

Code-lists for the water environment

Aquo as best practice



Een samenwerkingsverband van:



Rijkswaterstaat
Ministerie van Infrastructuur en Waterstaat



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Edwin Wisse, Joan Staeb



Water, information, standards management

- Water management in the Netherlands
 - Organization: regional and national
 - About IHW (Water Information Centre)
- The Aquo standard
 - Status in NL
 - Relation to international standards
 - Model and code-lists
 - *Process*
- **Reporting and code lists**
- Next steps

wetter
voda νερό
水 uisce
ūdens akvo
eau
vanduo
agua vand
vesi
víz woda
dŵr water
wasser
acqua aigua
apă вода
vatten



About IHW

Informatiehuis Water (IHW) is a cooperation programme of provinces, water boards and ministry of Infrastructure & Water in the Netherlands.

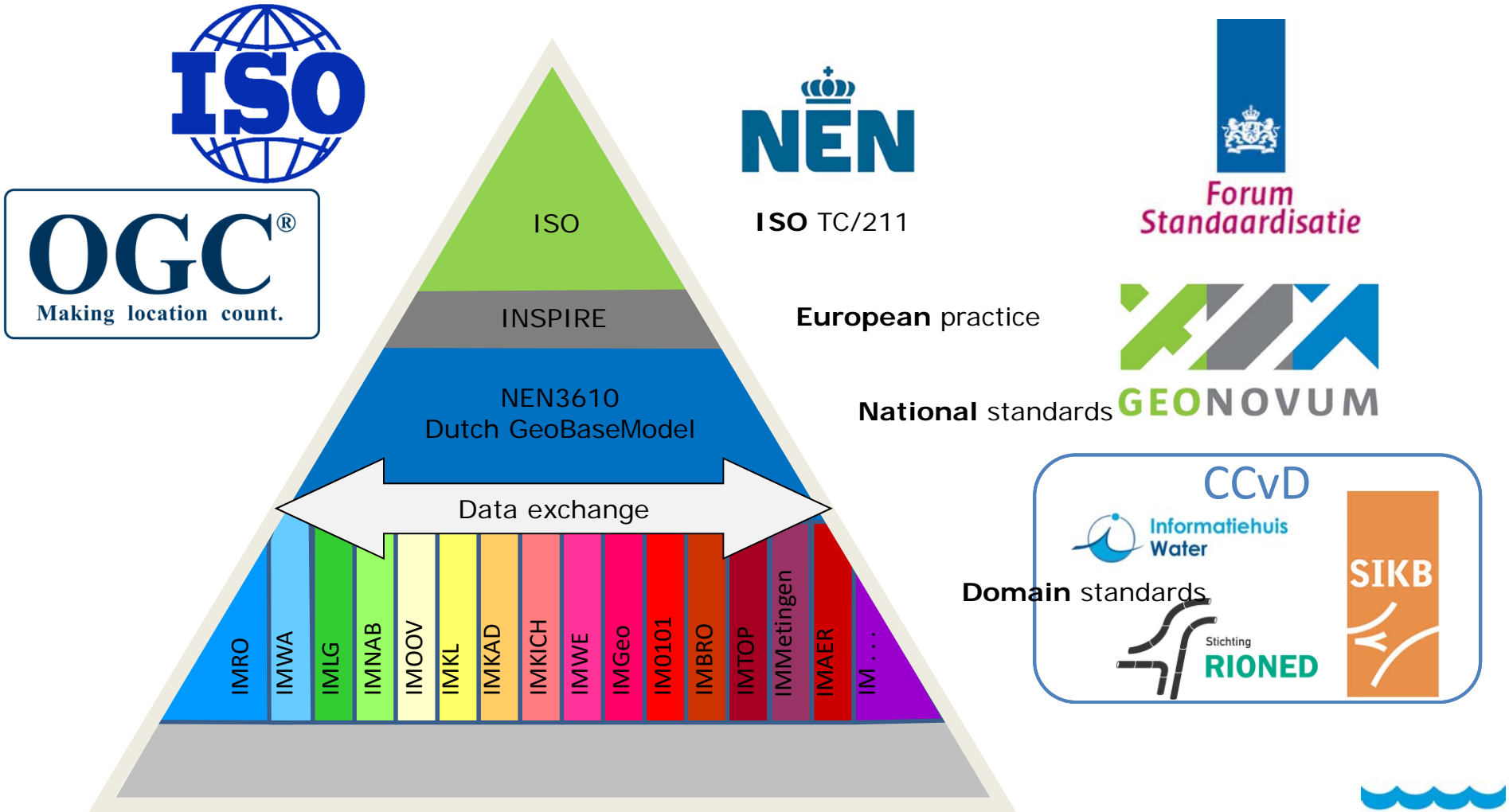
IHW reports on water quality to EU and NL. Aquo standard as a basis.

