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# Implementation

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*A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.*

Aldo Leopold  
The Upshot, *The Land Ethic*

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## **Implementation of the Multi-Species Recovery Plan**

The Multi-Species Recovery Plan provides the biological and ecological framework for a proactive approach toward the conservation and sustainability of biodiversity within South Florida. It is intended to be used as a guide by the FWS and our partners for assistance in project planning, research needs, protocols for management and restoration actions, land acquisition, information and data coordination and sharing, environmental compliance, interagency consultations, and habitat conservation plans.

Because the Multi-Species Recovery Plan is one of the critical elements of the South Florida Ecosystem Restoration Initiative, and integrally tied to other major restoration strategies, the FWS will develop an implementation plan in accordance with the Interagency Cooperative Policy on Recovery Plan Participation and Implementation under the ESA (59 FR 34272) instead of an implementation schedule.

A major component of the South Florida Ecosystem Restoration Initiative is the coordination among the many partners in South Florida for implementing recovery and restoration actions for threatened and endangered species and their habitats. Implementation of recovery efforts at the ecosystem level will not be possible without this coordination. This implementation plan calls for establishing a Multi-Species/Ecosystem Recovery Implementation Team (MERIT). Representation on the team will be similar to other recovery teams, and could include individuals from Federal, State, and local agencies, Tribal Governments, academia, industry, non-governmental organizations, the private sector, and other stakeholders. The focus of MERIT will be on prioritizing recovery actions as identified in the Multi-Species Recovery Plan from an ecosystem perspective, and on recommending and funding on-the-ground recovery and restoration activities at the species and community level. This team will also produce a technical/agency draft implementation schedule that prioritizes the recovery actions as identified in the final Multi-Species Recovery Plan. We will publish a notice announcing the availability of the draft implementation schedule in the *Federal Register*, and will request public review and comment.

Because the Multi-Species Recovery Plan is integral to all other restoration strategies in South Florida, MERIT will need to coordinate with other Working Group efforts. To accomplish this, the implementation plan will require MERIT to coordinate internally with Working Group teams, particularly the Project Coordination Teams (PCT) and the Science Coordination Team (SCT), including the Critical Ecosystems Studies Initiative (CESI). There are 6 PCTs, representing the various subregions of the South Florida Ecosystem, and 1 team representing the total system. These teams have responsibility for preparing material for the Integrated Financial Plan and Annual Report, and other activities, such as providing forums for information exchange between scientists and managers, promoting and providing public outreach, assisting with strategic planning, and involving local government. The SCT serves as the senior science advisory group to the Task Force and Working Group. It is responsible for recommending research plans and priorities, and facilitating the integration, synthesis, and application of the best scientific information available for the restoration effort.

The PCT and SCT liaisons to MERIT will ensure compatibility with proposed and ongoing projects within the various subregions and recommendations from the Recovery Plan. MERIT will interface with these groups, and will report directly to a MERIT Steering Committee with all implementation recommendations. The Steering Committee will be composed of select representatives from a cross section of Task Force and Working Group interests, and will interface with the Working Group on policy issues associated with implementation of recovery and restoration actions. Through this organizational structure (Figure 1), the public will be able to participate in the implementation plan process through Working Group and PCT meetings (see <http://www.sfrestore.org> for meeting schedules), and other opportunities such as *Federal Register* notices for specific actions being developed or modified. It is a process that provides a solution to recovery implementation at both the species and ecosystem level, given the unique situation we are faced with in South Florida.

### **Adaptive Management**

Adaptive management is an integral component to any plan, allowing for incorporation of new information as it becomes available. The Multi-Species Recovery Plan is subject to the adaptive management process, and will continuously be improved as implementation of tasks results in new information, techniques, and approaches to recovery and restoration. Information is just now becoming available on proven techniques and applied methodologies for conducting “on the ground” restoration activities for many of South Florida’s ecological communities. Because scientific knowledge and restoration are evolving processes, “The Ecosystem” section of this plan intentionally does not incorporate specific restoration methodologies for many of the communities. The community accounts do, however, provide sources for finding such information, as well as identification of specific individuals and groups using the current techniques. Working toward the goal of restoration of these ecological

communities will also facilitate the species recovery process. An example of how the adaptive management process could work using a multi-species approach to recovery and restoration planning and implementation is depicted in a flow chart in Figure 2. Implementation of the Multi-Species Recovery Plan, using an adaptive management process, will ensure the long-term conservation of biodiversity in South Florida.

The use of the flow chart in Figure 2 requires an evaluation of several specific questions, such as:

- 1. What are the natural historical conditions** (*i.e.*, structure, function, and composition) of the area to be restored, and does the plan help to restore, enhance, and sustain the natural ecological community?
- 2. Are there any listed species that may be affected by the restoration plan in the immediate future?**
- 3. Does the listed species of concern have a high degree of vagility?** (can the species rapidly move its center of distribution to accommodate a shift in hydroperiod--*i.e.*, the snail kite)?

If *YES*, then there is every reason to believe that modifications that are planned to restore the historical system will accommodate the listed species, and monitoring should be implemented to verify that result.

