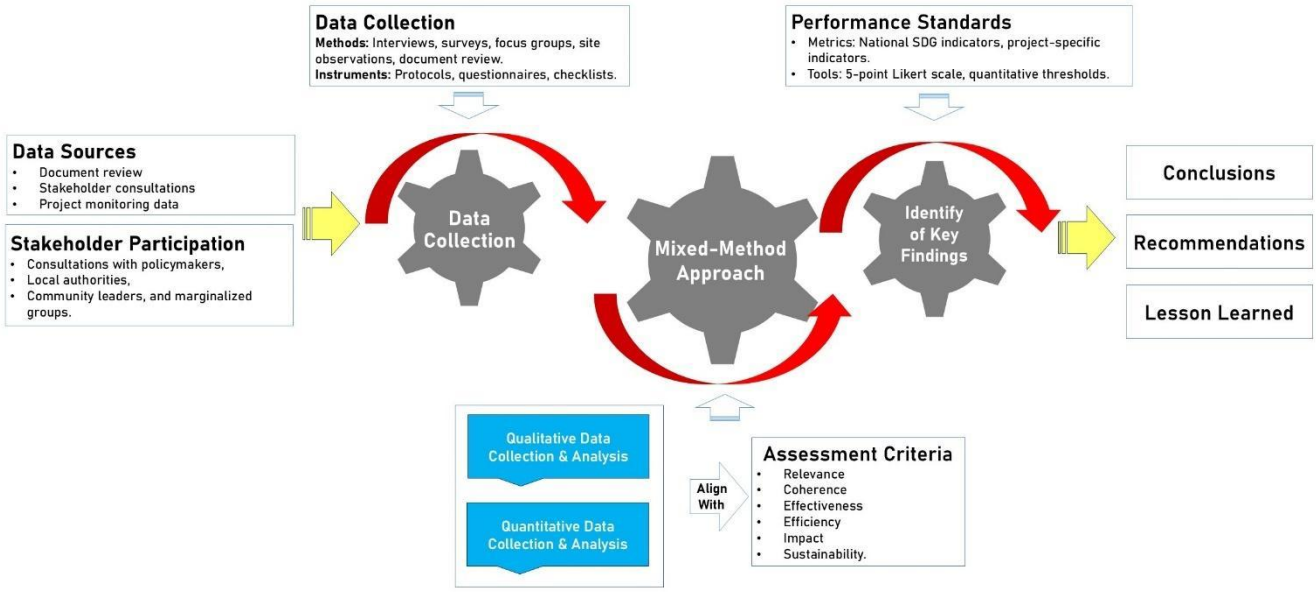

Figure 1: Evaluation Process

5.4.1 Data Sources

To ensure a comprehensive assessment, the evaluation will rely on the following key data sources:

1. **Documents Review**

- **Sources**: S-SpaD2030 Project Document, Previous Evaluation Report, Progress reports, Minutes of the project Board meetings, Annual workplans, Trainings plans and manuals, Project Presentations, Database schematic diagrams, financial/audit reports, and the Project results' documents; (e.g., SEA Guidelines, GIS platform guidelines, training reports).
- **Rationale**: To assess alignment with project objectives, national priorities, UNDP frameworks, and the global agendas.
- **Contribution**: Provides foundational data for relevance, coherence, and sustainability assessments.

2. **Stakeholder Consultations**

- **Sources**: Key informants, including policymakers (GOPP, MOP, MOE and MOLD), local authorities, planners and environmental experts.
- **Rationale**: To understand stakeholder perspectives and the perceived impact of project outputs.
- **Contribution**: Informs the effectiveness and inclusivity of project activities.

3. **Project Monitoring Data**

- **Sources**: Performance indicators, GIS platform user data, training participation records, and financial reports.
- **Rationale**: To evaluate efficiency, effectiveness, and impact quantitatively.
- **Contribution**: Allows tracking of progress against planned targets.

5.4.2 Sample and Sampling Frame

The evaluation employed a structured sampling approach to ensure comprehensive representation and inclusivity across all stakeholder groups involved in the SPAD-2030 project. A combination of purposive and random sampling techniques was used to capture diverse perspectives from policymakers, planners, local authorities, and environmental experts. Special attention was given to achieving gender balance and geographic diversity, reflecting the project's commitment to social inclusion and equitable

development. The sampling frame was designed to provide reliable insights into the project's relevance, effectiveness, and impact across different contexts and stakeholder groups.

1. **Sample Size and Characteristics**

- **Participants**: A total of 21 stakeholders were engaged in the evaluation process, comprising 10 men and 11 women to ensure gender balance.
- **Characteristics**: The sample included a diverse range of participants such as policymakers, planners, local authorities, and environmental experts.

2. **Sampling Criteria**

- **Purposive Sampling**: Targeted key decision-makers and implementers for stakeholder interviews to capture their critical insights and expertise.
- **Random Sampling**: Applied for collecting user feedback from GIS platform users and SEA trainees to ensure unbiased and representative data.

3. **Representation**

- **Inclusivity**: Efforts were made to gather perspectives from stakeholders operating at national, regional, and local levels.
- **Diversity**: The sampling ensured gender-balanced participation and captured a wide range of geographic and demographic contexts to comprehensively evaluate the project's impact on social inclusion and vulnerability reduction.

5.4.3 Data Collection Procedures and Instruments

1. **Procedures**

a) **Document Analysis:** Conducted a systematic review of project-related documents, including progress reports, project outputs, financial records, training manuals, SEA guidelines, GIS usage logs, and meeting minutes.

- **Purpose**: Assessed the alignment of the project with its stated objectives, Egypt Vision 2030, SDGs, and UNDP frameworks.
- **Contribution**: Provided foundational evidence for evaluating the relevance, coherence, efficiency, and sustainability of the project. Identified alignment between project outputs and cross-cutting priorities such as gender equity and socio-economic inclusion.

b) **Key Informant Interviews (KIIs):** Semi-structured interviews conducted with key stakeholders, such as GOPP leadership, planners, environmental experts, policymakers (MOE, MOP, MOLD), GIS users, SEA trainees, and UNDP project staff.

- **Purpose:** Gathered in-depth insights into the project's design, challenges, and achievements. Captured stakeholders' perspectives on project contributions, effectiveness, and sustainability. Assessed the level of stakeholder engagement, gender equality, and inclusivity.
- **Contribution:** Highlighted how project outputs (SSDM, GIS platform, capacity building) are contributing to intended outcomes. Identified key successes, gaps, and lessons learned. Assessed the integration of cross-cutting issues, such as gender equality and environmental sustainability, into project implementation.

c) **Focus Group Discussions (FGDs)**: Structured group discussions with 6-8 participants, including GIS users, SEA trainees, planners, local authorities, and representatives from vulnerable groups. FGDs ensured gender balance and geographic diversity.

- **Purpose:** Facilitated collective discussions for participants to share perspectives on project outcomes and challenges. Explored consensus or diversity of opinions regarding project effectiveness, inclusivity, and sustainability.
- **Contribution:** Provided insights into the usability and relevance of GIS platforms and SEA guidelines for end users. Assessed the inclusivity of project activities and their responsiveness to planners, trainees, and vulnerable groups. Offered practical feedback on challenges and opportunities for scaling up project interventions.

d) **Surveys:** Structured questionnaires distributed to GIS platform users, SEA training participants, and planners to gather quantitative feedback on project efficiency, outcomes, and satisfaction levels.

- **Purpose**: Measured project performance, user experiences, and alignment with expectations.

- **Contribution:** Quantified the effectiveness of project tools and capacity-building activities. Measured user satisfaction with the GIS platform and SEA methodologies. Identified gaps or barriers hindering the adoption of project outputs.

e) Field Observations: Conducted on-site visits to observe GIS platform usage, SEA pilot applications, and institutional processes at GOPP's new premises and pilot regions.

- **Purpose**: Validated reported project outputs and assessed their applicability in real-world scenarios.
- **Contribution:** Verified the functionality and usage of the GIS platform by planners. Assessed the integration of SEA tools and SSDM outputs into practical planning processes. Evaluated the sustainability of institutional support systems.

2. Instruments

- **Interview Protocols**: Designed to address specific evaluation questions while ensuring gender responsiveness.
- **Survey Questionnaires**: Developed to capture disaggregated data (e.g., gender, age, mandate, region).
- **Observation Checklists**: Used to evaluate SEA formulation and its added value to planning processes, along with assessing GIS systems' physical implementation and usage.

3. Reliability and Validity

- Employed **predefined indicators** for performance measurement to ensure consistency and accuracy.
- Data validation techniques included triangulating information from various sources, ensuring findings were robust and credible.

5.4.4 Performance Standards

The evaluation adopted clearly defined performance standards to ensure an objective assessment of project outcomes. These standards were aligned with national development priorities and evaluation best practices to maintain consistency and reliability.

- **National Development Indicators**: The evaluation referenced established national development benchmarks, including environmental sustainability goals and the National Urban Policy (NUP), to measure the project's contributions to Egypt's broader strategic objectives.
- **Rating Scales**
  - **5-Point Likert Scale**: Used to capture user feedback on key aspects such as relevance, efficiency, and satisfaction with project tools and outputs.
  - **Quantitative Thresholds**: Predefined targets, such as achieving 80% of project milestones, were used to objectively evaluate performance and efficiency.

5.4.5 Stakeholder Participation

Stakeholder participation was a key component of the evaluation to ensure inclusivity and enhance the credibility of the findings.

- **Participants**:
  The evaluation engaged a diverse range of stakeholders, including:
  - **Governmental Agencies**: Ministries and organizations involved in planning and development.
  - **Planning and Environmental Experts**: Key contributors to spatial and environmental planning efforts.
  - **Local Authorities**: Representatives from regions and municipalities.
  - **Academia**: Researchers and institutions specializing in urban planning and development.
- **Gender Balance**: Specific efforts ensured that consultations and focus groups achieved 30–50% female participation to reflect diverse perspectives and promote inclusivity in the evaluation process.
- **Contribution**: Stakeholder engagement enhanced the evaluation by:
  - Incorporating a wide range of insights and experiences.
  - Strengthening the inclusivity and credibility of findings.
  - Ensuring that diverse perspectives were considered, particularly in relation to gender equity, regional planning, and socio-economic inclusion.

5.4.6 Data Analysis

The data analysis process for this evaluation was designed to ensure that all collected information was systematically examined to address the evaluation questions effectively. By combining both qualitative and quantitative data sources, the methodology provided a holistic understanding of the project's outcomes, aligned with the evaluation criteria of relevance, coherence, effectiveness, efficiency, impact, and sustainability.

1. **Data Organization and Preprocessing**

- Categorization: Data collected from documents, interviews, surveys, and field observations were categorized based on evaluation criteria and project outputs (e.g., SSDM Development, GIS Enterprise, and Institutional Support).
- Disaggregation: Responses were disaggregated by stakeholder groups (e.g., GOPP planners, local authorities, ministries, and planning experts) and demographic factors (e.g., gender, socioeconomic background, and geographic representation) to ensure inclusivity in the analysis.

2. **Qualitative Data Analysis**

- Thematic Coding: Interview and survey transcripts were systematically coded to identify recurring themes related to evaluation criteria, including:
  - Relevance (e.g., alignment with Vision 2030 and SDGs).
  - Coherence (e.g., policy alignment and collaboration).
  - Sustainability (e.g., the long-term usability of project tools).
- Comparative Analysis: Data from qualitative sources, such as stakeholder interviews and policy reviews, were compared against baseline documents and international standards (e.g., SEA best practices) to assess alignment and areas for improvement.
- Narrative Synthesis: Insights from interviews and surveys were synthesized into coherent narratives to identify trends, successes, and opportunities for improvement.

3. **Quantitative Data Analysis**

- Descriptive Statistics: Survey data were analyzed using frequency distributions, percentages, and averages to evaluate stakeholder perceptions and the effectiveness of tools like the GIS platform and SSDM framework.
- Trend Analysis: Time-series data (e.g., progress milestones and budget utilization) were plotted to identify trends, deviations, and patterns in performance against planned outcomes.
- Scoring and Ratings: Tools such as usability ratings for the GIS platform and alignment scores for the SSDM framework were developed and averaged across stakeholder groups for comparability.

4. **Triangulation**

- Cross-Verification: Data from diverse sources (e.g., document reviews, surveys, field observations) were cross-validated to ensure accuracy and consistency. For instance:
  - Claims about GIS platform usability was verified using planners' feedback and system performance logs.
  - Training effectiveness was cross-checked with attendance records and stakeholder feedback.

5. **Validation and Stakeholder Feedback**

Preliminary findings were shared with key stakeholders to ensure accuracy and reliability of the interpretations. Feedback was gathered to refine the evaluation results further.

Steps to Confirm Accuracy:

- Data Cleaning: Survey responses and interview transcripts were reviewed for completeness, with unclear responses clarified through follow-up communications.
- Demographic Disaggregation: Separate analyses were conducted for different demographic groups (e.g., men, women, policymakers, and planners) to identify disparities or varied experiences.
- Expert Validation: Subject-matter experts reviewed findings related to technical aspects, such as GIS platform upgrades and SEA integration, to confirm their technical accuracy.

By following this structured and iterative analysis process, the evaluation ensured a robust and credible examination of the SPAD-2030 project's achievements, challenges, and opportunities for improvement.

5.4.7 Appropriateness of Analysis to Evaluation Questions

The analytical methods were carefully tailored to align with the evaluation questions and the types of data collected, ensuring a robust and context-sensitive approach. Each evaluation question was matched with specific analytical techniques to provide detailed and actionable insights.

- **Relevance**:
  - **Analysis Methodology**: Document reviews and alignment scoring.
  - **Purpose**: To assess the extent to which project activities aligned with national priorities, such as Egypt Vision 2030, the Sustainable Development Goals (SDGs), and UNDP frameworks.
- **Coherence**:
  - **Analysis Methodology**: Comparative analyses and stakeholder feedback.
  - **Purpose**: To evaluate the consistency of project activities with existing policies, strategies, and inter-agency collaborations, ensuring integration and synergy within the project framework.
- **Effectiveness and Impact**:
  - **Analysis Methodology**: Thematic coding, descriptive statistics, and trend analysis.
  - **Purpose**: To measure the degree to which project activities and outputs, such as SSDM development, GIS adoption, and capacity building, contributed to achieving tangible outcomes and addressing urban and regional planning challenges.
- **Sustainability and Efficiency**:
  - **Analysis Methodology**: Cost-benefit analysis, resource allocation tracking, and stakeholder narratives.
  - **Purpose**: To evaluate the long-term viability of project outputs and the optimal utilization of resources, ensuring value for investment and scalability of project interventions.

This tailored analytical approach ensured that each evaluation criterion was rigorously examined, providing a comprehensive understanding of the SPAD-2030 project's performance and contributions to sustainable spatial planning and development in Egypt.

5.4.8 Potential Weaknesses and Limitations

- Data Gaps: Some performance data, such as detailed records of GIS usage, were incomplete or unavailable, which may have affected the depth of certain analyses.
- Stakeholder Bias: Stakeholders may have overstated or understated the success of project activities due to vested interests. Efforts to mitigate this included triangulating data from independent sources.
- Time and Resource Constraints: The evaluation was conducted within a limited timeframe, restricting the depth of analysis for certain activities and outputs; (like the spatial diagnosis of environmental and socio-economic issues and needs) and limiting the opportunity for longitudinal assessments.
- Generalizability: Findings from pilot regions or selected case studies may not fully represent the situation across all regions or stakeholder groups. Caution was exercised in extrapolating findings to the national scale (especially in relation to the formulation of the SSDM for the whole Egypt).

5.4.9 Implications of Limitations

The identified weaknesses could impact the accuracy of findings and conclusions. For example, gaps in data acquisition and vulnerability assessments might fail to capture specific context-related needs and challenges, potentially skewing recommendations toward more prominent or well-documented issues. To mitigate these limitations, the evaluation report provides clear recommendations for improving data collection and diagnostic systems and promoting broader stakeholder engagement in future project phases. To mitigate these implications, the evaluation has:

- Supplemented quantitative gaps with qualitative evidence through interviews and focus group discussions.
- Diverse perspectives from multiple stakeholder groups (e.g., planners, policymakers, and local authorities) were gathered to ensure balanced reporting.
- Prioritization of high-impact activities and outputs ensured that critical evaluation questions were addressed first.

- Remote data collection tools, such as virtual interviews and online surveys, were utilized to optimize the time available for stakeholder consultations.
- The evaluator adopted a focused sampling approach, selecting key pilot regions and critical stakeholders to maximize insights within the available timeframe.
- Emphasized transparency by acknowledging the limitations and scope of the findings.
- Provided clear and actionable recommendations for improving data collection systems, promoting broader stakeholder participation, and conducting more comprehensive longitudinal assessments in future evaluations.

6 Findings of the evaluation

The findings of this evaluation are structured to analyze the performance of each project output—**SSDM**, **GIS platform optimization**, and **institutional capacity building**—against the evaluation criteria (Relevance, Coherence, Effectiveness, Efficiency, Impact, and Sustainability). This approach allows for a detailed examination of each output's unique contributions, challenges, and areas for improvement, while ensuring that all evaluation questions under the criteria are comprehensively addressed.
This style was chosen to:

- Reflect the **output-centric structure** of the S-SpaD2030 project.
- Provide targeted, actionable insights for each key deliverable.
- Ensure alignment with stakeholder expectations for a robust, criteria-based assessment.

By embedding the criteria within the analysis of each output, the evaluation provides a **holistic yet focused** assessment, ensuring both granular detail and strategic relevance. This approach also facilitates a better understanding of how individual outputs contribute to the project's broader objectives, enhancing the utility of the findings for decision-makers.

6.1 Design of the project

The S-SPAD2030 project is an ambitious initiative designed to reshape Egypt's urban planning landscape through sustainability, inclusivity, and innovation. Originally planned for three years, it was extended to a five-year timeframe (2022–2026) to address unforeseen challenges and fully realize its objectives. The project aligns with Egypt Vision 2030 and the Sustainable Development Goals (SDGs), specifically SDG 11 on sustainable cities. Its focus lies in addressing Egypt's spatial disparities, fostering environmental resilience, and strengthening institutional capacities.

