REPUBLIC OF RWANDA

MINISTRY OF ENVIRONMENT

Rwanda's Climate Adaptation Monitoring, Evaluation, and Learning in the Human Settlements and Transport Sectors:

Lessons learned

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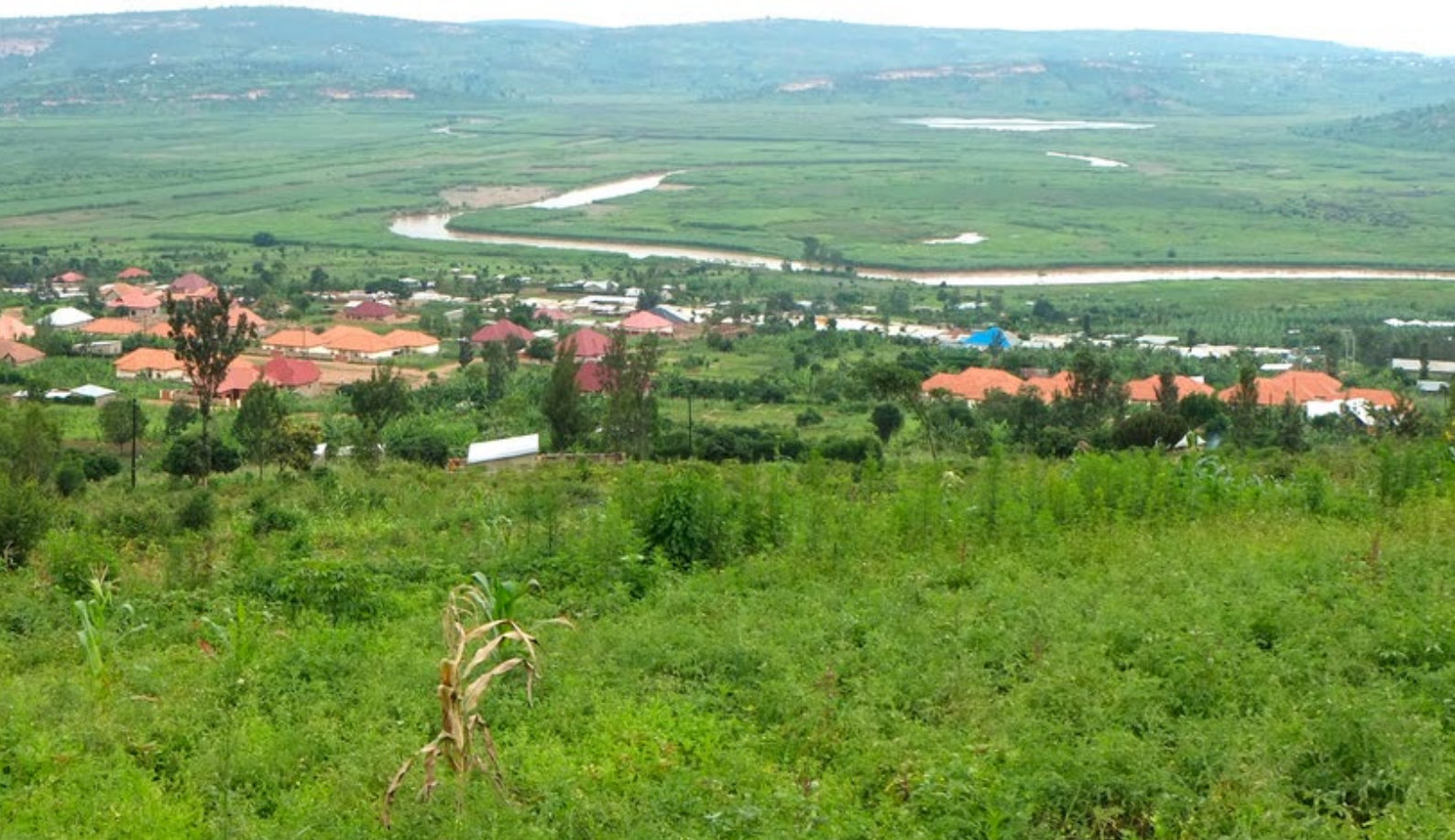

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1. Introduction

The Government of Rwanda has established a strong framework to monitor and report on progress toward its environmental and climate goals, as outlined in the Nationally Determined Contribution, the Green Growth and Climate Resilience Strategy, and the National Environment and Climate Change Policy (2019). This learning product consolidates the lessons learned from the use of specific climate change adaptation indicators in the human settlement and transport sectors to assess their effectiveness in achieving these aims and objectives and provides recommendations for improvement.

2. Indicators and Lessons Learned

1. **Percentage of the urban population living in informal settlements and of the rural population living in clustered settlements**

   Lessons learned

   - **Relevance:** This indicator is critical for assessing urbanization patterns and the effectiveness of policies aimed at improving living conditions. It aligns with the United Nation's global Sustainable Development Goals (SDGs) targets on sustainable cities and communities.
   - **Impact measurement:** Tracking changes in these percentages over time helps gauge the success of housing and urban development policies.
   - **Challenges:** Data collection in informal settlements can be challenging due to their transient nature and lack of formal records.

