AHMEDNADHIR.COM
Where global change meets public authority.
GOVERNANCE | CLIMATE | PUBLIC SYSTEMS

Climate Across Systems | Ahmednadhir | No. 11

18 November 2026

The farms behind the climate plan

Three-minute briefing

Farms and forests can reduce the cost of the energy transition. The difficult question is how their contribution is agreed when the same land and water already support food production and livelihoods. Five publications from 11–17 November show why agricultural climate policy needs to reconcile those claims rather than assume the resources are available.

Global modelling by Leon Merfort and colleagues finds that including land-based mitigation lowers discounted cumulative consumption losses for a 1.7°C peak-warming objective from 3.5% to 1.3%, relative to a current-policy baseline. The comparison covers 2025–2100, discounts at 5% annually and excludes climate damages. Constraints on bioenergy and agricultural emissions pricing can ease food-system pressure while retaining much of the benefit. These are modelled policy alternatives, not forecasts for household incomes.

The resource beneath a farm matters too. A new Comment on sinking land draws attention to groundwater loss. In susceptible sediments, compaction can permanently reduce storage. Protecting a crop through extra pumping can therefore weaken a shared reserve. The mechanism is established background; the Comment is an argument for its place in water governance, not a new global depletion estimate.

The farm-level readings complicate standard adaptation packages. Retrospective modelling across five US Corn Belt states finds that hybrid heat requirements help explain why climate contributions to maize yields differ across latitude. In Northwest Ethiopia, a survey of 734 dairy households associates intermediate and intensive-diversified adoption with less food insecurity than selective adoption. The difference between those two more extensive profiles was not statistically significant. The cross-sectional design cannot establish causal benefits.

A separate Perspective argues that water institutions must recognise informal and decentralised provision alongside cross-sector dependence. For public authorities, the affected decisions concern compatible land uses, shared-water access and the conditions attached to agricultural support. Private buyers, seed suppliers and lenders influence which choices farmers can make and maintain.

The proposed response is a negotiated land-use offer within an existing agricultural programme: compare feasible production and restoration options, explain their water and labour demands, and provide independent advice and a route to challenge contract terms. This is a proposition, not an approved programme. Multi-season evidence of income, yields, resource condition and who retains access would determine whether expansion is justified. Insecure rights, greater unpaid labour or continued depletion would weaken the case, even if a carbon calculation looked attractive.

Complete edition and sources