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Abstract title	ADAPTATION FOR NATURE IN DUTCH FEN MEADOWS; REFLECTIONS FROM STAKEHOLDERS
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Topic	Competing claims and land use in Deltas under climate change
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Problem definition

After fragmentation due to intensification of land use and urbanisation, the biodiversity of the fen meadow landscape in the Groene Hart region of the Netherlands now faces an additional threat: climate change. Since 1990 a National Ecological Network (NEN) is designed to prevent further habitat fragmentation. This NEN connects existing nature reserves and expands at key locations by: 1) acquiring new nature areas, and 2) adaptation of farmland management through agri-environmental schemes.

However, further expansion of this network stalls because; 1) many land owners do not want to sell their property for the purpose of nature, and 2) the adoption of agri-environmental schemes is not sufficient to construct coherent networks.

Theoretical framework and methods

In the fen meadow landscape dominated by grasslands we explored alternative options to connect habitat for species that are vulnerable to climate change. By connecting existing landscape elements (e.g. field margins and ditches and their banks) fragments of the landscape become more coherent and result in green-blue veining of the landscape. These green-blue veins can be used by species that are vulnerable to climate change for migration to other areas and as extended habitat.

Based on literature, information from experts and our own agronomic and ecological knowledge we designed a green-blue coherent network for farmland in the polders between existing nature reserves. Individual consultations of local experts and focus group discussions with local stakeholders provided feedback on practical implications, costs and benefits of green-blue veining options and the willingness to implement them.

Results

In focus group discussions most farmers, ecologists and policy makers agree that they have to cooperate to make the fen meadow landscape more resilient to climate change. Furthermore, the current agri-environmental schemes do not fit well in modern farming practices and they do not stimulate connectivity of the landscape sufficiently. The explored alternative options, especially green-blue veining, have been rated positive in the focus group discussions because they fit better into modern farming practices according to farmers and are thought to be more effective according to ecologists and policy makers. For species under pressure of climate change it is essential that habitats are connected and diverse. The connectivity of such networks is therefore a key issue and this will need more attention in the future design and implementation of agri-environmental schemes.

Images

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