

Attributes – Round 3

19 May 2016 meeting

Photo: DB Thats-Me, <http://www.panoramio.com/photo/5589140>



Previously

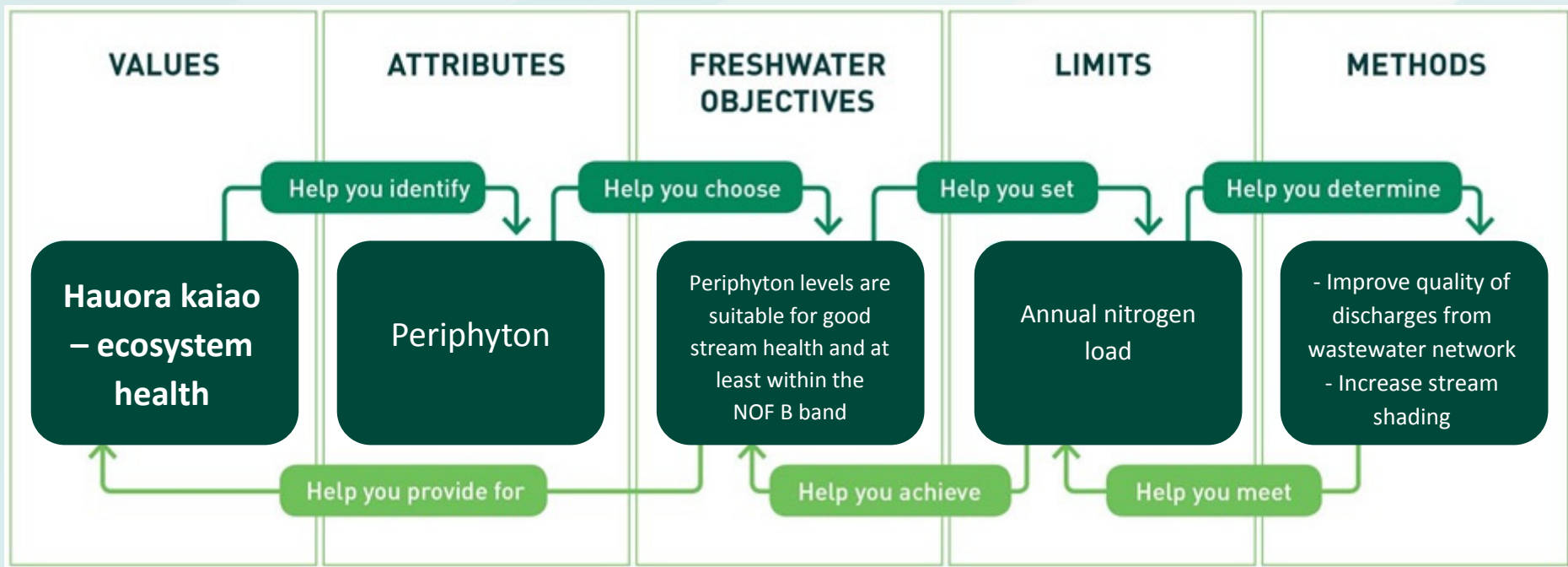
- Recapped what makes a good attribute
- Worked up two similar lists for Hauora kaiao – Ecosystem health
- But, lists long and still questions about what it all means and where to from here...

