Resilience perspectives on the new Dutch flood risk management policy Multi-Layer Safety

Mathijs Van Vliet*1

1Wageningen University, Public Administration and Policy group (WU) – Netherlands

Abstract

Many low lying delta’s will have to deal with an increasing flood risk, caused by sea level rise and increasing river runoff, population numbers and assets. This is also the case in the Netherlands, a country with a long tradition of flood management, which in the last centuries has mainly focussed on flood prevention. Recently, however, a new policy has been developed aiming to enhance the resilience. The new policy "Multi-Layer Safety" (MLS) is in an early stage, and faces considerable opposition. MLS consists of three layers 1) prevention by embankments, 2) spatial planning and building codes 3) crisis control and evacuation. Different government levels are responsible for the different levels, which makes the implementation difficult. Many of the questions that need to be dealt with impact resilience. Different actors and scientific disciplines, however, have different interpretations of resilience, all highlighting a number of important issues.

• Resilience only with layer 2 and 3 included, or not?
  Advocates of MLS, stress that 100% prevention of floods is not possible. We thus need to reduce the high impacts, even if flood probabilities are low. Moreover, it will increase the resilience as critical infrastructure will remain intact or can be repaired faster. Advocates further state that many measures in layer two and three can be implemented relatively cheaply, if they are combined with other functions or issues. Opponents stress that layer 2 and 3 measures are not cost efficient. Flood prevention decreases impacts more than measures in the other layers. Moreover, if a flood happens the costs will still be extremely high due to the large stock of existing non-flood-proofed buildings and high flood depths. Therefore, all available money should be spent on preventing floods to happen, as the consequences of a flood are too large. Better link to the technical knowledge used by the water and flood management community, by making resilience more concrete. E.g. take a recovery threshold into account; the amount of damage that society can still recover from (Mens et al., 2011).

• Temporal scale. Changing land use and flood proofed the building stock takes time, and some measures are only effective if the whole network is protected. When does MLS start to become effective and increase resilience? What if sea levels continue to rise; when does resilience start to decrease again?

• Impacts on the division of roles between private and public parties. After all, measures taken on a building level will need more involvement of the private sector, as does citizens' preparedness and insurance. The private sector is often seen as more flexible and innovative; capabilities that positively influence resilience.

*Speaker
Solidarity: Currently, everybody is paying for flood defences, even those who live outside the flood zones. What is the impact of MLS on this solidarity, and how will this affect the social resilience of the Dutch flood management, which has been such a defining element of the Netherlands for a long time?

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