

# Download

Overzicht

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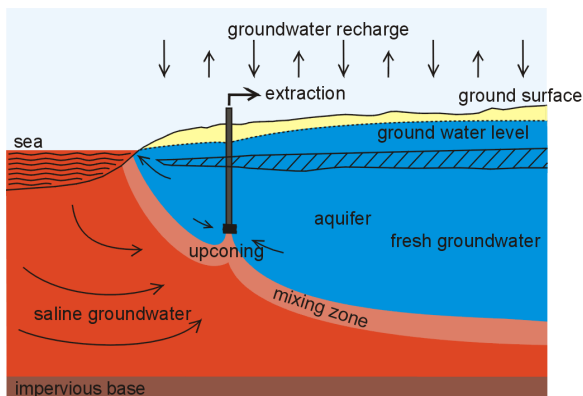
- Slim Water Management, case Rijnland
- Innovatie in Perkpolder, peilbuizen beschermen grondwater tegen verzilting
- The Challenges of Saline Groundwater
- Zoetwater zelfvoorzienendheid, Deltaproof
- GO-FRESH: Ondergrondse waterbergingsproeven Proeftuin Zuidwestelijke Delta
- Kansrijke oplossingen voor een robuuste zoetwatervoorziening( Uitleg GO-FRESH 3 proeven, 4m20s)
- Kreekrug Infiltratie Proef in bedrijf (2m39s)
- De effectiviteit van het doorspoelen van polders in Nederland
- De bronnen van verzilting, en de lange geschiedenis die eraan voorafgaat, case NL
- Nederland, een Landschap gevormd door Mens en Natuur

## Lecture Notes Density Dependent Groundwater Flow: Salt water intrusion in coastal aquifers

**Auteur:** Gualbert Oude Essink

**Dictaat:** [Density Dependent Groundwater Flow](#)

- 1 Introduction
- 2 Characteristics of a density dependent groundwater system
- 3 Freshwater head
- 4 The concept of a fresh-saline interface
- 5 Control of salt water intrusion
- 6 Numerical modelling
- 7 Salt water intrusion in the Netherlands
- 8 Heat transport in porous media: introduction



## Lecture Notes Groundwater Modelling

**Auteur:** Gualbert Oude Essink

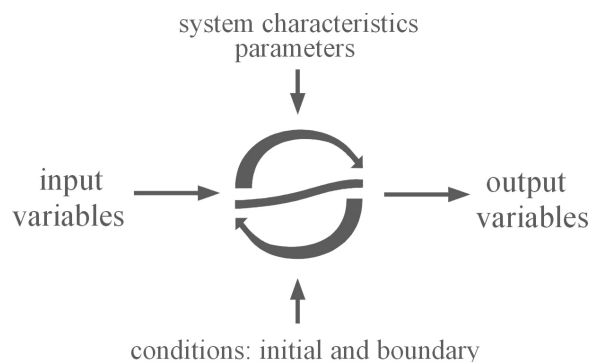
**Dictaat:** [Groundwater Modelling](#)

