

# Policies and governance for biomass and land use Special Report on Climate Change and Land

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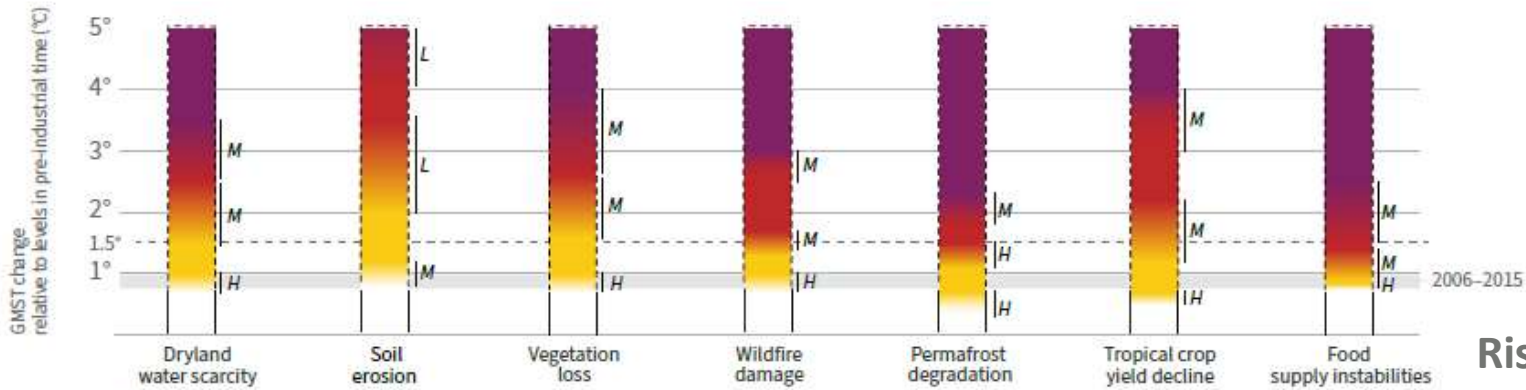


Agricultural landscape between Ankara and Hattusha, Anatolia, Turkey (40°00' N – 33°35' E)  
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**COP25 IPCC Pavilion, 5 December 2019**

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INTERGOVERNMENTAL PANEL ON climate change

