



COLD
FLOOD PREVENTION

Cold Flood Prevention

Preventing effects of climate change



FLOODING – THE MOST DESTRUCTIVE NATURAL DISASTER IN THE WORLD

Flooding is the single most common natural disaster in the world as well as the disaster with the highest economic and humanitarian impact. In Southeast Asia alone, the damages from flooding amounts to \$ 175 billion each year - and these expenses will only continue to increase as the climate changes, if traditional approaches remain the applied solution to prevent flooding. There is a vast need for evaluating current flood protection management in order to reduce the massive damages caused by flooding.

SANDBAGS – A SHORT-TERM SOLUTION

Today, sandbags are the most commonly used protection against flooding. However, the traditional use of sandbags is an extremely time-consuming and resource-intensive solution to protect longer distances against flooding. In addition, sandbags typically do not seal properly making the sandbag dam highly unreliable. When sandbags are soaked by floodwater they become contaminated and their disposal has a high environmental impact. Accordingly, the traditional use of sandbags is a very short-term solution, which will not be able to effectively manage the increasing need for flood protection in the future.

COLD FLOOD PREVENTION – AN EFFECTIVE LONG-TERM SOLUTION

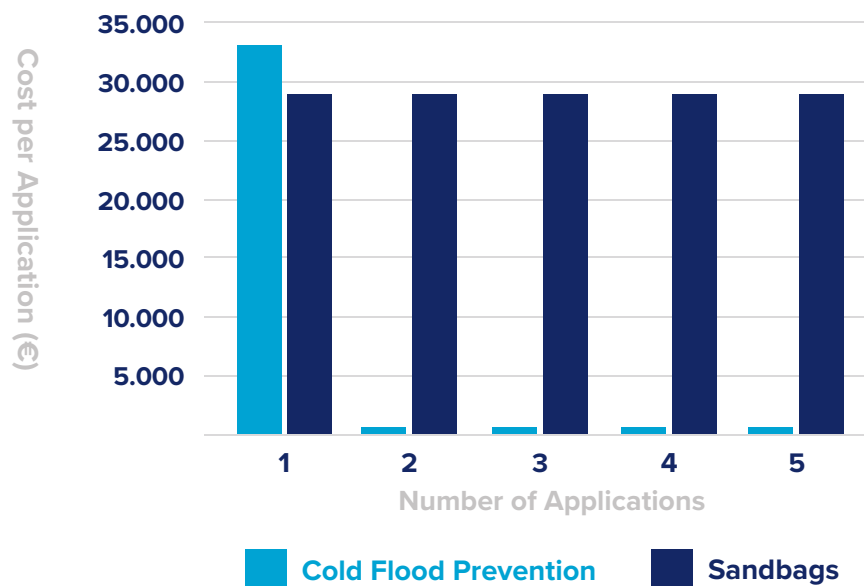
Cold Flood Prevention is an innovative alternative to the traditional use of sandbags, which is much more effective in preventing flooding. The Cold Flood Prevention system is easy to handle and quick to set up and remove. It can be managed by just 2 people and it is easily employed over longer distances. In addition, the Cold Flood Prevention system is reusable and has a low environmental impact. Accordingly, the Cold Flood Prevention system is a far superior solution that meets the apparent need for effective long-term flood protection management.

COLD FLOOD PREVENTION – LET THE FIGURES SPEAK FOR THEMSELVES

When comparing the Cold Flood Prevention system to the traditional sandbag dam, the barrier is both far more effective in preventing flooding and a cost-effective flood management solution especially in the longer term.

The cost-effectiveness of the Cold Flood Prevention system is primarily due to the fact that it is reusable and requires fewer resources to set up and remove.

The graph illustrates the cost of 100 meter flood protection in 1 meter height using the Cold Flood Prevention system or sandbags.



| | TRADITIONAL SANDBAG DAM | OUR SYSTEM |
|---|---|-------------------------------|
| SOLUTION The Cold Flood Prevention system replaces the enormous amount of sandbags required to make a 100-meter dam in 1 meter height. | 9.000 filled sandbags | 10 section barriers |
| TRANSPORTATION Since the Cold Flood Prevention system is very compact it can be transported in a trailer replacing the 45 truckloads a corresponding sandbag dam requires. | 45 truckloads | A standard van |
| EQUIPMENT The Cold Flood Preventions system requires significantly less equipment than the corresponding sandbag dam. | Sand, sandbags, sand loader, shovels etc. | Pumps, hoses and onsite water |
| TIME AND STAFF A team of 2 people can install and remove a 100-meter Cold Flood Prevention system in just 4 hours. The corresponding sandbag dam requires a team of 275 people to set up and remove within the same timeline. | 275 people | 2 people |
| DURABILITY The Cold Flood Prevention system can be reused multiple times for up to 10 years whereas the sandbag dem is a disposable solution. | 1 use | 10 years |

THE COLD FLOOD PREVENTION SYSTEM

Cold Flood Prevention is a unique patented modular system, which consists of a series of elongated sections that are attached to each other and thereby the length is easily adaptable to suit the extent of the flood. The barrier is filled with water, which creates a massive pressure that seals the surface and enables the barrier to withstand and divert floodwater.

The barrier's cellular construction ensures that it remains stable on any surface irrespective of external conditions making the barrier extremely robust and highly effective in preventing flooding.



MULTIPLE APPLICATIONS

The Cold Flood Prevention system has two main functions:

- **MOBILE BARRIER:** Used to control and protect against rising water levels in exposed areas such as housing, commercial buildings, infrastructure and airports etc. It can be used as a straight line, to form an arc or to encircle a building.
- **RESERVOIR:** used as temporary or permanent collection and storage of large amounts of water, waste water or contaminated liquids during construction or in areas with forest fires or extreme drought etc.

