Inter-Graduate School Program for

Sustainable Development and Survivable Societies

Interdisciplinary Seminar (1 session course)

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Interactions between climate change and invasive species

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Venue: Shishukan Hall (HIGASHI ICHIJOKAN, basement floor)

<Summary>

While climate change and biological invasions are among the greatest threats to ecosystem sustainability, the interplays between the two global drivers and their consequences currently remain overlooked. Climate change is expected to alter precipitation and temperature patterns that likely induce significant disturbance and stressor on both native and invasive species (e.g., more frequent/intense extreme weather and climate events). However, invasive species in general are known with greater adaptability to habitat disturbance and to a broader range of environmental conditions, which may favor their survival and proliferation over native species when facing climate change. This seminar therefore is going to review such interplays using several case studies as example, with the first part involving those showing how climate change contributes to success of invasive species in each step of invasion process (introduction, establishment, spread and impact) and second part with those about various adaptive strategies of invasive species to cope with extreme conditions. Management implications with consideration of climate change also will be addressed to help build up future efforts and practical approaches to sustain key ecosystem services in the face of climate change.