DWA

German Association for Water, Wastewater and Waste

Because we care about the future!



Anett Baum – DWA – 02.12.2019

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Contents

1. DWA
2. Development of rules and standards,
3. Latest Topics in Germany

Contents

1. **DWA**
2. Development of rules and standards,
3. Latest Topics in the water sector

Who is DWA

DWA

- non-governmental
- non-profit organisation
- represents the specialists, active in the fields of water management, wastewater and waste

DWA´s acitivities

- politically and financially independent

It deals with

- technical-scientific topics and
- economic and legal issues of environmental protection

About DWA

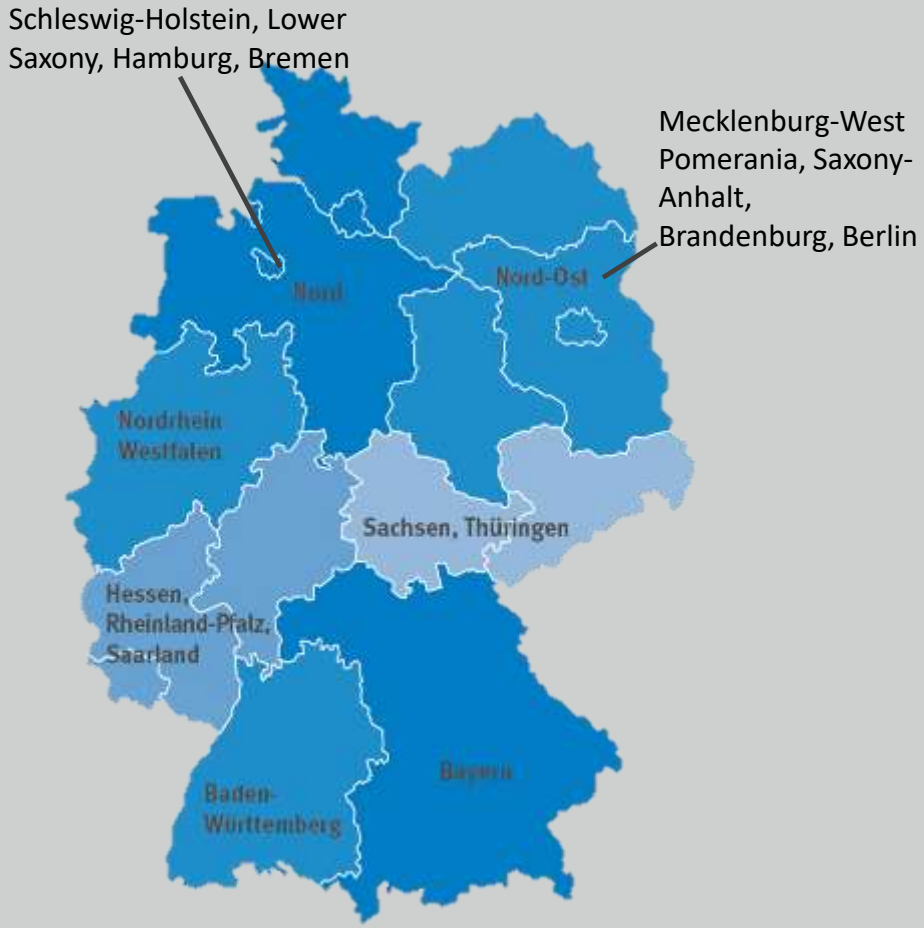
History

- 1948 foundation of ATV
- 1978 foundation of DVWK
- 2000 fusion: ATV-DVWK
- 2004 renaming: DWA

DWA in numbers

- 14,000 members
- 2,200 professionals working in an honorary capacity in more than 330 committees
- ca. 140 employees (Federal Office & seven Regional Groups)

Federal Office and Regional Groups



DWA-Members

Individual Members (ca. 8,500)

- engineers and natural scientists
- executives of water- and waste management
- operational staff
- students
- retirees

Corporate Members (ca. 5,500)

- engineering offices
- authorities, cities and municipalities
- companies and associations

Tasks of DWA

Development and updating of the DWA Set of Rules

Promotion of young talents and support of carreer entry

Planning and realisation of educational activities

Identification of the need for research and transferring of research results into practice

