

**Public Risk Management**  
with special reference to Dutch  
municipalities

a paper for the COE conference at  
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**Public Risk Management**  
**II**

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**Introduction**

**I**

- drought
- flooding
- diseases
- bad harvest

nature

- theft or assault
- threat of an invasion
- competition

other people

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## Introduction

### II

- Chinese Wall, sharing
- a first paper on insurance: in the early 17th century by the famous Dutch statesman Jan de Wit
- second half of the last century
- USA : PRIMA, Public Risk Management Association
- Western Europe: developing PRIMO

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## Introduction

### III

- the Netherlands, early nineties:
- a Bylaw for the municipalities and provinces : *Risk Paragraph*
- *Paragraph on Financial Resilience*

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## Content

- the difficult concept of risk
- distinction between positive and negative risks
- focus on negative risks
- the different steps or phases in a risk management
- the Dutch municipalities' approach of resilience.
- some objections and suggestions for improvement
- some conclusions.

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### What is risk?

- an *event*
- the *frequency or chance or probability*
- the *damage*
- Definition: *the chance a specific event will occur which will cause damage*

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### What is risk? Complications

Example: event of a dike breaking

- by different *causes*
  - damage to different objects
  - each effect not easy to assess: chances for different losses are different
- one cause: different effects: break through of the dike, flooding on other places, capsizing of ships, etc.

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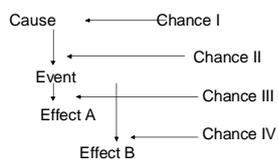
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### Illustration of Risk



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## The risk management cycle

### I

- I. Policy formulation
- II. Risk identification
- III. Risk assessment
- IV. Prioritization
- V. Policy measures
- VI. Implementation and organization
- VII. Feed back

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## The risk management cycle: Risk identification

- different instruments to distinguish and identify risks
- use a systematic classification:
  - *events* (like a fire),
  - *policy fields or organizational departments*,
  - *objects* impacted by the event.
- Use the classification most suited for your organization

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## The risk management cycle: Risk identification II

- classification of risk objects

Buildings	Other material damage	Immaterial damage (image)
Machinery	Personnel	Other organizations
Inventory	Clients	Sales loss
IT	Other citizens	Environment

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### The risk management cycle: Risk assessment

- I. assess the chance or probability of an event.
- II. quantify the possible damage(s).
  - one event may have different consequences
  - one consequence may have a varying intensity

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### the frequency-severity index: prioritization

	Severity →		
Frequency very high	III	III	IV
high	II	II	III
low		II	III

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### The risk management cycle: Policy measures

- economists' approach:
  - the consequence of an event is a damage or loss,
  - the measures will cost money.
  - weigh the advantage of possible but uncertain loss reduction against certain costs
- Bell and Schleifer (1995): "Often risk can be reduced at a cost. Clearly, if the price gets too high it may be better to stick with the risk."
- 70% of risks caused by human failures.
- promotion of *risk awareness!*

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**The risk management cycle:**  
Policy measures: Risk Control

1. *Risk Avoidance*: very extreme: the ending of an activity.
2. *Risk Prevention*: reduce the probability
3. *Risk Reduction*: reduce the damage
4. *Segregation of risks*:
  1. *splitting or spreading*
  2. *doubling*
5. *Contractual Risk Transfer*

Note: all (1?) measures cost money!

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**The risk management cycle:**  
Policy measures: Risk Financing

1. *Acceptance*
  - Funding from current account
  - Funding from free reserves
  - Funding from special reserves
  - Captive

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**The risk management cycle:**

Risk Financing:

2. *Insurance*
  - A mutual insurance
  - A commercial insurance

Implementation and organization

Feed back

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The Dutch municipalities approach  
*The rules in the bylaw I*

- since 1995 all (say 350) municipalities and 12 provinces a paragraph on risk management.
- Since 2004 a paragraph on financial resilience.

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The Dutch municipalities approach  
*The rules in the bylaw II*

- A scrutiny of the available financial capacity,
- A scrutiny of the risks (needed financial capacity)
- The policy on the financial resilience, the risks and the measures taken.

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The Dutch municipalities approach  
*The rules in the bylaw III*

- Step 1: summarize the uncovered “risks”
  - risks which occur frequently,
  - can for that reason be easily assessed
  - can be covered for that reason by a reserve or by insurance.

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The Dutch municipalities approach  
*The rules in the bylaw IV*

- Step 1: summarize the uncovered "risks"
  - 'positive risks' and pure risks
  - 3 categories of risk:
    - financial risks
    - risks for property
    - risks related to the internal organization.
  - distinguish between general risks and specific risks

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The Dutch municipalities approach  
*The rules in the bylaw V*

- Step 2: calculate the financial loss due to these uncovered risks. = the *financial capacity needed*.
- Step 3: calculate the *financial capacity available*. Equal to:
  - the available free budgetary reserves
  - + the available room for extra tax income
  - + hidden reserves.

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The Dutch municipalities approach  
*The rules in the bylaw VI*

- Step 4: the *financial resilience* = the ratio between the capacity available and the capacity needed.
- Step 5: give an exposé of its risk management policy.

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## Empirical findings I

- Boorsma and Haisma (research 2005-06)
- data from (a few provinces and) 130 municipalities
- *Step 1: identification:*
  - The municipalities do not identify the risks in a systematic way
  - No distinction between events, policy fields exposed to risk, and risk exposed objects
  - Cause: only unfunded risks are to be mentioned ??

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## Empirical findings II

- positive and negative risks: most cities only mention the pure or negative risks.
- The distinction between general and specific risks mostly is not followed.
- *Step 2: the assessment of the possible loss or of the financial capacity needed:*
  - A few cities, 5 out of 130, use the approach of the enlarged frequency-severity index
  - 23 have quantified the chance, without quantifying the resulting damage.
  - Many cities do not calculate the possible risk in an appropriate way.

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## Empirical findings III

- Many cities do not mention what is needed at all.
- *Step 3: calculate the financial capacity available:*
  - 124 mention the available financial capacity
- *Step 4: Calculate the financial resilience as the ratio between capacity available and capacity needed.*
  - Only 13 out of 130 calculated the needed financial capacity.
  - The range is between 0.39 and 3.92, the average being 1.58.

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### Empirical findings IV

- Step 5: the municipal risk management policy:
  - Only 7 presented an explicit policy.
  - Only 6 formulated a rather complete policy.
  - Most do not formulate the ways to improve the resilience.

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### Conclusions I

- Risk management is growing as a special, multidisciplinary discipline.
- Enough reasons to implement a modern public risk management.
- A growing mass of literature.
- In Holland there is an interesting new policy
- Quite much room for improvement!
- Especially the calculation of the possible loss, in theory difficult, is even more in practice a difficult problem.

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### Conclusions II

- The main objection to the Dutch approach is the restriction to “uncovered” risks.
- Each organization should have a full, systematic approach of all risks.
- Williams and Heins (1989): “Since no one knows the future exactly, *everyone is a risk manager, not by choice but by sheer necessity.*”

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