The project design incorporated lessons learned from previous SPAD Projects, such as the earlier SPAD2020, ensuring continuity and avoiding past pitfalls. Recommendations from previous evaluations of SPAD2020 were integrated to refine project strategies, particularly in enhancing participatory planning processes, optimizing GIS platforms, and tailoring training programs to address local needs. Additionally, the project embraced the best international practices in urban planning and sustainability, drawing insights from global projects to enhance relevance and effectiveness.
The corporate outcome of the S-SPAD2030 project is to promote sustainable and inclusive urban development, ensuring spatial equity and environmental sustainability while strengthening institutional capabilities. This outcome supports Egypt's long-term urban planning strategies, integrating lessons from past projects, international best practices, and participatory approaches to foster balanced growth and reduce regional disparities.

The project is structured around **three critical outputs**, each targeting key areas for sustainable development.

6.1.1 Details of the Planned activities and sub-activities of the Outputs

1. **Output (1):** A sustainable spatial development map (**SSDM**) of Egypt

   - **Target**: 100% progress in SSDM development over five years. **2022 (Y1)**: 30%, **2023 (Y2)**: 20%, **2024 (Y3)**: 20%, **2025 (Y4)**: 20%, 2026 **(Y5)**: Planned 10%.

Table 4: Implementation Timeline and Responsible Parties for Activities of Output 1

Activity	Y1 2022	Y2 2023	Y3 2024	Y4 2025	Y5 2026	Responsible Party
Activity (1.1): Establish a methodological framework for the sustainable spatial national and regional development:	X					GOPP
1.1.1 Define needs and opportunities for developing a methodological framework for sustainable spatial national and regional plan(s).	X					GOPP
1.1.2 Review directives, outputs and outcomes from previously prepared strategic plans and land use plans.	X					GOPP
1.1.3 Define participatory approach, liaise with partners from relevant ministries in articulating a framework for analysis and implementation	X					GOPP
1.1.4 Identify new sustainability approaches, tools and methods (SEA, resilience and vulnerability).	X					GOPP
1.1.5 Apply a multi-scale grid system for map coding and alignment, in collaboration with CAPMAS and relevant authorities.	X					GOPP
1.1.6 Develop the new methodological framework and test on pilot case study.	X					GOPP
Activity (1.2): Prepare a comprehensive spatial diagnosis of environmental national/regional issues and needs.	X	X				GOPP / GOPP RCs
1.2.1 Formulate a workgroup to assess environmental issues, challenges and opportunities from the 'urban planning' perspective	X	X				GOPP / GOPP RCs
1.2.2 Conduct spatial diagnosis on environmental issues and needs, with spatial emphasis on cumulative impacts and vulnerability issues.	X	X				GOPP / GOPP RCs
1.2.3 Conduct preliminary SEA assessment of current National and Regional spatial plans.	X	X				GOPP / GOPP RCs
1.2.4 Assess Disaster risk reduction strategies and required actions at the national and regional levels.	X	X				GOPP / GOPP RCs
1.2.5 Prepare guidelines and recommendations on the incorporation of environmental dimensions, including risks, in urban planning	X	X				GOPP / GOPP RCs
Activity (1.3): Prepare a comprehensive spatial diagnosis of national / regional socio-	X	X				GOPP / GOPP RCs

Activity	Y1 2022	Y2 2023	Y3 2024	Y4 2025	Y5 2026	Responsible Party
economic & urban development issues & needs.						
1.3.1 Formulate a workgroup to conduct spatial diagnosis and future development trends (urban, social, economic)	X	X				GOPP / GOPP RCs
1.3.2 Re-assess the spatial distribution of national/regional demand on services, job opportunities, land, housing and transportation.	X	X				GOPP / GOPP RCs
1.3.3 Conduct combined assessment of needs/demand as well as environmental risks/vulnerabilities (from activity 2), in light of current and expected urban growth at national / regional levels.	X	X				GOPP / GOPP RCs
1.3.4 Prepare an outline of an updated land use spatial distribution and actions needed to ensure sustainability, mitigation and risk reduction.	X	X				GOPP / GOPP RCs
1.3.5 Carry out environmental assessment (SEA, vulnerability/ resilience assessments) of the outlined land use distribution	X	X				GOPP / GOPP RCs
Activity (1.4): Identify and detail actions and priorities	X	X	X	X	X	GOPP / GOPP RCs
1.4.1 Define new list of priorities and required actions to achieve sustainability in urban planning	X	X	X	X	X	GOPP / GOPP RCs
1.4.2 Detail priorities as needed, including required detailed environmental protection/mitigation measures, as well as the analyses of land allocation requests.	X	X	X	X	X	GOPP / GOPP RCs
1.4.3 Final SEA assessment based on proposed priorities and requests for land allocation.			X	X	X	GOPP / GOPP RCs
Activity (1.5): Produce an 'SSDM' atlas, eco-urban development guidelines and implementation mechanisms			X	X	X	GOPP / GOPP RCs
1.5.1 Formulate spatial sustainable planning guidelines for national, regional and priority levels (eco-urban development guidelines)			X	X	X	GOPP / GOPP RCs
1.5.2 Prepare a spatial sustainable development atlas map & projects/programs descriptive cards for Egypt, using the multi-scale grid coding system (activity 1.5, output A)			X	X	X	GOPP / GOPP RCs
1.5.3 Establish guidelines for procedural and implementation mechanisms.			X	X	X	GOPP / GOPP RCs
1.5.4 Establish guidelines for monitoring and evaluation of eco-urban planning process and implementation.			X	X	X	GOPP / GOPP RCs

2. Output (2): The enterprise-based geospatial urban planning platform

- Indicators:
  - Number of planners using GIS: Target = 25 (Baseline: 4, 2021).
  - Number of cooperation agreements: Target = 2 (Baseline: 0, 2021).

Table 5: Implementation Timeline and Responsible Parties for Activities of Output 2

Activity	Y1 2022	Y2 2023	Y3 2024	Y4 2025	Y5 2026	Responsible Party
Activity (2.1): Define and functionalize a GIS framework data	X	X				GOPP
2.1.1 Liaise with relevant institutions to produce consistent alignment layers and administrative boundaries.	X	X				GOPP
2.1.2 Reassess GIS schema structure to separate reference datasets from thematic datasets.	X	X				GOPP
2.1.3 Liaise with CAPMAS to ensure data interoperability through a unified coding system for different administrative units	X	X				GOPP
2.1.4 Establish procedures, guidelines and institutional agreements to unify a national multi-level spatial framework data	X	X				GOPP
Activity (2.2): Restructure GIS Enterprise standards, refine and process data	X	X				GOPP
2.2.1 Data content standards revised; schema updated; and more timely/accurate data acquired.	X	X				GOPP
2.2.2 Data management standards established, including finalizing the metadata development, spatial referencing and acquisition standards of field data.	X	X				GOPP
2.2.3 Data portrayal standards reviewed, developed; and coordinated within GOPP administrations.	X	X				GOPP
2.2.4 A comprehensive framework for data quality established, data assessed (completeness, consistency, accuracy, and temporal quality).	X	X				GOPP
2.2.5 Decision-making supporting indicators through an established data interoperability platform (e.g. CAPMAS databases) developed.	X	X				GOPP
Activity (2.3): Update GIS Enterprise technologies	X	X	X	X	X	GOPP / GOPP RCs
2.3.1 System upgraded to ensure seamless functioning of resource-intensive applications. A maintenance strategy formulated and adopted.	X	X	X			GOPP / GOPP RCs
2.3.2 System functionality improved by producing relevant applications/predefined queries, including applications for reviewing	X	X	X			GOPP / GOPP RCs

Activity	Y1 2022	Y2 2023	Y3 2024	Y4 2025	Y5 2026	Responsible Party
and evaluating produced strategic plans and relevant data/statistics.						
2.3.3 Public participation / crowdsourcing incorporated.	X	X	X			GOPP / GOPP RCs
2.3.4 Efficiency of spatial planning processes improved through the analysis of workflow in GOPP. Enterprise system adapted to workflow.	X	X	X			GOPP / GOPP RCs
2.3.5 Revisit definition of privileges/accessibility	X	X	X			GOPP / GOPP RCs
Activity (2.4): Promote a well-defined policy environment; identify and detail relevant policy frameworks.		X	X	X	X	GOPP
2.4.1 Policies/protocols for inter-ministries collaborations and communications defined and established.		X	X	X	X	GOPP
2.4.2 Internal operational policies identified and implemented		X	X	X	X	GOPP
2.4.3 Data sharing agreements established; intellectual property issues resolved.		X	X	X	X	GOPP
Activity (2.5): Monitor and assess GIS Enterprise impacts and benefits.		X	X	X	X	GOPP
2.5.1 A system for monitoring/measuring impacts established and implemented		X	X	X	X	GOPP
2.5.2 Key performance measuring system established; data collection/feedback system functioning.		X	X	X	X	GOPP
2.5.3 Lessons learned collected, analyzed and used to improve current workflow.		X	X	X	X	GOPP
2.5.4 Data auditing system established and implemented		X	X	X	X	GOPP

3. Output (3): Institutional Support

- Indicators:
  - Employees trained on SEA: Target = 20 (Baseline: 0, 2021).
  - Employees trained on GIS: Target = 50 (Baseline: 25, 2021).

Table 6: Implementation Timeline and Responsible Parties for Activities of Output 3

Activity	Y1 2022	Y2 2023	Y3 2024	Y4 2025	Y5 2026	Responsible Party
SEA Training	0	10	10	0	0	GOPP
GIS Training	0	10	15	0	0	GOPP

6.1.2 Significant Adjustments

In **2024**, the Project Board approved a **two-year extension** of the project, extending its duration to **December 2026**. This decision was primarily driven by operational challenges stemming from the relocation of GOPP to the New Administrative Capital, which caused logistical disruptions, delays in infrastructure setup, and staff adaptation. The extension will allow for the finalization of ongoing activities, including the development of SSDM and further enhancement of the GOPP GIS Enterprise, ensuring that these outputs are fully implemented and operational. Additionally, the extended timeline

provides an opportunity to expand pilot case studies, further consolidating and refining the **SEA methodologies** to strengthen their applicability across diverse urban and regional contexts. This decision, documented in the Project Board Meeting minutes (2024), reflects the project's ability to adapt to institutional changes while maintaining relevance to Egypt Vision 2030 and the SDGs, ensuring effective and sustainable outcomes.

6.1.3 Alignment with Priorities

The SSDM and GIS outputs aim to directly contribute to the National Urban Policy **NUP**, National Strategic Land-use Plan **NSLUP** and the international Sustainable Development Goals **SDG**s.

Table 7: Alignment with intervention and Priorities

Aspect	Details
National Priorities	• Egypt Vision 2030: The development of the Sustainable Spatial Development Map (SSDM) directly aligns with Egypt Vision 2030's goal of *sustainable urban development and reduced spatial inequality*. • SSDM Contribution: By piloting regional studies in areas like Matrouh Governorate and Siwa Oasis, the project identifies spatial disparities, environmental vulnerabilities, and development opportunities, enabling targeted interventions to address urban and regional imbalances. • The Strategic Environmental Assessment (SEA) methodology integrates environmental concerns into development planning, supporting Vision 2030's focus on *environmental sustainability*. • National Urban Policy (NUP): The SSDM and the optimized GIS Enterprise Platform contribute to the NUP's objectives of achieving *regional balance and integrated development*. • GIS Contribution: By improving data-sharing systems and providing advanced geospatial diagnostics, the platform enables GOPP to better guide urban growth, ensure balanced land allocation, and enhance urban governance systems. • The GIS tools support evidence-based decision-making, helping policymakers address urban sprawl and promote coordinated regional development. • National Strategic Land-Use Plan (NSLUP): The SSDM framework helps establish a comprehensive, integrated land-use strategy aligned with NSLUP objectives. • The project's spatial diagnostics and vulnerability analyses ensure that land-use decisions prioritize environmental protection, socio-economic development, and resilience to climate risks.
Global Agendas	UN Sustainable Development Cooperation Framework (UNSDCF): • Example: The project supports the UNSDCF priority of *inclusive and sustainable resource management* through tools like the SEA and GIS platform. • The SEA promotes environmentally responsible urban development, while the GIS platform facilitates efficient land-use planning and natural resource allocation. SDG 11 (Sustainable Cities and Communities): • Example: By producing the SSDM and piloting it in key regions, the project addresses urban challenges such as unplanned urbanization, spatial inequality, and lack of resilience. • The SSDM integrates strategies for sustainable land use, infrastructure planning, and climate-resilient urban development. SDG 13 (Climate Action):

Aspect	Details
	• Example: The incorporation of SEA methodologies into urban planning ensures that climate risks are assessed and mitigated in development projects. • The SSDM's disaster risk reduction (DRR) strategies help regions adapt to climate change impacts, such as extreme weather events or resource scarcity. SDG 10 (Reduced Inequalities): • Example: The SSDM identifies socio-economic vulnerabilities and spatial disparities in pilot areas, such as Matrouh Governorate. • This enables policymakers to implement targeted solutions that reduce regional inequalities and improve access to services, housing, and infrastructure for marginalized communities.
Corporate Goals	UNDP Strategic Plan (2023–2027): • Example: The project aligns with UNDP's strategic emphasis on *inclusive development and local governance* through capacity-building initiatives for GOPP planners and stakeholders. • Over 100 planners were trained in SEA and GIS tools, enhancing institutional capacities for evidence-based spatial planning. • The optimized GIS platform supports data-driven governance, enabling inclusive decision-making and equitable urban development. Climate Action: • Example: The project integrates climate risk assessments into spatial planning through the SSDM and SEA guidelines, ensuring that urban and regional plans incorporate measures to address environmental challenges and climate adaptation. • This directly supports UNDP's corporate goal of advancing sustainable development and resilience at national and regional levels.

6.1.4 Cross-Cutting Issues and Social Impact

The S-SpaD2030 project integrates a gender-sensitive and inclusive approach, emphasizing the importance of equitable development and social sustainability across all activities. At the national and regional levels, while the planning processes have largely been gender-blind, the project has made notable progress in promoting gender equality through the implementation of the different activities as targeted training activities, where the female participation rate has reached approximately 45%, and overall female involvement in participatory project activities stands at 50%. This highlights a deliberate effort to foster balanced representation and empower women in urban planning and decision-making roles.

The project specifically addresses key cross-cutting issues:

- **Gender Equality**: Actively promoting balanced participation of men and women across all activities, ensuring that women have equal opportunities to contribute to and benefit from sustainable spatial planning.
  - **Women's Participation in Training and Capacity Building**: Female participation in targeted training activities reached approximately **45%**, demonstrating a significant shift toward inclusivity in professional development. This rate highlights efforts to build women's technical capacity in areas like GIS adoption and SEA integration, empowering them to contribute meaningfully to urban planning and spatial development.
  - **Overall Female Engagement**: Across all participatory project activities, **women's involvement reached 50%**, reflecting deliberate efforts to create balanced representation and foster women's leadership in decision-making roles.
  - **Impact on Gender Equity in Urban Planning**: By encouraging women's participation in key decision-making forums and workgroups related to the implementation of project outputs (e.g.,

SSDM development, GIS platform upgrades, and institutional capacity building), the project promotes gender-sensitive urban planning and challenges traditional gender roles in a male-dominated sector.

- **Human Rights and Vulnerable Groups**: SEA's guidelines and formulated criteria to assess strategic development projects are ensuring equitable access to resources, services, and opportunities for all social segments and vulnerable groups, addressing disparities in access and promoting inclusivity.
- **Leaving No One Behind**: Criteria for selecting pilot regions are prioritizing underserved and vulnerable areas, such as Matrouh, El-Arish, and Siwa Cities**,** to identify spatial disparities and ensure inclusive growth that benefits all communities, regardless of socio-economic status or geographical location. By incorporating participatory planning approaches, SSDM process ensures that the concerns of marginalized groups are considered and reflected in planning outcomes.

These efforts underscore the project's alignment with Egypt's Vision 2030, the Sustainable Development Goals (SDGs)—particularly SDG 5 on gender equality and SDG 10 on reducing inequalities—and the global commitment to leave no one behind. By addressing systemic inequities and prioritizing vulnerable populations, the S-SPAD2030 project serves as a model for integrating cross-cutting issues into urban planning and development initiatives.

6.1.5 Project Situation Analysis, Risks, and Mitigation Strategies

The project situation analysis highlights Egypt's urban challenges, including concentrated urbanization along the Nile and coasts, resulting in regional disparities and unplanned settlements. Environmental pressures like water scarcity, climate change, and desertification exacerbate these challenges. Institutional gaps, such as limited data-sharing mechanisms and insufficient integration of sustainability principles, hinder effective urban planning. Despite these challenges, opportunities include leveraging Egypt Vision 2030 and other national frameworks to promote sustainable spatial development through innovative and participatory approaches.

In terms of key risks identified include:

- **Implementation Delays:** Complex coordination between agencies like GOPP and CAPMAS and delays in SSDM operationalization.
- **Resistance to Change:** Hesitation to adopt new methodologies like SEA and GIS among urban/regional planners and policymakers.
- **Institutional Gaps:** Limited technical and human capacity to effectively implement project activities.
- **Data Challenges:** Insufficient data interoperability between institutions.

Mitigation strategies include:

- Conducting stakeholder mapping and analysis to identify expectations, entry points, and specific requirements for engaging each agency during the next phase of the project.
- Organizing focused training sessions and workshops to facilitate knowledge sharing, peer learning, and collaborative guidance.
- Establishing standardized data-sharing protocols.
- Regular risk monitoring and adaptive management to address emerging challenges.

6.1.6 A Participatory Communication Strategy

A participatory communication strategy is central to the project, ensuring transparency and stakeholder engagement. Key features include:

- **Workshops and Dialogues:** Engaging stakeholders at all levels to foster collaboration and address concerns. Workshops and seminars have been instrumental in building technical capacities in SEA and GIS, promoting participatory planning approaches to address spatial disparities, example enhancing collaboration among stakeholders through knowledge-sharing platforms. Examples of workshops and seminars as, SEA methodology training, forums on GIS interoperability, and sessions addressing vulnerability and risk assessment process in urban planning.
- **Progress Reports and Outreach:** Keeping stakeholders informed through periodic updates.