   Recommendations

   - **Improvement in data collection:** Enhance data collection methods using remote sensing and Geographic Information System (GIS) technologies to accurately map and monitor informal settlements.
   - **Policy integration:** Integrate findings into urban planning processes to prioritize interventions in areas with high percentages of informal settlements.

2. **Average share of built-up area of cities that is open and green space for public use**

   Lessons learned

   - **Relevance:** This indicator supports the SDG goal of providing access to green and public spaces, which are essential for urban sustainability and well-being.
   - **Impact measurement:** Positive trends indicate successful urban planning and green space initiatives.
   - **Challenges:** Urban expansion and land use pressures often limit the availability of green spaces.

   Recommendations

   - **Policy enforcement:** Strengthen policies that mandate the inclusion of green spaces in urban development plans.

- **Community engagement:** Encourage community-driven green space projects to foster ownership and maintenance.

3. **Access to water and sanitation services**

   Lessons learned

   - **Relevance:** Access to water and sanitation is a fundamental human right and a key SDG target. This indicator is crucial for assessing public health and quality of life.
   - **Impact measurement:** Improvements reflect effective infrastructure development and service delivery.
   - **Challenges:** Rural and peri-urban areas often face significant disparities in service access.

   Recommendations

   - **Equitable distribution:** Focus on reducing disparities by prioritizing underserved areas.
   - **Innovative solutions:** Explore innovative solutions such as decentralized water systems and community-led sanitation initiatives.

4. **Percentage of the urban population in areas covered by master plans with stormwater considerations**

   Lessons learned

   - **Relevance:** This indicator is vital for assessing resilience to urban flooding and climate adaptation measures.
   - **Impact measurement:** Higher coverage indicates better preparedness and proactive urban planning.
   - **Challenges:** Implementation and enforcement of master plans can be inconsistent.

   Recommendations

   - **Capacity building:** Enhance the capacity of local authorities to implement and enforce master plans.
   - **Public awareness:** Increase public awareness of stormwater management and its benefits.

5. **Environmental and engineering guidelines developed for climate-resilient road infrastructure**

   Lessons learned

   - **Relevance:** These guidelines are essential for ensuring infrastructure resilience to climate impacts.
   - **Impact measurement:** The existence and application of guidelines reflect proactive planning and adaptation efforts.
   - **Challenges:** Ensuring adherence to guidelines across diverse regions and projects.

Recommendations

- **Regular updates:** Periodically update guidelines to incorporate new knowledge and technologies.
- **Training programs:** Implement training programs for engineers and planners on climate-resilient infrastructure design.

6. **Reduction of the length of roads vulnerable to flood and landslides**

Lessons learned

- **Relevance:** This indicator measures the effectiveness of adaptation measures in reducing infrastructure vulnerability.
- **Impact measurement:** A decrease in vulnerable road length signifies successful interventions.
- **Challenges:** Identifying and prioritizing vulnerable road segments requires comprehensive risk assessments.

Recommendations

- **Risk mapping:** Conduct detailed risk mapping to identify priority areas for intervention.
- **Resource allocation:** Allocate resources for retrofitting and maintaining vulnerable infrastructure.

7. **Number of passengers using public transport each year**

Lessons learned

- **Relevance:** This indicator reflects the effectiveness of public transport policies and their impact on reducing traffic congestion and emissions.
- **Impact measurement:** An increase in ridership indicates successful public transport initiatives.
- **Challenges:** Ensuring the reliability and accessibility of public transport systems.

Recommendations

- **Service improvement:** Focus on improving the reliability, affordability, and coverage of public transport services.
- **Incentives:** Introduce incentives for using public transport, such as subsidies or dedicated lanes.

3. Recommendations

1. **Integration of gender mainstreaming**

- Ensure that data collection and analysis incorporate gender-disaggregated data to address specific needs and impacts on women and marginalized groups.

2. **Dynamic and flexible monitoring**
    - Establish a dynamic monitoring system that allows for regular updates and adjustments based on new data and changing circumstances.
3. **Learning and adaptation**
    - Create a feedback loop where successes and challenges are regularly documented and used to inform future policy and implementation strategies.
4. **Stakeholder engagement**
    - Foster collaboration with local communities, non-governmental organizations, and other stakeholders to enhance data accuracy and policy relevance.
5. **Capacity building**
    - Invest in building the capacity of local authorities and communities to collect, analyze, and use indicator data effectively.
6. **Use of technology**
    - Leverage advanced technologies such as GIS, remote sensing, and data analytics to improve the accuracy and timeliness of data collection and reporting.

4. Conclusion

The use of clearly defined indicators is of utmost importance when monitoring the advancements made toward Rwanda's environmental and climate goals. By acknowledging and using the lessons learned from past challenges, the government could improve the efficiency of its monitoring and reporting mechanisms, thereby facilitating the formulation of well-informed and impactful policy choices.

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