Cooperation with thematically related institutions, nationally and internationally

Representing the interests of water management in politics

Bringing Professionals together

DWA Educational Events

DWA educational events are divided in:
- Conferences
- Courses
- Seminars

Every event is attributed to the 8 reference levels of the *German Qualification Framework* for
- Orientation within the German educational system
- Comparability of German qualification in Europe

About 35,000 participants with qualifications such as
- Executives
- Natural scientists
- Technicians
- Skilled workers

Participate in DWA educational events annually

DWA Publications

DWA Set of Rules	Association Journals KA/KW	Miscellaneous
Determine future requirements, updating, publicise	Monthly fr… KA-Korresp… …fall	Software (Expert- Series)
Ca. 340 committees and working groups develop the Set of Rules	Monthly fr… KW-Korres… Wasserwir…	…r Reports
Currently the Set of Rules consists of ca. 340 Standards an Guidelines	Additionall… KW-Gewäs…	
The professional community may participate in the development process of new and updated rules by a standardised procedure	Free mailing of KA or KW for all members	Public Relations

DWA Publications

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Ca. 3… orking group… ules	Monthly frequency: KW-Korrespondenz Wasserwirtschaft	Work R…
Curren… nsists of ca. 3… lines	Additionally: KA-Betriebs-Info and KW-Gewässer-Info	Comp…
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DWA Service: Library

Literature database with bibliography on the following topics:
Water management, wastewater technology, hydraulic engineering, water protection, hydrology, waste and soils

Research service and distribution of copies

About 57,000 publications,
researcheable online

Knowledge and services for experts, executives and young professionals in water management

Collection of textbooks and scientific articlers since 1985

Reference library inside the DWA Federal Office

DWA connects research and practical use

Klare Konzepte. Saubere Umwelt.