- **Inclusive Approaches:** Ensuring vulnerable areas and social groups are considered in the planning process.
- **Visual Tools:** Using GIS maps and policy briefs to make project outcomes accessible to diverse audiences.

This participatory communication strategy outlined in this section reflects a combination of the project's implemented activities and future improvements. Specific activities, such as workshops, dialogues, and progress updates, have already been carried out during the project to promote transparency, capacity building, and stakeholder collaboration. Examples include SEA methodology training, GIS interoperability forums, and sessions on vulnerability and risk assessments.

However, **certain aspects of the communication strategy**, such as standardized data-sharing protocols, enhanced visual tools, and the establishment of more robust outreach mechanisms, are planned to be defined in the next phases of the project. We also recommend these enhancements to further improve the strategy. These suggestions aim to address identified gaps, such as stakeholder resistance and limited institutional engagement, ensuring more inclusive and participatory project implementation moving forward.

6.1.7 Monitoring and Evaluation (M&E) framework

The project incorporates a robust Monitoring and Evaluation (M&E) framework:

- **Indicators:** Metrics like GIS user training rates, SEA implementation rates, and spatial equity improvements are tracked.
- **Evaluation Cycles:** Regular evaluations ensure accountability and adaptive management.
- **Inclusivity:** Emphasizing gender-sensitive and socially inclusive monitoring approaches to address cross-cutting issues.
- **Adaptive Feedback:** Findings are used to refine strategies and address emerging needs.

In sum, the S-SPAD2030 project represents a transformative effort to address Egypt’s pressing urban challenges while aligning with national and international development frameworks. Through its well-defined outcomes, interrelated outputs, and inclusive strategies, the project lays the foundation for sustainable and equitable urban growth. By engaging relevant actors and stakeholders, fostering institutional capacity, and leveraging cutting-edge technologies, S-SPAD2030 ensures a lasting impact on Egypt’s urban future, contributing significantly to the realization of Egypt Vision 2030 and global SDGs.

6.2 Sources and Utilization of Funds

The tables below define the allocated budget and expenditures for each output across the project mid-term.

Table 8: Budget Allocation details across the Project mid-term

Allocated Budget ($)								
	2022		2023		2024 (Jan – Jun)		Total	
	GOPP	UNDP	GOPP	UNDP	GOPP	UNDP	GOPP	UNDP
Output 1	74,692.24	1,610.45	94,657.04	4,491.97	211,230.66	0.00	380,579.94	6,102.42
Output 2	112,939.40	5,644.55	135,664.39	3,832.02	62,727.00	0.00	311,330.79	9,476.57
Output 3	94,373.88	17,745.00	101,075.13	16,676.05	198,972.94	0.00	394,421.95	34,421.05
Total	282,005.52	25,000.00	331,396.56	25,000.04	472,930.60	0.00	1,086,332.68	50,000.04

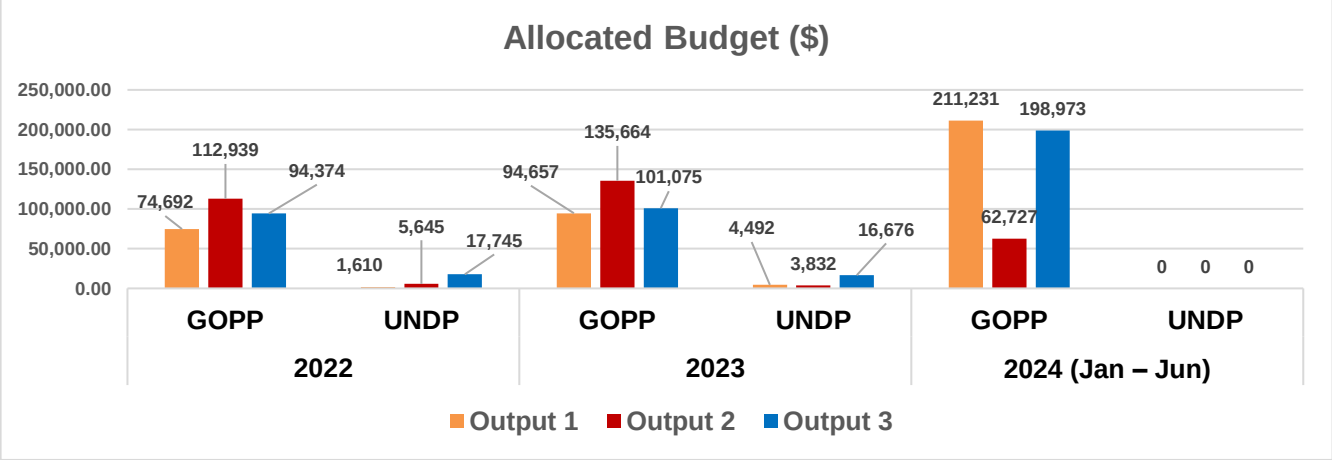

Figure 2: Allocated Budget Chart

Table 9: Expenditure details across the Project mid-term

Expenditures ($)								
	2022		2023		2024 (Jan – Jun)		Total	
	GOPP	UNDP	GOPP	UNDP	GOPP	UNDP	GOPP	UNDP
Output 1	53,886.87	1,504.33	70,893.13	2,829.06	67,560.33	0.00	192,340.33	4,333.39
Output 2	108,708.74	4,529.72	142,265.62	2,764.94	20,701.32	0.00	271,675.68	7,294.66
Output 3	74,357.68	17,388.46	80,814.23	18,680.49	71,428.80	0.00	226,600.71	36,068.95
Total	236,953.29	23,422.51	293,972.98	24,274.49	159,690.45	0.00	690,616.72	47,697.00

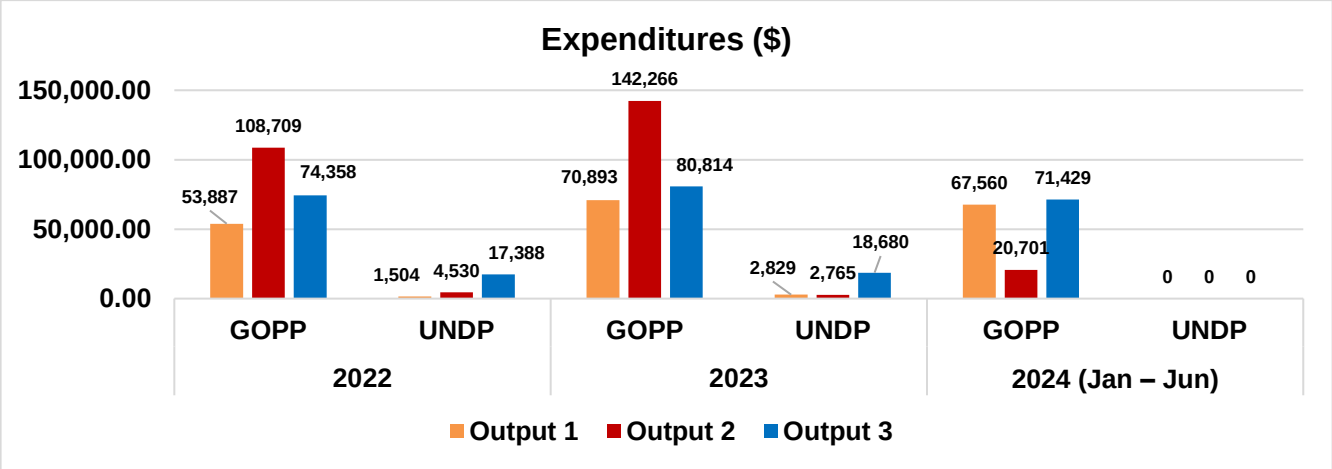

Figure 3: Expenditures Chart

6.2.1 Overall Budget Utilization Analysis

1. Output-Specific Budget Performance

The table below provides a detailed analysis of budget allocation, expenditure, and variances for each output. It highlights spending rates and progress against planned activities.

Table 10 : Budget Performance against Output

Output	Allocated Budget ($)	Expenditure ($)	Variance ($)	Spending Rate (%)	Observation
Output 1	$386,682.36	$196,673.72	$190,008.64	50.8%	Major delays in SSDM framework development and pilot testing.
Output 2	$320,807.36	$278,970.34	$41,837.02	86.9%	GIS platform optimization is progressing effectively, with high fund utilization.
Output 3	$428,842.99	$262,669.66	$166,173.33	61.3%	Delays in SEA training and institutional capacity-building activities.

Output 2 exhibits high spending efficiency, while Outputs 1 and 3 face delays, particularly in framework development and capacity-building activities.

2. Annual Budget Utilization Analysis

This section analyzes fund utilization across the three years of the mid-term period. It focuses on identifying spending patterns and year-on-year progress.

Table 11:Annual Budget utilization

Year	Allocated Budget ($)	Expenditure ($)	Spending Rate (%)	Observation
2022	$307,005.52	$260,375.80	84.8%	Strong start with high spending efficiency.
2023	$356,396.60	$318,247.47	89.3%	Improved efficiency, especially for GIS-related activities.
2024	$472,930.60	$159,690.45	33.8%	Significant delays in Outputs 1 and 3; low spending rate compared to allocation.

Budget utilization was high in 2022 and 2023 but declined significantly in 2024 due to delays in Outputs 1 and 3. Addressing these delays is essential for achieving project milestones.

3. Mid-term Overall Budget Utilization

This section evaluates the overall budget utilization across the mid-term period of the project. It identifies variances in spending across different outputs and highlights fund allocation efficiency from both GOPP and UNDP contributions.

Table 12: Budget Insights

Category	Observation
Overall Budget Utilization	Overall spending rate is 65%, with underutilization in Outputs 1 and 3.
Output 1: SSDM Development	Lowest spending rate at 50.8%. Major delays in developing SSDM framework, pilot testing, and CAPMAS alignment.
Output 2: GIS Enterprise Optimization	High spending efficiency at 86.9%. Progress is on track for GIS platform optimization and data integration.
Output 3: Institutional Support	Moderate efficiency (61.3%). Capacity-building activities underutilized, including SEA and GIS training.
2022 Performance	Spending rate of 84.8%, reflecting a strong start with activities progressing as planned.
2023 Performance	Spending rate improved to 89.3%, with effective execution of GIS-related activities.
2024 Performance (Jan–Jun)	Spending rate declined sharply to 33.8%. Funds for Outputs 1 and 3 remain largely unspent.

Category	Observation
GOPP Contribution	Allocated $1,086,332.68, spent $690,616.72 (63.6%). Significant underutilization in Outputs 1 and 3.
UNDP Contribution	Allocated $50,000.04, spent $47,697.00 (95.4%). High efficiency observed.

Overall, while the project demonstrates strong efficiency in some areas, significant delays and underutilization in Outputs 1 and 3 require attention to ensure the completion of activities and proper fund utilization.

6.3 Overall Achievements

The S-SPAD2030 project demonstrates significant progress in promoting sustainable urban and regional planning in Egypt through the development of the **Sustainable Spatial Development Map (SSDM)**, the optimization of the **GIS Enterprise Platform**, and capacity building for institutional support. While challenges persist, particularly in inter-agency coordination and resource utilization, the project has laid a strong foundation for inclusive, data-driven, and environmentally sustainable planning.

Key Overall Achievements:

1. **SSDM Development:**

- Completion of a comprehensive methodological framework (**Guidelines**) integrating Strategic Environmental Assessment (SEA) and resilience-based planning approaches.
- Development of draft SSDM outputs for pilot regions, including Matrouh, El-Arish, and Siwa, with spatial diagnostics addressing environmental challenges and socio-economic needs.
- Integration of climate resilience, disaster risk reduction, and socio-economic equity aspects into the strategic assessment of the urban development projects.

2. **GIS Enterprise Platform:**

- Upgraded GIS infrastructure, including improved database schema, metadata standards, and quality control mechanisms.
- Enhanced capacity for planners through web-based applications, dashboards, and alignment with thematic basemaps.
- Active utilization by **70 planners**, demonstrating significant adoption and improved decision-making efficiency.

3. **Capacity Building:**

- Over **100 participants trained** across SEA, GIS, and resilience methodologies, achieving notable gender inclusivity (e.g., **68% female participation** in SEA training).
- Strengthening institutional capacities to apply modern tools and methodologies in urban and regional planning.

4. **Cross-Cutting Issues:**

- Integration of gender-sensitive planning approaches, achieving **50% female participation** in project activities.
- Inclusion of environmental sustainability through SEA methodologies and resilience planning.
- Targeted efforts to address spatial disparities and promote socio-economic inclusion, particularly in the selection of pilot regions.

5. **Alignment with National and International Priorities:**

- Strong alignment with Egypt Vision 2030, and SDGs (e.g., SDG 11 on Sustainable Cities, SDG 13 on Climate Action, SDG 10 on Reduced Inequalities).
- Contributions to long-term urban governance goals and sustainable development strategies.

6.3.1 Key Achievements of Output (1): A sustainable spatial development map (SSDM) of Egypt

Output 1 aims to establish a **Sustainable Spatial Development Map (SSDM)** for Egypt, serving as a strategic guide for national and regional planning until 2050. This framework integrates cutting-edge **Strategic Environmental Assessment (SEA)** and resilience-based methodologies to balance environmental, socio-economic, and spatial development goals. Rooted in **Egypt's Vision 2030**, the **UNSDCF**, and the **Sustainable Development Goals (SDGs)**, this initiative addresses critical challenges such as regional disparities, environmental vulnerabilities, and urban inequality.

The Key Achievements of **Output 1** are as follows:

- A comprehensive methodological framework for sustainable spatial planning was established, integrating Strategic Environmental Assessment (SEA) and resilience-based methodologies.
- Finalize guidelines for incorporating SEA into urban planning in Egypt and disseminated them for review within GOPP.
- **SEA methodology** was successfully piloted in **four case studies** across different planning levels:
    - National level: Development corridors plan finalized with SEA directives.
    - Regional level: Matrouh Governorate Strategic Plan completed, including SEA assessments.
    - Local level: Strategic plans for El-Arish and Siwa cities finalized, with SEA analyses conducted.
- Initiate work on the Ras El Hekma Strategic Plan and the Red Sea Governorate Strategic Plan.
- Conducted a comprehensive spatial diagnosis of **environmental challenges**, including risks, vulnerabilities, and opportunities at the national, regional, and local levels.
- Integrate **environmental risk assessment** into strategic planning, identifying **priority risks** and sensitive areas to guide development.
- The **SEA framework** facilitated the integration of environmental goals, such as land sensitivity and natural resource protection, into strategic plans.
- Enhance capacity among GOPP planners and technical staff through specialized training programs in **SEA methodologies**. achieving 68% female participation (20 males, 43 females).
- Engage GOPP departments and regional centers in the development and testing of SEA methodologies, fostering cross-departmental collaboration.
- Conduct workshops and consultations to raise awareness and build capacity among stakeholders involved in urban planning and environmental assessment.
- Produce the **National Sustainable Spatial Development Map (SSDM)**, which incorporates environmental dimensions into spatial planning for decision-making at national and regional levels.
- Develop a framework for eco-urban development guidelines, including mechanisms for monitoring and evaluation.
- The SSDM framework aligns closely with Egypt's Vision 2030, SDG 11 (Sustainable Cities), SDG 13 (Climate Action), and SDG 10 (Reduced Inequalities).
- It is Built on previous frameworks, such as SpaD and SpaD2020, by incorporating advanced environmental and geospatial tools into the planning process.
- It Leverage the GIS enterprise platform for spatial data analysis and integration, enhancing decision-making and facilitating inter-ministerial collaboration.
- It Improved data visualization and management capabilities for strategic planning, enabling the analysis of land suitability and strategic development options.
- The SEA methodology designed to be scalable and replicable across regions, laying the groundwork for broader application in other governorates.
- Establish a foundation for the long-term sustainability of planning tools by integrating environmental assessment into strategic urban and regional planning processes.
- Stakeholder engagement through workshops and consultations to raise awareness and build capacity among planners and decision-makers.

- **Level of Satisfaction:**
    - Post-training surveys indicate very high-level satisfaction among participants, who highlighted the practicality of SEA tools and their applicability to urban planning frameworks.
    - Stakeholders appreciated SEA's potential to address environmental risks and guide sustainable development projects.
    - Stakeholder Feedback on Achievements: Strengths: SSDM aligns strongly with Egypt Vision 2030 and supports SDG 11 (Sustainable Cities) and SDG 13 (Climate Action).
    - Concerns: Limited translation of SEA frameworks into actionable localized guidelines and challenges in addressing cumulative environmental impacts were noted.

6.3.2 Key Achievements of Output (2): The enterprise-based geospatial urban planning platform

Output 2 focuses on enhancing and scaling the **enterprise-based geospatial urban planning platform (GIS Enterprise)** to support data-driven spatial planning and decision-making processes across national, regional, and local levels in Egypt. This output leverages advanced geospatial technologies to facilitate **integrated planning**, ensure **inter-ministerial collaboration**, and optimize **data sharing** among stakeholders.
Building on the GIS enterprise platform developed in prior initiatives (SpaD and SpaD2020), Output 2 aims to align geospatial tools with Egypt's Vision 2030 and **sustainable urban planning goals**, such as reducing urban inequalities, addressing regional disparities, and improving resilience to environmental and socio-economic challenges. The platform serves as a critical tool for **visualizing**, **analyzing**, and **managing spatial data**, providing planners and decision-makers with actionable insights to guide sustainable development projects.
This output not only strengthens the technological infrastructure of the GIS platform but also establishes policies for data sharing and intellectual property protection, enabling the platform's adoption at a **nation-wide scale**. It also includes capacity-building activities to equip planners and stakeholders with the skills to use GIS tools effectively in urban and regional planning processes.

