Global Landscapes and Soil Carbon at COP21

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Introduction: In their Washington Post article of December 6, 2015 Debbie Barker and Michael Pollan lamented that the UNFCCC (United Nations Framework Convention on Climate Change) negotiations then underway in Paris (COP 21) "have paid little attention to the critical links between climate change and agriculture." In fact, this was not as true as they thought it might be. In the COP21 blue zone, where Guy, Johannes Lehmann and John were to be found, over half of the side-events sponsored by developing countries focused on agriculture and forestry (AFOLU). But then over half of most of their economies, only Russia & China among the "BRICS" (BRICS is Brazil, Russia, India, China and South Africa) excepted, is about agriculture and forestry. Nevertheless, two weeks of sessions organized by France, Germany, the EU, the United States and the World Business Council on Sustainable Development (WBCSD) also devoted close to half their sessions to AFOLU role in climate change mitigation. Finally, over the intervening weekend, December 5-6, the Global Landscapes Forum at Palais des Congrès, where ALL the sessions were directed towards AFOLU, experienced record attendance.

UNFCCC Progress: Close to a third of the excess carbon in the atmosphere "used to be in the soil" (Barker & Pollan) until, over the last century, modern agricultural practices compounding deforestation and degradation began to do their damage. But this COP21 spurt in AFOLU interest in the climate change negotiations is, tragically, more recent. It has been driven by two factors:

1.) The inclusion, since COP 20 in Lima, of developing countries, with their AFOLU dominated economies, as equal partners in taking UNFCCC responsibility (through their "Intended Nationally Determined Contribution" - INDC - offerings); and
2.) The burgeoning co-ordination role being played by five networks – all linked to the World Bank:
    - The research program on Climate Change, Agriculture & Food Security CCAFS) at the CGIAR (Consultative Group for International Agricultural Research) whose Secretariat is at the World Bank;
    - The Global Alliance for Climate-Smart Agriculture (GACSA) "knowledge action group" based, in the shadow, but not the organizational control, of Food and Agriculture Organization (FAO) and International Fund for Agricultural Development (IFAD), in Rome;
    - The World Banks "TerrAfrica" programming efforts, which are putting an increased emphasis upon the soil fertility implications of their proven reforestation (including Farmer-managed natural regeneration FMNR) and other anti-desertification (such as United Nations Convention to Combat Desertification, UNCCD) initiatives;
    - The Bio-Carbon Fund (BCF) in the World Bank's Carbon Finance Unit; and, also in that unit:

- The Forest Carbon Partnership Facility (FCPF) trying to jump start the market for REDD+ (Reducing Emissions from Deforestation and Forest Degradation) offsets with over a billion dollars in pledges. REDD+ co-benefits in each of these Emissions Reductions (ER) schemes are attended to by a separate Forest Investment Program (FIP) account.

Each one of these networks needs IBI and knows it. But it is not happening. Neither side seems to know how to make the link. While the Bio-Carbon Fund and the Forest Carbon Partnership Facility are not pre-financing below ground carbon credits, they are both calling for "climate-smart" agriculture as a key co-benefit to their above ground vegetation credits. All of their project documents (PDs) call for fertilizer-free farming citing green composting and bio-char technologies, so that there would be less Nitrous Oxide (N_2O) and Methane (CH_4) restraint on the vegetation credits. But these documents, CCAFS and GACSA guidance notwithstanding, do not find a way of making site-specific technical recommendations. ***This is a gap that many stakeholders would like to see an organization like IBI expand to fill.***

Thus, a detailed review of these networks "soil capital" initiatives, and of the Institute for Advanced Sustainability Studies (IASS') rating of them, could get IBI into these well-funded loops. None of their presentations at COP 21 outlined specific soil mapping plans that could promote such a low emissions, "climate smart" agriculture, but all agreed that some structure needed to move into the breach.

The COP21 Text: The following truths emerged as self-evident at all of these COP21 discussions:

- Healthy forests and landscapes can help us realize real reductions in global emissions in the short and long term.

- The important role that forests have in addressing climate change was formally recognized in the Paris Agreement.

- The specific inclusion of REDD+ in the text builds on years of work to find ways to positively incentivize countries to reduce carbon emissions at a landscape scale and conserve their standing forests at the same time.

At COP21 in Paris, international governments recognized and acknowledged the key role that resilient forests and landscapes play for both climate change and development in the final agreement achieved and through a number of financial pledges and green initiatives.

Healthy forests absorb immense amounts of carbon dioxide, providing essential carbon sinks. However, when deforestation happens, often due to logging or converting land for agricultural use, forests release damaging greenhouse gases into the atmosphere. Because of this important climate regulating function, the land sector—and forests in particular—are critically important in both the post-2020 agreement and for the immediate actions necessary to slow climate change.

The Paris Agreement gives the world a fighting chance to avoid dangerous global temperature rise while conserving vulnerable ecosystems. A few forest highlights from Paris include:

REDD+ - In the final climate agreement, Parties explicitly recognize the role forests have in offsetting human actions. This is a clear call to action for countries to endorse policies that conserve standing forests. The agreement indicates that tropical and sub-tropical countries could receive both public and private funding if they succeed in reducing their emissions from deforestation and forest degradation, emissions that often come from activities like logging or clearing trees for ranching. This explicit inclusion of the mechanism known as REDD+ builds on years of work by governments, indigenous peoples, civil society, and funding institutions, to find ways to positively incentivize countries to reduce carbon emissions at a landscape scale and conserve their standing forests at the same time.

Forest financing - In Paris, among a number of other pledges for increased forest financing, the governments of Germany, Norway and the United Kingdom promised annual support for REDD+ for countries that come forward with ambitious and high quality proposals, with an aim to provide US$1 billion per year by 2020, or over US$5 billion in the period 2015-2020. From the World Bank, the new Africa Climate Business Plan will mobilize approximately US$1.6 billion for forests and resilient landscapes.

Indigenous peoples and local communities - Indigenous peoples and local communities are among a forest's most important stewards, and giving them a voice is a powerful way to protect these ecosystems. For indigenous and forest-dependent peoples, forests mean food, livelihoods and can be a path out of poverty. As just one example of how the World Bank collaborates with diverse forest stakeholders, a committee of indigenous peoples and local communities including members from Brazil, Burkina Faso, Democratic Republic of Congo, Indonesia and Peru highlighted progress on the Dedicated Grant Mechanism in Paris.

The Global Landscapes Forum, held alongside the UN climate negotiations in Paris, France, is the world's leading event for discussing land-use issues. In Paris, the Forum brought together 2,500 stakeholders from across sectors, including forestry, agriculture, water, energy, law and finance.

The World Resources Institute is a coordinating partner in this year's Forum, and events at the Global Landscape Forum included the "4 Per 1000 Initiative: Soils for Food Security and Climate" which aims to ensure that agriculture plays its part in combating climate change. It consists of a voluntary action plan under the Lima-Paris Action Agenda (LPAA) and is backed up by an ambitious research programme.

Conclusion: The demand for soil carbon intensification has now explicitly manifested itself in the post-COP21 UNFCCC accords. Beyond the World Bank, several carbon trading registries, C-CAR (California's), Voluntary Carbon Standard—VCS (of the International Emissions Trading Association—IETA) & American Carbon Registry (ACR) reminded COP21 how they recognize adequately measured below ground carbon in their accreditation protocols. The Copenhagen pledges in the Green Climate Fund (GCF) continue to call for soil carbon components in their solicitation of climate-smart agriculture proposals. IBI needs an institution building grant so that it can staff up and work with these international organizations in responding to this demand. COP 21 has made it more explicit than ever.