

FloodRisk Analysis for Insurance Companies



Financed by: Belgian Insurance Companies

Client: Belgian Insurance Companies

Date: 2001 –

Budget: € 120 000

Location: Belgium

Assignment:

Assignment from the insurance companies for the analysis of the flood probability of their client portfolio.

Scope of Services:

- Hydrology
- Informatics implementation
- Definition of Flood Probability

Technical Description:

Following the new Belgian law on housing insurance, the insurance companies need a tool in order to assess the flood risk of their client portfolio.

Soresma has developed such a tool to define "flood probability".



High river discharge

In order to accomplish a reliable assessment of "flood probability", several methods have been developed. These methods are complementary to each other and contribute to the optimization of the final result.

They are based upon:

- the calculation of the effect of nearby rivers and of differences in altitude. For this purpose, statistics of water levels in rivers are compared with a digital terrain model.
- registration of damages. Adequate information is provided by the Calamity Fund and by the insurance companies themselves (damage registration).
- a hydrologic model which calculates the water flow from the terrain and defines potential additional flood zones.
- flood by sea and tidal rivers.

To define the geographical position of the addresses, Soresma used the digital street atlas of TeleAtlas.



Damage after a flood



Soresma nv
Britselei 23
B-2000 Antwerpen
tel. +32 (0)3 221 55 00

Soresma nv - haecon
Poortakkerstraat 41
B-9051 Gent
tel. +32 (0)9 261 63 00

Soresma sa
Chaussée de Louvain 484
B-5004 Namur
tel. +32 (0)81 20 18 91

info@soresma.be
www.soresma.be
ing. Philippe Hyde
Contract Manager

The assignment by each of the insurance companies included:

- analysis of the existing client portfolio of the insurance company
- installation of an interactive graphical tool which allows the investigation of the "flood probability" of a new client
- integration with the existing mainframe application of the insurance company.

By means of a maintenance contract an update and/or extension of the tool is done, twice a year, for:

- the digital street atlas of TeleAtlas
- the flood zones according to the latest statistics of water levels and registered damages.

Soresma has all necessary multidisciplinary technical know-how to accomplish this project:

- hydrological knowledge to define the flood zones
- IT knowledge to develop the various models and tools

- fundamental understanding of flood risks, associated damage and victims modules and fundamental understanding of general water management
- expertise in external safety, evacuation and disaster management.

Furthermore Soresma has the appropriate contacts with the various administrations / authorities concerned in order to obtain the large amount of hydrological and geographic data.

Within this project Soresma does not only sell a product but guarantees and renders reliable services and support to the various departments of the insurance companies.

As an engineering consultant with a wide, year-long experience, Soresma can perfectly accomplish this task.

