EXAMPLES TO ASSIST WITH MONITORING WORKSHOP EXERCISE ISSUE: SEDIMENTS

	Monitoring Program Type			
	Current understanding & condition	**Reference data**	**Modelling**	**Change in condition**
Information needs	• Sediment sources • Sediment loads in different catchments • Current WQ and impacts of different sediment loads on water quality • Current condition of biota and impacts of different sediment loads on biota	• Loads in healthy systems • WQ in healthy systems • Biota condition in healthy systems	• Calibration of model processes – catchment and instream • Details of the effectiveness of different management actions	• Details of changes in management actions • Assessment of changes in loads due to management actions • Assessment of resultant changes in water quality • Assessment of resultant changes in condition of biota
Conceptual Model	A simple conceptual model that illustrates: a) The major processes generating sediment on land b) The impacts of sediments on water quality and the physical form of the waterbody c) The resultant impacts on	A simple conceptual model that illustrates: a) The major processes generating sediment on land b) The impacts of sediments on water quality and the physical form of the waterbody c) The resultant impacts on	Since this usually relates to models that already exist, the model documentation includes a mathematical representation of the processes simulated (typically depicted by a conceptual model or graphical representation of the processes included)	A simple conceptual model that illustrates: a) The major processes generating sediment on land b) The impacts of sediments on water quality and the physical form of the waterbody c) The resultant impacts on

	biota	biota		biota
Indicators	***Relates to " impact on biota" information need*** Instream pressure indicators • Turbidity • Light attenuation • Sedimentation rates • Bottom composition Value/use indicators • Seagrass depth range • Macroinvertebrate family richness	***Relates to " impact on biota" information need*** As for column 1	Indicators will relate to the indicators and processes in the models	***Relates to " impact on biota" information need*** As for columns 1 and 2
Objectives/ hypotheses	***Impacts:*** A change in light attenuation of "x" will affect seagrass depth range by "y" Sediment loads > "X" reduce macroinvertebrate richness by "Y" ***Current condition:*** To assess median, 20th percentile & 80th percentile turbidity in location X with confidence intervals of "Y"	To assess 20th and 80th percentile of macroinvertebrate richness	To measure required process rates with a desired level of precision. (Precision required can be guided by "sensitivity runs" of the model to show the key process rates which determine the overall precision of the model predictions)	***Change:*** Seagrass depth range does not change by more than 0.5m over the next 12 months Macroinvertebrate family richness does not change by more than "X" over the next 12 months