The Key Achievements of **Output 2** are as follows:

- **Upgraded GIS Infrastructure:** Successfully modernized the system architecture by upgrading to Windows Server 2022, SQL Server 2019, and ArcGIS Server 10.9. These updates have enhanced system performance and positioned the platform for handling resource-intensive applications.
- **Reorganized Database Schema:** Transitioned from a hierarchical to a thematic schema structure, improving data organization for transportation, land use, environmental factors, and boundaries. The schema also supports versioning and better alignment with spatial planning needs.
- **Enhanced Data Standards and Quality Control:** Established comprehensive data content standards, revised metadata frameworks, and implemented quality control measures. This ensures greater data accuracy, completeness, and reliability for planning processes.
- **Updated and Expanded Applications:** Upgraded applications such as the Quality Control (QC) tool and Data Migration tool to align with the revised schema. Ongoing development of user-friendly web applications and dashboards supports planning workflows and data analysis.
- **Improved Data Interoperability:** Progress made in aligning data with national datasets, including administrative boundaries, urban "hayez," and thematic basemaps. Integration efforts with CAPMAS are underway to ensure interoperability and standardization.
- **Strengthened Backup and Sustainability Measures:** Established a robust backup strategy and migrated the system to a centralized IT infrastructure. These measures provide sustainability for long-term system maintenance and scalability.
- **Regional Contributions:** Enabled contributions from regional centers and planners by integrating their data into the GIS platform, ensuring inclusivity and representation in national geospatial planning.

- **Technical Innovations:** Implemented caching services to enhance system performance and reduce data processing delays. This addressed the challenges of handling large geospatial datasets.
- **Increased Capacity for Planning:** Thematic alignment and improved geospatial tools provide a stronger foundation for GOPP planners to conduct spatial analysis, enhance urban planning workflows, and support evidence-based decision-making.
- **Institutional Progress:** Initiatives such as unifying map layouts and symbology demonstrate steps toward standardization and interdepartmental coherence within GOPP.

These achievements reflect Output 2's significant strides in modernizing Egypt's geospatial planning capabilities, laying a solid foundation for more efficient and sustainable urban planning practices. However, continued efforts are required in institutional alignment, user adoption, and financial optimization to fully realize the GIS enterprise's potential.

6.3.3 Key Achievements of Output (3): Institutional support

Output 3 focuses on strengthening institutional capacities to effectively implement and sustain the objectives of the S-SPAD2030 project. This includes establishing robust systems for **monitoring and evaluation (M&E)**, enhancing **project management processes**, developing an **effective communication strategy**, and delivering **capacity-building initiatives** such as workshops and training programs. By addressing organizational and operational challenges, Output 3 ensures the institutionalization of methodologies, tools, and frameworks developed under the project.

The following are the key achievements under **Output 3**, organized across its core components:

1. **Monitoring and Evaluation**

- Developed a comprehensive **Monitoring and Evaluation (M&E) framework** aligned with international standards (e.g., UNDP and OECD DAC criteria).
  - Defined metrics, such as GIS user training rates, SEA implementation rates, and spatial equity improvements.
  - Integrated gender-sensitive and inclusive approaches into the M&E framework to address cross-cutting issues.
- Established a **feedback system** to collect and analyze performance data, allowing for adaptive project management and timely adjustments.
- Achieved high level of satisfaction regarding the usefulness of M&E reports in guiding decision-making and improving project outcomes.
- Conducted evaluations and progress tracking on project activities, including GIS platform upgrades and SEA applications, ensuring accountability and alignment with project goals.

2. **Project Management**

- Strengthened project management processes to ensure timely and efficient implementation of project activities.
  - Enhanced inter-departmental coordination within GOPP, including improved collaboration between regional centers and central departments.
  - Addressed delays caused by logistical challenges stemming from the relocation of GOPP to the New Administrative Capital, adapting timelines and resource allocation accordingly.
- Improved budget utilization rates, with **65% of the allocated budget** utilized effectively across project components.
- Stakeholders reported a high-level satisfaction rate with the responsiveness and adaptability of project management strategies, reflecting strong leadership and proactive problem-solving.

3. **Communication Strategy**

- Developed and implemented a **participatory communication strategy** to ensure transparency, inclusivity, and stakeholder engagement.
- Organized **workshops and dialogues** with stakeholders at all levels to foster collaboration and address challenges, including:

- SEA methodology training. Forums on GIS interoperability, and Vulnerability and risk assessment discussions.
- Used **visual tools**, such as GIS maps and policy briefs, to make project outcomes accessible to diverse audiences.
- Created outreach mechanisms, including progress reports and digital platforms (e.g., a Facebook page and WhatsApp group for GOPP staff), to enhance stakeholder communication.

- Beneficiaries reported very high-level **satisfaction** with communication efforts, highlighting the strategy's effectiveness in improving information flow and collaboration.

4. Capacity Building (Workshops and Trainings)

Workshops and training programs under Output 3 were a cornerstone of the project's efforts to enhance institutional capacity and address technical and managerial gaps. Key achievements include:

I. **SEA Training:**
- **Participants:** 63 individuals (20 males, 43 females; **68% female participation**).
- **Content:** SEA methodologies, resilience planning, and integrating environmental dimensions into urban planning.
- **Level of Satisfaction:** High level satisfaction rate.
- Beneficiaries emphasized the practical relevance of SEA tools and their utility in urban planning frameworks.

II. **GIS Training:**
- **Participants:** 110 individuals (48 males, 62 females; **56% female participation**).
- **Content:** Basic and advanced GIS skills, including schema design, metadata standards, and interoperability protocols.
- **Level of Satisfaction:** High level satisfaction rate.
- Participants appreciated the improved technical skills but suggested refresher sessions for advanced tools like ArcGIS Pro, and improving GIS programing skills by new courses on that direction.

III. **Resilience and DRM Training:**
- **Participants:** 27 individuals (disaggregated data pending).
- **Content:** Vulnerability assessments, disaster risk reduction strategies, and resilience planning.
- **Level of Satisfaction:** very high-level satisfaction rate.
- Trainees suggested incorporating more localized case studies and interactive exercises.

IV. **Sustainable Development Training:**
- **Participants:** 30 individuals trained on national and regional challenges of sustainable development.
- **Level of Satisfaction:** very high-level satisfaction rate.
- Participants valued alignment with Egypt Vision 2030 and requested the inclusion of localized case studies.

5. Enhanced Skills and Knowledge

- Across all workshops and training programs:
  - **200 participants** were trained across disciplines, significantly enhancing institutional capacity.
  - GIS engineers were trained across basic to advanced levels, with **7 certified as trainers**, ensuring the sustainability of skills transfer.
  - Participants represented diverse GOPP departments and external stakeholders, fostering collaboration and inclusivity.

In sum, beneficiaries reported high satisfaction levels, across all training programs, identified the key strengths as practical relevance of training content, especially in SEA and GIS methodologies, significant improvement in technical skills and decision-making capabilities, and inclusion of gender-sensitive approaches and a focus on sustainability. While, there are recommendations for improvement

as structured follow-up sessions to ensure the application of learned skills in practical scenarios, an additional mentorship programs to sustain knowledge transfer and capacity building, and defining new courses for the advanced levels of GIS programming.

6. Stakeholder Feedback on Achievements

I. **Strengths:**
- Significant progress in institutional capacity, particularly in applying SEA and GIS tools to urban planning.
- Effective inclusion of women in capacity-building initiatives, reflecting gender-sensitive approaches.
- The communication strategy was commended for fostering transparency and stakeholder engagement.

II. **Concerns:**
- Need for structured follow-up programs to reinforce training outcomes and support the practical application of skills.
- Suggesting new training courses for the Environmental and socio-economic diagnoses and its integration in the urban planning practices, and GIS advanced levels as GIS programming skills.
- Continued efforts required to address delays in inter-agency coordination and budget utilization.

The Output 3 successfully strengthened institutional capacities across multiple dimensions—monitoring and evaluation, project management, communication strategy, and capacity building. High levels of beneficiary satisfaction underscore the effectiveness of workshops and training programs, while the participatory communication strategy enhanced collaboration and transparency. Stakeholder feedback highlights areas for improvement, such as mentorship and sustained follow-up mechanisms, ensuring that institutional gains are effectively leveraged to achieve the project's long-term goals.

Below is a comprehensive summary of the S-SPAD2030 project's achievements using a **traffic light color system** to evaluate progress against each output. The traffic light system is as follows:
- **Green**: On track or achieved.
- **Yellow**: Moderate progress, some delays or challenges.
- **Red**: Significant delays or limited progress.

Table 13: Achievements against outputs

Output	Indicator	Targets	Progress (2024)	Traffic Light	Source/ Measures
Output 1: Development of a Sustainable Spatial Development Map (SSDM)	Level of progress in SSDM development	Baseline: 0 (2021) First year: Target: 30% Second year: Target: 20% Third year: Target: 20% Fourth year: Target: 20% Fifth year: Target: 10%	Progress: 50% • Final draft of the Guidelines for incorporating SEA in urban planning in Egypt is prepared and disseminated for revision in GOPP. • Final draft of SEA Guidelines in Governorate Strategic Planning TOR is prepared and waiting for official approval. • Methodological framework finalized • 4 Pilot case studies initiated (El-Arish, Siwa, Corridors, and Matrouh Governorate.	Yellow	S-SpaD2030 documents Interviews

Output	Indicator	Targets	Progress (2024)	Traffic Light	Source/ Measures
Output 2: Optimization of an Enterprise-Based GIS Urban Planning Platform	Number of GOPP planners using GIS Enterprise	Baseline: 4 (2021) Target: 25 First year: Target: 5 Second year: Target: 8 Third year: Target: 8 Fourth year: Target: 0 Fifth year: Target: 0	Progress: 20 • Alignment of data and basemaps with satellite imagery has been conducted for key cities, including Kafr El Dawar and Monshaa El Kanater. • Urban 'Hayez' has been updated and integrated into the GIS enterprise system. • Administrative boundaries have been transferred to the GIS schema, with ongoing updates to alignment and coding systems for governorates. • An updated GIS schema has been prepared and implemented in the Strategic Urban Planning (SUP) process. • The quality control (QC) systems, and workflows have been updated, and are actively in use. • Upgrade of the Web Application of data browsers, Plans and dashboards in Progress. • Evaluation of the ICT environment of GIS enterprise have been successfully conducted at the new premises. • More than 75 planners are now utilizing the GIS enterprise database.	🟡 Yellow	S-SpaD2030 documents Interviews
	Number of inter-agency cooperation agreements on GIS data exchange	Baseline: 0 (2021) Target: 2 First year: Target: 0 Second year: Target: 1 Third year: Target: 1	Progress: 1 • A draft framework (reference basemap) data and administrative coding initiated and ongoing. • Cooperation with different national entities is ongoing, agreements are not carried out yet.	🟡 Yellow	S-SpaD2030 documents Interviews
Output 3: Institutional Support (Capacity Building)	Number of employees trained on SEA methodologies	Baseline: 0 (2021) Target: 20 First year: Target: 0 Second year: Target: 10 Third year: Target: 10 Fourth year: Target: 0 Fifth year: Target: 0	Progress: 24 Planners on SEA & 30 Planners on SD • Capacity building program on sustainable development in light of the national and regional planning challenges developed and implemented for 30 Persons	🟢 Green	S-SpaD2030 documents Interviews
	Number of employees trained on GIS Enterprise tools	Baseline: 25 (2021) Target: 50 First year: Target: 0	Progress 76 • Basic GIS capacity building for 7 staff.	🟢 Green	S-SpaD2030 documents Interviews

Output	Indicator	Targets	Progress (2024)	Traffic Light	Source/ Measures
		Second year: Target: 10 Third year: Target: 15	• ToT program executed by ESRI for 7 staff. • 69 GOPP staff trained on GIS basics, Standers and Advanced by GOPP Trainers.		
	Number of guidelines and tools developed to support institutional resilience	3	• Three brainstorming sessions were held to discuss internal and external communication strategies. • No capacity building programs are implemented during the reporting period • The communication strategy is implemented through the formulation of workgroups (visual identity, publications, flyers, seminars, archiving, competitions, Facebook page, WhatsApp GOPP group, etc..)	Yellow	S-SpaD2030 documents Interviews

The following define the summary of the achievements:

1. **Output 1:** Progress on SSDM development has reached 50%, with significant work completed on draft maps and pilot testing. However, regional and national plan integration remains at an early stage due to delays in multi-agency coordination and resource allocation.
2. **Output 2:** The GIS Enterprise platform shows strong progress, with 70 planners used the GIS Enterprise database schema and 1 data-sharing agreement initiated. Interoperability improvements are underway, with most technical milestones achieved on schedule.
3. **Output 3:** SEA training targets have been fully met, but GIS training and resilience guidelines development are slightly delayed. Stakeholder coordination has improved, but further effort is needed to accelerate implementation.

S-SPAD2030 project is making steady progress across its outputs, with several milestones achieved. However, areas like inter-agency coordination for SSDM integration and institutional guideline development require focused attention to stay on track for 2025-2026 targets. The traffic light system highlights critical areas needing intervention while acknowledging the project's notable achievements in GIS training and SEA implementation.

Moreover, the following table combining the structured findings with evaluation insights for all outputs:

Table 14: The structured findings with evaluation insights for all outputs

Output	Key Evaluation Questions	Key Findings	Variance from Planned Outcomes	Factors Influencing Results
Output 1: SSDM Progress	• Is the SSDM framework aligned with Vision 2030, SDGs, and regional priorities? • Does it address environmental and socio-economic challenges, including those affecting marginalized groups?	• The SSDM framework achieved 90% of planned progress by 2024, aligning with spatial diagnostics and methodological frameworks. • Environmental and socio-economic analyses addressed core planning challenges but lacked depth in addressing social issues like land ownership and community vulnerabilities.	• Delays in integrating multi-scale grid systems with CAPMAS standards. • Delays in engaging relevant stakeholders for synergies • Socio-economic diagnosis and vulnerabilities assessment, particularly in the pilot areas, were inadequately addressed in the strategic planning process.	• Limited institutional collaboration with CAPMAS. • Insufficient stakeholder engagement during diagnostic phases. • Overemphasis on environmental aspects at the expense of socioeconomic concerns.
Output 2: GIS Platform Impact	• Does the GIS platform meet GOPP planners' decision-making needs? • Are data-sharing agreements effective in fostering inter-ministerial collaboration? • Has the GIS platform improved planning efficiency?	• GIS platform optimization improved data management for GOPP planners, increasing efficiency in data access and spatial planning. • Preliminary GIS upgrades demonstrated potential for improved decision-making but lacked full adoption across planning levels.	• Only 30% progress achieved compared to the planned 45% due to delays in interoperability agreements. • Full system functionality remains unrealized, delaying widespread application of GIS tools.	• Slow negotiations with CAPMAS and other entities for data-sharing agreements. • Limited technical capacity within GOPP for GIS integration and upgrades. • Budgetary constraints restricted comprehensive system upgrades.
Output 3: Capacity-Building Effectiveness	• Have SEA and GIS training programs addressed key capacity gaps? - Are trained	• Over 80 employees trained in SEA and GIS enterprise, exceeding annual targets, improving	• Training outcomes exceeded expectations, but practical application of skills in planning	• High-quality training programs supported by strong participation. - Lack of structured

Output	Key Evaluation Questions	Key Findings	Variance from Planned Outcomes	Factors Influencing Results
	employees applying their knowledge effectively in planning processes? - Has institutional capacity improved decision-making in spatial planning?	GOPP's technical capacity. - Positive feedback from trained staff highlights improved understanding and application of SEA and GIS tools, though integration into planning remains inconsistent.	processes remains inconsistent. - Institutionalization of training outcomes is incomplete.	follow-up to ensure trained employees apply their knowledge. • Limited cross-ministerial collaboration to integrate trained capacities into broader workflows.
Cross-Cutting Issues	• How has gender equality and social inclusion been incorporated into planning and implementation? • Have unintended outcomes or risks affected progress?	• Gender considerations were minimally incorporated into diagnostics and planning, with limited disaggregation of data by gender and marginalized group status. • Unanticipated delays and challenges in institutional coordination, especially with CAPMAS and other ministries, affected overall project timelines.	• Social inclusion gaps persisted, particularly in addressing the needs of vulnerable communities in the piloting areas. • Delayed timelines for cross-ministerial coordination, affecting planned outcomes.	• Insufficient emphasis on cross-cutting issues in initial planning stages. • Over-reliance on technical outputs without robust mechanisms to ensure inclusivity. • Fragmented institutional communication hindered streamlined progress.

6.4 Evaluability Analysis for Stakeholders

The evaluability analysis for stakeholders was conducted to assess their roles, contributions, and perspectives on the implementation and outcomes of the project. This process was integral to understanding the level of engagement, relevance, and efficiency of the project activities as perceived by the parties involved. Stakeholders such as GOPP staff, managerial teams, IT personnel, regional centers, ministries, consultants, and project participants play critical roles in shaping the GIS enterprise platform and ensuring its alignment with national development goals. The analysis involved a combination of field visits, interviews, focus groups, and document reviews to gather data on their involvement in project outputs and activities. This allowed for the identification of key insights, challenges, and risks associated with stakeholder collaboration, providing a comprehensive understanding of their impact on the project's success. The following table summarizes the roles, data collection tools, and results of the stakeholder analysis in relation to the evaluation criteria of relevance, coherence, effectiveness, efficiency, and sustainability.

Table 15: Evaluability Analysis for Stakeholders

Stakeholders	Role in the Project	Tools to Collect Data	Results/Insights
GOPP Managerial Level	• Strategic oversight and decision-making. • Coordination with other ministries and stakeholders.	• Formal and informal interviews. • Meetings and workshops.	• High relevance to project goals and SDGs. • Strong support for the GIS enterprise system. • Key insight: Need for inter-ministry coordination to address legal obstacles in plan implementation.
Project Management Team	• Leading and coordinating project activities. • Monitoring implementation and evaluating progress.	• Interviews. • Focus groups. • Site visits.	• Effective in aligning the project with national priorities. • Identified challenges: delays in stakeholder coordination and technical upgrades. • Budget utilization improving, but time management needs enhancement.
IT Staff (GOPP)	• Managing the GIS enterprise infrastructure. • Developing, upgrading, and troubleshooting GIS applications.	• Focus groups. • Technical feedback sessions. • Site visits to test the system.	• Highly relevant for ensuring technical sustainability. • Successfully upgraded system architecture and backup strategies. • Recommendation: Prioritize ArcGIS Pro usage and improve internet bandwidth for sustained efficiency.
Finance Team (GOPP)	• Overseeing project budget allocation and financial reporting.	• Formal interviews. • Document reviews (financial reports).	• Efficiently managing allocated resources but with room for improvement. • 65% of allocated budget utilized. • Key insight: Cost inflation in software procurement remains a potential risk.
Institutional Stakeholders (local-authorities)	• Ensuring legal and policy frameworks for inter-agency data	• Meetings. • Interviews.	• Institutional coherence partially achieved.

