Wet linkages: Global Peatlands Initiative and mangroves

Climate action in forested high-carbon ecosystems

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Mangrove roots in Kenya FAO/Eva Ntara

A peatland in central Republic of the Congo, FAO/Maria Nuutinen
Peatlands, mangroves and carbon

Differences

• Mangroves' SOC in motion because of tidal influence
• Peatlands' soil organic carbon (SOC): more stable over time
  • 178 countries host peatlands.
  • Many tropical lowland peatlands are naturally forested

Similarities

➢ Vulnerable to changes in climate and land-use change
  ➢ Potential large emitters
  ➢ Irrecoverable carbon
  ➢ Similar soil sampling methods
  ➢ IPCC Wetlands Supplement 2013
  ➢ Need to understand better:
    ➢ Mapping, monitoring, accounting
Carbon dynamics

- Peatlands host the highest carbon stocks per unit area.
- Mangroves, salt marshes, and seagrasses: more rapid carbon sequestration rates.

> Sequestration rate exceeds oceanic and forest ecosystems.

Figures: (Right) Overview of the world’s major carbon-storing ecosystems; (Above) Carbon sequestration rates.

Source: Temmink et al., 2022

Legend: DOC = Dissolved Organic Carbon
Mangroves: the dominant wetland type in NDCs

From the total number of parties that are known to have mangroves, 62% (56) include mangroves in their NDCs.


**Other** refers to disputed areas, special and overseas territories excluded in NDC, and any country or Party that did not ratify the Paris Agreement.
Peatlands: largely underrepresented

- The inclusion ratio doubled in NDCs
- From 2020, peatlands are mentioned for the first time in Europe and N. America.

Figure: Parties that mentioned peatlands in their NDC

Source: FAO & Greifswald Mire Centre, 2022

From the total number of parties that are known to have peatlands, only 13% (17) include peatlands in their NDCs
Mangrove initiative
Myanmar

Coming up:
Journal article

Updated methodological guidance for mangroves in National Forest Inventories

Photo: Soil sampling in Myanmar mangroves, FAO/Marco Piazza
Peatlands in national frameworks: a must

NFI, NFMS and MRV

• Our approach: Integrating peatlands into national forest monitoring inventories, systems and reporting is key to boost transparency and access to finance

• Mapping and inventories as the baseline

• Monitoring for:
  • GHGs and ecosystem services for adaptation
  • Disaster risk reduction: fires, floods

• IPCC compliant, remote sensing supported, calibrated with field data

• Urgent need to move ahead:

• Toward nationally validated maps and inventories,
  • land use planning,
  • rapid restoration,
  • updated IPCC guidance – and more!
Key messages

• **Monitoring**: data and capacity development support available

• **New tools and methods**: contribute to NDCs, REDD+, agriculture, adaptive capacity in developing countries...

• **Invitation**: Joining existing technical through coordinated efforts - and feeding into GFOI process:
  - Global Peatlands Initiative's mapping & monitoring work stream: [https://dgroups.org/fao/peatlands/events/monitoring/join](https://dgroups.org/fao/peatlands/events/monitoring/join)
  - Mangroves, seagrass, wetlands,
  - Combining expertise

*Photo: Mangrove in Mida Creek, Kenya FAO/Eva Ntara*
Peatlands: coordinated approach

**Global experts’ network** coordinated by FAO under the Global Peatlands Initiative: [https://dgroups.org/fao/peatlands/events/monitoring/join](https://dgroups.org/fao/peatlands/events/monitoring/join)

**Technical innovations**: satellite-based soil moisture monitoring connected to ground-water level and emission factors

**Capacity development & knowledge exchange**: training on new tools & approaches

Joint efforts to update emission factors and the IPCC Wetlands Supplement 2013

Photo: FAO/Augustin Kamukenge Lamulamu