Submission to the UNFCCC Climate High-Level Champions

From: Conscious Planet – Save Soil Movement (Observer Organization: Isha Foundation)

Date: 17 August 2025

Subject: Input on the Vision and Plan for the Next Five Years of the Global Climate Action Agenda (GCAA)

Healthy soils underpin climate adaptation, food security, and ecosystem resilience, all of which are priority areas for the Global Climate Action Agenda (GCAA) (CGIAR, 2024). They regulate water cycles, buffer droughts and floods, support biodiversity, and sustain more than 95% of global food production (FAO & ITPS, 2015). Soils store more carbon than the atmosphere and all vegetation combined, making them a natural climate regulator and a critical lever for building resilience (Lal et al., 2018; IPCC, 2019). Yet more than one-third of the world's soils are moderately to highly degraded, eroding communities' capacity to withstand climate shocks (FAO & ITPS, 2015). Positioning soil health at the core of the GCAA will not only accelerate adaptation outcomes for vulnerable communities, but will also contribute to the Global Goal on Adaptation (GGA) by delivering measurable resilience across sectors

We thank the Climate High-Level Champions for the opportunity to contribute to this pivotal moment in global climate governance. As an observer organization committed to soil health, ecological regeneration, and community empowerment, Conscious Planet – Save Soil offers the following reflections and recommendations:

1. What Should Success Look Like for the GCAA in the Next Five Years?

Success must be measured not only by emissions reductions but by the entire ecosystem's resilience, community empowerment, and nature-positive outcomes. We propose the following indicators:

- Soil health as a climate indicator: Track soil organic carbon (SOC) stocks, including subsoil, alongside biodiversity and soil health metrics through national inventories and voluntary reporting, using comparable, open methods (FAO, 2017; Hengl et al., 2017; IPCC, 2019). A substantial fraction of SOC resides below 30 cm, so deeper profiles matter for durable resilience gains (Jobbágy & Jackson, 2000).
- Restoration targets: Set national and regional land-restoration targets that prioritize degraded lands and explicitly account for subsoil carbon and water-retention improvements that reduce climate vulnerability (UNCCD, 2021; IPCC, 2019). Wang et al. (2025) show subsoil holds 800+ Pg C, emphasizing its sequestration potential.
- Policy integration: Embed soil-health indicators and land-restoration milestones into Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) to connect adaptation, food-system stability, and water security, leveraging existing land-use commitments and monitoring frameworks (IPCC, 2019; UNCCD, 2021).

- Adoption of regenerative agriculture: Track hectares under proven practices (e.g., diversified rotations, cover crops, reduced tillage, agroforestry) (Abrar et al., 2025) and link to resilience outcomes such as yield stability, erosion reduction, and improved water infiltration (Paustian et al., 2016; FAO & ITPS, 2015).
- Empowerment outcomes: Recognize and integrate Indigenous and local knowledge systems in land stewardship, reflecting evidence that at least a quarter of the global land area is owned, used, or managed by Indigenous Peoples and that co-production of knowledge improves outcomes (Bell et al., 2025; IPBES, 2019).

Metrics:

- 1. Increase in SOC per hectare: Topsoil and subsoil, by land-use category.
- 2. Percentage of degraded land restored: Aligned with SDG 15.3 (LDN) indicators.
- 3. National programs: Number and scope of nationally endorsed regenerative agriculture programs and enrolled hectares.
- 4. Inclusive governance: Representation of farmers, Indigenous Peoples, women, youth, and marginalized groups in climate and land-use planning.

2. How Can the GCAA Facilitate Direct and Impactful Engagement Between Parties and NPS?

- Establishing Regional Soil Action Hubs: Co-led by governments and NPS to pilot, validate, and scale regenerative practices with robust, open measurement, monitoring, reporting, and verification (MMRV), emphasizing farmer economics and adaptation outcomes (Hengl et al., 2017; FAO, 2017).
- Annual Soil Dialogues at COPs: Dedicated sessions within the Marrakech Partnership pathways to share comparable adaptation metrics, methods, and case studies, and to align Party–NPS collaboration (UNFCCC High-Level Champions, 2023).
- Soil health in climate finance: Inclusion of soil health targets in climate finance mechanisms, such as Article 6, and prioritizing soil-centric adaptation outcomes across funds (Loss and Damage Fund), including mechanisms that support recovery from climate-induced land degradation (IPCC, 2019; UNCCD, 2021). Inclusion of land regeneration in climate finance, as supported by Jackson (2024) and WEF (2024) on shifting investments "from oil to soil."
- Enable Cross-sector coalitions: Foster business to NGO to farmer alliances for climate-smart, biodiversity-positive agriculture, with risk-sharing instruments and transition finance to bridge the shift to regenerative systems (Paustian et al., 2016)
- Highlight programs where soil regeneration measurably improved drought/flood buffering, yield stability, and rural livelihoods, to inform policy design and finance allocation (FAO & ITPS, 2015; IPCC, 2019).