Practice

- Authorities
- Economy
- Operators

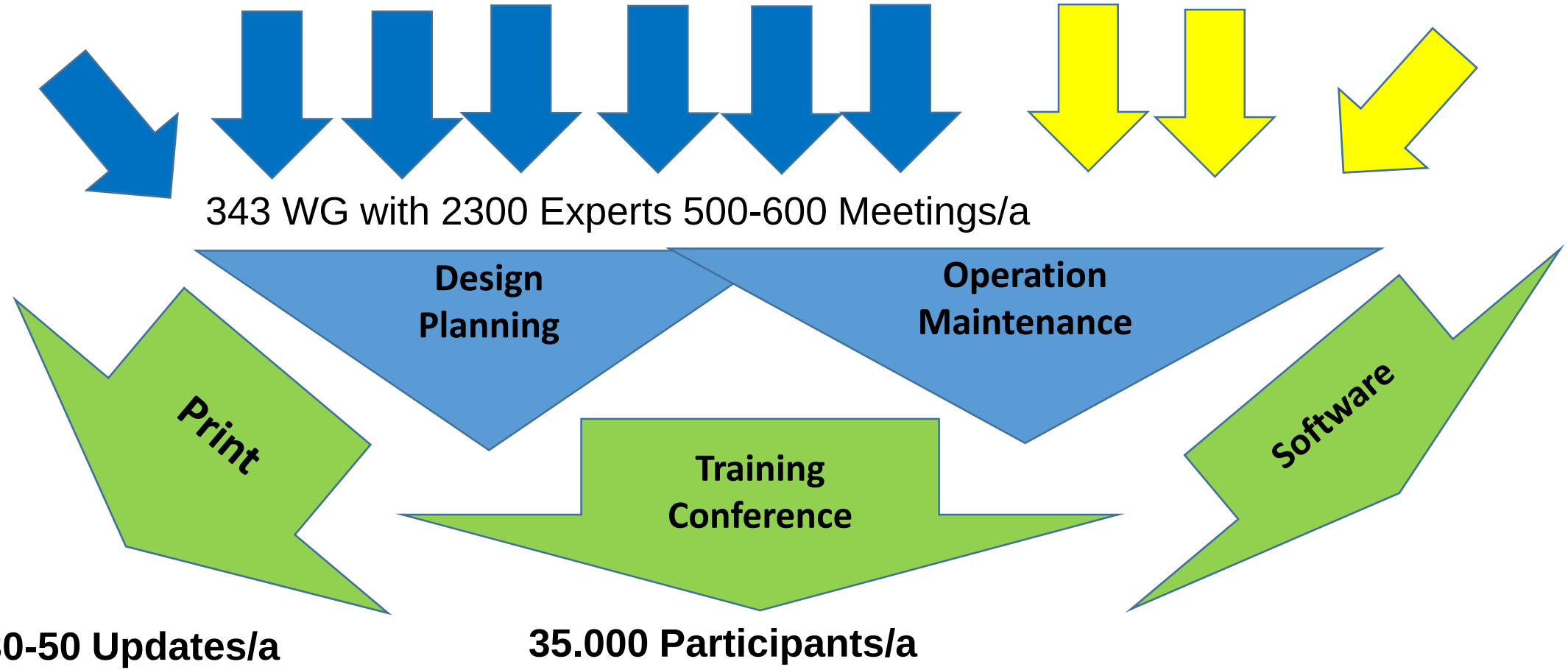
DWA

- DWA-Committes

Research

- Funding Organisations
- Universities
- Research Institutes

Know how in Germany – DWA system



Staff Levels – Water Utilities

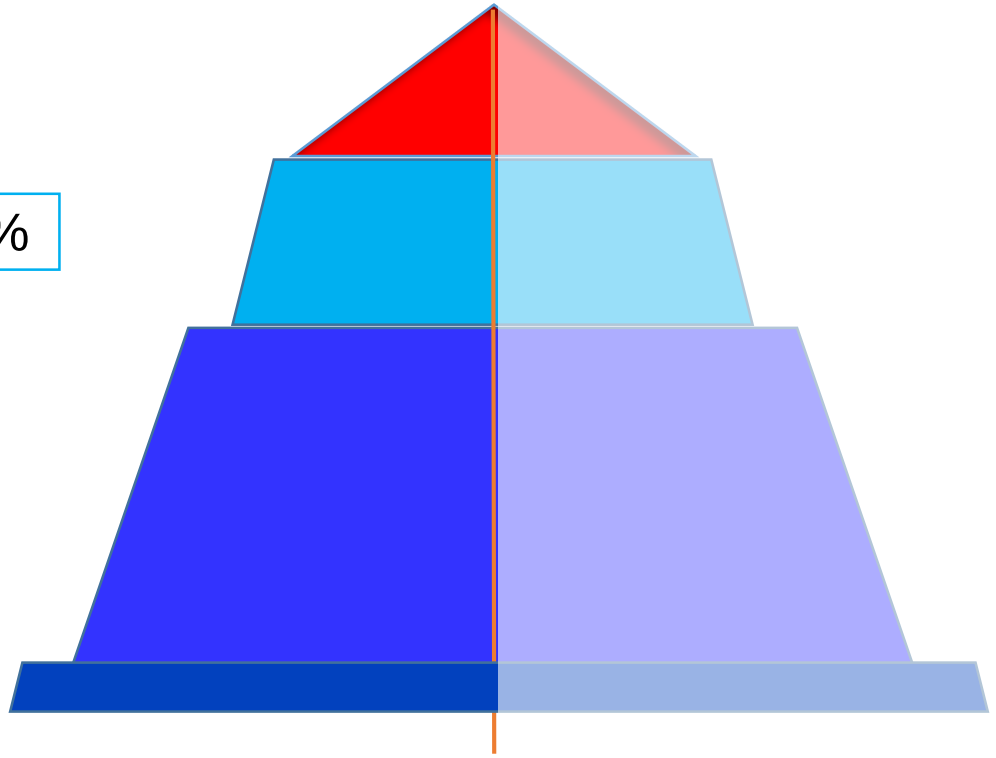
250,000 people

Engineers 10%
Ingenieur / Experte

Master Technicians 15 %
Meister / Spezialist

Technicians 70 %
Fachliche Ausbildung/ Facharbeiter

Helper 5 %
Helfer



Economists

Admin. Clerks

Clerks

Technical Staff

Administration Staff

Environmental Engineering Technician

Water supply engineering technician
(200/a); 1984/2002

Sewage engineering technician
(1100/a); 1984/2002

Recycling and waste management technician
(100/a); 1984/2002

Pipe, sewer and industrial service technician
(300/a); 2002

Scource: BIBB, Krampe

DWA

1. **Die DWA - Der Start – (https://www.youtube.com/watch?v=nw4j1bpccDs)** english - https://www.youtube.com/watch?v=SZTQtCoRoyo

