

## **From the Global to the Local: Managing Climate Change Impacts across Scales**

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### **ABSTRACT**

Human responses to the fact of human-caused climate change fall along two dimensions: mitigation of changes induced by greenhouse gases and adaptation to the changes and their impacts to which we are already committed. This presentation will deal solely with the adaptation problem because we must learn how to manage changing rates of change, particularly those that occur on seasonal-interannual to decadal time scales. Impacts also differ on spatial scales, which add to the management challenges. Since place is important as well as time I shall focus on the Pacific Northwest (PNW), set in a context of the American West, using regional hydrology and the water resources sector as my major domain of explanation. This choice reflects the fact that water is perhaps the most powerful trans-sectoral regulator of climate impacts. Analytically, the explanation will be developed in terms of the dynamics of social-ecological systems as panarchies originally developed by Holling (1973), and elaborated more recently by others.