Essential climate variables to support climate change mitigation in the land use sector

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Background

1. The Essential Climate Variables (ECV) framework has resulted in focus and important progress for climate observations (steered by UNFCCC/GCOS)
2. ECV observation progress has largely focused on IPCC Working Group I – type users
3. Importance of terrestrial domain is increasing in climate science
4. Human dimension largely absent in ECVs; required for links to mitigation and adaptation
5. Implications from Paris Climate Agreement

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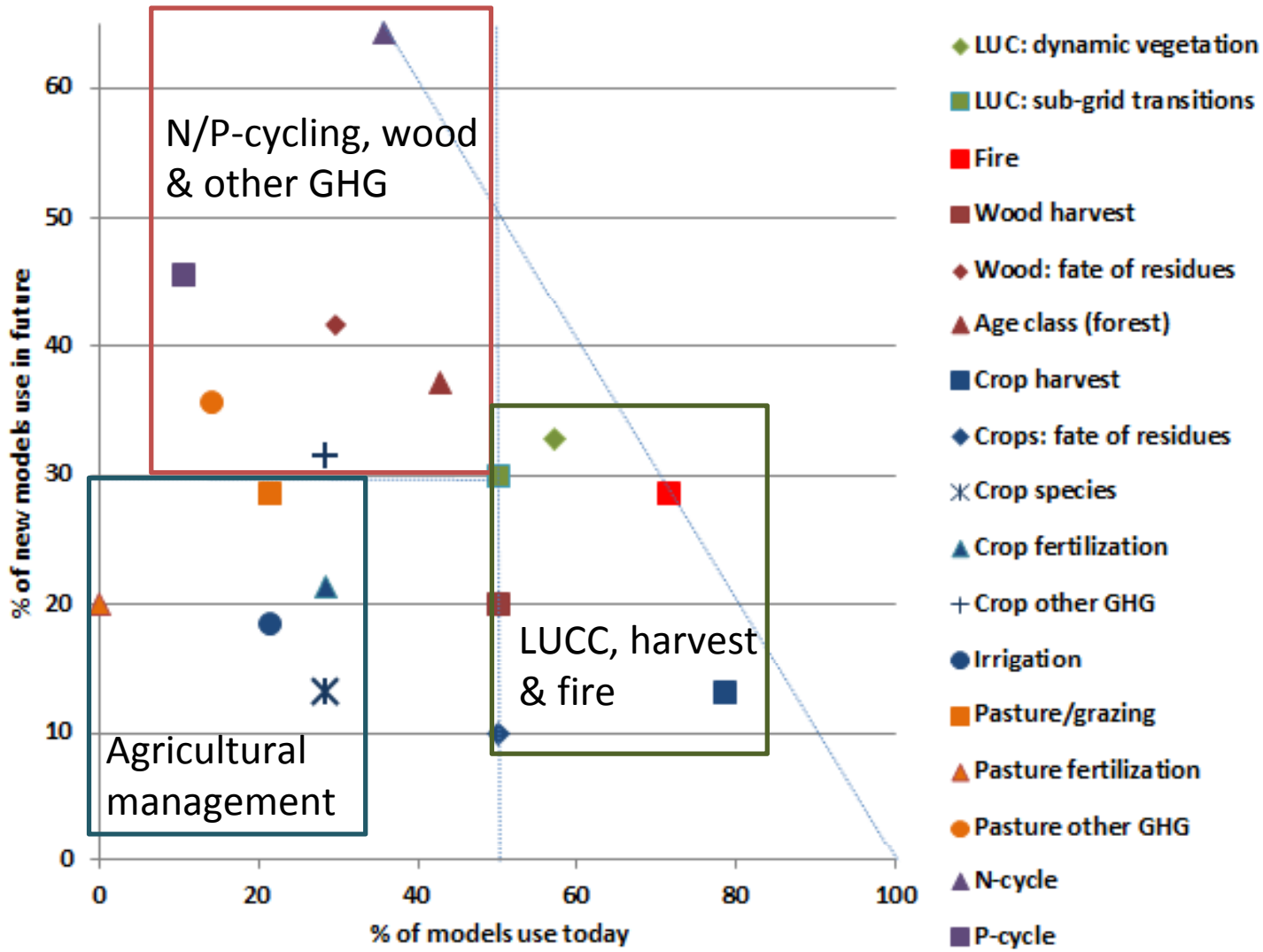
Land use and land management in CMIP6



Source: ISSI LM team questionnaire of 14 Earth System models in CMIP6

Starting the dialog between observation and mitigation community

GCOS Workshop on Observations for Climate Change Mitigation

Geneva, Switzerland
5–7 May 2014

Co-sponsored by the Land Cover Project Office of the Global Observation for Forest Cover and Land Dynamics (GOFC-GOLD) Programme

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- ***Representatives from UNFCCC, FAO, IPCC, ICRAF, ESA, etc.***
- ***Focus on Land-based mitigation (land use and land management)***
- ***ECVs in the context of mitigation***
- ***Users and data requirements***
- ***Recommendations and actions***

Workshop website:
http://www.wmo.int/pages/prog/gcos/index.php?name=ObservationsforMitigation

Users of observations for climate change mitigation

Mitigation: planning, implementation, evaluation

Users	Mitigation-related objectives / research
Countries	1. Global mitigation negotiations (e.g., COPs). 2. Establishment of mitigation targets and mitigation policies, i.e. legally binding emission reduction commitments. 3. Implementation of mitigation policies at national and sub-national scales 4. International reporting through bottom up country contributions. 1. National Communications 2. National GHG Inventories (IPCC Good Practice guidelines)
Climate modelling	Research on climate scenarios in connection with mitigation needs.
Earth Systems modelling	Biogeochemical global cycles and associated GHG fluxes scenarios and their relation to mitigation scenarios
Integrated assessment models	Socioeconomic, climate, and biogeochemical integrated global scenarios
Policy impact assessment and modelling	1. Mitigation alternatives and scenarios considering political, socioeconomic, climatic, and biogeochemical components. 2. Sustainable consumption

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