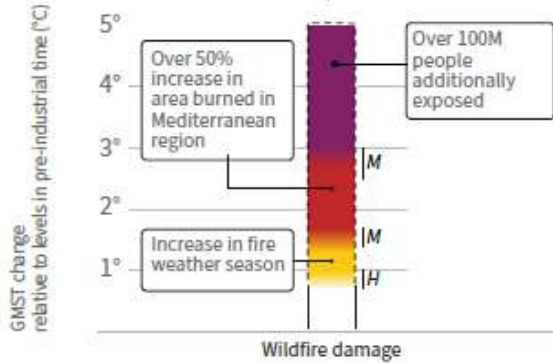




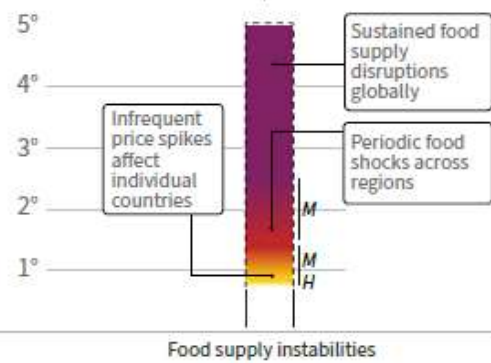
**Systems at risk:**



*Indicative example of transitions*



*Indicative example of transitions*

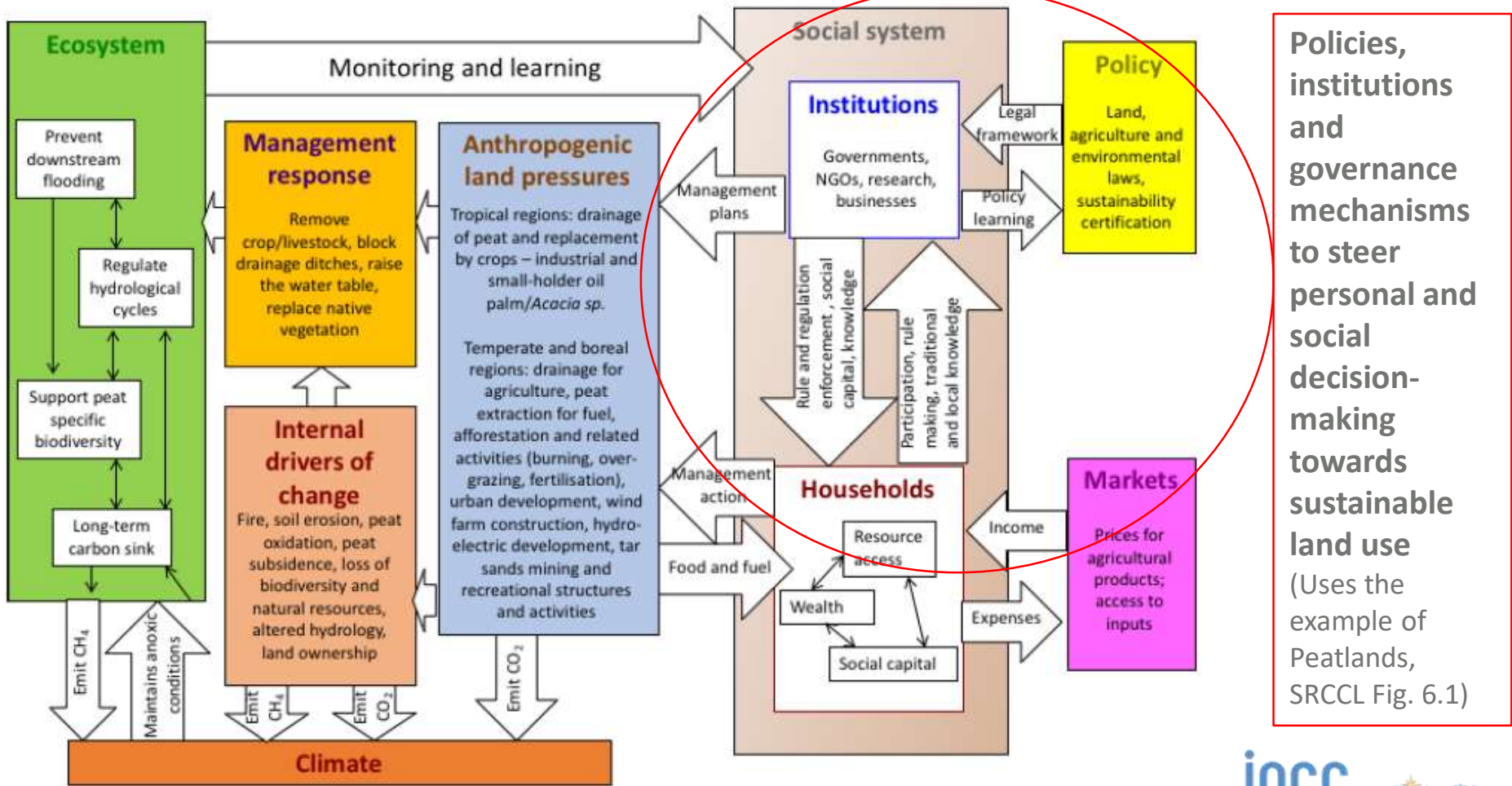


Risks to humans and ecosystems from changes in land-based processes as a result of climate change (SRCCL Fig. TS.14A)



