

Professional Capacity Building: the Missing Agenda in Conservation Priority Setting

Given current unprecedented extinction rates (Mace et al. 2005), finding ways to invest limited conservation resources is of the utmost importance. Wilson et al. (2006) recently made significant advances in this area by explicitly integrating financial costs and temporal constraints into a model for conservation priority setting, which to date has been driven largely by static area-selection algorithms. This is particularly relevant at a time when international conservation organizations are finding it difficult to spend their own funds effectively in the global priority areas they have identified (Halpern et al. 2006).

A crucial dimension remains missing from Wilson et al.'s (2006) model, however: the availability of human resources to implement the priorities identified. For example, in Austral and Neotropical America (ANA; from México to Argentina, including the Caribbean) there is a clear gap between the conservation work to be done and the professionals available to do it. To reach a level of technical conservation capacity in ANA comparable to that existing in the United States, the number of conservation biology departments in ANA universities must increase by four to eight times, at an estimated cost of US\$8–20 million over a few years (Rodríguez et al. 2005). Based on these figures, raising the level of professional capacity for conservation in the entire developing world would require funds on the order of US\$100–200 million. Although large, these figures are clearly

within the funding capacity of international donors; between 2000 and 2004, the Global Environmental Facility alone approved or endorsed biodiversity-related proposals in Brazil, Costa Rica, Ecuador, and México—just four ANA countries—totaling approximately US\$140 million (www.gefonline.org, accessed October 2004).

Although increased rigor in conservation priority setting is clearly desirable, it makes little sense to create elaborate conservation investment plans for needy regions without considering who will implement them. For example, the region chosen by Wilson et al. (2006), which primarily includes Malaysia and Indonesia, is heavily dependent on foreign human resources for biodiversity-related research. Of 97 articles about these two countries published in *Biological Conservation*, *Biodiversity and Conservation*, *Oryx*, and *Conservation Biology* between 1995 and 2006, only 15 have corresponding authors based in the region (ISI Web of Knowledge, accessed April 2006). Instead, the majority of research leaders were based at institutions in Europe (55%), North America (22%), or Australia and New Zealand (6%).

If efforts to improve biodiversity conservation are similar to those devoted to advancing public health and science in general, they will only be truly effective where local capacity and involvement is strong (Sreenivasan 2004; Muller 2006). Generating quantitative data on this point is vital, but it seems reasonable that international organizations who truly value their long-term conservation investments will need to take into account not only investment schedules but

also strengthening local capacity and institutional development. Unless the people of biodiversity-rich countries in the developing world are able to take the lead in the conservation of their own regions, long-term, sustainable solutions are unlikely to be found and the limited funds for conservation are likely to be misspent.

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