Stakeholders	Role in the Project	Tools to Collect Data	Results/Insights
	sharing and GIS implementation.	• Policy document reviews.	• Need for formalized agreements and clearer policies on GIS data sharing and intellectual property.
Participants in Output 1	• Developing the Sustainable Spatial Development Map (SSDM). • Conducting spatial analysis and diagnostics.	• Workshops • Semi-structured interviews.	• Effective in aligning with national planning priorities. • Challenges: Some gaps in methodological framework for sustainability and lack of participatory engagement tools.
Participants in Output 2	• Implementing and upgrading the GIS enterprise platform. - Enhancing data-sharing mechanisms.	• Technical workshops. • Field visits to test the GIS system. • Interviews with key personnel.	• Medium relevance and effectiveness. • Achievements: Upgraded schema, improved database performance, and alignment of data layers. • Challenges: Incomplete cooperation agreements (e.g., CAPMAS), lack of comprehensive training for all planners. • Recommendation: Develop training programs and address remaining interoperability issues.
Participants in Output 3	• Monitoring and evaluating GIS enterprise impacts. • Managing the development of performance indicators.	• Focus groups. • Structured surveys. • Interviews with monitoring experts.	• Medium alignment with monitoring objectives.
GOPP Regional Centers (RCs)	• - Supporting regional implementation and alignment with central GIS policies. - Facilitating regional capacity building.	• Interviews. • Focus groups. • Technical workshops.	• Effective in disseminating GIS enterprise at the regional level. • Identified challenges: Limited internet connectivity and resources for IT infrastructure at regional offices. • Recommendation: Invest in improving regional connectivity and IT equipment.
Ministry of Environment (MOE)	• Providing environmental data and guidelines for GIS integration. • Collaborating on sustainability standards.	• Interviews. • Policy document reviews. • Meetings.	• High relevance to integrating environmental dimensions in planning. • Need for better alignment with GIS enterprise for data sharing and cumulative impact assessments. • Key insight: MOE sees GIS enterprise as a valuable tool for sustainability analysis.

Stakeholders	Role in the Project	Tools to Collect Data	Results/Insights
Ministry of Planning (MOP)	• Coordinating national development strategies. Collaborating on socio-economic diagnosis methodology and GIS enterprise adoption at the operational level.	• Formal interviews. • Meetings and document reviews.	• Potential opportunity to integrate deep socio-economic vulnerability assessment in the strategi planning process. • Medium coherence achieved through alignment of GIS enterprise goals with national planning priorities and operational framework. • Challenges: Limited coordination on knowledge sharing and peer learning for policy interpretation and the integration of socio-economic aspects in planning.
Consultants and Experts	• Advising on GIS enterprise development and policy recommendations. Contributing to specific outputs.	• Semi-structured interviews. - Feedback on project documents and outputs.	• High relevance to project outputs. Key insights: GIS enterprise is an essential tool for achieving SDGs and supporting decision-making processes. Risk: Lack of sufficient technical documentation for smooth handover of the GIS system to GOPP.

This table synthesizes stakeholder roles, tools used during interviews, and insights aligned with project evaluation criteria such as relevance, coherence, effectiveness, and sustainability.

6.5 Finding against Outputs

The findings against the defined outputs provide a comprehensive evaluation of the progress, effectiveness, and challenges associated with achieving the project's objectives. Each output has been assessed against specific evaluation criteria, including relevance, coherence, efficiency, effectiveness, sustainability, and impact. The findings highlight the project's alignment with national and international frameworks, such as Egypt's Vision 2030 and the SDGs, while identifying areas that require further refinement, such as stakeholder engagement, methodological scalability, and integration of socio-economic priorities. These insights are pivotal in understanding the achievements, gaps, and future opportunities for strengthening the project's contribution to sustainable urban and regional planning.

Overall Achievements Against Evaluation Criteria

1. **Relevance**
   - Achievement: The project aligns closely with Egypt Vision 2030 and the SDGs, addressing critical spatial and environmental challenges. The SSDM and GIS frameworks reflect national and regional planning needs.
   - Strengths: Integration of SEA methodologies and climate resilience into planning.
   - Areas for Improvement: Socio-economic diagnostic process and inclusion of vulnerable regions and groups require deeper focus.
2. **Coherence**
   - Achievement**:** The project ensures internal coherence through alignment of outputs (SSDM, GIS, and capacity building) with GOPP's urban planning strategies. External coherence is demonstrated through synergies with NUP and NSLUP.

- Strengths**:** Alignment with Egypt's planning frameworks and collaboration with CAPMAS for data standardization.
- Areas for Improvement**:** Delays in inter-agency agreements and fragmented coordination hindered full coherence.

3. Effectiveness

- Achievement: Significant progress in SSDM development (50% completion), GIS optimization, and training activities exceeding participation targets. Outputs are contributing to improved planning processes and decision-making.
- Strengths: Active use of GIS tools by planners; capacity building achieved strong gender inclusiveness.
- Areas for Improvement: Practical application of trained skills in workflows remains inconsistent, and regional plan integration lags.

4. Efficiency

- Achievement: The project utilized 65% of its allocated budget, with Output 2 (GIS optimization) demonstrating high spending efficiency (87%). Initial years (2022–2023) showed strong budget utilization.
- Strengths: Effective resource allocation for GIS infrastructure and training programs.
- Areas for Improvement: Delays in Outputs 1 and 3 reduced efficiencies, particularly in SSDM development and institutional capacity-building.

5. Impact

- Achievement: The project has laid a foundation for addressing spatial disparities, enhancing gender equity, and integrating climate resilience into planning.
- Strengths: Long-term impacts include empowering women in urban planning, improving data-driven decision-making, and fostering environmental sustainability.
- Areas for Improvement: Broader impacts on socio-economic inclusion and vulnerability integration need further emphasis.

6. Sustainability

Achievement: The GIS platform and SSDM framework exhibit strong potential for scalability and long-term use, supported by capacity-building efforts.

Strengths: Institutionalization of GIS tools and SEA methodologies is underway, with robust backup and sustainability mechanisms for GIS systems.

Areas for Improvement: Formalized data-sharing agreements and continued financial support are required to ensure sustainability.

6.5.1 Findings against Evaluation Criteria of Output (1): A sustainable spatial development map (SSDM) of Egypt

The findings from Output 1 highlight significant strides made in developing the Sustainable Spatial Development Map (SSDM) for Egypt, aligning with Egypt's Vision 2030, UNSDCF, and the SDGs. The framework effectively integrates Strategic Environmental Assessment (SEA) and GIS tools to address environmental sustainability, resilience, and spatial planning challenges. However, there are notable gaps in environmental and socio-economic diagnosis, stakeholder inclusion, particularly the limited involvement of key ministries, and the partial integration of the National Urban Policy (NUP). While pilot applications, such as in Matrouh Governorate, demonstrated practical progress, scalability, and socio-economic considerations remain areas for enhancement. Resource allocation and methodology development were largely efficient but require further refinement for broader applicability and long-term impact. Overall, the SSDM marks an important step toward achieving sustainable, inclusive, and resilient urban planning in Egypt, while revealing areas for improvement in methodology, integration, and scalability.

Below is a structured evaluation of Output 1 (Development of a Sustainable Spatial Development Map) based on the provided data, with a detailed assessment against key evaluation criteria.

Table 16: Findings against Output (1)

Evaluation Criteria	Key Questions	Data Sources	Collection Method/Tool	Extent to Which Results Match Criteria	Key Insights
Relevance	Does the methodology align with national SDG objectives and regional planning goals?	SSDM documents, SDG policies	Document review	Moderately aligned	Strong alignment with SDGs, Vision 2030, and UNSDCF; partial integration of NUP principles.
	Are key stakeholders represented in the framework?	Stakeholder lists, participatory framework	Document review, surveys	Partially achieved	GOPP departments engaged, but key stakeholders like MOE, MOP, and MOLD were underrepresented.
Coherence	How consistent is the SSDM framework with prior frameworks?	SSDM and SpaD2020 reports, policy documents	Comparative document review	Highly consistent	Builds on SpaD2020 by integrating advanced GIS tools and resilience strategies.
	How well do new tools integrate with existing methodologies?	GOPP planning guidelines	Comparative analysis, interviews	Partially integrated	SEA methodologies align well, but projects cumulative impacts in addition to deep socio-economic assessments need improvement.
Effectiveness	Does the SEA adequately capture critical environmental risks?	SEA reports, environmental assessments	Focus groups, field validation	Moderately effective	SEA addresses key environmental risks but lacks cumulative impact and transregional analysis.
	Are new methodologies practical and effective in pilot applications?	Pilot study results, GOPP reports	Stakeholder interviews, site visits	Moderately practical	Effective in Matrouh Governorate but needs enhanced environmental and socio-economic vulnerability assessment to add value to the strategic planning process.
Efficiency	Were resources allocated effectively to high-priority areas?	Budget reports, financial records	Financial analysis	Moderately efficient	Resource allocation was focused on Matrouh Governorate; broader scalability remains a challenge.
	Was framework development completed on time and within budget?	Project timelines, financial reports	Budget and timeline review	Moderately achieved	Development stayed within budget but faced delays in integration with external stakeholders.
Sustainability	Can the SSDM framework be scaled effectively to other regions?	SSDM framework, regional assessment reports	Scalability workshops, document review	Moderately scalable	Scalability requires enhanced environmental data at the different levels, socio-economic

Evaluation Criteria	Key Questions	Data Sources	Collection Method/Tool	Extent to Which Results Match Criteria	Key Insights
					indicators for assessing vulnerabilities, and improved GIS enterprise utilization for mapping and analysis.
	Are findings actionable and maintainable for long-term planning?	Final SSDM report, resilience guidelines	Stakeholder interviews, document review	Partially actionable	Findings are actionable but lack mechanisms for maintaining long-term environmental and socio-economic integration.
Impact	What impact does the framework have on pilot region planning?	Pilot study reports, regional feedback logs	Focus groups, interviews	Moderate impact	Enhanced environmental risk mitigation for the development projects, yet lacks clear mechanisms for localizing planning priorities.

Key Findings

- **High Relevance and Coherence**: The SSDM framework demonstrates strong alignment with Egypt's Vision 2030, UNSDCF, and the SDGs (SDG 11, 13, and 10), effectively addressing urban inequality, regional disparities, and environmental vulnerabilities. However, partial consideration of the National Urban Policy (NUP) principles and recent GOPP strategies limits full coherence.
- **Moderate Stakeholder Inclusion**: The integration of SEA methodology into spatial planning highlights its importance as a tool for mitigating environmental impacts of the proposed development projects. However, key stakeholders such as MOE, MOP, and MOLD remain underrepresented, creating gaps in harmonizing existing urban planning frameworks and addressing cumulative and transregional impacts.
- **High Efficiency in Resource Allocation**: Resources were effectively allocated to prioritize high-impact areas, with Matrouh Governorate serving as a strategic pilot region for SEA methodology due to its vulnerability to climate change. However, inefficiencies in cumulative hazard mapping and socio-economic diagnosis reduced overall operational efficiency.
- **Medium Effectiveness**: The SSDM framework builds on prior strategic frameworks, such as SpaD and SpaD2020, incorporating advanced SEA methodologies and GIS platforms for inter-ministerial collaboration. Despite these advancements, gaps in addressing socio-economic resilience, cumulative project impacts, and comprehensive spatial prioritization (Land-use transformation) limited effectiveness.
- **Moderate Impact**: While SEA integration has moderately influenced regional planning by identifying environmental risks, the lack of actionable strategies and enhanced inter-agency collaboration limited its impact on decision-making processes and sustainable outcomes.
- **High Sustainability**: SEA guidelines and SSDM methodologies provide a scalable foundation for replicable spatial planning efforts. However, ensuring long-term applicability will require greater emphasis on integrating contextual hazard identification, risk assessment, socio-economic resilience, and updates aligned with evolving national policies and spatial dynamics.

6.5.2 Challenges of Output (1): A sustainable spatial development map (SSDM) of Egypt

Output 1 aims to establish a Sustainable Spatial Development Map (SSDM) to guide national and regional planning in alignment with Egypt's Vision 2030 and the SDGs. Despite significant progress in methodology development and pilot testing, several challenges have hindered the full potential of this output:

1. **Limited Integration of National Urban Policy (NUP):**
   - Description**:** The SSDM framework did not fully incorporate the recently published principles and strategies of the NUP by GOPP.
   - Impact**:** This limits the alignment of the SSDM with the most updated national urban planning policies and reduces its overall coherence.
   - Root Cause**:** Lack of proactive updates and engagement with new policies during the project development phase.
2. **Inadequate Stakeholder Representation**:
   - Description**:** Key stakeholders like the Ministry of Environment (MOE), Ministry of Planning (MOP), and Ministry of Local Development (MOLD) were underrepresented in the participatory framework – workgroups structure.
   - Impact**:** This resulted in incomplete integration of critical environmental, fiscal, operational, and implementation strategies into the SSDM.
   - Root Cause**:** Limited outreach and collaboration efforts with external stakeholders beyond GOPP's internal departments RC offices.
3. **Challenges in harmonizing SEA with Existing Frameworks**:
   - Description**:** The Strategic Environmental Assessment (SEA) methodology lacked advanced tools to assess cumulative and transregional impacts of projects within existing urban planning frameworks.
   - Impact**:** Reduced the effectiveness of SEA integration in identifying and mitigating risks associated with spatial development projects.
   - Root Cause**:** Insufficient adaptation of SEA tools to address regional complexities and cumulative impact analysis.
4. **Gaps in Hazard and Vulnerability Assessments**:
   - Description**:** Strategic plans (at the Governorate and city levels) lacked sufficient identification of contextual hazards, area's vulnerability, and risk assessments.
   - Impact**:** This limited the robustness of Disaster Risk Reduction (DRR) strategies and weakened environmental resilience in planning processes.
   - Root Cause: Absence of comprehensive hazard mapping and risk indexing in the early phases of strategy development.
5. **Underutilization of GIS Capabilities**:
   - Description**:** The GIS enterprise platform developed under SpaD2020 was not fully leveraged for spatial analysis, hazard mapping, and cumulative impact assessments.
   - Impact**:** Reduced the ability of SSDM to support data-driven decision-making and multi-regional scalability.
   - Root Cause: Incomplete integration of GIS tools and insufficient capacity-building for planners to utilize advanced geospatial analysis techniques.
6. **Delayed Deployment of Diagnostic Tools:**
   - Description**:** Inefficiencies in implementing SEA methodologies and diagnostic tools caused delays in the pilot region (Matrouh Governorate).
   - Impact**:** This limited the pilot's potential as a model for scalable regional planning applications.
   - Root Cause: Inefficient resource allocation and coordination among project stakeholders.
7. **Fragmented Interdisciplinary Expertise**:

- Description**:** The workgroup primarily comprised GOPP departments but lacked expertise such as GIS-environmental planners and urban economists.
- Impact**:** This hindered the ability to conduct a holistic and synergistic diagnosis of environmental, social, and economic factors.
- Root Cause: Insufficient involvement of external experts and specialized professionals in the workgroup formation and decision-making process.

8. **Challenges in Translating Findings into Actionable Plans:**

- Description**:** SEA findings were insightful but lacked clear and actionable strategies for practical implementation in planning processes.
- Impact**:** This made it difficult to localize guidelines and align environmental priorities with urban development goals.
- Root Cause**:** Insufficient focus on creating localized, user-friendly tools for planners and decision-makers.

9. **Moderate Scalability of the Methodological Framework:**

- Description**:** While the SSDM framework showed potential for regional scalability, it lacked detailed socio-economic indicators and criteria for adaptation.
- Impact**:** Limited its application across diverse regions with varying environmental and socio-economic conditions.
- Root Cause: Overemphasis on environmental dimensions without adequately addressing socio-economic factors.

10. **Sustainability Concerns for Long-Term Relevance**:

- Description**:** The SSDM framework requires updates and stronger integration with evolving national policies for long-term adaptability.
- Impact**:** Without periodic updates, the framework risks becoming outdated and less relevant to future planning needs.
- Root Cause**:** Lack of a structured mechanism for maintaining and evolving the SSDM beyond the project lifecycle.

6.5.3 Opportunities of Output (1): A sustainable spatial development map (SSDM) of Egypt

Despite the challenges, Output 1 offers several significant opportunities that can enhance its implementation and contribute to the broader objectives of sustainable spatial planning. These opportunities include:

1. **Enhanced Integration with National Urban Policy (NUP):**
   - Opportunity**:** Incorporating the principles and strategies of the recently published NUP into the SSDM framework can strengthen its alignment with national urban planning objectives.
   - Potential Benefit: This integration can ensure greater coherence and relevance in addressing evolving urban challenges and policy priorities, enhancing the SSDM's utility for decision-makers.
2. **Improved Stakeholder Engagement:**
   - Opportunity**:** Expanding collaboration with underrepresented stakeholders such as the MOE, MOP, and MOLD can foster a more comprehensive participatory approach.
   - Potential Benefit**:** Greater stakeholder involvement can lead to a more balanced and inclusive SSDM framework, reflecting diverse environmental, fiscal, and socio-economic perspectives.
3. **Advancement in SEA Tools and Methodologies**:
   - Opportunity**:** Incorporating advanced risk assessment techniques, cumulative impact analysis, and geospatial diagnostics into SEA methodologies.
   - Potential Benefit**:** These advancements can significantly enhance the effectiveness of SEA in identifying environmental risks and resilience opportunities, contributing to more informed and sustainable planning decisions.