If *NO*, the species has a low vagility, (*i.e.*, the Cape Sable seaside sparrow), then a conflict may exist; actions could be delayed and an immediate interim solution may be required.

- 4. Is the listed species' population so critically small that an immediate change in local conditions required for community restoration will immediately benefit the species' survival?**

If *YES*, then the plan may continue.

If *NO*, then a conflict may exist, and a delay in action may be needed along with an immediate interim solution.

Interim solutions, the adaptations to a restoration plan, must be able to be implemented without bringing the overall plan to a halt. Interim solutions can modify the early stages of a planned restoration initiative, and allow affected species a sufficient amount of time to recover to an acceptable population level before the plan is fully implemented.

The restoration plan must incorporate a broad range of environmental conditions and management options to meet the biological needs for all species of concern. More importantly, the plan must ensure stable population structures and community composition at some spatial and temporal scale. This approach allows for population variability due to natural stochastic events inherent in any system.

Monitoring survival and reproduction of species and populations for status and trends analysis, and monitoring to detect changes in structure, function, and composition of the ecological community in response to

management efforts, will provide information for measuring the overall success of restoration plans. Sutter (1996) discusses four criteria that monitoring techniques and processes must meet to reliably detect changes in populations and communities: (1) monitoring data must have a known and acceptable level of precision, (2) data collection techniques need to be repeatable over years and across personnel, (3) data must be collected over a long enough period of time to capture important natural processes and responses to management, and (4) efficiency must be considered an integral component of monitoring. In addition, monitoring objectives should be specific and quantifiable, provide the framework for defining tasks, specify the variables to be measured and the frequency of measurement, specify how success or failure will be assessed, and communicate and justify the project and provide a historic record of the project.

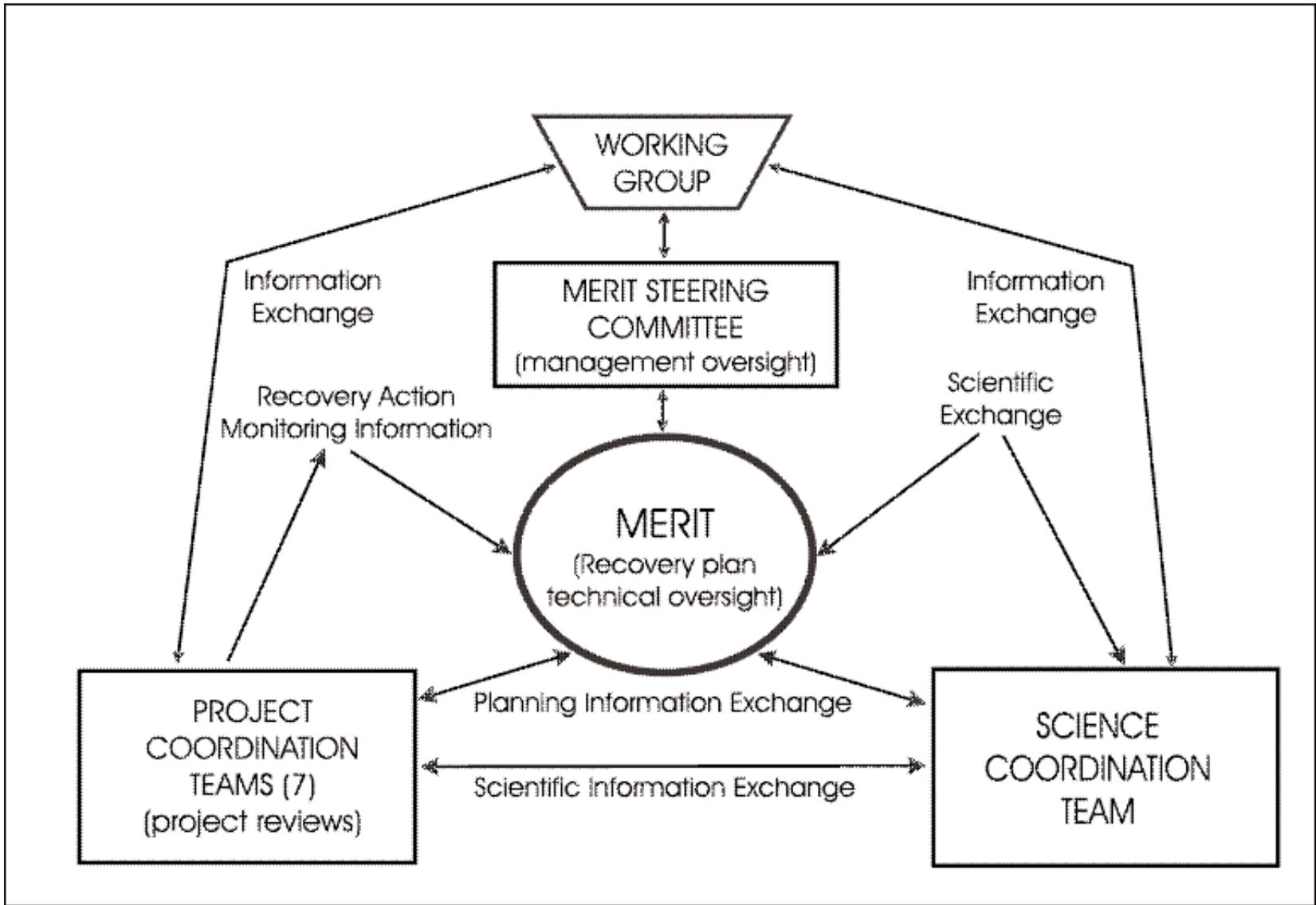


Figure 1. Implementation process for the Multi-Species Recovery Plan.

