

California and the World Ocean '02
Abstract for Session on California Coastal Wetlands Issues

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Title: Sustaining Regional Partnerships for Conservation: Sharing the Future

Regional conservation planning is gaining momentum in the San Francisco Bay Area. Efforts to restore the bay, its wetlands, and its watersheds are evolving from separate initiatives but could merge into the most comprehensive picture yet developed of what kinds of habitats are needed where to restore and sustain regional ecological health. None of these efforts will be successful in the long term without broad participation at all levels of government, plus the continuing advice and review by advocacy groups and the regional community of environmental science and engineering.

A fundamental need at this time and into the future is a set of organizing principals and basic planning steps that might help the participants develop and achieve shared goals and objectives. The experience gained from the Bay Area Wetlands Habitat Goals Project may be applicable to similar long-range conservation plans for other landscapes in the Bay Area, and for other regions. Without delving into important details, the following ideas are presented.

Assemble a management team. Large-scale conservation planning requires champions, people with enthusiasm, energy, vision, and credibility. They need a support group that can assemble human resources and find money. It is useful for the team to start with state and federal managers who can employ the plan to adjust governmental projects, programs, and policies. It is helpful to be able to give credit where it is useful and not always where it is due, and to keep the process open to new ideas.

Define the big problem. Conservation problems need to be explicitly stated in terms of habitat, meaning either the domain of a species or assemblage of species, or a type of land or waterscape that is usually subjected to a management plan. The problem may directly present itself in terms of habitat or more indirectly in terms of species support or environmental quality, but eventually it should be translated into a question about how much of what kind of habitat is required where to achieve what, and for whom. The problem will be refined as new information is gained, but the initial problem statement should be as specific as possible in terms of the distribution and abundance of habitat. There may be one problem, or a set of problems. Since land is limiting, there may be conflicts between solutions to multiple problems that ask more of the land than it can provide. The problem statement will linger unfinished through the next few steps. It is helpful to consider that habitat is always subject to some degree of management, even if that means trying to leave it alone. It is also important to try to think ecologically, and therefore it is not wrong to disregard the realities of property lines and legal jurisdictions within the geographic scope of the plan.

Add science. The tension between science and policy is healthy but must be given a venue where the two perspectives are shared. Based on the existing problem statement, scientists can be

nominated by the managers to join their team. Once scientists are involved, the big problem will be refined, and what information is needed to address the problem will be identified. Scientific committees will be required to assemble the needed information. It is helpful for managers to consider that scientists need time to think and interpret and to make discoveries. Hurrying up science can generate reports but not necessarily understanding. And it is helpful for scientists to consider that timely reports make science relevant, and that in this context the purpose of the science is to advance public debate, not just advance science.

Define the scope. Regions have social and natural dimensions. The region should encompass the community of people that share a definition of the big problem; it should include the purviews of the regulatory and management agencies that can implement the solutions; and it should encompass the spatial distribution of the problem itself. The fact that everything is connected to everything else is true but not a practical planning principle. When setting the boundaries of the plan, it is useful see the problem as the center of the scope, to then look at the limits of the things that affect the problem and that can be managed. These are the causative agents or driving variables or forcing functions that can be adjusted to affect the solution. Some are environmental; some are social or institutional. All should be acknowledged and made visible in a conceptual model of causal links that suggest where the problem came from and how it can be fixed. It is not useful to look further at the things that affect the things that control the problem. Such higher-order interactions are very difficult to quantify and use in management plans.

Make two maps. Maps are the single best kind of tool for coordinated conservation planning. Maps are the visual aids that keep people thinking well together during and between meetings. Maps help people visualize what they think they want. Two maps are needed. Each shows the distribution and abundance of habitats that embody the big problem. One map shows the past, and the other shows the presents. The map of the past should represent the habitats as they existed under a similar climate regime but before the advent of non-indigenous land management. The science teams should use the maps to estimate the relative importance of people and nature in the evolution of the problem, and to what extent environmental management can solve the problem. It is likely that the problem will thus be redefined, and a clearer solution pathway will be revealed. It is helpful to regard the map of past conditions not as an exact template of the future (ecosystems don't run backward and the past can never be reached), but as an indication of the general abundance and arrangement of habitats that existing geology and climate (and native land use) tends to sustain.

Map the future. Landscape scenario-planning involves making maps of different solutions in the form of possible future habitat arrangements based on different sets of assumptions about what controls the problem. The scenarios can factor in species requirements, habitat evolution, expected environmental benefits (e.g., water quality and recreation), costs of infrastructure, monitoring requirements, etc. One basic outcome should be a map of the optimal spatial and temporal plan of implementation. It is helpful to consider that the plan is never finished. The real products are better communication between managers and scientists from different agencies and disciplines, and a process for testing the efficacy of policies, plans, and projects.

Involve the public. The public is typically narrowly defined as the groups represented by active environmental advocates and their adversaries. The public needs to be more broadly defined through active outreach that presents proposals and interim products to as many interest groups as possible. One important avenue for new public input to conservation planning is historical ecology. The effort to produce a map of past conditions should reach into public schools, local libraries, and family histories for evidence of the location, shape, and size of habitat patches, plus their historical uses and abuses. One possible new objective in conservation planning might be to recover traditional ecological knowledge with the intent to engage the public in sustainable local land use practices. It is helpful to consider that informed people care, and that caring people can change the world.