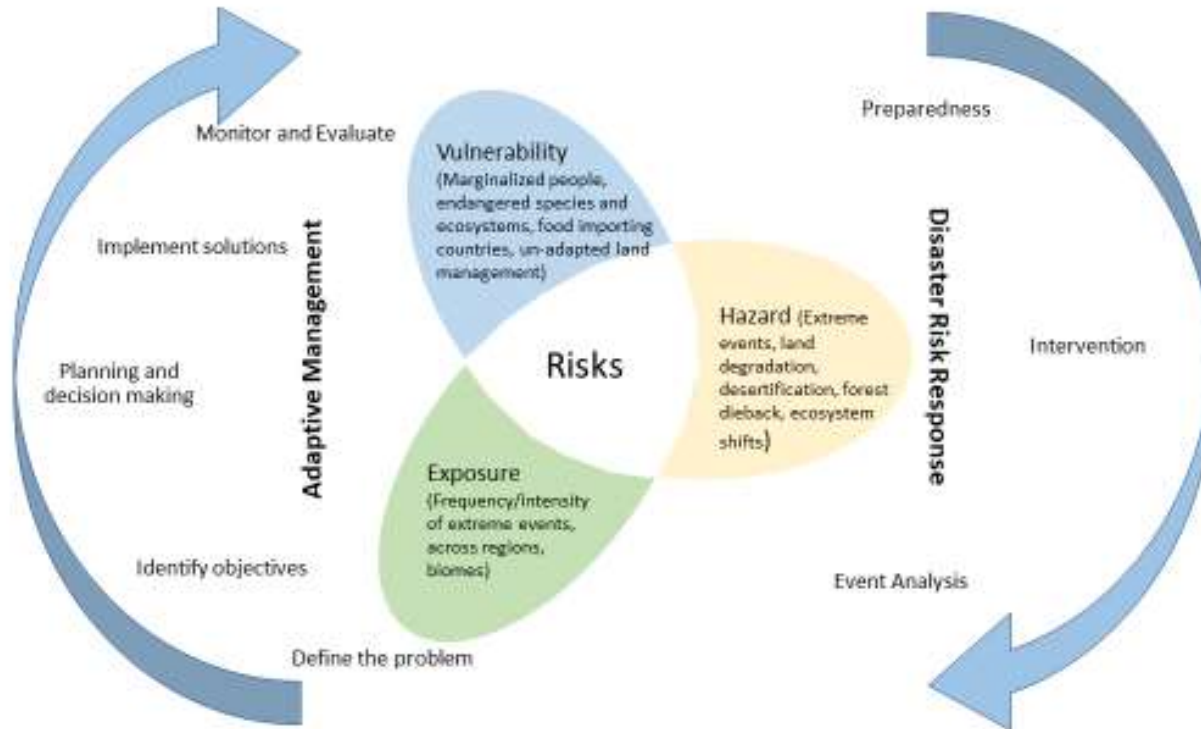
# Risk Management issues in Policymaking

- Changes in global temperature have impacts on land and can result in **compound risks** to food systems, human and ecosystem health, livelihoods, the viability of infrastructure, and the value of land. These vary by region.
- Risks related to land degradation, desertification and food security increase with temperature and **can reverse development gains** in some pathways.
- Land-based responses can have **adverse side-effects**.
- Policies that address poverty, degradation & emissions can achieve climate resilient sustainable development.
- Delaying mitigation in other sectors and **shifting the burden to the land sector increases risks**, including adverse effects on food security & ecosystem services.



Policies, institutions and governance mechanisms to steer personal and social decision-making towards sustainable land use (Uses the example of Peatlands, SRCCL Fig. 6.1)

# Risk Management and Adaptive Governance



Source: SRCCL  
Figure 7.8



## Wide range of Policies and institutions to reduce and manage Desertification and Land Degradation

- Land Degradation Neutrality targets and monitoring
- Regulation (land use zoning, land sparing, land sharing)
- Support schemes for switching away from traditional biomass use (fuelwood and charcoal) towards modern renewable fuels
- Siting ordinances for solar/wind farms to reduce negative impacts on biodiversity and local livelihoods
- Land tenure reforms
- Voluntary (diet changes, standards/certification, collective action)
- Persuasive (e.g. payments for ecosystem services)
- Early warning systems and advisories
- Risk sharing mechanisms (e.g. insurance)



## Policies that are widely applicable across the food system

- Policies that operate across the food system, including those that **reduce food loss and waste and influence dietary choices**, enable more sustainable land-use management, enhanced food security and low emissions trajectories.
- Policies promoting the target of **land degradation neutrality** can also support food security.
- Empowering women and local communities can bring synergies and co-benefits to **household food security** and sustainable land management. Policies can address land rights and barriers to women's participation in sustainable land management.