Contents

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Republik Sambia
Republic of Zambia

Wahlspruch: "One Zambia, one nation"
„Ein Sambia, eine Nation"

Republik Simbabwe
Republic of Zimbabwe

Wahlspruch: *Unity, Freedom, Work*

(englisch für: *Einheit, Freiheit, Arbeit*)

zepte. Saubere Umwelt.

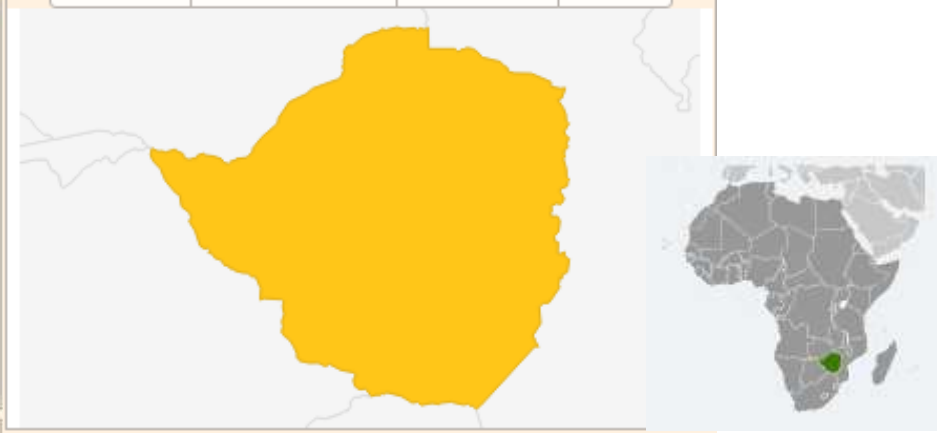
Germany	Country	Subcontinent	Continent	World

- **Capital**: Berlin
- **Population**: 83,019,213
- **Surface Area**: 357,580 km2
- **Currency**: Euros
- **Religion**: Mostly Christianity
- **Belongs to**: CoE, EA, EEA, G20, G8, IMF, NATO, OECD, UN, OSCE, EU

Country	Subcontinent	Continent	World

- **Capital**: Lusaka
- **Population**: 17,351,822
- **Surface Area**: 752,610 km2
- **Currency**: Zambian kwacha (1 EUR=16.0299 ZMW)
- **Religion**: Mostly Christianity
- **Belongs to**: ACP, IMF, UN, SADC, AU

Country	Subcontinent	Continent	World



- **Capital**: Harare
- **Population**: 14,439,018
- **Surface Area**: 390,760 km2
- **Currency**: Various
- **Religion**: Mostly Christianity
- **Belongs to**: ACP, IMF, UN, SADC, AU

Facts and figures about Germany

Located in Central Europe

Area	357,167 km²
Inhabitants (2015)	81,459,000
Density of population	228 inhabitants/km²

System of Government: Parliamentary Republic with 16 “Bundesländer” (federal states)

GDP – Total (2013)	3,636 Bill. USD
GDP / inhabitant (2013)	45,000 USD
HDI (2014)	0,916 (6)