A SOLUTION THAT FITS EVERY FLOOD THREAT

The Cold Flood Prevention system is available in three different models in order to manage different flood risks.

Each model is available in desired lengths by connecting more sections. Customized solutions can be produced on request.

| | Model I | Model II | Model III |
|---|----------|-----------|-----------|
| Installed height | 0,52 m | 1,04 m | 1,60 m |
| Effective height | 0,38 m | 0,76 m | 1,17 m |
| Width | 0,70 m | 1,36 m | 2,07 m |
| Standard length (per section) | 15 m | 10 m | 10 m |
| Water consumption (per section) | 7.500 l | 12.000 l | 26.800 l |
| Weight without water (per section) | 68 kg | 90 kg | 180 kg |
| Weight with water (per section) | 7.568 kg | 12.090 kg | 26.980 kg |



WHY CHOOSE COLD FLOOD PREVENTION?



FLEXIBLE & EFFECTIVE

The barrier's flexible material ensures that it adapts to all types of surfaces and terrain and diverts 98 % of the floodwater. The unique design ensures that it is resistant to drifting objects and remains stable irrespective of external conditions.



COST-EFFECTIVE & REUSABLE

Unlike sandbags, the barrier can be reused to protect against flooding for up to 10 years. The barrier's material is recyclable and thereby it ensures a very low environmental impact compared to sandbags.



QUICK & EASY HANDLING

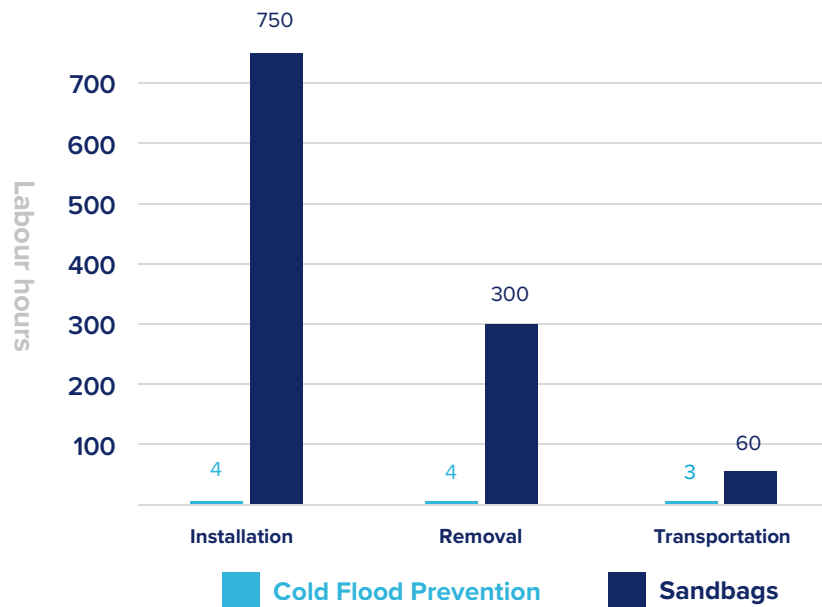
The barrier is far quicker to deploy than sandbags and requires only pumps, hoses and onsite water supply as well as a team of 2 people.



FAST RESPONSE TIME

A team of 2 people can handle up to 50 m per hour, ensuring a fast response time which is often crucial to prevent flooding.

WHEN A FAST RESPONSE IS CRUCIAL



Eliminating the damages of flooding is often a question of time. A fast response is crucial to protect exposed areas from flooding and prevent damages.

Unlike sandbags, the Cold Flood Prevention system is easy, quick and effective to set up and remove.

Where it takes 750 labour hours to set up a 100 m sandbag dam and 300 labour hours to remove it, it only takes 4 labour hours to install the Cold Flood Prevention system and 4 hours to remove it.

INSTALLATION

Step 1: Place sections in the exposed area, roll them out and connect them through the locking system.

Step 2: Connect the pumps to the filling couplings and fill the sections with water.

Step 3: Remove the pumps. The barrier will now effectively divert the floodwater and prevent flooding in the exposed area.

REMOVAL

Step 1: Open the drainage couplings and empty the sections for water. Disconnect the sections from one another, open the drain plugs and drain the remaining water.

Step 2: Place the sections in the storage case, which makes them easy to move and transport them to the storage facility.

Step 3: Rinse and dry the sections after use and store in the storage case until they are needed again.



ABOUT US

With headquarters in Hirtshals, Denmark, Cold Flood Prevention has since 2012 developed and produced innovative flood prevention solutions that are characterized by its high efficiency, easy handling and reusability.

The Cold Flood Prevention system is patented, developed and tested in collaboration with a number of authorities and emergency services around the world and we have received very positive feedback.

“The Cold Flood Prevention system was very quick to set up and enabled us to respond quickly to the flood threat, which is important since response time is crucial in most situations. The easy handling saved us many labour hours and provided better working conditions for our staff.”

- The Fire and Rescue team, Denmark



COLD
FLOOD PREVENTION



FLEXIBLE & EFFECTIVE

- Adapts to all types of surfaces and terrain
- Remains stable irrespective of external conditions



COST-EFFECTIVE & REUSABLE

- Can be reused for 10 years
- No environmental impact



QUICK & EASY HANDLING

- Can be handled by just 2 people
- Installation requires only pumps, hoses and onsite water supply



FAST RESPONSE TIME

- 2 people can handle 50 m per hour
- A 100 m barrier is operational in just 2 hours

COLD FLOOD PREVENTION

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Contact us

Please contact us to learn more about how we can assist you in preventing flooding. We are happy to help you with evaluating your flood risk and finding the right solution to manage it.