

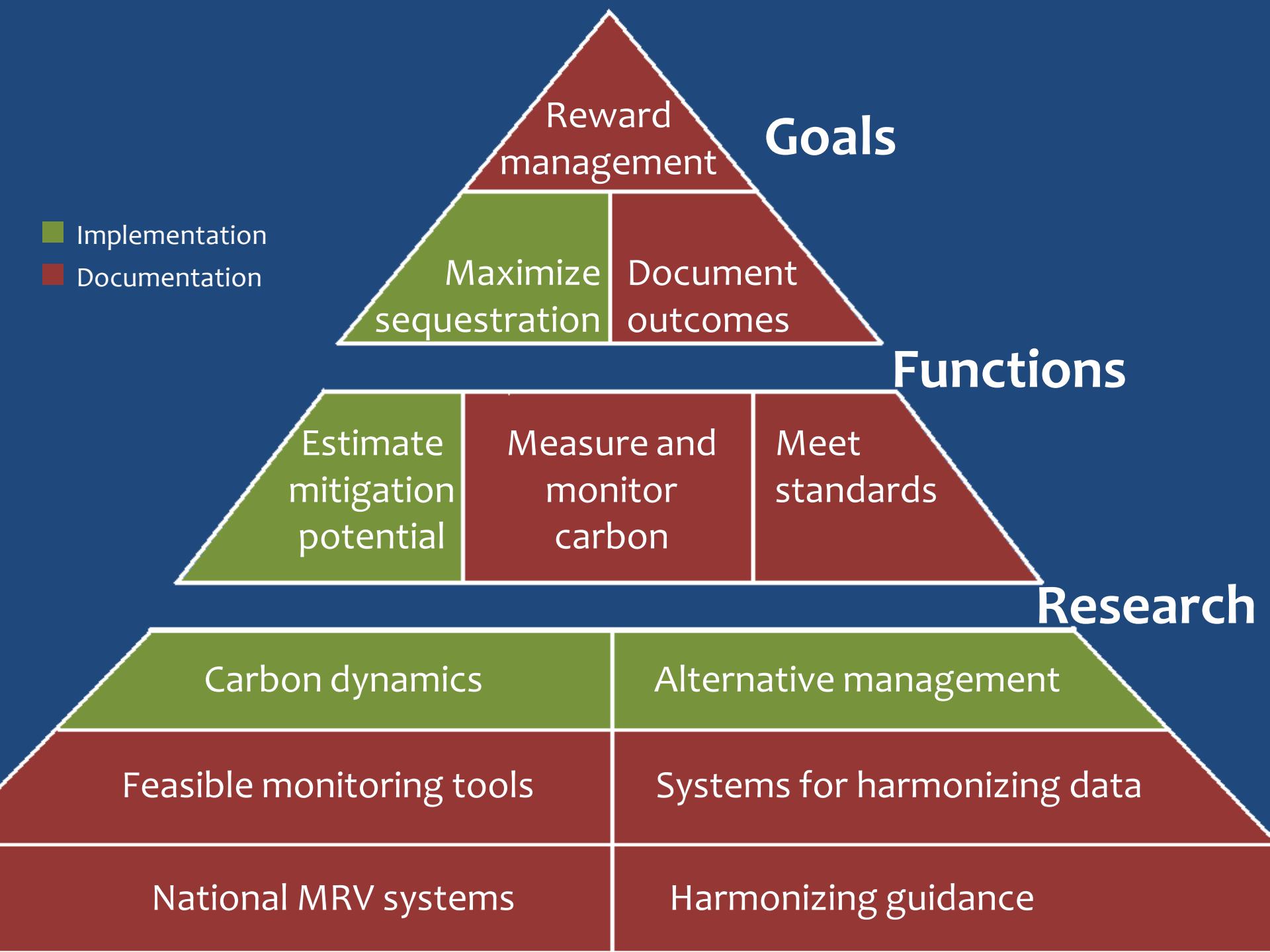
Building the Base:

Scientific Investments to Support Agricultural Mitigation

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High-level conclusions

- Solid foundation of knowledge, experience, tools, data, and guidance
- Need cost-effective tools / methods and spatially-resolved data-gathering
 - for all land classes, regions, and carbon pools
- Diverse circumstances require regionally-relevant mix of
 - management practices
 - measurement approaches and models