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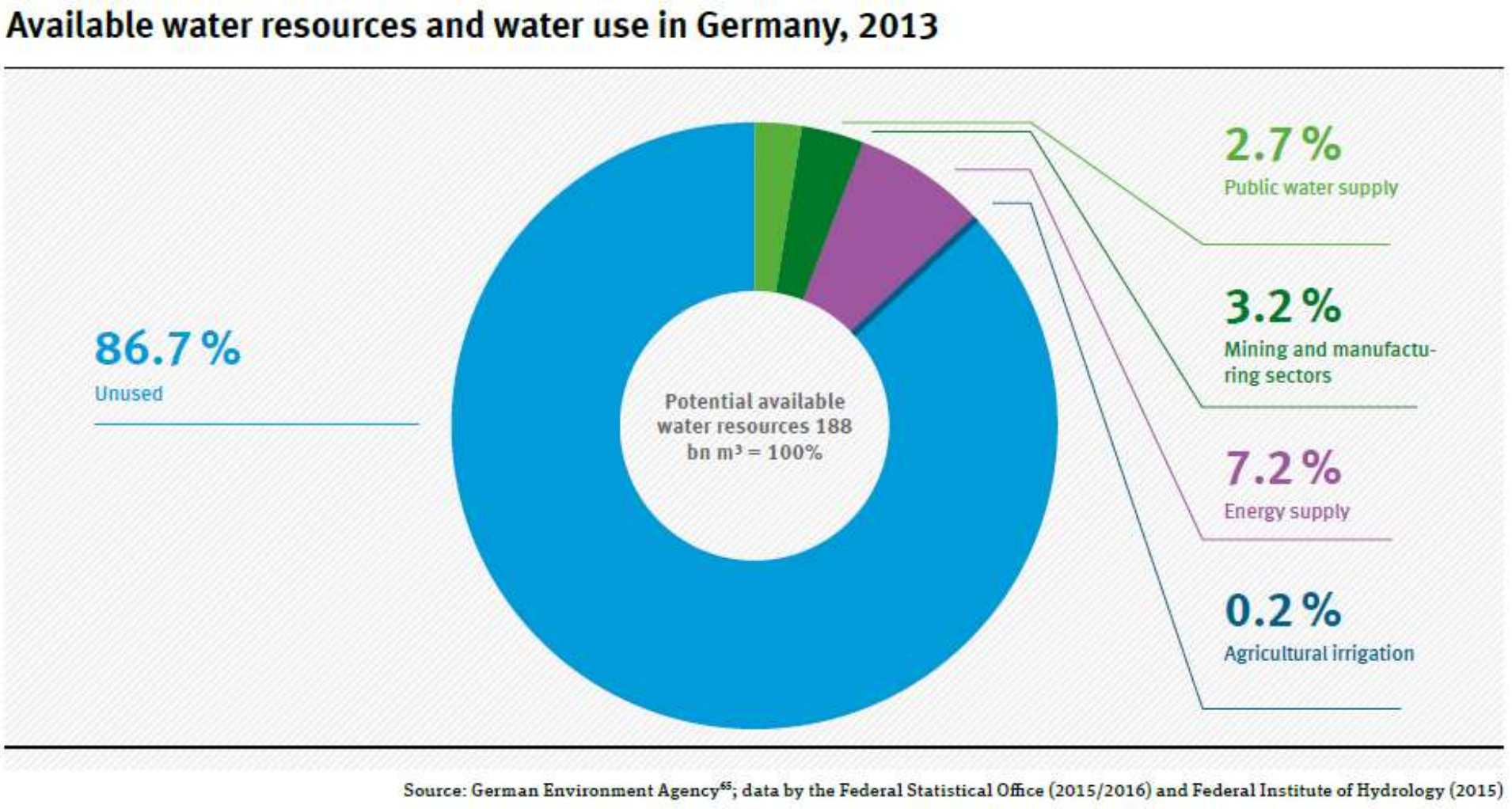