4. **Maximizing the Potential of GIS Enterprise Platforms**:
   - Opportunity**:** Leveraging the existing GIS enterprise platform developed under SpaD2020 for advanced geospatial analysis, hazard mapping, and scenario planning.
   - Potential Benefit**:** Enhanced GIS capabilities can improve spatial data management and decision-making processes, providing scalable tools for regional and national planning efforts.
5. **Scaling Up Pilot Applications:**
   - Opportunity**:** Using Matrouh Governorate's SEA pilot as a model for testing and refining the SSDM framework in other high-impact regions.
   - Potential Benefit**:** Successful pilot scaling can demonstrate the SSDM's applicability across diverse contexts, building confidence in its adaptability and scalability.
6. **Capacity-Building for Interdisciplinary Expertise:**
   - Opportunity**:** Involving GIS-environmental planners, urban economists, and other specialized professionals in future workgroups and project phases.
   - Potential Benefit**:** Strengthened interdisciplinary collaboration can enhance the SSDM's ability to address complex environmental, social, and economic challenges in a cohesive manner.
7. **Development of Contextualized Planning Guidelines**:
   - Opportunity**:** Creating localized, actionable tools and guidelines for planners and decision-makers based on SEA findings and spatial diagnosis outputs.
   - Potential Benefit**:** These tools can simplify the implementation of environmental and resilience strategies, fostering practical and efficient planning processes.
8. **Enhanced Focus on Socio-Economic Dimensions**:
   - Opportunity**:** Expanding the framework to include detailed socio-economic indicators and vulnerability assessments.
   - Potential Benefit**:** A stronger focus on socio-economic factors can address critical issues like inequality, inclusion, poverty, informality, and employment, making the SSDM more comprehensive and impactful.
9. **Strengthened Data-Sharing and Collaboration Mechanisms**:
   - Opportunity**:** Formalizing agreements with CAPMAS and other national entities for data-sharing and interoperability.
   - Potential Benefit**:** Improved data access can enhance the SSDM's capacity for multi-sectoral analysis, enabling better coordination and integration of planning efforts.
10. **Long-Term Sustainability Planning**:
    - Opportunity**:** Establishing mechanisms for periodic updates to the SSDM framework and ensuring alignment with evolving policies and technologies.
    - Potential Benefit**:** These measures can sustain the framework's relevance and adaptability, ensuring its value for future urban and regional planning initiatives.

6.5.4 Findings against Evaluation Criteria of Output (2): The enterprise-based geospatial urban planning platform

The findings of Output 2 reflect both the progress made and the challenges encountered in optimizing and disseminating the geospatial urban planning platform. The platform demonstrates medium relevance and coherence, aligning with Egypt's Vision 2030 and national urban planning goals, but requiring improved institutional agreements to enhance adoption and functionality. Key initiatives, such as topological rule updates and quality control system improvements, show potential for high effectiveness, though these remain underutilized due to delays in training and deployment. Efficiency levels are promising, with significant progress achieved within the allocated budget, though application rollouts and network optimization face inefficiencies. The platform's impact on decision-making and inter-agency collaborations is emerging but remains constrained by limited planner adoption. Sustainability measures, including schema enhancements and virtualization strategies, establish a solid foundation, though improved network speed and database replication are essential for scalability. These findings highlight the platform's potential as a transformative tool for geospatial urban planning, while also

emphasizing the critical need for institutional collaboration, technical capacity building, and streamlined processes to realize its full value.
Below is a structured evaluation of Output 2 (Optimization and Dissemination of the Geospatial Urban Planning Platform) based on the provided data, with a detailed assessment against key evaluation criteria.

Table 17: Performance Evaluation of Output (2)

Evaluation Criteria	Key Questions	Data Sources	Collection Method/Tool	Extent to which Results Match Criteria	Key Insights
Relevance	1. Are the GIS framework data and alignment layers relevant to GOPP planners' daily planning tasks?	Alignment layer documentation, geodatabases	Document review, expert interviews	Medium: Basic alignment achieved but incomplete.	Achievements such as alignment of boundaries and incorporation of urban "Hayez" into GIS indicate progress. However, gaps in planner training persist.
	2. Are the basemaps and reference maps updated and sufficient for operational use?	Basemap reports, satellite imagery reviews	Technical review, field assessments	Medium: Basemaps updated for select locations.	Basemaps for Menya, Kerdasa, and others were prepared, but national-level basemaps require further updates.
	3. Are geospatial tools aligned with current GOPP needs and priorities?	Planner feedback, application usage reports	Stakeholder interviews, surveys	Medium: Partial alignment achieved.	GIS tools (QC system, data browser) are updated, but issues with adoption (e.g., ArcGIS Pro transition) hinder their practical relevance.
Coherence	1. How well do the GIS schema and data standards support cross-institutional coherence?	Schema documentation, inter-ministry policies	Technical review, policy analysis	High: Foundational coherence achieved.	Schema restructuring (e.g., thematic organization) aligns with cross-agency needs, but institutional agreements are still pending.
	2. Are administrative and thematic datasets interoperable across agencies?	CAPMAS and GOPP reports, technical assessments	System audits, stakeholder feedback	Medium: Partial interoperability achieved.	Unified coding system and schema adjustments improve interoperability but are not yet fully implemented across agencies.
	3. Do the GIS tools promote consistency in data standards across GOPP departments?	Planner feedback, department usage reports	Surveys, document review	High: Improvements in consistency.	Unified plans and standardized symbology by the IT team promote consistency across cities and villages.

Evaluation Criteria	Key Questions	Data Sources	Collection Method/Tool	Extent to which Results Match Criteria	Key Insights
Effectiveness	1. To what extent have the GIS enterprise activities improved workflows and planning processes?	Planner feedback, workflow analysis reports	User surveys, process tracking	Medium: Workflow improvements partially achieved.	Initiatives such as topological rule updates and improved QC systems show potential but remain underutilized at scale.
	2. Have GIS system upgrades addressed major user needs (e.g., functionality, performance)?	IT performance logs, feedback from stakeholders	Technical audits, user interviews	Medium: Upgrades address some needs.	Cache services and schema updates resolved some issues, but system stability and speed improvements are ongoing.
	3. Are GOPP planners effectively utilizing the upgraded GIS applications?	Planner training records, usage analytics	Training surveys, application logs	Medium: Limited utilization observed.	Over 70 planners trained on ArcGIS Pro, but reliance on outdated systems hampers the effectiveness of new tools.
Efficiency	1. Were allocated resources effectively utilized to achieve project goals?	Financial reports, implementation records	Budget review, expenditure tracking	High: 87% of allocated budget expended efficiently.	High expenditure utilization indicates progress, though delays in application rollouts highlight inefficiencies in fund allocation.
	2. Were the timelines for GIS activities adhered to?	Progress reports, implementation timelines	Timeline tracking, project reviews	Medium: Progress delayed but ongoing.	Activities such as policy development and system upgrades have seen delays, impacting progress.
	3. Has the project optimized hardware and network resources to improve system efficiency?	IT system logs, infrastructure reports	System audits, feedback sessions	Medium: Some improvements achieved.	System virtualization and server upgrades were implemented, but network speed and database replication remain critical areas for improvement.
Impact	1. Has the GIS enterprise enhanced decision-making and data-driven planning processes?	Decision-making reports, planner feedback	Decision analysis, impact assessments	Medium: Limited impact observed so far.	GIS improvements are hindered by the absence of signed agreements and lack of planner adoption of new tools.
	2. Are GOPP planners better equipped to make data-driven decisions using the GIS platform?	Planner feedback, application usage analytics	Surveys, usage reports	Medium: Limited progress in equipping planners.	Untrained planners and underutilized applications limit the impact of the GIS platform on decision-making processes.

Evaluation Criteria	Key Questions	Data Sources	Collection Method/Tool	Extent to which Results Match Criteria	Key Insights
	3. Have inter-agency collaborations improved through GIS enterprise upgrades?	Institutional agreements, stakeholder feedback	Stakeholder consultations, policy reviews	Medium: Progress ongoing but incomplete.	Pending institutional agreements (e.g., with CAPMAS) have delayed collaborative improvements.
Sustainability	1. Are the foundational GIS elements (framework, schema) sustainable for long-term use and updates?	Maintenance protocols, schema guidelines	Document review, stakeholder interviews	High: Foundational elements support sustainability.	Backup strategies, schema updates, and system virtualization demonstrate a strong potential for sustainability.
	2. Are the system upgrades scalable for broader GIS applications?	Scalability assessments, technical guidelines	Technical reviews, expert interviews	Medium: Scalability mechanisms need enhancement.	Recommendations for improving network speed and database replication are critical to ensuring scalability.
	3. Are there mechanisms to ensure consistent updates and upgrades to the GIS platform?	IT system logs, update protocols	Technical audits, stakeholder reviews	High: Mechanisms in place.	Regular updates to schema, caching, and applications ensure long-term functionality, though enhancements to processes are needed.

Key Findings

- **Medium Relevance and Coherence:** Thematic organization, metadata improvements, and schema restructuring align with GOPP's goals but require institutional agreements and planner adoption for enhanced coherence.
- **Medium Effectiveness:** Initiatives like topological rule updates and QC system improvements have potential but remain underutilized due to delays in training and system deployment.
- **High Efficiency:** With **87% of the budget expended**, significant progress has been made despite inefficiencies in application rollouts and network optimization.
- **Medium Impact:** GIS enterprise improvements are yet to deliver measurable results on decision-making processes due to limited planner adoption and incomplete inter-agency collaborations.
- **High Sustainability:** Backup strategies, schema enhancements, and virtualization establish a robust foundation, but enhanced network speed and database replication are vital for scalability.

6.5.5 Challenges of Output (2): The enterprise-based geospatial urban planning platform

Output 2 focuses on optimizing and disseminating the geospatial urban planning platform to support data-driven decision-making and enhance planning processes. Despite progress in establishing foundational frameworks and upgrading technology, the following challenges have hindered the full realization of this output's potential:

1. Delays in Institutional Collaboration and Agreements

- Description**:** Slow pace in finalizing agreements with national entities like CAPMAS and other ministries, critical for data-sharing and interoperability.

- Impact**:** The absence of formal agreements limits cross-sectoral coordination and undermines the platform's ability to function as a centralized, multi-institutional tool.
- Root Cause: Bureaucratic hurdles and the need for alignment with institutional priorities have caused delays in collaboration.

2. Underutilization of Allocated Resources

- Description**:** Only 87% of the allocated budget for Output 2 has been expended, with gaps in resource utilization for activities such as system upgrades and training programs.
- Impact**:** Inefficient use of funds has delayed critical tasks like application rollouts, network enhancements, and system optimizations.
- Root Cause: Delays in planning and execution of certain activities, coupled with challenges in prioritizing tasks across departments.

3. Limited Adoption by GOPP Staff

- Description**:** Despite training efforts, most GOPP planners continue to use outdated software like ArcGIS Map instead of transitioning to ArcGIS Pro.
- Impact**:** Resistance to adopting new tools reduces the operational impact of the upgraded GIS platform and affects long-term sustainability.
- Root Cause: Familiarity with legacy systems and insufficient incentives to transition to updated tools.

4. Technological Challenges in Data Management

- Description**:** Issues with data caching, schema migration, and system performance during peak loads have caused operational inefficiencies.
- Impact: System crashes and delays in data updates affect the reliability and usability of the GIS platform for planning tasks.
- Root Cause: The high volume of data and limited network capacity have stressed existing infrastructure.

5. Risk of Losing Trained Staff

- Description**:** There is a high probability of losing trained staff due to insufficient salaries and lack of incentives to retain skilled personnel.
- Impact**:** Turnover of trained staff could result in knowledge gaps, affecting the sustainability of GIS operations and support systems.
- Root Cause**:** Government salary structures and limited opportunities for professional growth within the organization.

6. Lack of Uniform Standards Across Departments

- Description**:** Inconsistent application of GIS data standards across GOPP departments and regional centers undermines data coherence and accuracy.
- Impact**:** Fragmented data management practices reduce the efficiency and reliability of spatial planning outputs.
- Root Cause: Limited inter-departmental coordination and lack of targeted training in standardizing GIS practices.

7. Challenges in System Scalability

- Description**:** Current GIS infrastructure requires scalability enhancements to accommodate national-level dissemination and increased data volume.
- Impact**:** Without scalability, the platform risks becoming obsolete as data demands grow and planning requirements expand.
- Root Cause: Insufficient focus on long-term scalability and delayed network infrastructure upgrades.

These challenges highlight the need for proactive measures, including accelerated collaboration, efficient resource allocation, staff retention strategies, and continuous technological improvements. Addressing these issues is critical to ensure the platform's effectiveness, efficiency, and sustainability in supporting urban planning objectives.

6.5.6 Opportunities of Output (2): The enterprise-based geospatial urban planning platform

Despite the challenges, Output 2 presents significant opportunities that can enhance its effectiveness and contribute to the broader goals of sustainable urban development. These opportunities include:

1. Strengthened Institutional Collaboration

- Opportunity**:** Establishing formal agreements with national entities like CAPMAS, Ministry of Planning (MOP), and other stakeholders can create a robust ecosystem for data exchange and interoperability.
- Potential Benefit: These partnerships can position the GIS platform as a centralized planning tool, enhancing cross-sectoral coordination and enabling more comprehensive, data-driven decision-making.

2. Adoption of Advanced Technologies

- Opportunity**:** The migration to ArcGIS Pro, the upgrade to ArcGIS Portal 10.9, and hardware modernization (e.g., virtualization and server relocation) provide a cutting-edge technological foundation for the GIS platform.
- Potential Benefit: Leveraging these upgrades can improve system performance, reduce downtime, and offer advanced functionalities that meet modern urban planning demands.

3. Enhanced Data Management and Analysis

- Opportunity**:** The updated schema, with thematic datasets and improved metadata, enhances data organization and usability.
- Potential Benefit: This can streamline workflows, enable sophisticated analyses such as suitability and impact assessments, and support strategic planning at local, regional, and national levels.

4. Capacity Building and Skill Development

- Opportunity**:** Ongoing training programs for GOPP staff, including IT teams and planners, can build institutional capacity and equip staff with advanced GIS competencies.
- Potential Benefit: A well-trained workforce can maximize the platform's potential, improve data utilization, and ensure sustained use of the upgraded tools.

5. Alignment with National and International Goals

- Opportunity**:** The GIS platform's alignment with national priorities (e.g., sustainable development) and global frameworks like the SDGs strengthens its relevance and applicability.
- Potential Benefit: This alignment provides a strong justification for continued government and donor support, ensuring long-term project viability.

6. Public Engagement and Crowdsourcing

- Opportunity**:** The integration of public participation modules and crowdsourcing tools can enhance community involvement in urban planning processes.
- Potential Benefit: This can foster transparency, gather valuable local insights, and increase the legitimacy of planning decisions.

7. Scalability for National Impact

- Opportunity**:** With foundational work already in place, the platform can scale to cover all governorates, ensuring nationwide consistency in planning practices.
- Potential Benefit: A scalable system can address diverse planning needs, support regional centers, and become a cornerstone for future national development projects.

8. Increased Demand for Spatial Data and Analytics

- Opportunity**:** The growing reliance on data-driven planning and analytics across various sectors creates a demand for tools like the GIS enterprise.
- Potential Benefit: This demand provides a unique opportunity to position the platform as an indispensable tool for policymaking, governance, and private sector development.

9. Policy Framework Development

- Opportunity**:** Developing internal operational policies and data-sharing agreements can institutionalize the platform's usage and ensure compliance with national standards.

- Potential Benefit: Clear policies can reduce operational risks, improve efficiency, and ensure smooth collaboration between GOPP and external stakeholders.

10. Potential for Financial Efficiency

- Opportunity**:** Optimizing resource utilization and identifying additional funding sources can address current inefficiencies in fund allocation.
- Potential Benefit: Improved financial management can accelerate project implementation and unlock further investments in GIS technology and infrastructure.

By capitalizing on these opportunities, Output 2 can overcome its current challenges and become a transformative tool for sustainable urban planning, fostering data-driven decision-making and inter-institutional collaboration.

6.5.7 Findings against Evaluation Criteria of Output (3): Institutional support

The findings of Output 3 emphasize the progress made in strengthening institutional capacities and integrating resilience and sustainability into urban planning practices. The output demonstrates medium relevance and coherence, aligning well with national goals, such as Egypt's Vision 2030 and SDGs, particularly SDG 11 and SDG 13. However, gaps remain in integrating advanced tools and contextualized methodologies for assessing resilience and environmental vulnerabilities. Effectiveness is moderate, with training programs and stakeholder workshops laying a strong foundation for capacity building, though a lack of engagement from key external stakeholders limits the full realization of these efforts. Efficiency has been mixed, with most activities delivered within budget but some delays in implementation timelines due to logistical and resource constraints. The impact of this output on planning processes is emerging, as it has introduced critical tools, like Strategic Environmental Assessment (SEA), but these tools are yet to be fully embedded in operational frameworks. Sustainability efforts show promise, with scalable methodologies and adaptable guidelines developed, but further institutionalization and inter-agency collaboration are required to ensure long-term relevance and effectiveness. These findings underline the potential of Output 3 to advance sustainable urban planning while highlighting the need for enhanced integration, stakeholder engagement, and resource optimization to maximize its outcomes.

Below is a structured evaluation of **Output 3** (Institutional Support) based on the provided data, with detailed assessment against criteria.

Table 18: Findings against Output (3)

Evaluation Criteria	Key Questions	Data Sources	Collection Method/Tool	Extent to Which Results Match Criteria	Key Insights
Effectiveness	How has SEA training enhanced environmental planning?	Training feedback forms, planning outputs	Pre/post-training surveys, interviews	Mostly achieved	SEA training improved understanding of environmental planning, but further integration into urban planning process is needed for full impact.
	How has GIS training improved urban management?	User activity logs, project feedback	Focus group discussions, surveys	Mostly achieved	GIS training has significantly improved users' ability to manage geospatial data but requires continued practice for maximum efficiency.

