

## Mapping environmental problem shifting:

### Towards building a database

Department: Copernicus Institute of Sustainable Development  
Research group: Environmental Governance (Project [PROBLEMSHIFTING](#))  
Supervisor: Dr. Rak Kim (<https://www.uu.nl/staff/RKim>)  
Email address: [r.kim@uu.nl](mailto:r.kim@uu.nl)

### Project description

Sometimes decisions made to address an environmental problem lead to new environmental problems. Examples of this phenomenon – known as ‘environmental problem shifting’ – are plentiful. These include the production of biofuels damaging local ecosystems, the conservation of invasive species harming native species, and the use of HFCs for a better protection of the ozone layer exacerbating climate change.

Ironically, some of these instances of problem shifting are triggered by international environmental treaty regimes, which are designed to solve specific environmental problems of their concern. There are more than 200 such treaty regimes, whose objectives are articulated in multilateral environmental agreements. These regimes may shift problems to one another, somewhat similar to the manner in which how trade-offs occur between 169 targets under the Sustainable Development Goals (SDGs) ([Pradhan et al. 2017](#)).

The Bright Minds Assistant will build on the work that has already been done on mapping SDG interactions, and apply it to map environmental problem shifting between international environmental treaty regimes. This work will ultimately contribute to building a database on environmental problem shifting. For an example of such a database, visit [regimeshifts.org](http://regimeshifts.org), and read more about it here: [Biggs et al. \(2018\)](#). The database building has been initiated by the research team, but cases of problem shifting still need to be identified through an ongoing survey and added to the database.

The tasks of the Bright Minds Assistant are organized in three phases: (1) conceptual phase (where we develop a framework similar to the one widely used to map SDG interactions ([Nilsson et al. 2016](#)); (2) data collection and mapping phase, where we employ a few methods for case identification such as systematic literature survey, and expert questionnaire survey and interview; and (3) analysis and write-up phase.

This Bright Minds Assistantship will be part of the research project PROBLEMSHIFTING ([problemshifting.org](http://problemshifting.org)) and work closely with the larger research team. There will also be some support from the members of the advisory board, some of whom are based at our own Institute (e.g., Prof. Frank Biermann with expertise in earth system governance and Prof. Detlef van Vuuren with expertise in earth system science).

### Job requirements

I am looking for a highly motivated and talented student who is determined to conduct scientific research and co-author a journal article based on the Assistantship. A strong interest in the topic of environmental problem shifting is a must, along with an affinity to an interdisciplinary approach to research at the intersection between environmental governance and environmental science. Some experience with the above-mentioned methods is desired. I hope to build a long-lasting collaborative relationship with the Bright Minds Assistant, which may also result in a Master’s thesis project.