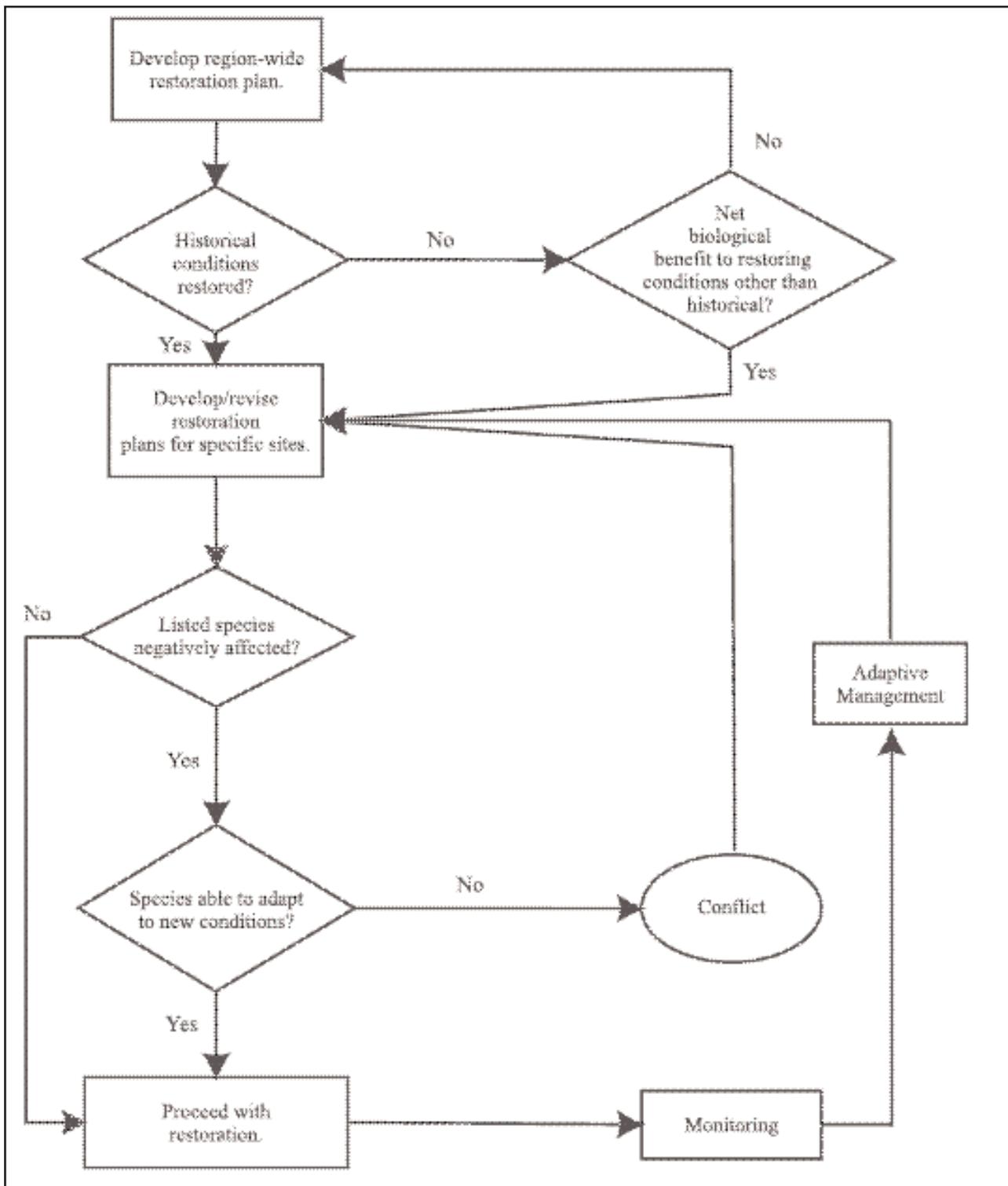


Figure 2. A multi-species approach for evaluating restoration planning and implementation.

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**Literature Cited**

- Sutter, R.D. 1996. Monitoring. Pages 235-264 *in* D.A. Falk, C.I. Millar, and M. Olwell (eds.) Restoring diversity: strategies for reintroduction of endangered plants. Island Press; Washington, D.C.
- U. S. Fish and Wildlife Service [FWS]. 1994. An ecosystem approach to fish and wildlife conservation. U. S. Fish and Wildlife Service concept document, March 1994; Washington, D.C.

