Reflections on and lessons learnt from recent flood events in Flanders

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Flood management: how does it work?

- before
- during
- after
(Long) before the flood ...

Flemish Gvmt + Administrations

- Coordination and publication of flood prevention policy
  - runoff source control @ public + private sites
  - safeguarding of flood plains (building permit)
  - design criteria + code of good practice for sewer systems

Fluvial flooding

Pluvial flooding

Local (sewer) authorities

- Trunk sewers (+ WWTP)
- Local sewers

- Aquafin
- Regional sewer managers
- Municipalities

Real flood management

- (Planning)
- Design
- “Normal” operation

Flood prevention at design level
(Just) before and during the flood ...

Flemish Gvmt + Administrations

- Early warning (48 hrs) of flood risk for watercourses
  - based on hydrologic/hydraulic modelling
  - Pluvial flood risk often not anticipated

RMI (Met Office)

- Severe rain warning
  - update frequency = f (alert level)
  - 2-6 hrs

- realtime C-band radar images
  - (+/- 10 mins delay)
(Just) before and during the flood ... (ctd.)

Crisis / disaster management

<table>
<thead>
<tr>
<th>Impact level</th>
<th>Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>(not officially declared)</td>
<td>None (individuals)</td>
</tr>
<tr>
<td>Level 1 (local impact)</td>
<td>Municipality (mayor)</td>
</tr>
<tr>
<td>Level 2 (regional impact)</td>
<td>Province (governor)</td>
</tr>
<tr>
<td>Level 3 (national impact)</td>
<td>Federal govt (Interior Minister)</td>
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</tbody>
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Fire Brigade
Sewer managers
...
After the flood ...

• (when the media are still on top of it)
  → Find the culprit!
• (in the next days/weeks)
  → Prepare the insurance claim
• (in the next months – maybe for life)
  → Watch thunderstorms with a heavy heart ... and pray that it won’t happen again.
The July 29th event
Lessons to learn?

• Don’t wait until it hits you!
  – Watch the RMI severe weather alerts
  – Watch the radar images
First clear indication of storm trajectory

fast growing cells

fast growing cells

fast growing cells
Lessons to learn?

• Discrepancies in responsibilities
  – flood prevention
  – flood management
• Everybody should have a script for dealing with floods
  – public involvement
  – debriefing/discussion after the event