Mission:

“To make information flow efficiently and effectively between partners in water management & To make it available to third parties”



Standards and organisation



The Aquo standard

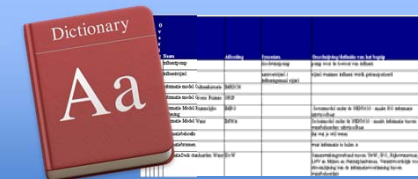
- Standards for: water quality, water system, levees.
- Management: yearly procedure.
Apply or explain status.
- Collaborations on geographic objects (the map), sewage systems, soil samples.
- We manage both information models, the vocabulary and code-lists.



Aquo IMWA

code	Omschrijving	Categorie
112T4C2a	1.1.1.2-tetracloroethaan	630-20-6
112T4C2b	1.1.1.2M-Code	Omschrijving
112T4C2c	1.1.1.2M-Code	Omschrijving
112T4C2d	1.1.2.2a	1.1.1.2-tetracloroethaan
112T4C2e	1.1.2.2b	1.1.1.2-tetracloroethaan
112T4C2f	1.1.2.2c	1.1.1.2-tetracloroethaan
112T4C2g	1.1.2.2d	1.1.1.2-tetracloroethaan
112T4C2h	1.1.2.2e	1.1.1.2-tetracloroethaan
112T4C2i	1.1.2.2f	1.1.1.2-tetracloroethaan
112T4C2j	1.1.2.2g	1.1.1.2-tetracloroethaan
112T4C2k	1.1.2.2h	1.1.1.2-tetracloroethaan
112T4C2l	1.1.2.2i	1.1.1.2-tetracloroethaan
112T4C2m	1.1.2.2j	1.1.1.2-tetracloroethaan
112T4C2n	1.1.2.2k	1.1.1.2-tetracloroethaan
112T4C2o	1.1.2.2l	1.1.1.2-tetracloroethaan
112T4C2p	1.1.2.2m	1.1.1.2-tetracloroethaan
112T4C2q	1.1.2.2n	1.1.1.2-tetracloroethaan
112T4C2r	1.1.2.2o	1.1.1.2-tetracloroethaan
112T4C2s	1.1.2.2p	1.1.1.2-tetracloroethaan
112T4C2t	1.1.2.2q	1.1.1.2-tetracloroethaan
112T4C2u	1.1.2.2r	1.1.1.2-tetracloroethaan
112T4C2v	1.1.2.2s	1.1.1.2-tetracloroethaan
112T4C2w	1.1.2.2t	1.1.1.2-tetracloroethaan
112T4C2x	1.1.2.2u	1.1.1.2-tetracloroethaan
112T4C2y	1.1.2.2v	1.1.1.2-tetracloroethaan
112T4C2z	1.1.2.2w	1.1.1.2-tetracloroethaan