*Knowledge and technology transfer can help enhance the sustainable use of natural resources for food security under a changing climate (e.g. seasonal forecasts and early warning systems)*

Scale	Policy/instrument	Food security	Land degradation and desertification	Sustainable land management (SLM)	Climate related extremes	GHG flux/ climate change mitigation
Global/ cross-border	Finance mechanisms (also national)	•	•	•	•	•
	Certification (also national)		•	•		•
	Standards (including risk standards) (also national)		•	•	•	•
	Market-based systems (also national)			•		•
	Payments for ecosystem services (also national)		•	•	•	•
	Disaster assistance (also national)				•	
National	Forecast-based finance, targeted microfinance	•	•	•		•
	Insurance (various forms)	•			•	
	Hazard information and communication (also sub-national and local)	•			•	
	Drought preparedness plans (also sub-national and local)	•			•	
	Fire policy (suppression or prescribed fire management)			•	•	•
	Regulations	•	•	•	•	•
	Land ownership laws (reform of, if necessary, for secure land title, or access/control)	•	•	•		
Sub-national	Spatial and land-use planning	•	•		•	
	Watershed management	•	•			
Local	Land-use zoning, spatial planning and integrated land-use planning	•		•	•	
	Community-based awareness programmes	•	•	•	•	•

Selected Policy Instruments at different scales in relation to land-climate interactions and aims (extracted from SRCCL Table 7.2)



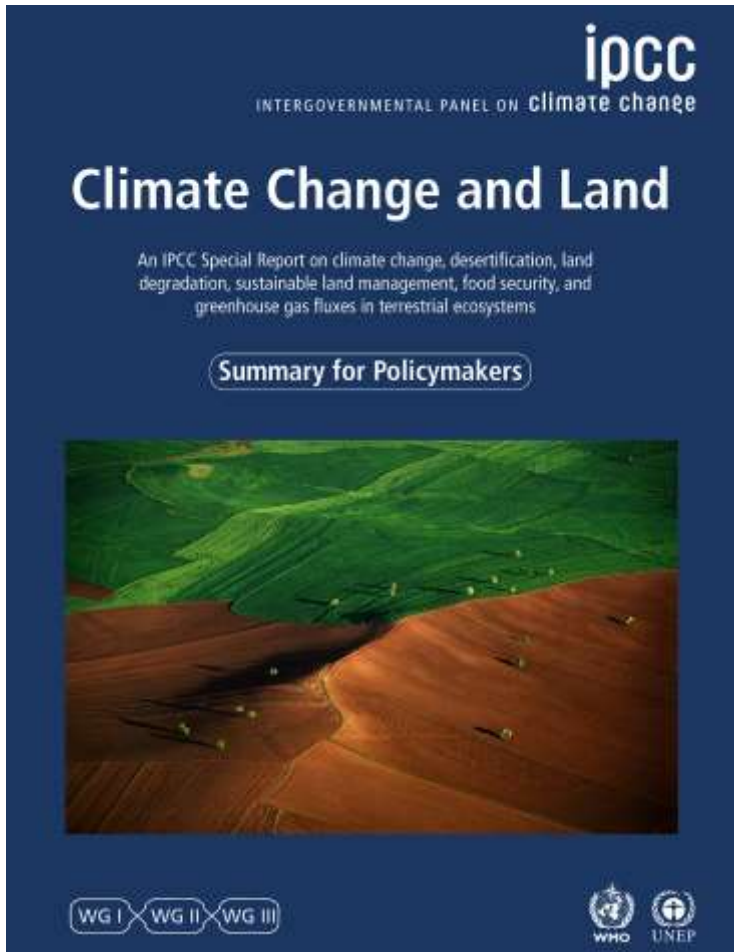


## Strong **Governance** mechanisms for the **land-climate interface** that can **adapt to uncertainty** and **changing risks** are critical to achieve **best practices**

- *Governance as a social function* for steering collective behaviour towards sustainable and climate resilient development
- *Adaptive institutions* that incorporate experimentation and learning
- Incorporating *indigenous knowledge* and informal decision-making
- *Hybrid governance* combines centralized decision-making with horizontal structures that allow flexibility, autonomy for local decision making and multi-stakeholder engagement
- *Multi-level* (local, national, regional, global) governance structures
- *Transnational* governance (e.g. standards, partnerships, certification)
- *Integrated* governance across sectors, policies and landscapes
- Strong integrated governance systems will help to achieve Best Practice for *land-based mitigation*, including Bioenergy with CCS

# Concluding Thoughts

- The potential for mitigating climate can only be realised if **agricultural emissions are included in mainstream climate policy**.
- **Acting early** will avert or minimise risks, reduce losses and generate returns on investment.
- **Sustainable land management approaches** should be mainstreamed into decision-making processes
- **Measuring progress towards goals** is important to decision-making, adaptive governance & policy success.
- A **flexible, adaptive, iterative approach** is needed for the complexity of land and climate interactions and food security.



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