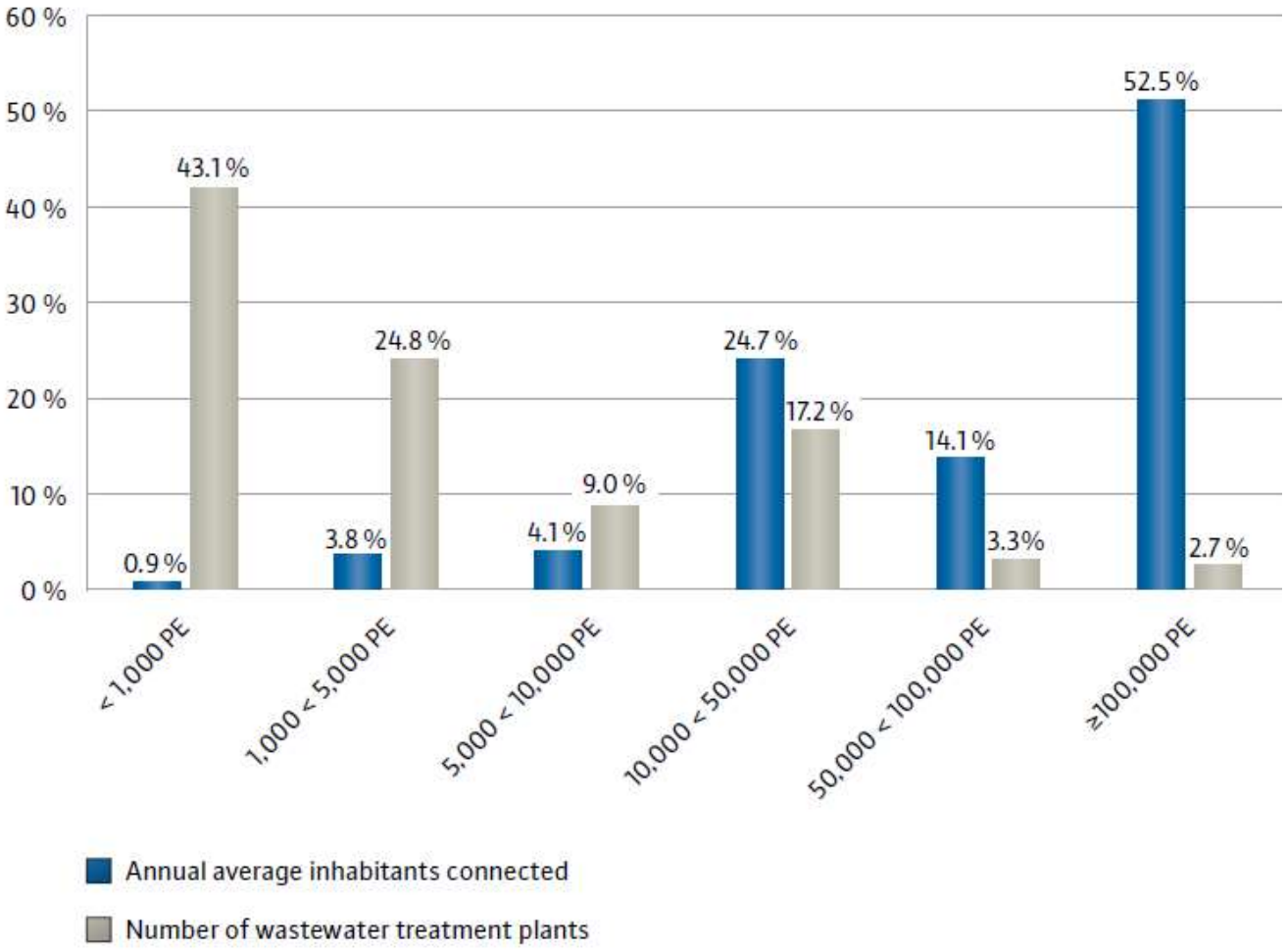
Water resources in Germany



