

# Summer School *Land Use and Ecosystem Change*

20-27 August 2019, Garmisch-Partenkirchen, Germany





The Karlsruhe Institute of Technology (KIT) will run an international Summer School on the topic of land use and ecosystem change during August 2019 at the KIT-Campus Alpin, IMK-IFU (Garmisch-Partenkirchen). Master and doctoral students are invited to learn about and discuss a wide range of issues related to ecosystem functioning, socio-ecological systems and land use change, in particular:

1. Both the biophysical and human processes and concepts needed to understand the broader issues of socio-ecological systems. This includes ecosystem functioning, biodiversity, ecosystem services, resilience, vulnerability, risk management, tipping-points, sustainability and related concepts in the field. We will also explore current understanding of how physical and human environmental changes affect socio-ecological systems, including content on international assessment processes such as the IPCC and IPBES.
2. Different aspects of land use change processes across geographic scales and for the past, present and future drivers of change. This will include, for example, land abandonment, extensification vs. intensification, deforestation, the role of social networks and knowledge diffusion, the role of pollinators and land management. There will be a focus on land use change assessment methods, including the role of observational data (e.g. from remote sensing and other sources) and land use modelling approaches using interactive exercises and case studies.

**Format:** The summer school will include a mix of lectures, practical exercises with student presentations and a field excursion. Participation is limited to a max. of 35 students. The cost for travel and accommodation is the student's own responsibility; KIT will cover lunches, materials and the field excursion.

**Lecturers (KIT):** Prof. Dr. Almut Arneth, Prof. Dr. Mark Rounsevell, Dr. Richard Fuchs, Dr. Sam Rabin, Dr. Heera Lee, Dr. David Martin Belda, Dr. Calum Brown, Dr. Verena Seufert, Dr. Penelope Whitehorn, Dr. Anita Bayer, Dr. Bumsuk Seo. External keynote speakers not yet confirmed.

**Applications:** Application deadline is 31 March 2019. Please send a CV and a letter of motivation (limited to one page), signed by your supervisor, to: [sylvia.kratz@kit.edu](mailto:sylvia.kratz@kit.edu). Successful applicants will be notified in April 2019.



Day 1 20.08.	Introduction Past & present land use change Practical on drivers & processes of land use change Practical on global ecosystem functioning
Day 2 21.08.	Observational data of land use change Practical on observational land use change data Practical continued incl. report & discussion
Day 3 22.08.	Land use change modelling Practical on land use change modelling services Practical continued incl. report & discussion
Day 4 23.08.	a) Ecosystems & land use change b) Ecosystem functioning & ecosystem services Practical continued incl. report & discussion
Day 5 24.08.	Field trip to local farms
Day 6 25.08.	Free time
Day 7 26.08.	Species & biodiversity Practical on landscape scale analyses of species and biodiversity Practical continued incl. report & discussion
Day 8 27.08.	Socio-ecological systems Practical on people, biodiversity & ecosystem Practical continued incl. report & discussion Wrap-up and close



### Contact

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### Issued by

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This summer school contributes to the Global Land Programme (GLP) and the Analysis & Integrated Modelling of the Earth System (AIMES) project of Future Earth.