

Editorial

The current issue includes three articles. The first employs a livelihood framework to study the social and ecological impacts of palm oil schemes in Sarawak, Malaysia. The second uses a back-casting approach to develop an action for renewable energy in Region Zealand, Denmark. The third combines a stakeholder and a governance approach to examine barriers to implementing biogas plants in Denmark and the prospects for overcoming these by the inclusion of stakeholders in the energy sector and the municipalities.

Wilms-Posen et al.'s *Land-Use and Livelihoods – A Malaysian Oil Palm Scheme and its Social and Ecological Impacts* combines research on livelihood security and environmental sustainability. Applying a livelihood framework to analyse the outcome of actual livelihood strategies for households participating in cash crop schemes for palm oil, the authors combine a qualitative approach to livelihood security and a quantitative approach to environmental sustainability to land use changes and soil fertility. The latter indicates that there can be environmentally detrimental long term effect of oil palm plantations depending on the cultivation practice as there are no incentives built into to the palm oil scheme to ensure soil fertility in the long run. The palm oil scheme has a positive impact on livelihoods as it allows for diversification of livelihood strategies and, moreover, secures land titles for those households that previously had none.

In *Back to the Future: A Backcasting based Approach to Planning for an Energy System Transition in The Danish Region of Zealand* Damsø et al. take a systemic and target-oriented approach to develop a plan for a flexible transition to a renewable energy future. Based on a thorough review the authors have developed a five step framework for backcasting towards the ideal future state. The framework includes formulating the ideal state, mapping the current state and the transitional preconditions, backcasting towards the ideal future state to meet the target state and finally outlines the transitional steps towards the target state. The authors touch upon technological lock-in issues such as capital intensity, longevity and fuel specificity, and address the challenges related to keeping future energy options open.

In *The Role of Municipalities, Energy Companies and the Agricultural Sector in Denmark as Drivers for Biogas: Trends in the Current development* Lybæk et al. explore the major challenges and barriers to expanding the biogas sector through Danish agriculture. Drawing attention to possible drivers, they investigate the possible role the energy sector could play as a new stakeholder and in particular the key role municipalities could play by using biogas in public procurement, by facilitating biogas projects, by the provision of energy services based on biogas and by regulating biogas projects. In relation to agriculture and its future role, the authors sketch three new models for organising biogas projects to overcome environmental barriers and financial barriers: the neighbour model, the star model and the institutional model.

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Editor