**PART I Modelling Protocol**

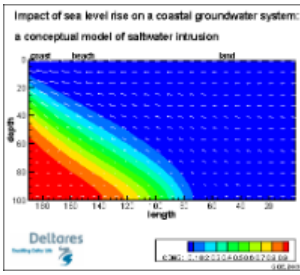
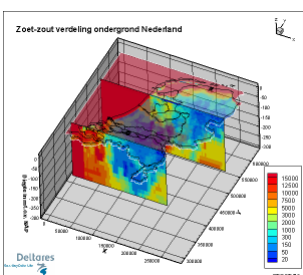
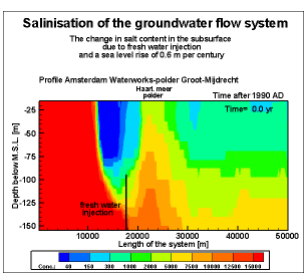
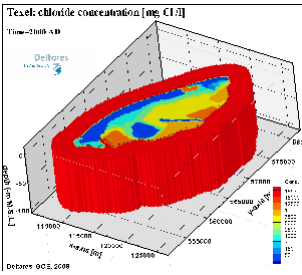
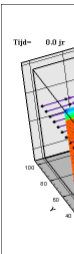
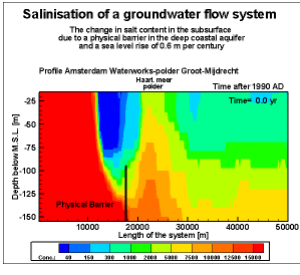
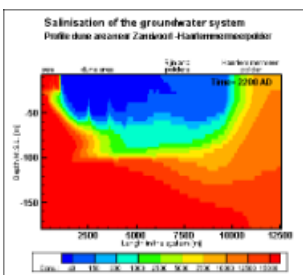
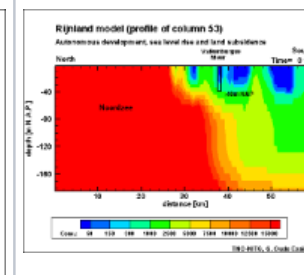
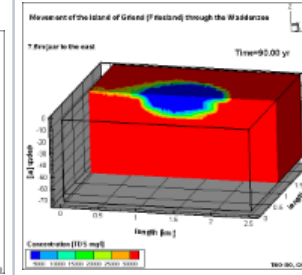
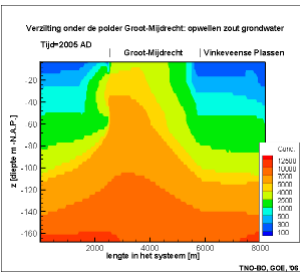
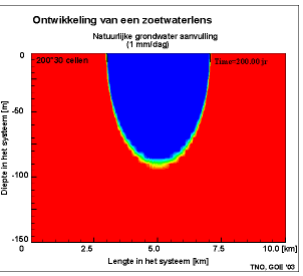
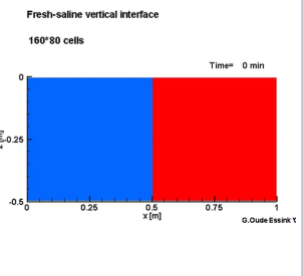
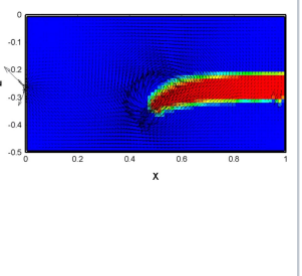
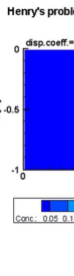
- 1 Introduction
- 2 Classification of mathematical models
- 3 Methodology of modelling
- 4 Data gathering

**PART II Groundwater Modelling**

- 5 Introduction
- 6 Mathematical description of hydrogeologic processes
- 7 Solution techniques
- 8 Numerical aspects of groundwater models
- 9 Some selected groundwater codes



Animations: examples of salinisation processes

|                                                                                                                                                      |                                                                                                                                                            |                                                                                                                                                                |                                                                                                                                                                         |                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <p><b>Henry's profile with sea level rise</b></p>                   | <p><b>3D zoet-zout verdeling ondergrond NL</b></p>                        | <p><b>Fresh water injection to combat salinisation</b></p>                   | <p><b>3D zoet-zout verdeling ondergrond Texel</b></p>                                | <p><b>Region partly c</b></p>  |
| <p>Henry's profile with sea level rise</p>                                                                                                           | <p>3D zoet-zout verdeling ondergrond NL</p>                                                                                                                | <p>Fresh water injection to combat salinisation</p>                                                                                                            | <p>3D zoet-zout verdeling ondergrond Texel</p>                                                                                                                          | <p>Regional captured</p>                                                                                          |
| <p><b>Physical barrier in the coastal zone</b></p>                 | <p><b>Dutch profile: extraction, upconing and low inland levels</b></p>  | <p><b>Profile over 3D model: effect sea level rise on salinisation</b></p>  | <p><b>Movement of the island De Griend (NL): creation of a freshwater lens</b></p>  | <p><b>Evo lens</b></p>        |
| <p>Physical barrier in the coastal zone</p>                                                                                                          | <p>Dutch profile extraction, upconing and low inland levels</p>                                                                                            | <p>Profile over 3D model: effect sea level rise on salinisation</p>                                                                                            | <p>Movement of the island De Griend (NL): creation of a freshwater lens</p>                                                                                             | <p>Evo lens</p>                                                                                                   |
| <p><b>Upconing saline groundwater under a low-lying area</b></p>  | <p><b>Ontwikkeling van een zoetwaterlens</b></p>                        | <p><b>Interface</b></p>                                                    | <p><b>Saltwater pocket</b></p>                                                     | <p><b>Henry</b></p>          |
| <p>Upconing saline groundwater under a low-lying area</p>                                                                                            | <p>Ontwikkeling van een zoetwaterlens</p>                                                                                                                  | <p>Interface</p>                                                                                                                                               | <p>Saltwater pocket</p>                                                                                                                                                 | <p>Henry</p>                                                                                                      |