

WATER **VERSUS** WATER



BoxBarrier

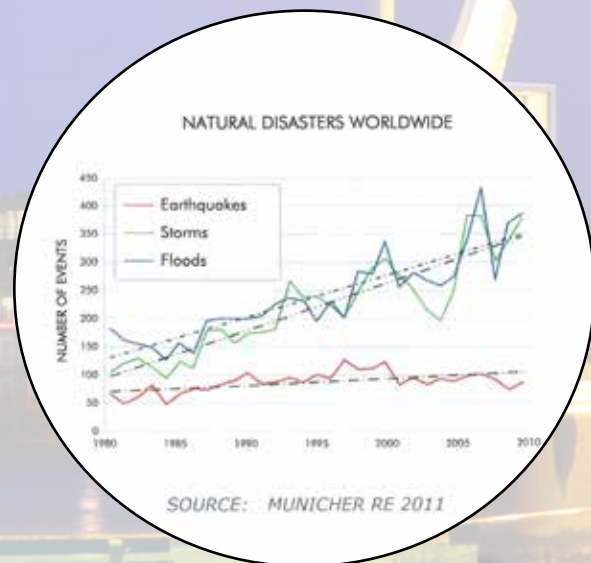
Water versus water



Effective flood barrier to prevent damage

Worldwide increase of flood events

The number and extent of natural disasters is increasing. These are often weather related disasters, such as hurricanes and floods. In recent years the consequences of flooding worldwide are broadcasted on a weekly basis in areas like Europe, Pakistan, USA, Australia and Thailand. Due to climate change, countries around the world are vulnerable to sea level rise and to larger river discharges. Climate change has also a negative effect on rainfall intensities.



Waterboard Rijnland

“The main advantages of the BoxBarrier are the fast deployment, efficient storage and easy handling”.

BoxBarrier wins Innovation Award Dutch Army

The Royal Dutch Army Corps of Engineers awarded the BoxBarrier their Innovation Award, “Golden Pioneer 2009”.

Effective flood barrier



BoxBarrier

The BoxBarrier is a new temporary flood defence system which can be deployed quickly and easily in case of an emergency. The system uses water to retain flood water and prevent wave overtopping. The BoxBarrier can be used to temporarily increase the height of a dike or quay but can also be deployed on a flat terrain with the aim to retain water. The additional height of 50 cm is in most cases sufficient to prevent flooding of the hinterland.

Quick facts BoxBarrier

- Flood retaining height of 0.5 m
- Deployment of 100 m within 1 hour (team of 3 men)
- Compact shape (LxWxH = 0.9 x 0.6 x 0.6 m)
- Light weight, less than 9 kg
- Easy to handle in harsh conditions
- Easy to fill through opening in cover
- Bridge function
- No foundation required
- Storage and transport of 400 m BoxBarrier in one conventional 40 ft container

Replacement of the conventional sandbag

For ages sandbags have been used as flood protection in case of calamities. Installation of sandbags (25 kg) is time consuming and physically demanding. Installation of sandbags requires huge quantities of sand which have to be transported to locations which are difficult to access under extreme conditions.

Prevent flooding, save time and money. 100 meter flood barrier, installed within one hour!

to prevent damage

Installation of 100 meter temporary flood defence system (installed within one hour) in six steps:



1. Transport



2. BoxBarrier elements



3. Installation



4. Filling of BoxBarriers



5. BoxBarrier retains water



6. Efficient storage after use

Applications

The BoxBarrier is a multifunctional system and can be used for various applications, such as:



Flood Barrier for dikes and levees

The origin of floods can be either overflow of rivers and canals due to extreme rainfall or melting snow water. Normally rivers and canals have shores, quays or dikes, which prevent overflow. In case of high river discharges due to the melting of snow or rainfall the height of the dike or shore is not sufficient and temporary heightening of dike/shore is required to prevent flooding of the hinterland.



Flood Barrier for vital infrastructure

Logistics are vital for the supply of the economy, so the permanent availability of infrastructure such as airports, motorways and railways is a main priority. The BoxBarrier can prevent flooding of infrastructure.



Flood Barriers for homes

Businesses and home owners can also protect their property and themselves by installing the BoxBarrier around their property. BoxBarrier and a mobile pump can be stored efficiently in the property or close by the property.

Not only private properties can be protected by the flood barrier, but also public properties such as schools, libraries, museums, galleries, churches, castles and other national and local heritage. The BoxBarrier® is suited for protecting homes and other real estate.



Flood Barrier for urban areas

Especially in urban areas heavy rainfall can lead to flooding, because large areas are paved and the drainage system cannot handle all the excess water. Terraced houses, shops and other businesses can be protected easily by installing the BoxBarrier.



Application as (temporary) basin

The BoxBarrier can be used to create a (temporary) basin. The basin can be used to capture fresh/salt water or to capture (contaminated) water originating from dredged materials or from other (semi) solid materials. The basin is also suitable to capture other types of liquid. BoxBarriers can also be used in combination with a membrane.



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BoxBarrier® is a patented technology

