INTERNATIONAL WORKSHOP ON SUSTAINABLE FORESTRY MANAGEMENT: MONITORING AND VERIFICATION OF GREENHOUSE GASES

SUMMARY STATEMENT

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In addition to presenting their papers, workshop attendees shared experiences concerning the development and monitoring of regional and national forestry projects, through their participation in one of two working group sessions. The discussions focused on institutional, economic, methodological, and data availability problems. Group 1 concentrated on data collection and methods for monitoring and verifying GHG flows, while Group 2 discussed the key socio-economic and institutional issues associated with monitoring and verification. Within their focus areas, both groups addressed the questions of what should be monitored, how should monitoring and verification be done, and how can leakages be managed.

The main findings of the working groups were

1. Proven methods exist for the monitoring of GHG flows and carbon stocks in forestry. Monitoring programs can be designed to provide credibility to forestry carbon offset projects. The effectiveness, cost, and reliability of methods vary by type of project, scale, and the fluxes being monitored.

2. Monitoring should focus on all significant carbon pools or GHG fluxes that are vulnerable to significant change. This should apply to leakages and secondary benefits as well.

3. All forestry sector GHG mitigation projects must ensure that they meet accepted standards for sustainable forest management.

4. As a mitigation option, forest sector activities serve primarily to delay the release of carbon stocks to the atmosphere. Wood harvested from sustainable forests, when used to substitute for fossil fuels and other emission-intensive products, may significantly multiply carbon benefits.

5. Project developers expect carbon credits for limited duration forestry projects, in which the fate of carbon after the project is over is unknown. This expectation conflicts with the need to maintain carbon stock in perpetuity. Resolution of the conflict is an important challenge for project participants, national governments, and the international community.

6. A without-project baseline (reference case) must be established for estimating future GHG benefits from a project. Due to the long duration of forestry projects (in

comparison to most energy and other projects), the estimated baseline may be amenable to periodic revision on the basis of new data and information monitored from control plots or gathered from other sources.

7. Monitoring is the primary responsibility of the project implementers, and should satisfy appropriate professional standards. Verification should be carried out by third-party auditors agreeable to the participants.

The working group summary statements provide additional detail on these and other issues that were discussed at the workshop.

GROUP 1 — DATA AND METHODS*

The discussion of Working Group 1 focused on data collection and monitoring and verification methods for mitigating greenhouse gas emissions through individual and national forestry projects and policies.

INDIVIDUAL PROJECT-LEVEL MONITORING AND VERIFICATION PROGRAMS

Monitoring programs should be designed to measure all significant carbon flows associated with a project. A verification program should be aimed at evaluating the accuracy and reliability of the monitoring program. Project participants should decide who will monitor, what will be monitored, and how the flows will be monitored based on their best understanding of the implications of the project and appropriate professional standards; verification should be done by professionals that are independent of the project.

To ensure that forestry projects used for GHG mitigation are of high quality and are effective at sequestering carbon, guidelines are needed that provide structure and direction to project developers. These guidelines need to be flexible so that they are broadly applicable and do not discourage innovative approaches.

WHAT SHOULD BE MONITORED?

All significant carbon pools that are vulnerable to significant change should be monitored. A three-dimensional matrix illustrates a procedure for ranking carbon pools according to their significance (size of pool), vulnerability (rate of change), and direction of change (Figure 1). Changes that are directly related to project activities should be the focus of monitoring efforts, but changes in all potentially important carbon pools need to be evaluated. For example, a pool that is relatively small and unlikely to change would not be important to monitor. Alternately, a pool that is relatively large and likely to change would be important to monitor. For potentially important pools (i.e., large pools that change slowly or small pools that change quickly), the direction of the change

* Co-chairs for Working Group 1 are Steve Hamburg, Brown University, Providence, Rhode Island, United States; Michelle Pinard, University of Aberdeen, Aberdeen, United Kingdom. Participants included Mike Apps, Forestry Canada, Northern Forestry Center, Edmonton, Alberta, Canada; Xavier Bauicles, Cartographic Institute of Catalonia, Barcelona, Spain; Salvadore Dayanandan, University of Massachusetts, Boston, Massachusetts, United States; Arturo Sanchez, Central American Project on Climate Change, San Jose, Costa Rica; Ben De Jong, ECOSUR, San Cristobal, Mexico; David Skole, University of New Hampshire, IGBP-LUCC, United States; and Philip Fearnside, Institute for Research in the Amazon, Manaus, Brazil.