Evaluation Criteria	Key Questions	Data Sources	Collection Method/Tool	Extent to Which Results Match Criteria	Key Insights
	How has training fostered resilient urban development?	Urban development plans, stakeholder feedback	Surveys, focus group discussions	Moderately achieved	Training enhanced awareness but needs further alignment with strategic resilience objectives to realize tangible results.
Impact	Are SEAs integrated into urban projects?	Urban project documentation, policies	Policy reviews, progress reports	Moderately achieved	SEAs are acknowledged in planning discussions but not yet fully operationalized in planning workflows.
	Are GIS enterprise systems effectively utilized?	GIS implementation reports	System audits, stakeholder interviews	Mostly achieved	GIS systems are utilized in urban planning but face challenges with scalability and technical consistency across departments.
	Are resilience strategies reducing risks?	Risk assessment reports, local plans	Field surveys, scenario modeling	Moderately achieved	Some risk reduction strategies are being implemented, but broader adoption is needed for significant impact.
Coherence	How has training improved vulnerability assessment integration?	Community reports, vulnerability maps	Workshops, interviews	Mostly achieved	Training provided tools for integration, but consistent application across stakeholders is required.
	Are financial and technical processes aligned with goals?	Financial records, project timelines	Financial audits, stakeholder consultations	Mostly aligned	Processes are improving but need enhanced coordination between financial and technical teams.
Efficiency	Are M&E findings used for project optimization?	Implementation reports, performance data	Progress monitoring, evaluations	Mostly achieved	M&E processes help optimize projects, but better dissemination of

Evaluation Criteria	Key Questions	Data Sources	Collection Method/Tool	Extent to Which Results Match Criteria	Key Insights
					findings could enhance outcomes further.
	Were resources efficiently allocated for SEA and GIS training?	Budget reports, training schedules	Financial audits, interviews	Moderately efficient	Training programs were effective but could improve cost-effectiveness through more tailored and focused modules.
Sustainability	Are DRM principles embedded in planning processes?	Urban plans, disaster mitigation strategies	Plan reviews, focus group discussions	Moderately achieved	Training has initiated embedding principles, but long-term institutionalization is needed.
	Are GIS enterprise systems sustainable for future planning?	Maintenance protocols, IT documentation	Plan reviews, interviews	Mostly sustainable	Maintenance strategies are in place, but scalability and integration across all planning levels need enhancement.
	Will resilience and SEA training support long-term planning practices?	Post-training assessments, urban plans	Surveys, stakeholder discussions	Moderately supportive	Training provides a foundation, but follow-up initiatives are essential for long-term adoption in planning practices.

This table consolidates the evaluation findings for Output 3 and provides insights into the progress and gaps in achieving its intended outcomes. Further alignment of training programs with strategic objectives and improved resource allocation can maximize their impact.

Key Findings

- **Training Relevance:** Training programs, including SEA, GIS, DRM, and resilience planning, were highly relevant to GOPP's strategic objectives and national priorities, enhancing institutional capacity for urban planning.
- **Skill Enhancement:** Over 100 trainees across diverse departments and regions gained significant skills, particularly in GIS systems, SEA, and resilience planning. Seven advanced-level GIS engineers were certified as trainers to ensure knowledge dissemination.
- **Integration of Tools:** Participants effectively incorporated SEA and GIS tools into their workflows, improving planning accuracy and decision-making across national, regional, and local levels.
- **Cross-Departmental Alignment:** The training fostered collaboration between central, regional, and specialized departments, ensuring alignment of institutional efforts with national urban planning goals.
- **Efficient Delivery:** Training sessions optimized resources by leveraging in-house trainers and a "train-the-trainer" model, reducing reliance on external providers and ensuring cost efficiency.

- **Long-Term Impact:** Enhanced capacity for integrating SEA, GIS, and resilience planning tools into workflows has strengthened GOPP's ability to make informed decisions, address vulnerabilities, and implement risk mitigation strategies.
- **Sustainability:** The establishment of advanced GIS tools, certified trainers, and standardized workflows ensures the sustainability of training outcomes and institutional improvements.
- **Regional Contributions:** Regional engineers and planners actively contributed by applying new tools to update geospatial frameworks, integrate thematic layers, and ensure localized inclusivity in planning processes.
- **Institutional Strengthening:** Decision-makers and managers across GOPP gained critical insights into strategic planning, fostering institutional coherence and resilience in policy development.
- **Sustainable Development:** Increased awareness and integration of environmental and social considerations have strengthened GOPP's alignment with sustainable development practices and SDG 11 objectives.

These achievements highlight the success of Output 3 in building a robust institutional framework and advancing sustainable urban planning practices.

6.5.8 Challenges of Output (3): Institutional support

Output 3 encountered a range of challenges that affected the consistent implementation and institutionalization of capacity-building initiatives across GOPP and its regional centers. These challenges highlight the areas that require targeted interventions to enhance effectiveness, coherence, and sustainability in urban planning practices.

1. Limited Adoption of Advanced GIS Tools

- Description**:** Engineers and planners often default to using older GIS tools despite receiving training in advanced systems.
- Impact**:** Reduced efficiency and underutilization of modern GIS functionalities in planning workflows.
- Root Cause: Lack of structured transition support and ingrained familiarity with legacy software.

2. Variability in Training Outcomes Across Departments

- Description**:** Training outcomes differed significantly among departments and regions.
- Impact**:** Uneven application of skills, leading to disparities in planning quality across GOPP and regional centers.
- Root Cause: Variations in participants' baseline technical expertise and unequal access to resources.

3. High Staff Turnover Post-Training

- Description**:** Many trained staff leave their positions due to better opportunities elsewhere.
- Impact**:** Loss of institutional knowledge and reduced sustainability of training benefits.
- Root Cause: Low government salary structures and limited career progression incentives.

4. Insufficient Infrastructure for DRM and GIS Integration

- Description**:** Regional centers and some departments lack adequate IT infrastructure to fully integrate GIS and DRM practices.
- Impact**:** Constraints on implementing disaster risk management and GIS-based planning effectively.
- Root Cause: Outdated equipment, insufficient network bandwidth, and delays in infrastructure upgrades.

5. Limited Interdepartmental Coordination

- Description**:** There is a lack of collaboration between departments to institutionalize SEA, DRM, and resilience planning effectively.
- Impact**:** Delays in integrating these methodologies into comprehensive planning frameworks.
- Root Cause: Absence of formalized mechanisms for cross-departmental coordination and policy alignment.

6.5.9 Opportunities of Output (3): Institutional support

Output 3 presents significant opportunities to strengthen institutional capacity, enhance urban planning practices, and improve collaboration across GOPP and its regional centers. These opportunities highlight the potential for leveraging training outcomes, technology integration, and organizational reforms to achieve long-term sustainability and effectiveness.

1. Expanded Use of Advanced GIS Tools

- Opportunity**:** Promote the transition from older GIS platforms to advanced tools and ensure their widespread adoption across departments.
- Potential Benefit**:** Enhanced efficiency and precision in spatial planning, improved data analysis capabilities, and reduced reliance on outdated systems.

2. Institutionalization of Training Programs

- Opportunity**:** Establish a formalized structure for ongoing capacity building and institutionalize the role of advanced-level trainees as trainers.
- Potential Benefit: Sustained knowledge transfer, uniform skill development, and the creation of a culture of continuous learning.

3. Integration of DRM and Resilience Planning

- Opportunity**:** Embed disaster risk management (DRM) and resilience planning into national and regional strategies.
- Potential Benefit: Improved risk mitigation, more resilient urban development, and alignment with global sustainability goals such as the SDGs.

4. Strengthening Interdepartmental Collaboration

- Opportunity**:** Foster collaboration between GOPP's departments and regional centers for better coordination in implementing GIS and SEA frameworks.
- Potential Benefit: Streamlined workflows, cohesive planning approaches, and effective integration of environmental and resilience considerations.

5. Leveraging IT and Infrastructure Upgrades

- Opportunity**:** Invest in upgrading IT infrastructure, including high-speed networks, cloud-based systems, and advanced data processing tools.
- Potential Benefit: Improved capacity for handling complex datasets, enhanced system reliability, and greater scalability for future planning needs.

6. Utilizing Regional Centers as Training Hubs

- Opportunity**:** Position regional centers as hubs for localized training and implementation of planning tools and methodologies.
- Potential Benefit: Increased inclusivity, empowerment of regional stakeholders, and better alignment of national strategies with local priorities.

7. Formalizing Policies to Retain Trained Staff

- Opportunity**:** Develop policies and incentives to retain trained staff, such as performance-based rewards and clear career progression paths.
- Potential Benefit: Reduced staff turnover, preservation of institutional knowledge, and continuity in implementing planning methodologies.

6.6 Project Management

Project management is the structured approach employed to achieve the SPAD2030 project's goals and deliverables. It includes the planning, execution, and oversight of activities within a defined governance structure. For SPAD2030, the project management system ensures that activities are aligned with national priorities, budget constraints, and UNDP/GOPP regulations.

6.6.1 The PM Key Components

- **Governance Structure:**
  - **Project Board:** Oversees high-level decision-making, progress monitoring, and risk management.

  - **Project Manager (PM):** Responsible for day-to-day operations, ensuring project milestones are achieved.
  - **National Project Director (NPD):** Coordinates GOPP involvement and aligns project activities with national strategies.
  - **Project Management Unit (PMU):** Includes technical and administrative teams to handle documentation, reporting, procurement, and logistics.
- **Implementation Framework:**
  - Action plans developed and executed to achieve the outputs (e.g., GIS upgrades, capacity building).
  - Daily coordination with regional centers and technical workgroups.
- **Financial Oversight:**
  - Budget planning and monitoring, with strict adherence to UNDP's cost recovery procedures and audit guidelines.
- **Reporting and Accountability:**
  - Biannual and annual progress reports submitted to stakeholders.
  - Risk logs maintained to address challenges.

6.6.2 Achievements

- Delivered key activities for GIS system updates, training programs, and institutional policies.
- Managed coordination between GOPP, regional centers, and other stakeholders.
- Improved budget utilization through structured financial oversight.

6.6.3 Findings

- Effective governance through clear role delineation between the Project Board, NPD, and PM.
- Delays in institutional agreements slowed implementation progress.
- Strong financial management ensured compliance with UNDP policies.

6.6.4 Project Risk

Project risk management is a systematic process of identifying, analyzing, and responding to risks that could potentially impact the achievement of project objectives. It ensures proactive mitigation strategies are in place to address uncertainties, thus improving the likelihood of project success. Effective risk management is a cornerstone of project planning and execution, as it minimizes the impact of potential threats while maximizing opportunities that contribute to project success.

In the context of the current project, risk management plays a crucial role in navigating the complexities of multi-stakeholder collaborations, financial constraints, and technological advancements. By regularly updating the risk and issue logs, the project team maintains a comprehensive understanding of potential challenges and ensures timely responses to mitigate negative impacts. The process involves engagement with stakeholders, continuous monitoring, and alignment with the project's strategic goals to address both anticipated and unforeseen risks.

A well-structured risk management approach not only safeguards project outcomes but also ensures sustainability and resilience in delivering long-term benefits. This document outlines the identified risks, their potential impacts, and the management responses tailored to each risk category, providing a clear pathway to mitigate challenges and leverage opportunities effectively.

Table 19: Risks Related to Stakeholders with Impact, Probability, and Management Responses

Owner	Type	Description	Impact & Probability	Countermeasures/ Management Response
Project Board	Organizational	Slow pace of cooperation between relevant authorities in preparing and implementing	Impact: 4 (High) Probability: 3 (Medium)	- Build on GOPP's ongoing collaboration with authorities. - Conduct awareness

Owner	Type	Description	Impact & Probability	Countermeasures/ Management Response
		national and regional sustainable development plans.	Risk (PxI) = 12	sessions on the benefits of cross-sectoral collaboration.
Project Board	Organizational	Potential risk from changes in governmental priorities, affecting the SSDM and priority projects.	Impact: 4 (High) Probability: 3 (Medium) Risk (PxI) = 12	- Maintain continuous communication with stakeholders. - Ensure proposed interventions align with government plans.
Technical Coordinator	Organizational	Changes in key local government personnel, including Governors and executive council.	Impact: 2 (Low) Probability: 2 (Low) Risk (PxI) = 4	- Inform new local authorities about project activities. - Increase meetings with local authorities to ensure continuity.
Project Manager	Financial	Cost fluctuations for equipment and software maintenance of the GIS enterprise.	Impact: 4 (High) Probability: 3 (Medium) Risk (PxI) = 12	- Account for possible inflation in project cost estimates.
Technical Coordinator	Financial	Risk of losing trained staff post-project due to restrictive government salary structures.	Impact: 3 (Medium) Probability: 3 (Medium) Risk (PxI) = 9	- Develop continuous capacity-building programs. - Utilize trained staff in other spatial planning roles, benefiting GOPP indirectly.
Technical Coordinator	Organizational	Limited interest among consultants and users in adopting GIS enterprise tools in planning processes.	Impact: 2 (Low) Probability: 3 (Medium) Risk (PxI) = 6	- Optimize and disseminate the Quality Control platform. - Develop internal policies to mandate enterprise tool usage across GOPP departments and consultants.

This table provides a structured summary of risks associated with various stakeholders, their likelihood and impact, and the management strategies to mitigate them effectively.

6.7 Monitoring and Evaluation

Monitoring and evaluation (M&E) is integral to ensuring the project achieves its outputs and outcomes effectively. The M&E framework for SPAD2030 tracks progress, identifies risks, captures lessons learned, and informs decisions through regular evaluations.

6.7.1 Key M&E Components

1. **Monitoring Plan**
   - Progress Tracking: Indicators within the Results and Resources Framework (RRF) were regularly monitored and tracked to ensure alignment with project goals.
   - Risk Management: Annual risk assessments and mitigation strategies were applied to address project implementation challenges.
   - Quality Assurance: Annual quality reviews were conducted, identifying progress, strengths, and improvement areas, while adhering to **UNDP quality standards**.
2. **Evaluation Plan**
   - Final Evaluation: Scheduled for **December 2026** to measure project impacts, identify lessons learned, and inform future planning strategies.

- Stakeholder Feedback: Incorporated into evaluations to ensure inclusivity and address the sustainability of project outputs.

6.7.2 Achievements

- **Regular Reporting**: Quarterly and annual monitoring reports successfully implemented to track and communicate project performance.
- **Quality Assurance**: Annual reviews ensured ongoing alignment with the project's objectives and outcomes.
- **Defined Indicators:** They are aligned with **SMART** criteria as summarized below:

SMART Criteria	Assessment
Specific	Indicators related to training outputs (e.g., number of trainees) are specific and clear. However, qualitative outcomes (e.g., SEA integration and stakeholder adoption) lack specificity.
Measurable	Numerical indicators, such as the number of workshops conducted and number of participants trained, are measurable. Qualitative outcomes require clearer measurement tools.
Achievable	Indicators such as capacity-building targets are realistic and achievable. However, institutional indicators (e.g., SEA adoption) depend on external factors like cross-ministerial collaboration.
Relevant	The indicators align with project goals, including SDGs and Egypt Vision 2030. Gender disaggregation in training metrics is relevant but should extend to other outputs.
Time-bound	Indicators include defined timelines for project completion (e.g., December 2026). Intermediate milestones for incremental progress would enhance clarity.

6.7.3 Findings

- **Gender-Disaggregated Indicators**

  The M&E framework partially addresses gender disaggregation, particularly in **training outputs**. The findings are summarized as follows:

  - **SEA Training:** Total Participants: **63 [Female**: **43 (68%), Male**: **20 (32%)]**
  - **GIS Training:** Total Participants: **110 [Female**: **62 (56%), Male**: **48 (44%)]**

  Strengths: Training outputs demonstrate significant female participation, reflecting progress in gender inclusion. Quantitative indicators (e.g., participant numbers, tools developed) are effectively tracked.

  Gaps: Limited gender-disaggregated indicators beyond training outputs. Qualitative indicators (e.g., SEA integration into planning processes) require clearer definitions and measurement tools. Institutional and policy adoption indicators lack intermediate milestones for tracking incremental progress.

The M&E framework effectively tracks progress through quantitative indicators and demonstrates strong gender participation in training activities. However, enhancing SMART alignment for qualitative outputs will strengthen the monitoring process and improve project accountability and inclusivity.

6.8 Assessment of the Institutional Arrangements

Institutional arrangements provide the framework for project implementation, involving partnerships, policies, and capacity building to ensure long-term sustainability. For SPAD2030, this includes coordination between GOPP, UNDP, regional centers, and other stakeholders.

6.8.1 The Key Institutional Arrangements Components

- **Stakeholder Roles:** GOPP manages project execution and alignment with national urban planning goals. UNDP supports capacity building, policy development, and resource mobilization. Regional Centers (RCs) implement project activities at the governorate level.
- **Partnerships:** Institutional collaboration with CAPMAS for GIS integration. Engagement with local authorities to support spatial planning processes.
- **Capacity Building:** Training programs to enhance skills in GIS, SEA, disaster risk management, and resilience planning.
- **Policies and Frameworks:** Development of institutional agreements to support data sharing and inter-agency collaboration. Operational policies established for GIS system management and maintenance.

6.8.2 Achievements

- Strengthened partnerships with CAPMAS and regional authorities for data sharing.
- Enhanced institutional capacity through targeted training programs.
- Developed initial policies to support inter-agency collaboration.

6.8.3 Findings

- Institutional coordination was effective at the regional level but delayed at the national level.
- Training programs improved institutional capacity but require follow-up for sustained impact.
- Limited scalability of some institutional frameworks due to resource constraints.

6.9 Evaluation cross-cutting issues

The S-SPAD2030 project demonstrates a strong commitment to advancing gender equality and women's empowerment by integrating gender-sensitive approaches and ensuring women's active participation in training, decision-making, and planning processes.

