GeoPRISMS

Implementation Plan

4. Funding Strategies and Priorities

4. GeoPRISMS Funding Strategies and Priorities

The ambitious scientific goals of GeoPRISMS require an equally ambitious strategy for attracting research funds to meet our objectives. Funds allocated for the GeoPRISMS Program will provide a strong base for such efforts, but these funds will have to be augmented through additional sources. Promising avenues for co-funding include NSF divisional core funds, but also larger special programs such as Continental Dynamics (CD) and the new biennial Frontiers of Earth System Dynamics (FESD), both of which encourage the strongly collaborative and interdisciplinary research approach that is the hallmark of GeoPRISMS.

International collaborations and leveraged funding also played a significant role in carrying out MARGINS research around the world. We anticipate similar opportunities within GeoPRISMS, particularly in Africa and New Zealand, but we also hope to engage international collaborators to US-based primary site investigations. Several GeoPRISMS targets also overlap with the interests of industry (in particular, the petroleum industry along the Eastern North American Margin, but also the minerals industry), opening up possibilities for collaborations and data sharing. The USGS charge to survey the US Extended Continental Shelf presents unique near-term opportunities to share survey data, and potentially, to support low-cost piggy-back studies in areas of mutual interest (e.g., Eastern US margin, Alaska); similar opportunities exist with NOAA along all of the US margins. Funds for proposed enhancements to the GeoPRISMS education and outreach programs will be sought from external sources, including relevant NSF education and outreach programs.

By necessity, new GeoPRISMS activities at each of the five primary sites will ramp-up on a unique schedule, as will the thematic studies, based on immediate and long-term opportunities. Research funds also will be phased in over time. Research and funding priorities are highest for Alaska, Cascadia, and Eastern North American Margin, given the immediate need to leverage EarthScope activities and the Cascadia Amphibious Array, and the high US societal relevance of all three settings. Major funding for GeoPRISMS investigations in New Zealand and the East African Rift System should await the outcomes of international planning workshops, and thus will be phased in more slowly than for the other three primary sites. This approach will also provide time to develop strong international collaborations and co-funding arrangements for these two sites, enhancing the impact of GeoPRISMS studies.

Most importantly, GeoPRISMS must make it a priority to engage a broad cross-section of investigators, from those with established reputations designing and running large onshore and/or offshore experiments, to early-career scientists. This will require maintaining a mix of funding levels and mechanisms, and soliciting and funding both large and small projects. Proposal pressure, guided by peer review, will ensure that the best science is supported. Without question, several of the scientific targets outlined in the GeoPRISMS implementation plan will benefit from large community experiments (e.g., USArray, the Cascadia Amphibious Array). Such community experiments and other projects that yield open data will also build a powerful framework with many hooks for complementary PI-driven projects. MARGINS succeeded largely because it built a large community of collaborative investigators accustomed to carrying out broadly interdisciplinary research. These collaborations, however, depended upon funding opportunities that encouraged newcomers to join and strengthen the research community. To sustain and grow this community, GeoPRISMS must ensure that such opportunities continue to

exist for all researchers interested in contributing to GeoPRISMS science goals, and must confirm that there is room for innovative new approaches to achieving these goals.

Support for science, planning and educational workshops must also remain a cornerstone of GeoPRISMS funding, as these facilitate communication, knowledge transfer, and data exchange, while also encouraging new interdisciplinary collaborations. Workshops are also an important means to educate new members of the community, in particular, students and early career scientists, helping them to identify research pathways that contribute to the common cause. These avenues must be kept open and inviting to ensure the continued growth of the community, and the greatest research achievements.