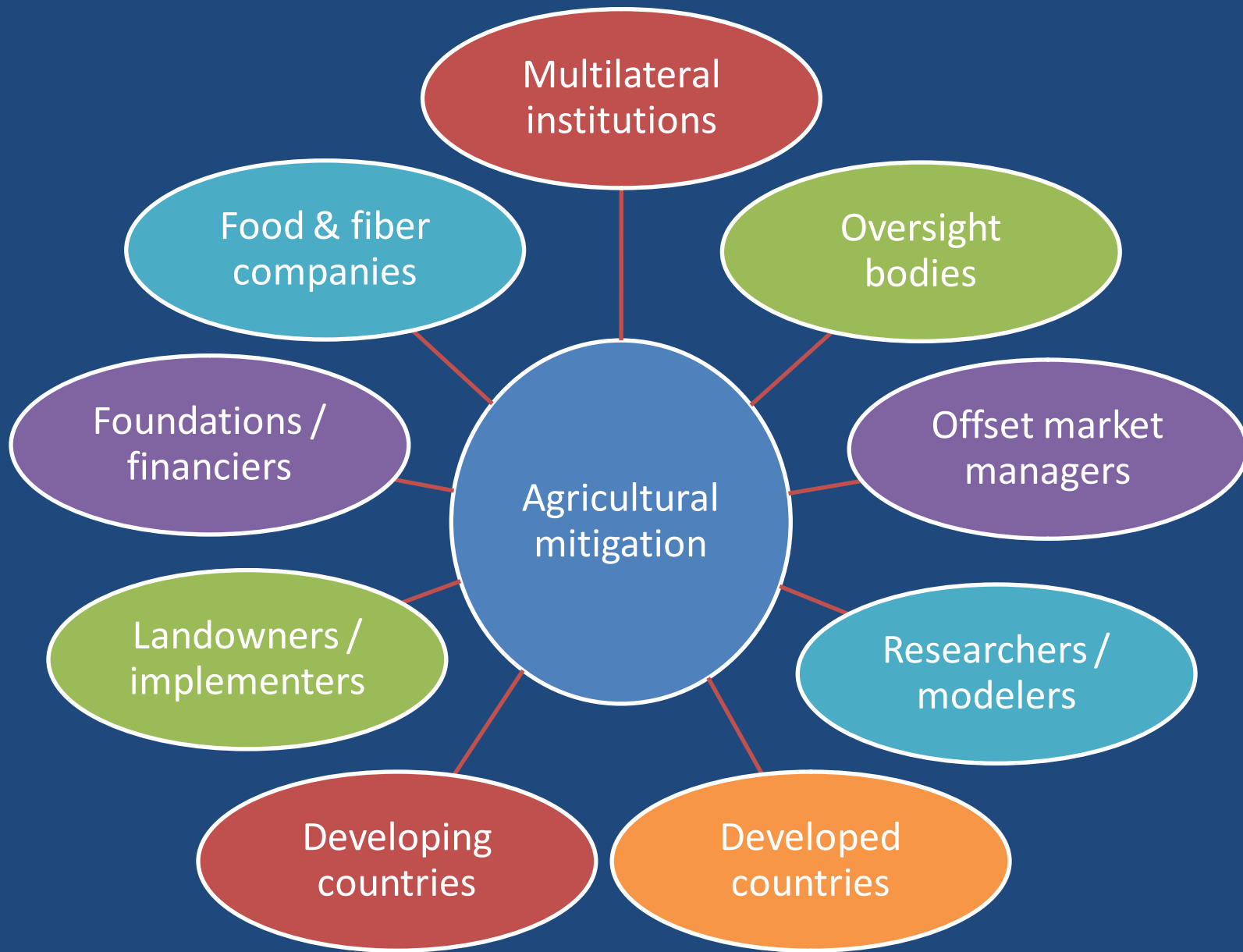
Priority research needs for agriculture

Carbon dynamics	<ul style="list-style-type: none">•Soil C distribution – among pools, with depth, over time
Alternative management	<ul style="list-style-type: none">•Soil C distribution & residence times•Extent of desertification, degradation
Accounting tools	<ul style="list-style-type: none">•Regionally-relevant field data and models•Heterogeneous landscapes
Global data system	<ul style="list-style-type: none">•Integrated research and inventory data•Data sharing across scales and sectors
National accounting	<ul style="list-style-type: none">•Regional field data, conversion equations•Sampling designs
Reporting guidance	<ul style="list-style-type: none">•Methodology development / approval•Compatible terms, definitions, standards

Recommendations

- **Greater convergence / consistency**
 - research / synthesis
 - models
 - terminology, reporting guidelines
- **Network platforms are key**
 - facilitate research synthesis, tool development
 - access to tools, databases, technical support, extension
 - structured / convened <--> open source
 - requires motivated participants and continuity of resources





Initiatives underway – some examples

- **Climate Change, Agriculture and Food Security (CGIAR)** – global research program
- **GlobalSoilMap.net** (consortium) – digital soil data
- **GRACEnet** (USDA-ARS) – national database of agricultural practices and emissions
- **Technical Working Group on Agricultural Greenhouse Gases (T-AGG)** – methodologies for agricultural practices
- **Climate Assessment project** (Sustainable Food Lab, Unilever, etc) – common tool for supply chain mitigation
- **EX-ACT** (FAO) – project design tool

Robust, global, integrated scientific / technical infrastructure



- **necessary for expanded agricultural mitigation**
 - advancement also needed in policy, finance, governance
- **most effective if information needs for full range of stakeholders are known and addressed**
 - prioritize information delivery
- **can be achieved through convergence among existing institutions and initiatives**
 - emphasis on networks / platforms



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