Recommendations:

- 1. Formal recognition of soil initiatives under Article 6 mechanisms.
- 2. Integrate land-based solutions into NDC/NAP dialogues through HLC roadmaps and the Yearbook of Global Climate Action (UNFCCC High-Level Champions, 2023).
- 3. Encourage annual local party engagement forums focused on ecosystem regeneration and farmer-led learning networks.

3. How Can the GCAA Promote Inclusive and Equitable Engagement?

Soil degradation disproportionately affects rural, Indigenous women and youth populations. Centering equity in soil-based adaptation reduces exposure and sensitivity to climate hazards while strengthening adaptive capacity. To ensure equity:

- Prioritize capacity-building for underrepresented groups in climate-smart land management, recognizing Indigenous and local knowledge on equal footing with scientific expertise (IPBES, 2019).
- Support youth-led campaigns and education initiatives, such as the Save Soil Global Campaign, which reached over 3.9 billion people in 2022. Support soil literacy initiatives tied to local adaptation action (e.g., school and community projects that improve nutrition, water infiltration, and erosion control) (FAO & ITPS, 2015).
- Ensure language accessibility and cultural relevance in all GCAA communications and tools, to ensure meaningful participation and informed decision-making.
- Bridging ancestral wisdom, traditional farming practices, and digital tools ensures cultural relevance and modern scalability (e.g., open soil maps, in-field testing, remote sensing) to enable adaptive management and community-owned data (Hengl et al., 2017; FAO, 2017).

Actions for Equity:

- 1. Dedicated funding for youth and Indigenous-led regeneration programs.
- 2. Multilingual toolkits for local soil monitoring and education.
- 3. Representation targets for farmers and underrepresented regions in GCAA platforms.

4. How Can Transparency and Reporting Be Improved?

We propose:

- Expanding the Global Climate Action Portal (NAZCA) to include a dedicated Soil and Land Regeneration Tracker, with voluntary reporting from NPS.
- Standardized subsoil reporting: Encourage reporting that captures deeper-soil contributions to resilience and carbon storage, using machine learning, openly documented depth

functions, and digital soil mapping (Jobbágy & Jackson, 2000; Hengl et al., 2017; Wang et al., 2025).

- Encouraging open-source data platforms for soil monitoring, leveraging satellite and citizen science inputs (UNCCD, 2022).
- Publishing an Annual Soil Health Report, "Land and Soil" supplement, as part of the Yearbook of Global Climate Action.

System Enhancements:

- 1. Add a Soil Health Tracker section to the Global Climate Action Portal (NAZCA)
- 2. Annual "Land and Soil" supplement to the Yearbook of Global Climate Action
- 3. Open-data partnerships with satellite and citizen science programs

As we mark a decade since the Paris Agreement, we must recognize that soil is the silent ally in our climate journey. It stores more carbon than all vegetation and the atmosphere combined yet remains underrepresented in climate discourse. The Save Soil movement calls for a paradigm shift, where soil regeneration becomes central to climate action, food security, and ecological resilience.

We stand ready to collaborate with Parties, Champions, and fellow stakeholders to co-create a future where living soil sustains living communities.

With respect and commitment,

Conscious Planet – Save Soil Movement

References:

Abrar et al. (2025) Abrar, M. M., Waqas, M. A., Mehmood, K., Fan, R., Memon, M. S., Khan, M. A., Siddique, N., Xu, M., & Du, J. (2025). Organic carbon sequestration in global croplands: Evidenced through a bibliometric approach. Frontiers in Environmental Science, 13, Article 1495991. https://doi.org/10.3389/fenvs.2025.1495991

Bell et al. (2025) Bell, E., Tremblay, C., Carodenuto, S., Downie, B., Dearden, P., Kileli, E. O., & McDougall, S. (2025). Indigenous knowledge-bridging to support ecological stewardship in Canada and Tanzania. People and Nature, 7(5), 1139–1150. https://doi.org/10.1002/pan3.70034

