

Workshop on “Modelling relationships between plant diversity, the functioning of grassland systems and their ability to deliver ecosystem services”

Wednesday June 20th, 2018 - 5.30-7.30 pm
Maple Suite, Rochestown Park Hotel,
Rochestown Rd, Douglas, Cork (Ireland)

If you are interested in attending please contact:

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Description of the workshop (topics and goals)

The paradigm of systemic modelling attempts to represent the complexity of grassland vegetation, on which depends a broad range of ecosystem services. While remarkable advances in modelling have been made in recent decades, the simulation of grassland biogeochemical cycles and the dynamics of plant species remain unrelated, with considerable uncertainty in the quality of predictions. With the support of detailed datasets from experimental and long-term observational grassland sites, an explicit, dynamic representation of the grassland community integrating the response functions of different plant species under changing conditions would represent a break in the paradigm of grassland modelling beyond existing approaches. Biological diversity being at the hearth of several grassland ecosystem services, new functionalities would allow for a better analysis of synergies and trade-offs between services (e.g. production of quality forage, C storage). This involves the study of key functions that support ecosystem services by addressing functional mechanisms at the community level through the properties of the individual species composing the community (that is, translation of functional traits into vegetation parameters).

The workshop will present novel approaches to model development, and discuss the extent of their effective implementation in the decision making process. Scientists and stakeholders from grassland business are invited to attend the workshop, which will provide participants with opportunities to discuss:

- (1) how the modelling of plant diversity can be improved,
- (2) factors that need to be addressed in the modelling processes, and
- (3) how grassland models can be employed to support the delivery of ecosystem services.

The goals of the workshop are to identify open issues and/or explore directions for novel developments in grassland modelling. We welcome active interactions from and among participants as well as controversial and stimulating discussions. No particular skills in modelling are required for the participants to the workshop.

Workshop agenda

- **17:30 – 17:45 Outline of the workshop and self-presentation of participants**
- **17:45 – 18:30 Presentations:**
 - **Advancements in grassland modelling**
 - **Plant trait-based approaches**
 - **Effects of environmental factors on plant diversity**
- **18:30 – 19:15 Open discussion**
- **19:15 – 19:30 Review and synthesis of the workshop**