Break-Out Session 2

Discussion Leader: Dorothy Sarah Stamps, Virginia Tech
Scribe: Kelly Olsen, UT Institute for Geophysics
What studies are necessary for synthesis for a GeoPRISMS synthesis?

• Regional workshops and collaborations necessary to not only present work but also to synthesize results – need to sit in a room and create documents
  • Possibly focus on specific aspects of each focus site, not necessary to have one huge document

• Create textbooks, publicly accessible websites (Wikipedia?), and other educational materials for schools and general public

• Have repositories of processed data - not just raw data - for research and educational purposes
  • All collected material should be documented and added to databases for general use
Where do we have gaps in our understanding?

• Unifying theme: fluid-rock interactions
  • How does Vp, Vs, Vp/Vs, etc. actually relate to the actual fluid properties of rocks
  • How do fluids and gasses affect rheology - controlled source EM, conductivity, resistivity
  • Possible TEI for fluid-rock interactions: important for keeping community together, question combines both aspects of GeoPRISMS

• Volcanic systems – triggering of eruptions, deformation at both long and short time scales

• Role of pre-existing structures – how do we quantify this? Focus on specific questions

• Slab hydration and slabs in the mantle – focus should not solely be on subduction zone hazards – possible new synthesis on known material here

• How does deformation occur in different areas at different time scales? i.e. on the megathrust vs in the frontal wedge, or deformation near the rift vs far-field?
What kind of infrastructure does our community need?

• Dense geodetic networks – campaign vs continuous
  • Backbone networks similar to Africa-Array Network
  • Offshore geodetic networks - continued investment in technological investments for offshore

• Need to keep momentum for push for new marine seismic vessel – necessary for most of these studies, and really crucial for EC geoscientists

• Funding for rock-physics labs
  • Experimental petrology and rheology labs -- few successor labs coming online

• Computational resources
  • Large-scale, high performance computing
  • Need support for HPC at the national level - look at ways to leverage NASA, DOE, other organizations with these capabilities

• More support for real-time data access – even just to check instruments are still running and don’t need to be moved

• Samples – many onshore samples are undiscoverable, need a synthesis and easily-searchable database
Is an amphibious research program required to accomplish our goals?

• Yes
Is an amphibious research program required to accomplish our goals?

• Yes - necessary to bridge land-sea boundary, and necessary bridges NSF funding organizations (OCE and EAR) - promotes funding + collaboration
How do we capture the momentum of the GeoPRISMS community?

• SZ4D, Research Collaboration Networks, and CIDER have similar goals to GeoPRISMS

• Clear ideas in terms of subduction zones – less comparisons for rifting
  • Should rifting and subduction be in the same initiative? Is anyone prepared to lead a rift-based initiative similar to SZ4D?

• Should focus on what are the big questions are, and what people want to work on – i.e. RCN on deformation, or volcanoes, not on rift vs subduction
How do we capture the momentum of the GeoPRISMS community?

“Do we just wake up tomorrow with a bad hangover and call it quits, or do we go out to brunch?” – Damien Saffer