RIE-IW EVALUATION MATRIX

Use this worksheet as an objective means to evaluate both the science questions and proposed thematic or primary sites. This work-sheet will NOT be collected. When evaluating sites, use a ranking 0-4 scheme where 4 is an ideal site to evaluate the question, and 0 is not suitable. Note that the wording of some questions has been shortened.

| (T)heme / (P)rimary Site | Sub-Question Priority | Ideal Site Attributes | Ideal Comparison Site Attributes | SITES | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. WHERE AND WHY DO CONTINENTAL RIFTS INITIATE? | | | | | | | | | | | | | | | |
| 1a. What are the relative roles of magmatism and pre-existing structures in rift initiation? | | | | | | | | | | | | | | | |
| 1b. How do border fault segments form, and how is strain distributed throughout the lithosphere along these faults? | | | | | | | | | | | | | | | |
| 2. HOW DO FUNDAMENTAL RIFTING PROCESSES AND FEEDBACKS BETWEEN THEM EVOLVE IN TIME AND SPACE? | | | | | | | | | | | | | | | |
| 2a. What is the relationship between deformation and magmatism at all levels of the lithosphere? | | | | | | | | | | | | | | | |
| 2b. What controls the evolution of segmentation and along-strike variations in extensional style and magmatism? | | | | | | | | | | | | | | | |
| 2c. What is the relative importance of discrete rifting events vs. continuous deformation in accounting for divergence? | | | | | | | | | | | | | | | |
| 2d. How do erosion, sediment transport, and deposition vary with climate and tectonic forcing in rifts? | | | | | | | | | | | | | | | |
| 3. WHAT CONTROLS THE STRUCTURAL AND STRATIGRAPHIC ARCHITECTURE DURING AND AFTER BREAK-UP? | | | | | | | | | | | | | | | |
| 3a. What controls the large-scale form of evolving rifted margins? | | | | | | | | | | | | | | | |
| 3b. How does evolving rift architecture modify and interact with sediment-dispersal pathways through time? | | | | | | | | | | | | | | | |
| 3c. What are the rates, processes, and timescales of delta transport and their expression in the stratigraphic record? | | | | | | | | | | | | | | | |
| 3d. What active processes influence the form of the post-rift continental margin? | | | | | | | | | | | | | | | |
| 3e. How do fluxes of sediment and the landscapes they support respond to changes in climate and land use? | | | | | | | | | | | | | | | |
| 4. WHAT ARE THE MECHANISMS AND CONSEQUENCES OF FLUID AND VOLATILE EXCHANGE AT RIFTS? | | | | | | | | | | | | | | | |
| 4a. What are the net volatile fluxes at continental rifts? | | | | | | | | | | | | | | | |
| 4b. What are the reservoirs and release mechanisms for volatiles from rift inception to break-up? | | | | | | | | | | | | | | | |
| 4c. What role do volatiles play in initiation and evolution of rifting? | | | | | | | | | | | | | | | |
| LOGISTICS AND LEVERAGING | | | | | | | | | | | | | | | |
| Amphibious | | | | | | | | | | | | | | | |
| Feasibility | | | | | | | | | | | | | | | |
| Overall Readiness Level (3, 5, vs 10 year outcomes) | | | | | | | | | | | | | | | |
| Completeness of Backbone Geophysics | | | | | | | | | | | | | | | |
| Completenesss of Ancillary Studies | | | | | | | | | | | | | | | |
| Overall Immediate-, mid- and long-term potential | | | | | | | | | | | | | | | |
| Accessibility & Safety | | | | | | | | | | | | | | | |
| Availability of U.S. Infrastructure (Earthscope, OBS arrays, UNOLS vessels, etc.) | | | | | | | | | | | | | | | |
| Foreign Resources & Collaboration | | | | | | | | | | | | | | | |
| Broader Impacts (U.S.) | | | | | | | | | | | | | | | |
| Broader Impacts (Global) | | | | | | | | | | | | | | | |