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Applied Systems Analysis
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science for global insight

Scientific Working Group on Scenarios

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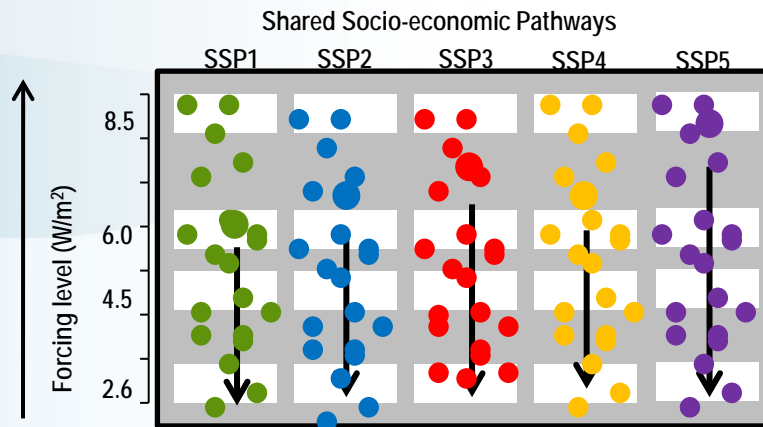
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Three main Activities

- Finalizing SSP IAM marker scenario development



- Facilitate widespread application of IAMs for the SSPs



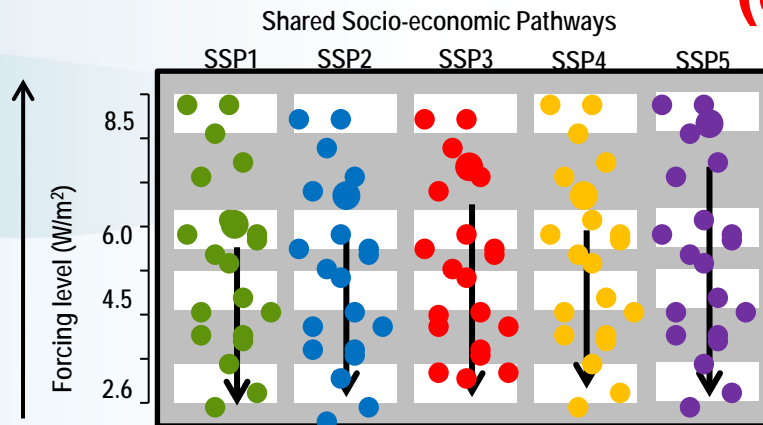
- Serve as contact group for ScenarioMIP; prepare the required inputs for ESMs

Three main Activities

- Finalizing SSP IAM marker scenario development



- Facilitate widespread application of IAMs for the SSPs (Jointly with Data SWG)**



- Serve as contact group for ScenarioMIP; prepare the required inputs for ESMs

Which IAM scenarios?

- Additional global SSPs
- Regional & national SSP scenarios
- Sectoral SSP scenarios (eg, energy)
- Harmonized & non-harmonized SSPs
- Etc....

Main steps in the process

- Develop guidelines
 - SSP-IAM modeling protocol
 - Data formats/variables
- Collect scenarios information using the IAMC database infrastructure
- Manage submissions
- Continuous review and quality control

Guidelines for IAM scenario development

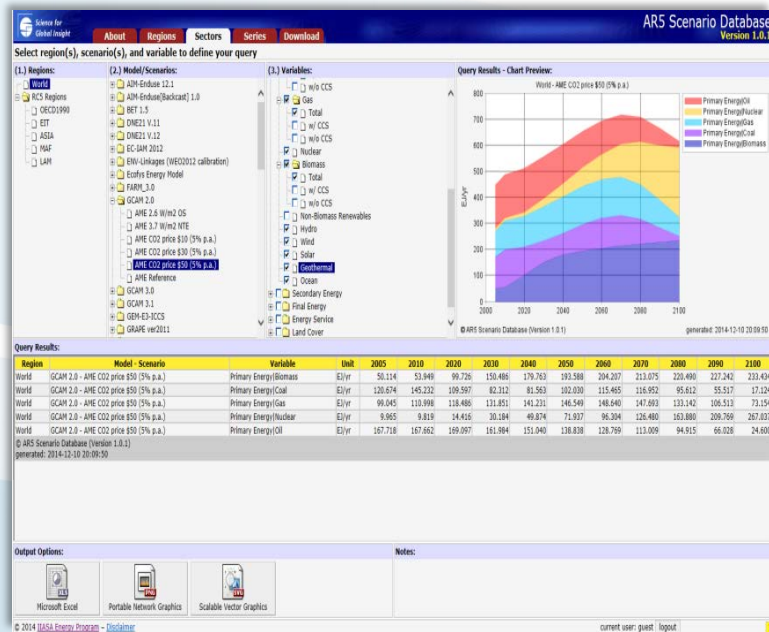
- Storylines (O'Neill et al)
- National GDP/POP (KC& Lutz / Dellink et al)
- Qualitative guidance on key IAM assumptions
 - Energy technologies
 - Energy demand
 - Energy resources
 - Land-use change
- SSP specific SPAs (assumed in the global runs)

Extension of narratives for IAM modeling (eg assumptions for energy demand)

SSP Element	SSP 1			SSP 2			SSP 3			SSP 4			SSP 5					
	<i>Country Income Groupings</i>																	
	Low	Med	High	Low	Med	High	Low	Med	High	Low	Med	High	Low	Med	High			
Non-climate Policies																		
Traditional Fuel Use	fast phase-out, driven by policies and economic development			intermediate phase-out, regionally diverse speed			continued reliance on traditional fuels			continued traditional fuel use among low income households			fast phase-out, driven by development priority					
Energy Demand Side																		
Lifestyles	modest service demands (less material intensive)			medium service demands (generally material intensive)			medium service demands (material intensive)			low service demands			high service demands (very material intensive)					
Environmental Awareness	high			medium			low			low			medium (low for global)					
Energy Intensity of Services																		
Industry	low			medium			high			high			medium					
Buildings	low			medium			high			medium			medium					
Transportation	low			medium			medium			high			low			high		
General Comments				some regional diversity														

- Similar tables for tech change of supply, resource availability, and land-use change

Collect information using the IAMC database infrastructure



- Model teams manage own scenarios
- Data comparisons and downloads available to all teams
- Library grows evolutionary (populating the matrix)
- Data template and variable definitions to be defined/developed
- New features needed (eg, automated harmonization / quality checks)

Points for discussion

- Minimum requirements for submissions
 - Minimum data reporting
 - Documentation (peer-reviewed only?)
- Harmonized vs non-harmonized SSPs:
 - POP & GDP
 - IAM ranges of current SSPs
- Quality control needed
 - Some automated quality controls (eg, base year information or climate)
 - Establish Review Committee to screen submissions for public release (community effort)
- Timeline
 - IAM guidance materials: February 2016
 - Database development: Jan-April/May 2016
 - IAM Submissions as of April/May
 - Quarterly (semi annually?) review of submissions by Committee