Section 9—Social/Economic/Cultural Components

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Previous chapters of this synthesis rely on multiple ecological disciplines to frame core aspects of a sustainable, resilient ecosystem. Approaching forest management in the Sierra Nevada and southern Cascade Range in a manner that promotes socioecological resilience and sustains important forest values requires consideration of not only the ecological, but also the social, economic, cultural, and institutional components of the ecosystem, using a systems approach (Higgins and Duane 2008). The term “socioecological system” has been widely used in scientific literature on resilience. Key ideas underpinning the concept of integrated socioecological systems are: interactions between biophysical and social factors; linkages across spatial, temporal, and organizational scales; regulation of the flow and use of critical resources that are natural, socioeconomic, and cultural; and continuous adaptation (Redman et al. 2004). In the following six chapters, we draw from published research to improve understanding of forest management for socioecological resilience in the synthesis area.

Chapter 9.1 describes the social context of the synthesis area. Drawing from the extensive analysis of the Sierra Nevada Ecosystem Project Final Report (Erman and SNEP Science Team 1997), the chapter explores the social complexities of the area. Recreation and tourism are used as a specific example of a triple bottom line approach to sustainability, which brings together ecological, economic, and social considerations (Thomas 2012). These topics are emphasized because of their great importance.
in this synthesis area and because they are the subject of recent scientific advances reflected in published literature (see Bricker et al. 2010, Cottrell and Vaske 2006, Cottrell et al. 2007, Winter et al. 2013, WTO and UNEP 2008).

Chapter 9.2 focuses on how the concept of ecosystem services can be used in forest management to frame and describe concerns and tradeoffs as they relate to social, economic, and cultural values. This chapter also considers tensions between supply and demand for such services, especially in light of the population growth described in the first chapter.

Chapter 9.3 examines the connection between social and ecological health and well-being in the Sierra Nevada and southern Cascade Range. It explores, from a sociocultural perspective, the ecosystem dynamics that are threats to and stressors on ecosystems in the synthesis area—specifically, climate change, wildland fire, and invasive species. The chapter also presents and discusses the complexities of decisionmaking associated with effective management for resilience.

After considering these broad regional issues in the first three chapters, this section turns to the sustainability and resilience of rural communities that lie within the synthesis area. The final three chapters examine how benefits for rural communities can be created through forest management that contributes to socioeconomic sustainability and enhances overall socioecological resilience within the region.

One way to create local community benefits is to undertake forest management in a manner that enhances economic opportunities in local communities. This can be accomplished in a number of ways, including through forest restoration, recreation management, and the production of forest products. Chapter 9.4 discusses strategies for job creation in forest communities through forest restoration and recreation on national forest lands. Chapter 9.5 focuses on strategies for sustaining and improving the production of forest products from public lands, including timber, biomass, nontimber forest products, and forage for livestock, to help support community residents who depend on these resources for their livelihoods.

The final chapter in the section, 9.6, focuses on institutions, processes, and models for collaboration in forest management that use an all-lands approach and incorporate traditional and local ecological knowledge. The importance of collaboration within the larger context of forest management, discussed in the first chapter, loops back here to focus on effective approaches for collaboration across scales, regions, and institutions, with examples from throughout the state. These collaborative institutions and processes will continue to be an important influence on the success of managing for socioecological resilience in the Sierra Nevada synthesis area.
References