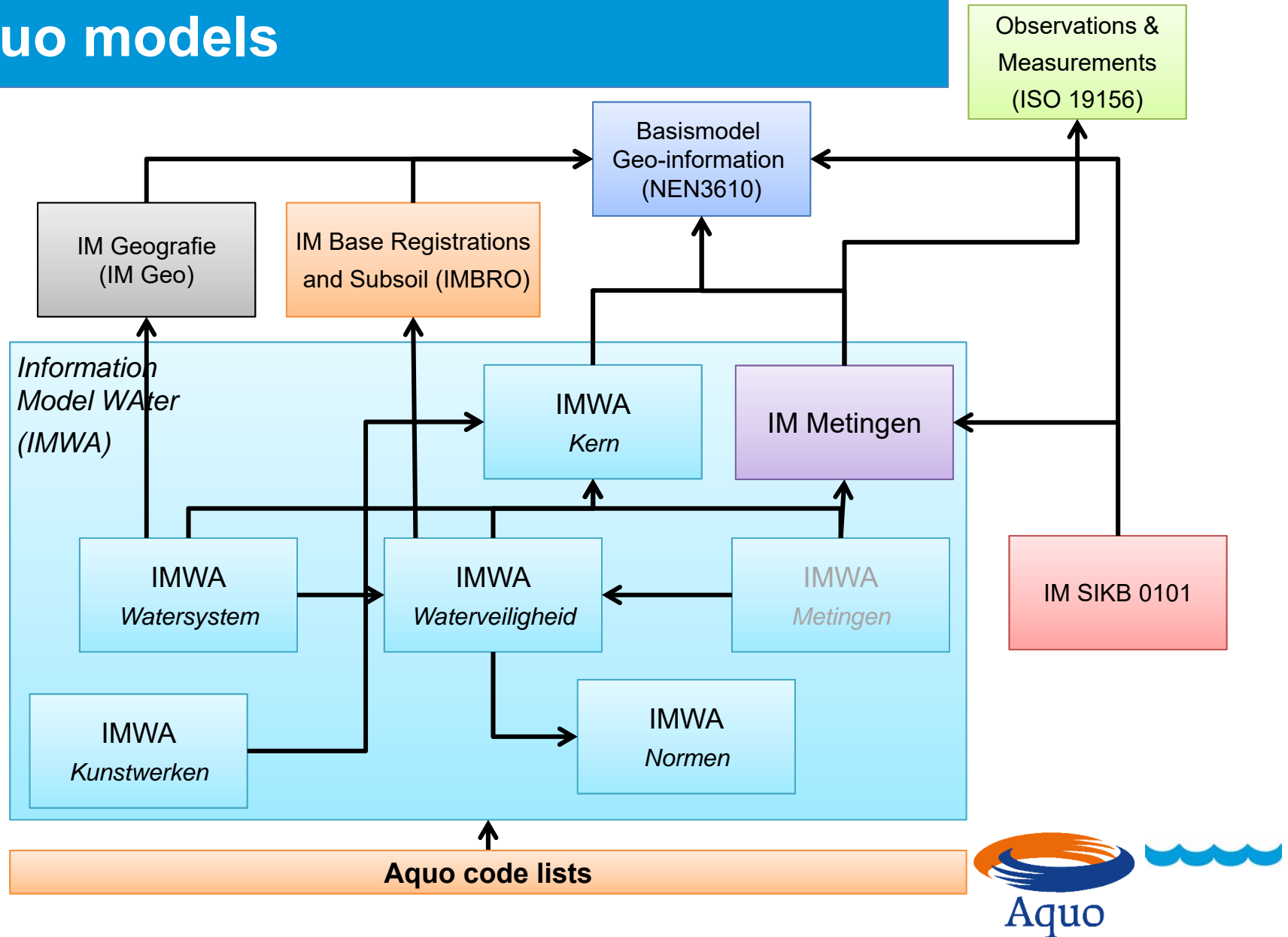
Aquo code-lists



Aquo lexicon

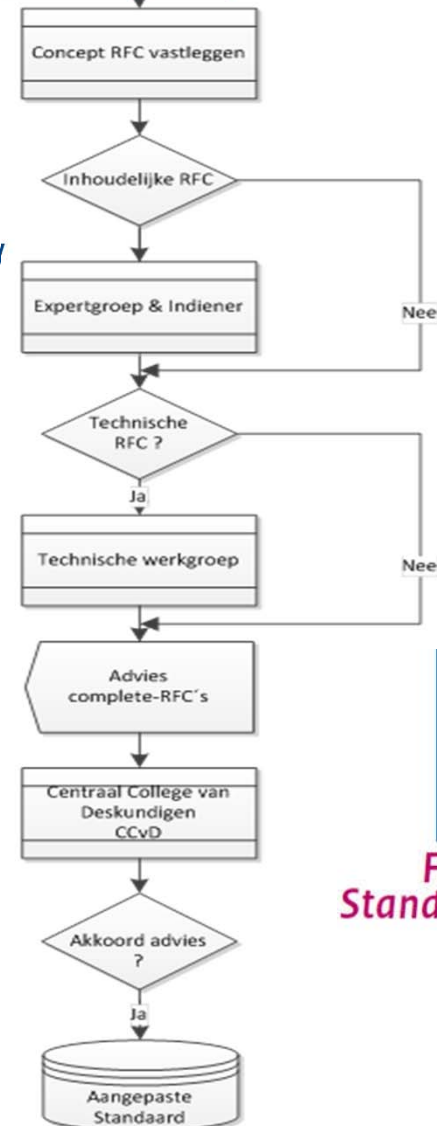


Aquo models



Process

- Apply or explain standards are accredited by the Forum Standardisation in NL.
- Yearly process from change request to new Aquo version
 - Expert groups on chemistry, ecology, water system, waste water
 - Technical working groups
 - Board of experts
- Joint process with SIKB (soil) and RIONED (municipal water).



