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Practical Approaches to Supporting City-level GHG Emissions Accounting by Local Governments

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SUMMARY

- Local authorities play a key role in tackling climate change as the ground implementers of national greenhouse gas (GHG) mitigation policies. They are expected to measure, report and verify data on city-level GHG emissions in a credible and sustained manner by referring to national and global protocols and methodologies, coordinating data collection responsibilities among multiple municipality departments and with external stakeholders, and drawing technical support from external stakeholders.
- A replicable model for building a local authority's capacity in GHG accounting was demonstrated by Phitsanulok City, Thailand, which was trained to collect reasonably complete data for an inaugural municipal-level GHG inventory by: (a) establishing a cross-department working group, which is led by skilled managerial and working-level coordinators, (b) exchanging experience with a peer municipality (Nonthaburi Municipality), (c) flexibly adjusting pre-existing administrative and accounting procedures for GHG data collection, and (d) Developing an in-house energy use reporting system.

Box 1. Summary.

The world is urbanising rapidly and most urbanisation in the future will happen in developing Asia. Over 70% of GHG emissions are attributed to human activities in urban areas, which drive current and future GHG emissions. The realisation of globally and nationally-adopted GHG mitigation goals depends on the effectiveness of mitigation measures by local authorities. To this end, local authorities must be capable of GHG accounting, i.e. measuring, reporting and verifying data on GHG emissions in cities. Yet, most local authorities in developing Asia lack the basic capacity, motivation and incentives for GHG accounting despite the availability of global and national guidelines and methodologies for city-level GHG accounting.

Policy Implications

City-level GHG accounting initiatives risk being a one-off, unsustainable effort. Hence, it is essential to create realistic incentives (legal, financial and reputational benefits, etc., in both direct and indirect forms) to encourage local authorities in this endeavour.

In the absence of a legal mandate for city-level GHG accounting, a non-regulatory approach facilitated by a higher-level national body or external party is recommendable. This approach will help link inexperienced municipalities with more experienced ones, reward notable efforts and conduct performance benchmarking within the country as well as with other countries.

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The baseline capacity of local authorities in developing countries is generally very low. Hence, a GHG accounting training programme needs to take a long-term perspective. Adequate post-training technical guidance is necessary, and training materials need to be available in local languages.

Training should involve not only local authorities, but also relevant non-government stakeholders such as electricity and water utilities, petrol stations, etc., who support their data collection efforts.

Current data management IT systems of local and national authorities and relevant agencies are either unable or ill-designed to organise GHG data within a city's geo-political boundaries as required by global protocols. Therefore, more in-depth technical support and guidance on data collection and interpretation beyond what is provided in current global and national protocols may need to be given to local authorities, especially for accounting emissions in the transportation and building sectors.

Recommendations

» Local authorities should be encouraged to implement city-level GHG accounting for effective data-driven city planning and management. GHG accounting ability is an indicator of progressive city management, which may help attract international partners and investments to advance the sustainable development of a city.

» Much of the data required for a municipal-level GHG inventory is already available in various formats, with the collection procedures embedded within existing organisational procedures within a municipality. The critical challenge is to create a sustained and systematic approach to compile all of these data. Existing organisational culture and working relationships within the municipality should be considered and a tailored approach is required.

  ✓ It's recommendable to sustain and motivate data collection by decentralising the data collection process to individual departments or buildings, with assigned focal points for each building or department. To ensure a higher level of cooperation from all departments, the overall coordinator is best assigned to a "neutral" party, such as the IT division (in the case of Phitsanulok), which has regular contact and service-oriented relationships with all departments.

  ✓ It's recommendable to sustain routine and cross-department data collection by starting with an in-house online energy use reporting system as demonstrated in the case of Phitsanulok. Focusing on measuring energy use is a sensible starting point because measures to promote energy efficiency and savings are already supported by national policy in Thailand and many other countries.

» The model demonstrated in Phitsanulok may be a useful reference for other cities of a similar class (a population of 120,000, service-oriented economy, provincial capital) and organisational characteristics (progressive, aspirational management with motivated working-level staff).

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