Today

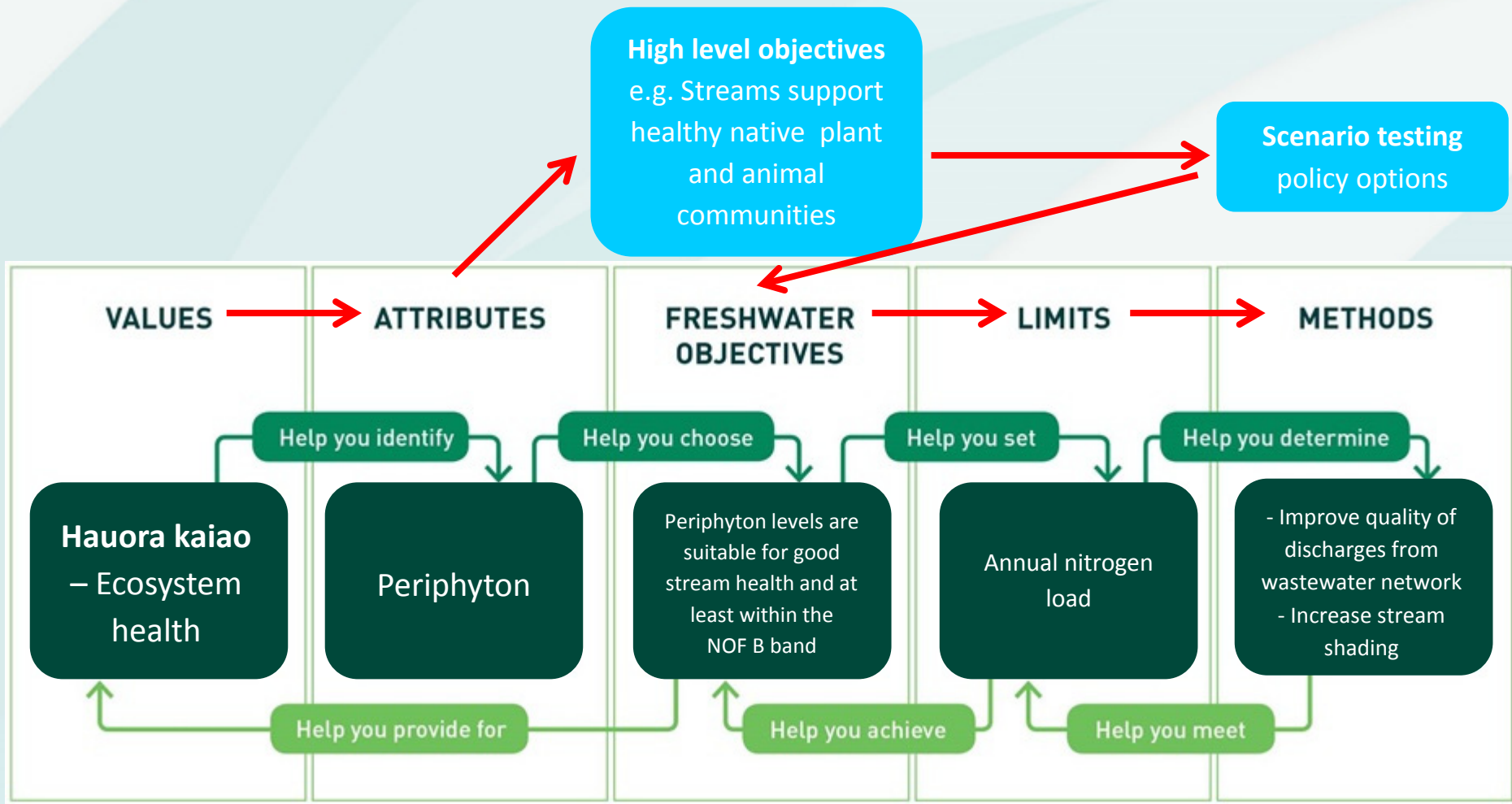
- Revisit how we're using attributes
- Think about attributes in scenario testing
- Refine list of attributes for Hauora kaiao – Ecosystem health

We'll use attributes for:

1. Scenario testing
2. Setting objectives
3. Calculating limits
4. Monitoring the actions of the WIP



The theory

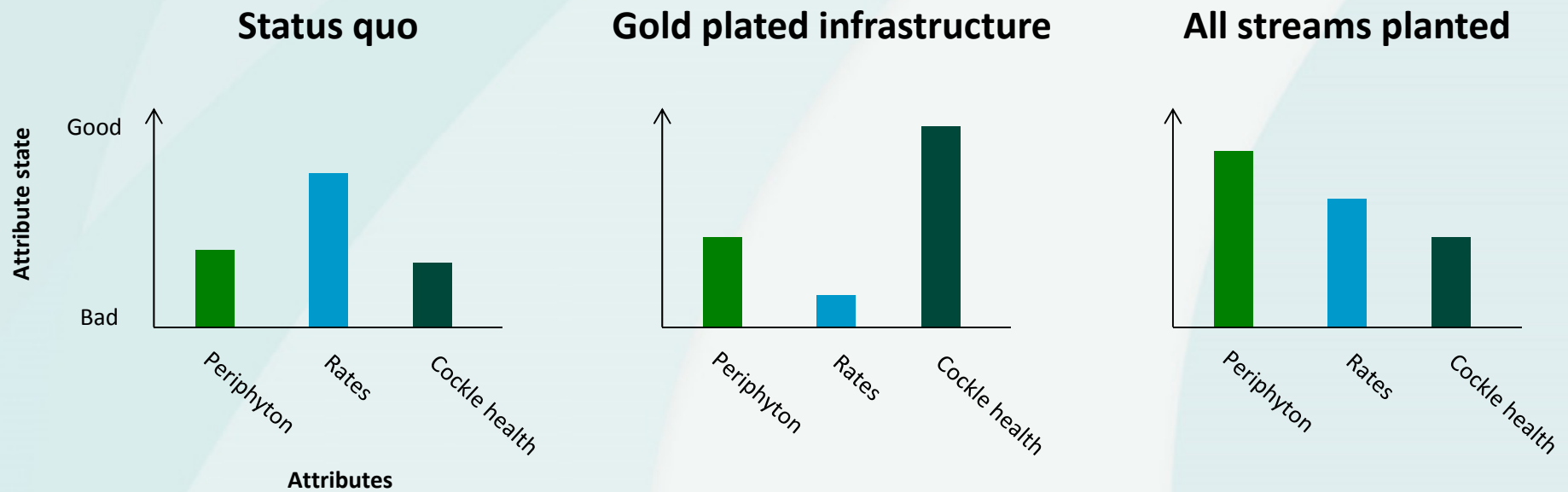


The messier reality...

