

**Title of coalition:****Land and Freshwater Nexus****Main objective of the coalition:**

The Land-freshwater Nexus Cluster Coalition proposes a systematic, collaborative approach to manage land and water resources. It proposes the development of incentives and initiatives that promote integrated land and water resources management in food systems to protect watersheds and conserve surface and groundwater resources. A key part of this is to integrate innovative and traditional land and water resources management solutions for mountain, highland and lowland ecosystems. Such solutions must take into account different geographies, climates, ecosystems, social and economic considerations and the motivations of relevant stakeholders, including local communities.

Science based evidence to prioritize this coalition (scientific references):

Worldwide, food production accounts for 70% of human water abstraction (i.e. 2,800 km³ /yr) often diminishing, polluting and degrading water sources. Above all, this is creating an imbalance between current water supply and demand, and long term alteration of water cycles. This problem is inextricably linked to food production systems being responsible for approximately 80% of deforestation, 70% of terrestrial biodiversity loss, 50% of freshwater biodiversity loss, 25% of all greenhouse gas emissions and varied degradation of groundwater resources that account for 40% of total irrigated production. In Africa, 65% of the land is already considered degraded further compromising efforts to sustainably produce food. As of 2013, the Intergovernmental Panel on Climate Change reported that climate change had already caused the disappearance of 600 glaciers leading to significant changes in local and regional water cycles. These foregoing facts illustrate the urgency to sustainably manage land and freshwater ecosystems. Mountains and highlands are of particular importance contributing 60-80% of the freshwater critical to both upstream and downstream habitats, including arid and semiarid areas.

References

DeClerck et al. (2021) Biodiversity and Agriculture: Rapid Evidence Review.

UNEP. 2016. A snapshot of the world's water quality: towards a global assessment. Nairobi, United Nations Environment Programme.

Mateo-Sagasta, J. & Burke, J. 2010. Agriculture and water quality interactions: a global overview. SOLAW Background Thematic Report-TR08. Rome, Food and Agriculture Organization of the United Nations.

Scanlon, B.R., Faunt, C.C., Longuevergne, L. Reedy, R.C., Alley, W.M., McGuire, V.L. and McMahon, P.B. 2012. Groundwater depletion & irrigation sustainability. Proceedings of the National Academy of Sciences 109(24):9320-9325. DOI: 10.1073/pnas.1200311109

Greenpeace 2021. Agribusiness & Deforestation. <https://www.greenpeace.org/usa/forests/issues/agribusiness/> (Accessed June 23, 2021)

WWF 2021. Farming with Biodiversity. Towards nature-positive production at scale. WWF International, Gland, Switzerland.

Gilbert, N. One-third of our greenhouse gas emissions come from agriculture. Nature (2012). <https://doi.org/10.1038/nature.2012.11708>

IPCC. 2013. Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Mechanisms of implementation (Global to National levels):

The Land-Freshwater nexus will initiate a coalition for action around scientific evidence generation, scaling of policy and business solutions, policy leadership, and communities. The coalition will function



based on the current UNFSS process through inclusion of forward thinking organisations coalescing around the crucial challenge of managing Land and Freshwater sustainably. Solutions will be cross-border, national and local in nature. Leadership of this coalition will be critical, and will be defined as a key step to ensure strong objectives and follow up of the stated vision. Objectives will mainly include i) global and national pathways ii) business solutions iii) integration of existing initiatives iv) set of geographic-specific initiatives, development of action roadmaps.

Strategic partners (members, private sector, civil society, academia):

- The Mountain Partnership – the UN alliance dedicated to protecting mountain ecosystems and peoples.
- Regional mountain conventions and initiatives, such as the Alpine Convention, the Carpathian Convention and the Andean Initiative.
- World Farmers Organization, TNC/Water for Food Institute/Bureau of Reclamation/ USDA/ Veolia, WRI, WOCAT
- Water Funds/Resilient Watersheds (40+ water funds + PES water schemes around the world) – innovative funding of NBS in agriculture – TNC, ABI, others
- FAO, IUCN, TNC, WWF, World Bank, IFPRI, IWMI/CGIAR, WRI, Universities, WOCAT, CONDESAN

Monitoring and Evaluation (clear quantifiable indicators and targets linked to SDGs)

Based on the mechanisms of implementation above, indicators of progress include i) a bold coalition with strong leadership and political involvement/ buy-in to drive structural change, ii) a coalition report including innovative pathways on how to deliver the set goals, iii) financing mechanisms, iv) global and national pathways v) geographic-specific initiatives including alternatives for businesses.