



2018 AFWA Climate Adaptation Surveys: Executive Summary

Introduction

State fish and wildlife agencies have long been on the front lines of responding to changing environmental conditions affecting natural resources. As the impacts of a changing climate become more severe, state agencies are continually challenged with designing and implementing the most effective adaptation strategies to safeguard the nation's fish and wildlife. Since 2011, AFWA has conducted surveys of state fish and wildlife agencies to better understand their needs, activities, and perspectives for fish and wildlife management in a changing world. The goal of the survey is to better understand state needs and help communicate those needs and activities within those agencies and with other partners. This report summarizes responses to the 2018 AFWA Climate Adaptation Surveys, compares them to past surveys, and provides some general recommendations for federal, state, and non-profit partners to target research needs, deploy management strategies, and consider future collaborative efforts. In 2018 two surveys were conducted, one to state fish and wildlife agencies in general and one specifically targeting marine components of state fish and wildlife agencies. The general survey was sent to 122 state climate contacts on August 1, 2018 and was closed on September 1, 2018. In total, the survey received 69 submissions with a response rate of 57%. Only nine states/jurisdictions did not submit survey responses (Arkansas, District of Columbia, Kansas, Mississippi, Nevada, New Mexico, New York, Oklahoma, and South Carolina). The marine and coastal survey was sent to 34 contacts from states or territories with a coastline. The survey received 15 submissions with a response rate of 44%.

Major Takeaways/Highlights for the General Survey

Agency perceptions of climate are complicated. For example, 65% reported that their agency has a program or position where at least some time is dedicated to climate-related work and that 57% reported that adaptation is being integrated into other programs or projects throughout their agency. However, only 29% of respondents have time allocated towards on-the-ground implementation, whereas 28% reported there was no time allocated to any climate-related work within their agency. Time is reportedly allocated towards learning, educating others, or capacity building (57%). Barriers that inhibit development or implementation include lack of staff time and capacity (82%), lack of funding (66%), and lack of staff expertise (53%).

Most states report that they access climate-related information from peer-reviewed journals (75%), academic institutions (74%), and the US Geological Survey (72%). When asked about specific federal programs, states reported using tools or information generated by the former Landscape Conservation Cooperatives (72%), the USGS Climate Adaptation Science Centers (62%), and NOAA's Regional Integrated Sciences and Assessments (31%). Identifying science and information needs, states reported a desire for more information/products on climate impacts for specific species or habitats (68%), guidance on incorporating climate adaptation into agency planning (58%), and translating data into a format that would be relevant for managers (55%). High priority information needs over the coming months and years were identified as invasive species movement and range expansion (81%), habitat connectivity (64%), and adaptive capacity of species (63%). Webinars (73%), online resources, such as databases (68%), and workshops or in-person trainings (61%) topped the list for preferred mechanisms for accessing climate information and tools.

Trends Over Time

AFWA has conducted similar surveys since 2011. However, survey content has not been consistent over time and makes comparison challenging. Only surveys from 2014, 2016, and the most recent 2018 surveys were assessed. Overall, the takeaway is that not much has changed over time. For example, goals that are being addressed under the National Fish, Wildlife, and Plants Climate Adaptation Strategy remain consistent. Goal 1: conserve habitat and connectivity, and Goal 2: manage species and habitat to protect ecosystem function, topped the list for most addressed goals while Goal 3: enhance capacity for effective management and Goal 6: increase awareness and motivate action to safeguard species, were least addressed. However, there was a significant shift in priority research areas. In 2016, 100% of respondents indicated that water quality and quantity were the highest priority climate-related research need for their agency. In 2018, this research area dropped to fourth (61%). In 2018, research priorities included invasive species movement and range expansion, habitat connectivity, and adaptive capacity of species.

Major Takeaways/Highlights for the Marine & Coastal Survey

Concurrent to the AFWA Climate Adaptation Survey, we also collected feedback on a similar survey targeted towards state agencies or departments that focus on marine and coastal resources. The survey was sent to states or territories with a coastline. The survey was sent to 34 individuals and had a response rate of 44% (15 individual responses). One major deviation between the surveys was in where staff time is allocated for climate-related work. In the main survey, most states indicated that they spent most of their time on learning, educating others, or capacity building. For marine and coastal survey respondents, the majority are focused on time for assessing climate impacts or conducting vulnerability assessments (64%) or time for adaptation planning or developing management responses to climate impacts (50%). This suggests that marine and coastal resource agencies may be further along in climate adaptation implementation than broader natural resource agencies.

Recommendations

Using the survey results, we can identify research gaps and needs that can be met, in addition to targeting specific Strategy goals that can be emphasized and better implemented. However, an overarching theme is a desire to elevate climate adaptation as a higher priority in state fish and wildlife agencies. Therefore, we recommend the priority focus over the next few years be two-pronged in order to meet this need. First, state leadership should be engaged to increase awareness and understanding of the importance of climate adaptation for fish and wildlife management. Second, greater coordination between federal, state, tribal, and non-profit partners will be critical in aligning priorities and developing a unified voice. In turn, these actions will help to raise the profile of climate adaptation for fish and wildlife across the nation and the world.

Conclusion

Overall, there is strong evidence that state agencies are engaging in a wide variety of climate adaptation work. Over the next few years, it will be critical to make climate adaptation for fish and wildlife a higher priority within the conservation community. To do so requires developing a roadmap to engage state leadership, as well as to develop mechanisms to increase coordination across federal agencies, state agencies, tribes, and non-profit partners. The next survey is scheduled to be conducted in 2020.