CGIAR. (2024, December 18). Resilience in soil ecosystems: Healthy soils means healthy people. https://www.cgiar.org/news-events/news/resilience-in-soil-ecosystems-healthy-soils-means-healthy-people/

FAO. (2017). Global Soil Organic Carbon Map (GSOCmap) technical report. Food and Agriculture Organization of the United Nations. https://www.fao.org/documents/card/en/c/I8891EN/

FAO, & ITPS. (2015). Status of the world's soil resources (SWSR) – Main report. Food and Agriculture Organization of the United Nations; Intergovernmental Technical Panel on Soils. https://www.fao.org/3/i5199e/i5199e.pdf

Hengl, T., de Jesus, J. M., Heuvelink, G. B. M., Gonzalez, M. R., Kilibarda, M., Blagotić, A., Shangguan, W., Wright, M. N., Geng, X., Bauer-Marschallinger, B., Guevara, M. A., Vargas, R., MacMillan, R. A., Batjes, N. H., Leenaars, J. G. B., Ribeiro, E., Wheeler, I., Mantel, S., & Kempen, B. (2017). SoilGrids250m: Global gridded soil information based on machine learning. PLOS ONE, 12(2), e0169748. https://doi.org/10.1371/journal.pone.0169748

IPBES. (2019). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES Secretariat. https://doi.org/10.5281/zenodo.3553579

IPBES. (2019). Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Brondízio, E. S., Settele, J., Díaz, S., & Ngo, H. T. (Eds.). IPBES Secretariat, Bonn, Germany. https://doi.org/10.5281/zenodo.3831673

IPCC. (2019). Climate change and land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems (Summary for Policymakers). Intergovernmental Panel on Climate Change. https://www.ipcc.ch/srccl/

Jackson (2024) Jackson, F. (2024, November 19). Realigning climate finance: Time to move from oil to soil. Forbes. https://www.forbes.com/sites/feliciajackson/2024/11/19/realigning-climate-finance-time-to-move-from-oil-to-soil/ Jobbágy, E. G., & Jackson, R. B. (2000). The vertical

distribution of soil organic carbon and its relation to climate and vegetation. Nature, 408(6814), 623–627. https://doi.org/10.1890/1051-0761(2000)010[0423:TVDOSO]2.0.CO;2

Lal, R., Smith, P., Jungkunst, H. F., Mitsch, W. J., Lehmann, J., Ramachandran Nair, P. K., Ravindranath, N. H. (2018). The carbon sequestration potential of terrestrial ecosystems. Journal of Soil and Water Conservation, 73(6), 145A–152A. https://doi.org/10.2489/jswc.73.6.145A

Paustian, K., Lehmann, J., Ogle, S., Reay, D., Robertson, G. P., & Smith, P. (2016). Climate-smart soils. Nature, 532(7597), 49–57. https://doi.org/10.1038/nature17174

UNCCD. (2021). Good practice guidance for SDG indicator 15.3.1, proportion of land that is degraded over total land area. United Nations Convention to Combat Desertification. https://www.unccd.int/resources/manuals-and-guides/good-practice-guidance-sdg-indicator-1531-proportion-land-degraded

UNFCCC. Global Climate Action portal (GCAP). United Nations Framework Convention on Climate Change. https://climateaction.unfccc.int/

UNFCCC High-Level Champions. (2023). Yearbook of global climate action 2023. United Nations Framework Convention on Climate Change. <u>Yearbook of Global Climate Action 2024:</u> Marrakech Partnership for Global Climate Action | UNFCCC

UNCCD. (2022). Global Land Outlook 2nd Edition: Land Restoration for Recovery and Resilience. United Nations Convention to Combat Desertification Secretariat. https://www.unccd.int/resources/global-land-outlook/global-land-outlook-2nd-edition

Wang et al. (2025) Wang, H., Cai, T., Tian, X., Chen, Z., He, K., Wang, Z., Gong, H., Miao, Q., Wang, Y., Chu, Y., Zhang, Q., Zhuang, M., Yin, Y., & Cui, Z. (2025). Global patterns of soil organic carbon distribution in the 20–100 cm soil profile for different ecosystems: A global meta-analysis. Earth System Science Data, 17(7), 3375–3390. https://doi.org/10.5194/essd-17-3375-2025

World Economic Forum (2024) World Economic Forum. (2024, November 22). Ground zero: Why soil health is integral to beating climate change. https://www.weforum.org/stories/2024/11/soil-climate-change-sustainable-agriculture/