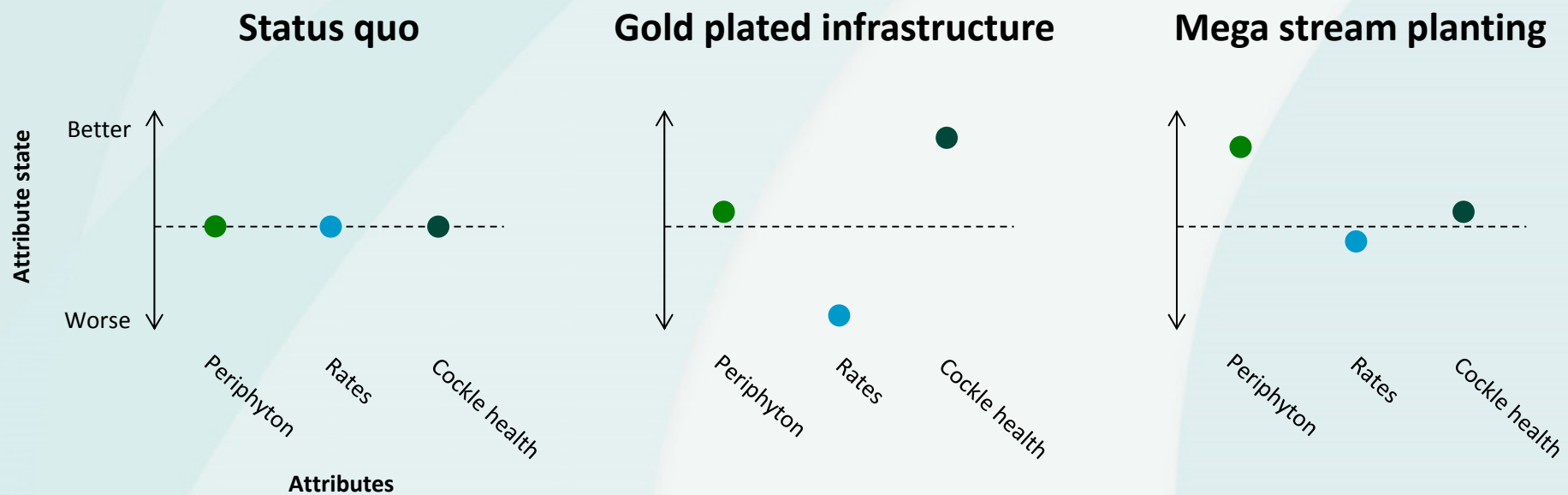
Using attributes in scenario testing

- Need an attribute set that tells us enough about what we care about
- Show us the size of change between different scenarios

Hypothetical scenario attribute scoring



Hypothetical scenario attribute scoring



Refining HK-EH attributes

- Look over list
 - Gaps and clarifications
 - Do the attributes apply to this value?
- Next steps

	Could apply to					
	Rivers/streams	Lakes	Wetlands	Groundwater	Estuaries	Open coast
Water quality/physico-chemistry						
Dissolved oxygen	NOF	X				
pH	X	X	X	X		
Water temperature	X	X				
Clarity/suspended solids/turbidity	X	X			X	X
E.coli	NOF*	NOF*	X	X	X	X
Heavy metals (dissolved)	X	X		X	X	
Hydrocarbons	X	X			X	
Nitrate toxicity	NOF					
Ammonia toxicity	NOF	NOF		X		
Nitrogen (nitrification)	X	NOF		X	X	
Phosphorus (nitrification)	X	NOF	X		X	
Salinity				X		
Suspended sediment	X	X			X	
Sediment						
Sediment toxicity	X	X			X	
Sedimentation rate		X			X	
Substrate – muddiness/content	X	X			X	
Aquatic plants/algae						
Algae	X	X			X	X
Periphyton	NOF					
Phytoplankton		NOF				
Seagrass					X	
Ulva					X	
Animals						
Biodiversity Index	X	X	X		X	X
Birds	X	X	X		X	X
Fish	X	X	X		X	X
Indicator species	X	X	X		X	X
Mahinga kai abundance, condition, presence, edible	X	X	X		X	X
MCI	X					
Native fish presence	X	X				
Shellfish abundance					X	X
Taonga species	X	X	X		X	X
Habitat						
Connectivity b/t fresh and seawater	X		X		X	
Fish passage and dissolved	X	X			X	X
Flow	X					
Habitat (catchment scale index)	X	X	X		X	X
Riparian	X	X	X		X	X
Shade and cover	X	X				