

**DRAFT Outline**  
**California Climate Adaptation Strategy Update 2012**  
**Biodiversity Sector Outline**  
**June 15, 2012**

**I. Biodiversity Sector Vulnerability to Climate Change**

The 2009 CAS provided comprehensive coverage of climate change impacts to the biodiversity sector with the exception of a discussion on extreme events. The 2012 update will not repeat information covered in the 2009 CAS but will include discussion on extreme events as they relate to the biodiversity sectors such as impacts of these events on habitat, species, and human communities. The most significant events to focus on are:

- Fire
- Drought / Flood
- Sea level rise
- Noxious Invasives
- Storm events

**II. Highlights of Actions to Adapt to Climate Change in the Biodiversity Sector**

- DFG Collaborative Partnerships
  - i. Climate Stakeholder group activities & products:
    1. Organization of collaborating entities including state, federal, NGO, industry, and academic partners to promote coordination, collaboration, and communication around climate adaptation planning for biodiversity.
    2. Public Outreach: Completed Projects and Products (e.g. DFG climate change magazine)
    3. Climate Change & Biodiversity Workshops: web link detailing workshops 2009-2012
  - ii. New partnerships (highlight collaborative partnerships like BAECCC, LCC, etc and highlights of collaborative activities/accomplishments)
- Policy Development Accomplishments (i.e. Climate considerations into DFG Land Acquisition Policy)
- Efforts to Increase Capacity and Continuity (climate workshops and resources to increase internal capacity of DFG staff)
- Completion of DFG Climate Planning Tools:
  - i. DFG's Areas of Conservation Emphasis mapping and modeling tool
  - ii. California Essential Habitat Connectivity Project
  - iii. Initiated a collaborative revision process for California's Wildlife Action Plan with climate considerations.
  - iv. DFG Research Reports
    1. DFG climate change related research – Aug2011
    2. DFG Climate Change Research Needs – Feb2012
  - v. DFG's Climate Change Vulnerability Assessment Resource Center
  - vi. Unity-Integration-Action: DFG's Vision for Confronting Climate Change in California 2011



- vii. California Bird Species of Special Concern-climate vulnerability assessment
- viii. Climate Change Vulnerability Index for Rare Plants
- ix. DFG climate case studies highlighting adaptation actions on the ground

### **III. Priority Climate Change Adaptation Strategies Going Forward**

#### **Goal 1: Promote cross sector integration of biodiversity strategies into other sector actions.**

1. Develop set of climate smart principles or guidelines to promote biodiversity conservation during implementation of climate actions across agencies.
2. Develop specific recommendations for cross-sector policy initiatives
3. Increase opportunities to work collaboratively with local government entities to increase communication and information sharing that supports collaboration and partnership around biodiversity conservation.
4. Identify sustainable funding mechanisms to support long term consistency and continuity in climate planning and implementation efforts.

#### **Goal 2: Create and Maintain Climate Change Partnerships**

1. Pursue and maintain collaborative partnerships
2. Pursue national, regional, and local coordination
3. Pursue collaborative outreach efforts to increase climate literacy, build internal capacity, and increase communication with partners in support of state actions.
4. Increase cross sector engagement in outreach efforts
5. Support efforts related to use of citizen scientists
6. Develop information to be used for public interpretation and classroom education related to biodiversity conservation in the face of climate change.

#### **Goal 3: Integrate Climate Change into Management and Planning Activities**

1. Build capacity to address climate change issues relative to biodiversity conservation
2. Thoroughly integrate climate change into the process to revise California's Wildlife Action Plan (SWAP) and provide opportunities for partner involvement/input.
3. Establish a climate training course to provide a foundation of knowledge on climate change and access to tools and resources that will empower resources managers in the state to become climate leaders.
  - a. To support the climate training course create a "Climate Training Network" of online training webinars and presentations related to climate change and biodiversity
4. Create a climate community within individual state agencies to build internal capacity and empower staff to be future climate leaders.
5. Make climate change a regular part of state agency outreach and communications
6. Maintain a strong website presence as a resource for staff and the public to access climate change information related to biodiversity, as well as information on individual Department's climate change activities



**Goal 4: Develop Conservation Practices to Maintain and Enhance Ecosystem Function**

**1. Support the creation and maintenance of a state-wide system of terrestrial and marine conservation areas**

- a) Implement Marine Life Protection Act and support Marine Protected Area activities.
- b) Develop incentives for participation by private land owners and local land-use agencies in terrestrial/marine conservation efforts.
- c) Create pilot projects to test approaches to putting adaptive management on the ground in the context of climate change.
- d) Promote use of tools such as Areas of Conservation Emphasis mapping and modeling tool, California Essential Habitat Conservation Plan, State Wildlife Action Plan, National Fish, Wildlife, and Plants Climate Adaptation Strategy, and DFG and CEC vulnerability assessments in conservation planning efforts that promote biodiversity conservation.
- e) Promote environmental stewardship and biodiversity adaptation by integrating ecosystem connectivity into other state agency projects such as DWR's water management projects

**2. Manage for Enhanced Ecosystem Function**

- a) Thoroughly integrate climate change into California's Wildlife Action Plan revision process.
- b) Develop a technical scientific panel to facilitate credible and appropriate use of climate, ecosystem and species data to inform the development of sound biodiversity conservation practices.
- c) Continue to integrate climate change into field management activities through updating and modifying land and resource management objectives to incorporate climate change impacts and existing adaptation planning efforts.

**3. Manage Endemic and Other Priority Species Populations**

- a) Use DFG's Areas of Conservation Emphasis mapping and modeling tool, California Essential Habitat Conservation Plan, DFG and CEC climate vulnerability assessments, and other tools to inform conservation priorities for the State Wildlife Action Plan revision and other state-wide management plans and activities as appropriate.
- b) Develop cross sector management recommendations to minimize habitat conversion and large scale biodiversity loss from catastrophic events.
- c) Continue to support and develop climate change research and assessments that support management and planning efforts to conserve biodiversity.
  - Continue to pursue vulnerability assessments for various taxa across the state to inform natural resource planning and management.
  - Integrate recently completed DFG and CEC vulnerability assessments into California's Wildlife Action Plan revision and other management/planning actions as appropriate.
  - Promote applied research efforts that are tied to management actions including but not limited to monitoring efforts that can track and detect changes associated with a changing climate.



#### **IV. Related Planning, Investment, and Regulatory Processes (opportunities for integration and implementation)**

- California Fish and Wildlife Strategic Vision
- DFG's Strategic Planning Effort
- DFG's Science Initiative
- California's State Wildlife Action Plan
- Natural Community Conservation Plans (e.g. DRECP, Bay-Delta Conservation Plan, etc.)
- Landscape Conservation Cooperative (LCC) initiatives
- National Fish, Wildlife, and Plants Climate Adaptation Strategy
- California Water Plan Update and Water Quality Control Plans (Basin Plans)
- Fire and Resource Assessment Program
- Environmental Goals and Policy Report

#### **V. Climate Change Adaptation Research Needs in the Biodiversity Sector**

Refer to research needs detailed in [California DFG Climate Change Research Needs – Feb2012](#)

