What is scenario planning?

- a tool to develop and test management strategies or policies under a range of plausible futures
- not a tool to predict the future
- most appropriate when uncertainty about the future is high and the drivers of future change are difficult or impossible to control

Focal Question for Today

- Considering the next 35 years (i.e., to mid-century), what overarching themes and specific drivers would affect decisions related to land use/management by federal officials, state/local authorities, or others?

- Degree of consistency with global scenarios is at group discretion

Suggested Process (see examples below)

- Identify several high impact drivers from those identified yesterday
- Identify two different (uncorrelated) themes to serve as organizing devices
- On a large sheet of paper draw a large "+"
- Sketch out elements of the 4 scenarios resulting from combinations of high and low values of the drivers.
- Reserve time at end to critique, provide feedback regarding options for future scenario development

Example from Mongolia

- Question was:

What environmental, social, and policy conditions are most likely to support long-term sustainability of social-ecological systems on the Mongolian Plateau over the next 20-50 years?

Green policy

H

- Sustainability development
- Rehabilation (ecology)
- Native plants & animals
- Employment & Living condition
- Waste mgt.
- Forestation
- GDP increase

- Pastural system development
- Living condition better
- Water quality
- Rural Living condition increase.
- Small scale farmers
- LULC better.
- forestation
- GDP decline

Industrial & Mining

L

- Desertifaction
- Degradation
- Economic development
- Pastural shortage
- Infrastructure development
- Rural Living condition worse (decrease)
- Migration (to center)
- Water & Soil stress.
- Pollution
- food shortage
- GDP increase.

- Drought
- Sand storm
- Pollution & agriculture
- Pastural/management conflict
- Agricultural Soil erosion
- infrastructure development problem
- Land mgt needed & regulation
- Livestock quality problem
- Green house gases increase.
- forest cut

H

Agricultural and Livestock sector

L

Private market

Another example high-level framework and drivers

US Level of Concern and Consensus on Sustainable Development

High

"Low-Growth Renaissance"

"Smart-Growth"

Demand for Land-Based Natural Resources

Low

High

Identify main drivers, consider divergent 'state' or trends, and combine into internally-consistent combinations. E.g.,

- Land policy and practice
- Agriculture/forest policy
- Culture
- International effects
- Demographics
- Settlement patterns

"Brownfields Persist"

"Slash and Burn"

Low

US Level of Concern and Consensus on Sustainable Development

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Low

High

"Low-Growth Renaissance"

Land policy and practice
Agriculture/forest policy
Culture
International effects
Demographics
Settlement patterns

…

"Smart-Growth"

Strict zoning
High gov't intervention in ag/forestry
Sustainable consumption
High export demand for ag/forestry
Slow economic growth
Low population growth/low migration
Concentrated development

…

"Brownfields Persist"

"Slash and Burn"

Market-based land development
Little environmental regulation
High materialism/consumption
High export demand/commod. prices
Rapid economic growth
High population growth
Sprawl

…

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Possible Outcomes

- Ideas for possible frameworks for scenarios
- Learning about scenario development process
- Based on reflections on this experience, suggestions for next step processes for design of US land scenarios
- Belief that workshop organizers are crazy

Millennium Ecosystem Assessment

Other International Scenario Families

	IPCC-SRES	GEO-3	Millennium Ecosystem Assessment	FAO
Economic optimism, market liberalisation	A1	Markets First	*Global Orchestration*	
Reformed market scenario		Policies First	*Global Orchestration*	
Global sustainable development	*B1* (B1-450)	Sustainability First	TechnoGarden	
Regional competition, low growth	A2	Security First	Order from Strength	
Regional sustainable development	*B2*		Adapting Mosaic	
"Business as usual" (medium	*B2* MiniCam,			AT2015/2030
Main interest	Greenhouse gas emissions	Global environmental change	Changes in ecosystem services;	Changes in agricultural production

Westhoek, H., Eickhout, B., vanVuuren, D., 2005

Main Scenario Features

	Economic optimism	Reformed markets	Global sustainable development	Regional competition	Regional sustainable development
Economic development	Very rapid	Rapid	Slow-rapid	Slow	Slow/medium
Population growth	Low	Low	Low	High	Medium
Technology development	Rapid	Rapid	Medium-Rapid	Slow	Slow-medium
Main objectives	Economic growth	Various goals	Economy, Environment, Equality	Security	Local sustainability
Attitude towards env. Protection	Reactive	Pro-active – reactive	Pro-active	Reactive	Pro-active
Trade	Globalisation	Globalisation	Globalisation	Trade barriers	Trade barriers
Policies/institutional development	Policies create level playing fields for markets	Policies help reducing market failures	Strong global governance	Strong national governments	Local steering; local actors

Westhoek, H., Eickhout, B., vanVuuren, D., 2005