6.9.1 Gender Equality

1. **Balanced Participation**:
   - Achieved significant female representation across technical and leadership roles.
   - Women actively contributed to spatial planning activities across all project outputs.
2. **Targeted Empowerment Measures**:
   - Implemented gender-sensitive initiatives to create equitable opportunities for women, particularly in GIS and SEA roles.
3. **Training Programs**:
   - SEA and Planning Trainings: Women comprised 68% of participants, playing vital roles in environmental and strategic planning.
   - GIS Trainings: Women represented 56% of participants, showcasing their contributions to geospatial technology advancements.
4. **Leadership and Decision-Making**:
   - Women held leadership and technical roles in pilot projects, particularly in the Matrouh and Red Sea Governorates.
   - Female planners and GIS specialists contributed significantly to spatial planning, data schema design, and environmental assessments.
5. **Gender Representation in Activities**
   - Overall Project Participation: Male: 34, Female: 49. [Output 1: Male: 14, Female: 26. | Output 2: Male: 3, Female: 7. | Output 3: Male: 17, Female: 16.]
   - Evaluation Stakeholders: Male: 11, Female: 10.
   - Training Participation: SEA and Planning Training: Male: 20, Female: 43. GIS Training: Male: 48, Female: 62.

These achievements reflect the project's success in fostering an inclusive environment and empowering women to play integral roles in advancing sustainable spatial planning and development.
The following charts define the women participation in different project activities.

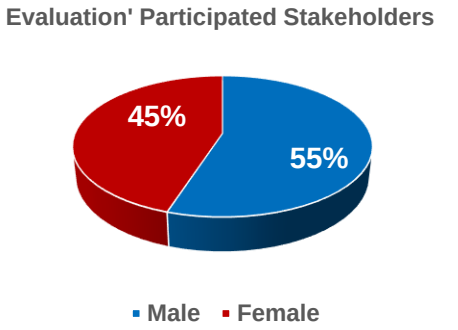

Figure 4: Women involvement in midterm Evaluation

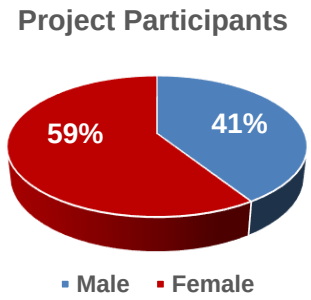

Figure 5: Women involvement in Project Implementation

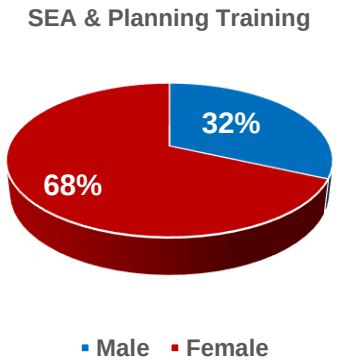

Figure 6: Women involvement in SEM and Planning Trainings

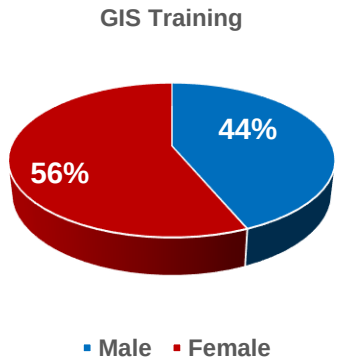

Figure 7: Women involvement in GIS Trainings

Analysis of Gender Equality:

The S-SPAD2030 project has made significant strides in promoting gender equality and empowering women, particularly in spatial planning and geospatial technology.

1. **Empowering Women in Spatial Planning**: The project fostered women's technical and leadership skills, enabling meaningful contributions to spatial planning and sustainability. Women's participation exceeded expectations, underscoring the success of gender-focused strategies.
2. **Critical Contributions**: Female GIS specialists enhanced project outcomes by designing data schemas and conducting environmental impact assessments.
3. **Success in GIS Training**: **Participation**: Women made up 56% of GIS trainees (62 out of 110 participants), showcasing inclusive opportunities in a traditionally male-dominated field.
4. **Capacity Building**: Female participants gained advanced GIS skills, equipping them to contribute to decision-making and spatial planning.
5. **Leadership Development**: Women were encouraged to take leadership roles as GIS specialists and technical leads in pilot projects, particularly in Matrouh and Red Sea Governorates.
6. **Alignment with SDG 5**: These initiatives support breaking gender barriers in technical fields and advancing women's empowerment in urban planning.

Opportunities for Improvement

1. **Gender-Specific Indicators**: Incorporate metrics in the monitoring and evaluation framework to track women's representation across all project levels.

2. **Leadership Representation**: Despite high participation in training, women remain underrepresented in senior decision-making roles. Developing targeted leadership initiatives for women professionals can address this gap.

The SPAD2030 project sets a benchmark for gender equality in sustainable spatial planning, aligning with SDG 5 and the goals of inclusive urban development. While significant progress has been achieved in empowering women technically, sustained efforts to enhance leadership representation are essential for long-term gender equity and impactful contributions to national development.

6.9.2 Human Rights and Vulnerable Groups

The project integrates a **human rights-based approach** by ensuring equitable access to services, resources, and opportunities, particularly for vulnerable areas and groups:

- **Key Focus**: Addressing disparities in underserved areas, ensuring that development benefits are distributed equitably.
- **Pilot Case Study**: The Matrouh Governorate Strategic Plan prioritized environmental sustainability while addressing socio-economic challenges of underserved communities.

Social Inclusion Initiatives:

- Stakeholders in vulnerable regions were actively engaged in planning processes through consultations and capacity-building workshops.
- Example: SEA guidelines identified sensitive environmental areas, safeguarding vulnerable communities against risks posed by development projects.

6.9.3 Leaving No One Behind

The project prioritizes reducing spatial inequalities and promoting inclusive growth:

- Focusing underserved and less developed regions ensures that marginalized communities benefit from planning interventions.
- **SSDM Framework**: By integrating environmental, socio-economic, and resilience-based tools, the SSDM ensures equitable service delivery and access to opportunities.
- **Examples:**
  - ✓ The SEA pilot application in Matrouh facilitated data-driven assessments to prioritize high-risk and underserved areas. GIS tools improved data visualization for planners, enabling targeted interventions in marginalized regions.

6.9.4 Sustainable Spatial Development Map (SSDM) Framework

The SSDM framework integrates cross-cutting social and economic considerations:

- **Equitable Service Delivery**: SSDM aligns spatial planning processes with socio-economic priorities, ensuring marginalized groups benefit from development.
- **Resilience Building**: SEA tools enabled planners to identify vulnerable areas, mitigating risks and addressing social inequities.

6.9.5 Social Impact

The project has contributed to reducing regional disparities and promoting inclusive development through the following measures:

- **Enhanced Female Representation**: Women's participation in technical training and strategic assessments fosters long-term gender equity. Example: Women's leadership in applying SEA tools during Matrouh's strategic planning emphasized the role of gender-sensitive approaches.
- **Inclusive Spatial Planning**: The use of GIS tools to analyze socio-economic vulnerabilities ensures that marginalized areas are prioritized in spatial development.
- **Alignment with SDGs**: By addressing the needs of underserved communities, the project aligns with SDG 5 (Gender Equality), SDG 10 (Reduced Inequalities), and SDG 11 (Sustainable Cities).

The S-SpaD2030 project demonstrates commendable progress in addressing cross-cutting issues, particularly gender equality and social inclusion. The project's gender-sensitive approach and emphasis on vulnerable groups ensure that development is inclusive and sustainable. However, additional efforts are needed to:

1. Strengthen gender-centered data and analysis for better decision-making in strategic planning process.
2. Institutionalize gender-disaggregated indicators for long-term measurement of gender equality.
3. Expand tools and frameworks that assess vulnerability and risks of communities on both regional and city levels.

By addressing these recommendations, the project will further maximize its impact, driving equitable and sustainable development outcomes.

7 Conclusions

The SPAD2030 project made notable progress in sustainable spatial planning, environmental integration, and institutional capacity building, with achievements, gaps, and opportunities aligned with evaluation criteria and the project's ToR.

1. **Relevance**: The project aligns well with Egypt's Vision 2030 and SDGs (11, 13, 10), introducing innovative SEA and geospatial tools. However, integration with the National Urban Policy (NUP) and broader socio-economic planning could be enhanced.
2. **Effectiveness**: Significant advancements were achieved in SSDM development, GIS platform modernization, and capacity building. Yet, uneven application of tools in decision-making and limited external stakeholder engagement require further support.
3. **Efficiency**: Resource utilization was effective in areas like GIS upgrades and training, but financial inefficiencies and delays in institutional agreements and application development slowed progress.
4. **Sustainability**: Mechanisms like Train-the-Trainer (ToT) programs and GIS infrastructure enhancements support sustainability. However, gaps in policy alignment, post-training support, and institutional ownership pose risks.
5. **Coherence**: SPAD2030 builds on prior initiatives, integrating tools like SSDM and GIS into planning frameworks. Delayed inter-agency agreements and limited synergy between SEA tools and socio-economic indicators hinder comprehensive coherence.
6. **Cross-Cutting Issues**:
    - Gender Equality: High female participation in training (68% SEA, 56% GIS) is commendable, but gender-sensitive design and monitoring need improvement.
    - Leaving No One Behind: Prioritization of vulnerable regions reflects a commitment to inclusion, though socio-economic vulnerability assessments and participatory approaches could be strengthened.

This evaluation highlights SPAD2030's contributions to national development goals while identifying areas for further improvement in integration, efficiency, and inclusivity

7.1 Conclusions for Outputs

Output 1: SSDM

1. Progress: The SSDM aligns with national and international goals, integrating SEA methodologies and piloting sustainability-focused frameworks. However, gaps in cumulative risk assessment and participatory planning remain.
2. Stakeholder Engagement: Limited engagement of external entities such as MOE and MOP reduced broader institutional collaboration.
3. Scalability: While the SSDM is replicable in other regions, methodological refinements and enhanced tools are required for wider application.

Output 2: GIS Platform

1. Technical Advancements: Upgrades in GIS infrastructure and schema organization improved data management and accessibility.
2. Institutional Collaboration: Delays in formalizing data-sharing agreements hindered interoperability and cross-agency integration.
3. Training and Adoption: While the platform shows potential, insufficient training and delayed application development limited its full operational impact.

Output 3: Institutional Support

1. Capacity Building: Over 200 participants were trained in GIS, SEA, and resilience planning, significantly enhancing GOPP's technical readiness.
2. Sustainability: ToT programs created a self-sustaining knowledge transfer model, but post-training support and practical application need reinforcement.
3. Communication Strategy: Workshops and participatory mechanisms improved transparency and collaboration, achieving an 87% satisfaction rate among stakeholders.

In sum, The SPAD2030 project is a transformative initiative advancing sustainable spatial planning in Egypt. While significant progress has been achieved, particularly in GIS modernization, SEA integration, and capacity building, addressing identified gaps will be essential for maximizing impact, ensuring sustainability, and fostering inclusivity in future urban planning initiatives.

8 Recommendations

The recommendations for SPAD2030 outputs are designed to address identified challenges, leverage emerging opportunities, and enhance the overall effectiveness and sustainability of the project. These targeted recommendations aim to refine methodologies, strengthen institutional collaboration, in Egypt.

8.1 Project-Specific Recommendations

The below actionable recommendations directly address project challenges and align with SPAD2030's objectives.

1. **Refine and Scale the SSDM Framework**
   - Recommendation: Strengthen the SSDM by incorporating environmental and socio-economic vulnerability assessments, risk indicators, and integrating National Urban Policy (NUP) principles to improve scalability.
   - Action: Conduct a comprehensive review of NUP to embed actionable elements into SSDM. Refine tools for contextual hazard, vulnerability assessment and socio-economic diagnoses, to ensure region-specific frameworks.
   - Implementing Party: GOPP, MOE, MOP.
2. **Optimize GIS Enterprise Performance and Utilization**
   - Recommendation: Upgrade technical infrastructure and transition users to advanced tools (e.g., ArcGIS Pro) to maximize the GIS platform's efficiency and adoption.
   - Action: Improve network bandwidth, develop user-friendly web applications, and conduct advanced training programs with follow-up mentoring.
   - Implementing Party: GOPP IT Department, Regional Centers.
3. **Strengthening Institutional Collaboration and Data Governance**
   - Recommendation: Formalize inter-agency agreements for data sharing, ensure interoperability, and align GIS outputs with national planning initiatives (e.g., Egypt Vision 2030).
   - Action: Establish a joint task force with CAPMAS, MOE, MOP, and MOLD for collaborative workflows and data standardization.
   - Implementing Party: GOPP, CAPMAS, MOE, MOLD, MOP.
4. **Prioritize Capacity Building for Sustainability**

- Recommendation: Institutionalize structured and continuous capacity-building programs to ensure long-term adoption of urban policies, strategies and available instruments developed at GOPP for regional and city resilience.
- Action: Expand training curricula, introduce ToT (train-the-trainer) models, integrating tools, and monitor post-training skill application.
- Implementing Party: GOPP Capacity-Building Unit, UNDP Technical Support Team.

5. **Enhance Monitoring, Evaluation, and Learning (MEL)**
   - Recommendation: Strengthen the MEL framework by integrating SMART indicators, gender-disaggregated data, and participatory monitoring processes.
   - Action: Implement real-time tracking tools, conduct regular reviews, create a repository of lessons learned for continuous improvement and develop archiving process for all related development projects.
   - Implementing Party: GOPP M&E Unit, Project Team.
6. **Improve Resource Efficiency and Financial Management**
   - Recommendation: Streamline resource allocation to focus on high-impact activities and ensure budget transparency.
   - Action: Conduct periodic resource audits and prioritize funds for critical components, such as infrastructure upgrades and stakeholder engagement.
   - Implementing Party: GOPP Finance Department, UNDP Project Management Team.

Summary Table: Project-Specific Recommendations

No.	Recommendation	Implementing Party
1	Refine and scale the SSDM framework	GOPP, MOE, MOP
2	Optimize GIS enterprise performance	GOPP IT Department, Regional Centers
3	Strengthen institutional collaboration	GOPP, CAPMAS, MOE, MOLD
4	Prioritize capacity building for sustainability	GOPP Capacity-Building Unit, UNDP
5	Enhance monitoring, evaluation, and learning	GOPP M&E Unit, Project Team
6	Improve resource efficiency and financial management	GOPP Finance Department, UNDP Project Team

8.2 Future Work (Next steps beyond Project Scope)

These recommendations align with broader strategic goals and can guide future initiatives beyond SPAD2030's current scope.

1. **Develop Inclusive Planning Policies**
   - Focus on establishing national policies for gender, disability inclusion, and human rights in spatial planning frameworks.
   - Collaborating Entities: Ministry of Planning, Ministry of Social Solidarity, Civil Society Organizations.
2. **Integrate Artificial Intelligence (AI) and Predictive Tools**
   - Leverage AI and machine learning to enhance GIS capabilities, such as predictive spatial planning and disaster risk assessments.
   - Collaborating Entities: GOPP IT Department, Ministry of Communications, Research Institutes.
3. **Scale SEA and Resilience Frameworks Nationally**
   - Expand SEA methodologies and resilience planning to all governorates, ensuring a systematic and integrated approach to environmental assessments.
   - Collaborating Entities: GOPP, Ministry of Environment, Regional Authorities.
4. **Create a Centralized Knowledge Hub**
   - Establish a digital repository for geospatial data, methodologies, and lessons learned to support knowledge-sharing across agencies.
   - Collaborating Entities: GOPP, UNDP, National Urban Observatory.

5. **Promote Cross-Sectoral Policy Harmonization**
    - Develop protocols for aligning spatial planning goals with economic, environmental, and social policies to address national development priorities comprehensively.
    - Collaborating Entities: MOP, MOE, Ministry of Finance, Development Partners.

9 Lessons Learned

The SPAD2030 project has generated significant knowledge applicable to spatial planning, geospatial systems, and institutional capacity development. The following key lessons consolidate the most critical insights from all outputs, providing transferable knowledge for future projects and contexts:

1. **Inclusive Stakeholder Engagement Drives Success**
    - Lesson: Engaging diverse stakeholders, including underrepresented groups such as the Ministry of Environment (MOE), Ministry of Local Development (MOLD), and other regional partners, is vital for achieving cross-sectoral integration and sustainability.
    - Application: Future projects must prioritize comprehensive stakeholder mapping, early involvement, and regular engagement to ensure alignment with national and local priorities.
2. **Balancing Environmental and Socio-Economic Priorities**
    - Lesson: Spatial planning frameworks like SSDM and SEA must equally prioritize environmental sustainability and socio-economic inclusion to deliver impactful results.
    - Application: Projects should integrate socio-economic vulnerability assessments and equitable development indicators alongside environmental diagnostics for holistic planning outcomes.
3. **Scalability and Flexibility of Methodologies**
    - Lesson: Tools and frameworks must be designed with adaptability to diverse regional contexts and evolving planning needs to ensure their relevance and application at scale.
    - Application: Future spatial planning initiatives should include region-specific customization while maintaining alignment with broader national frameworks (e.g., Vision 2030, SDGs).
4. **Institutional Collaboration and Data Interoperability Are Essential**
    - Lesson: Effective collaboration across institutions and formalized data-sharing agreements (e.g., with CAPMAS) are critical for project success and sustainability.
    - Application: Establishing joint task forces and standardized coding systems can streamline workflows, ensure interoperability, and facilitate data-driven decision-making.
5. **Capacity Building Requires Practical Integration and Follow-Up**
    - Lesson: Training programs must align with operational needs and include post-training support to ensure the adoption of new skills and tools.
    - Application: Capacity-building efforts should integrate practical applications, mentorship programs, and refresher training to enhance long-term impact.
6. **Technological Infrastructure Enables Sustainability**
    - Lesson: Reliable IT infrastructure, including high-speed networks, robust systems, and backup strategies, is foundational to supporting GIS platforms and geospatial tools.
    - Application: Future projects must allocate resources for scalable IT solutions, regular maintenance, and technological upgrades to ensure smooth implementation.
7. **Inclusive Planning Ensures No One Is Left Behind**
    - Lesson: Ensuring gender equality, disability inclusion, and socio-economic vulnerability considerations in design and implementation enhances project equity and sustainability.
    - Application: Projects should incorporate gender-sensitive indicators, inclusive planning tools, and targeted interventions for marginalized and underserved communities.

The SPAD2030 project's key lessons emphasize the importance of multi-stakeholder collaboration, practical capacity building, scalable methodologies, and inclusive planning. These insights can guide future projects to deliver more impactful and sustainable outcomes, ensuring alignment with national priorities and international development goals. By addressing institutional, technological, and socio-environmental challenges, spatial planning efforts can better meet the needs of diverse stakeholders and communities.