**Environmental issues of trail running and sporting events in protected areas: Progress on research and management**

Session Organizers:

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Trail running, adventure racing and other competition-based sporting events are rapidly gaining popularity in protected areas in different continents. The rising demands are partly due to changing public interests and effective marketing of non-profit or for-profit event organizers while protected area agencies are increasingly embracing public and physical health objectives to demonstrate their societal relevance. However, intensive use of trails, facilities and natural areas by large numbers of people in these events can cause significant negative impacts on the natural resources and recreation infrastructure. Some examples include vegetation damage, soil erosion, informal trail formation, wildlife disturbance, and trash. Protected area managers are challenged to weigh the social and economic benefits of these events with the environmental and social costs. One critical question is when and where these events, as well as their size and type, are appropriate based on conservation and other integral values of protected areas.

Concerns about environmental impacts of trail running and sporting events in protected areas have been raised by colleagues (Newsome, 2014; Newsome & Hughes, 2018), urging for policy responses and more research. Guidelines for some of the events have also been developed by protected area agencies or event organizers to manage impacts. Empirical research that informs policies and regulations, planning and management, and education and communication, is still lacking.

This special session is intended to bring together academics, managers, and practitioners in assessing the current progress of research, policies and management practices in this topic. The session will consist of brief presentations highlighting reviews and empirical studies conducted in different countries, followed by an open forum intended for identifying information and research needs. Despite the environmental focus, this session welcomes discussion on social factors that influence, or are influenced by, environmental impacts. This session should provide valuable insights for researchers and managers in protected areas, as well as sporting event organizers and other recreation groups.