Forum
Standardisatie



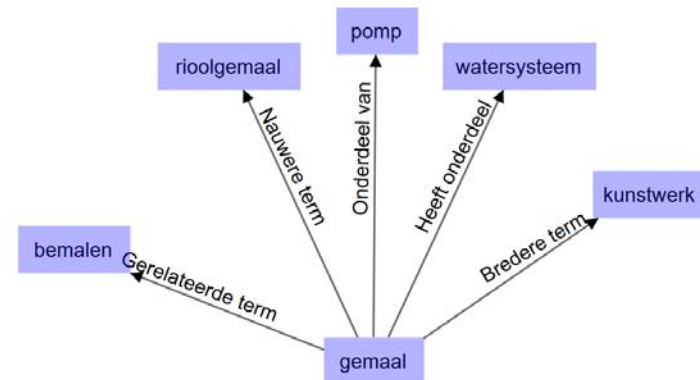
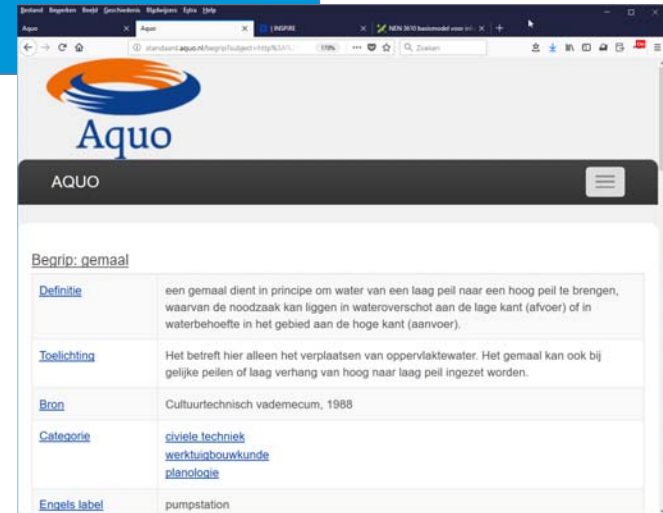
Reporting and code lists

- Information models, the grammar of the semantic web are well standardised. But code lists are national.
- Wide scope of national code lists in comparison to international code lists
- For reporting several different, overlapping code lists must be used.
- For the current European monitoring data exchange we use many code-lists:
 - SDN/BODC (Seadatanet)
 - Reportnet /Eionet (MSFD/WFD reporting)
 - OSPAR (Oslo Paris convention)
 - ICES (international council for exploration of the seas)
 - TMAP
 - International river conventions (Rhine, Meuse, Scheldt, Ems, etc.)



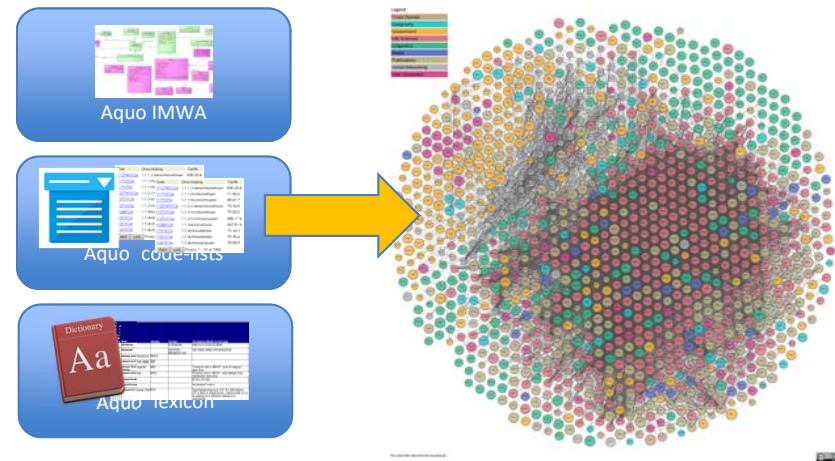
From lists to semantics

- Now: from dictionaries, lists and models to linked data
- From harmonisation between standards to linking at semantic level.
- *Smaller Aquo standard, broader use*
- We use *relatedMatch* relations to terms in other catalogues.
- We can set *use* or *equals* relations to Inspire code-lists.
- Similar international proces for managing code-lists makes linking possible.



Next steps and questions

- Move from layered model, code lists, thesaurus to linked data.
- Need for harmonised, international code-lists
 - Reporting needs standardised code lists
 - Or does linked data make harmonisation obsolete?
- Governance of the standardisation process
 - What is the current situation per country?
 - Now to the international level!



Contact and info IHW

IHW: www.informatiehuiswater.nl

Aquo: standaard.aquo.nl/domeintabellen
standaard.aquo.nl/begrippen
[aquo models](#)

Reporting portals:

www.waterkwaliteitsportaal.nl
www.waterveiligheidsportaal.nl

(it's all in Dutch, sorry)

Thanks!

Edwin Wisse e.wisse@ihw.nl

Joan Staeb j.staeb@rws.nl

On Friday 10:15 in Gorilla 3 more about water
information: Roland van de Boel *Sharing data leads to
quality improvement; case at waterboards in NL*

