



Photo: Duckrabbit

Governance by Small Water Management Units

Problem

Conflicting interests of different stakeholders involved in polder water management, which often manifest in disagreements over when to open and close sluice gates, prevent the adoption of more intensive cropping systems and create inequity in decision making regarding resources.

Background

While drainage is a prerequisite for increasing agricultural productivity in the polders, this alone will not create the conditions needed to realize production potential. Land elevation within the polders varies considerably; there can be a difference of 10 to 30 centimeters over a distance of 10 to 100 meters, and 1 to 2 meters variation across a wider landscape. In the absence of barriers, water flows to the lowest point in the landscape. The needs of farmers in lower lying areas often conflict with the needs of those in upper parts. For example, keeping sluice gates and flushing pipes open until the higher lands are flooded for rice cultivation results in too much water in the lower lands, and fosters conflict within communities.

Recommendation

Water management units (WMUs) need to be created and managed based on the hydrology of the landscape and the shared interests of those farming within the units. In addition to reducing water management conflict, the creation of small WMUs would allow farmers to take advantage of more productive cropping system options. Such units might be 50 to 100 hectares in size.

The physical creation of WMUs need not be technically difficult or costly, and could take advantage of existing rural infrastructure including roads, embankments and culverts. Small dykes would need to be constructed in places to separate lands of higher and lower elevations, and farmers within the WMUs could construct networks of small drains/channels to facilitate drainage or irrigation. Each WMU should have the capacity to control the times and rates at which water flows in and out of its boundaries and would need to be linked to a *khal*.

For more information, please visit : www.waterandfood.org and www.wle.cgiar.org