MANAGING UNDERUSE, BIODIVERSITY, AND RESILIENCE OF SATOYAMA SOCIAL-ECOLOGICAL SYSTEM IN JAPAN

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Abstract:

In Japan, community-based resource management has traditionally been successful in terms of addressing overuse issues regarding SESs, which arise when many competing users vie for the resources. However, high economic growth, rural-to-urban migration, and land-use changes have caused people to leave the satoyama SES, resulting in many changes in community-based resource management. The Sub-Global Assessment (SGA), which followed the approaches of the Millennium Ecosystem Assessment (MEA), has identified a long list of regionally and globally valuable ecosystem services that the satoyama can generate. The key ecosystem services include regulating services (such as flood management), provisioning services (such as food safety), and cultural services (such as traditional festivals). However, scholars and practitioners do not yet know how these commons will be managed sustainably, since degradation due to underuse is a new phenomenon. This study demonstrates that a combination of market-based instruments, such as eco-tourism and organic farming, and non-market-based instruments, such as the formulation of useful institutional arrangements involving interdependent, regional, and global stakeholders, could help cope with the underuse or non-use of the satoyama SES. Scholars argue that the overuse of resources challenges the biodiversity and resilience of a social-ecological system (SES), such as a fishery or irrigation commons. In response to these types of problems, scholars have conducted substantial amounts of empirical research and have developed many theoretical frameworks addressing the issue. A lesser-known fact is that the biodiversity and resilience of a commons is also severely compromised when certain types of SESs are underused. There is a worrisome lack of empirical research that aims to understand how we can best cope with the biodiversity and resilience of underused commons. Biodiversity and resilience of Japan's satoyama (abandoned rural landscape) SES has disintegrated due to the underuse or non-use of resources. This study involves case studies of satoyma in different parts of Japan and demonstrates that combining market-based instruments and non-market-based instruments can help manage the underuse and resilience of the satoyama SES in Japan.