BMU/ UBA (editors) (2018): Water Resource Management in Germany. Fundamentals, pressures, measures. Dessau-Roßlau. Publications in pdf format: www.uba.de/en/water-resource-management, p. 49

Size structure of wastewater treatment facility operators in Germany 2010

PE = total number of inhabitants and population equivalents as a percentage



Source: German Federal Statistical Office, Fachserie 19, Reihe 2.1., Heft 2010 (published in 08/2013)

Source: Profile of German Water Sector 2015, p. 34

Regulations and standards

Directives and Regulations

CEN-Standards and BREFs

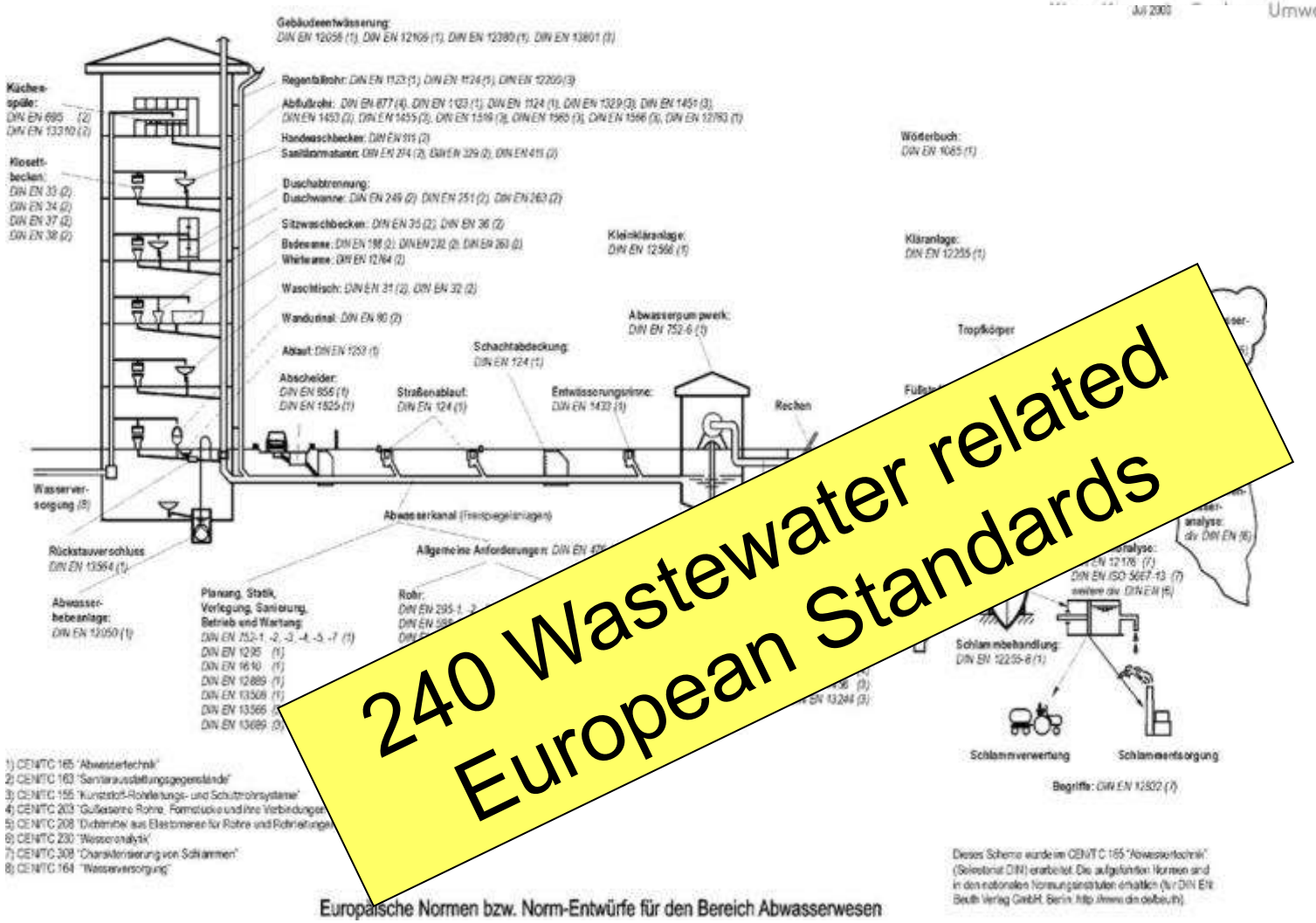
Laws

Regulations and Bylaws

Rules and Standards

Utilities Guidelines and Instructions

European rules and standards



240 Wastewater related European Standards

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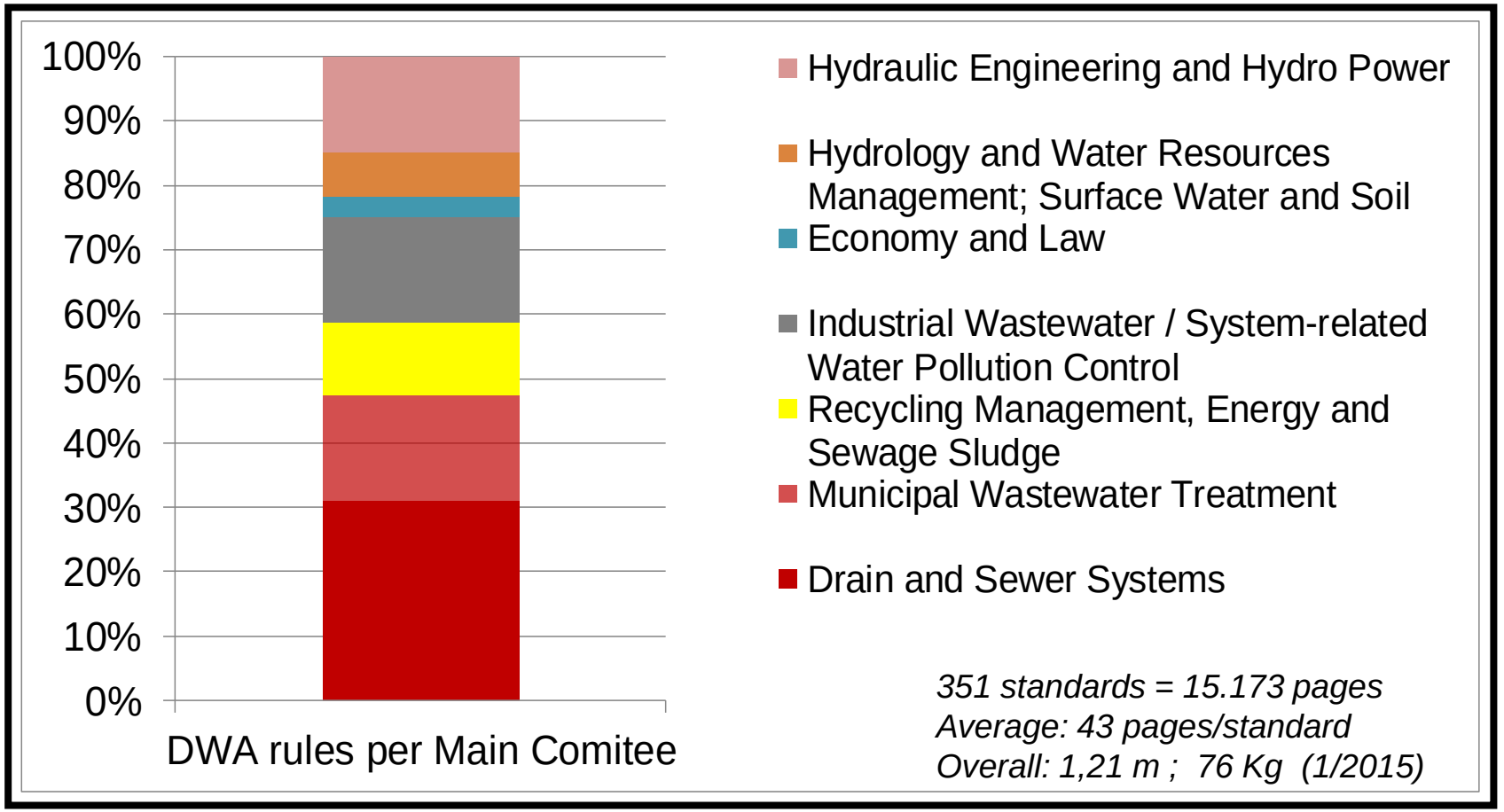
German rules and standards

- Technical document designed to be used as a rule, guideline or definition.
- DIN approx. 35,000 product and testing standards
- DWA & DVGW approx. 600 process standards for the water sector
  - Design & Construction
  - Operation & Maintenance
  - Management
- DWA & DVGW represent the German water sector within the CEN / EN

600 German Standards

Technical Standards, the core competence of DWA



What are technical rules?

- Technical regulations are not legally binding
- Usually developed by private organisations such as DWA or DIN.
- Deserve recognition due to the requirements described in national laws and European directives (technical paragraphs)
- This leads to the fact that e.g. the drain and sewer system has to be operated by following special technical rules

DWA Standards
are generally recognized technical rules!

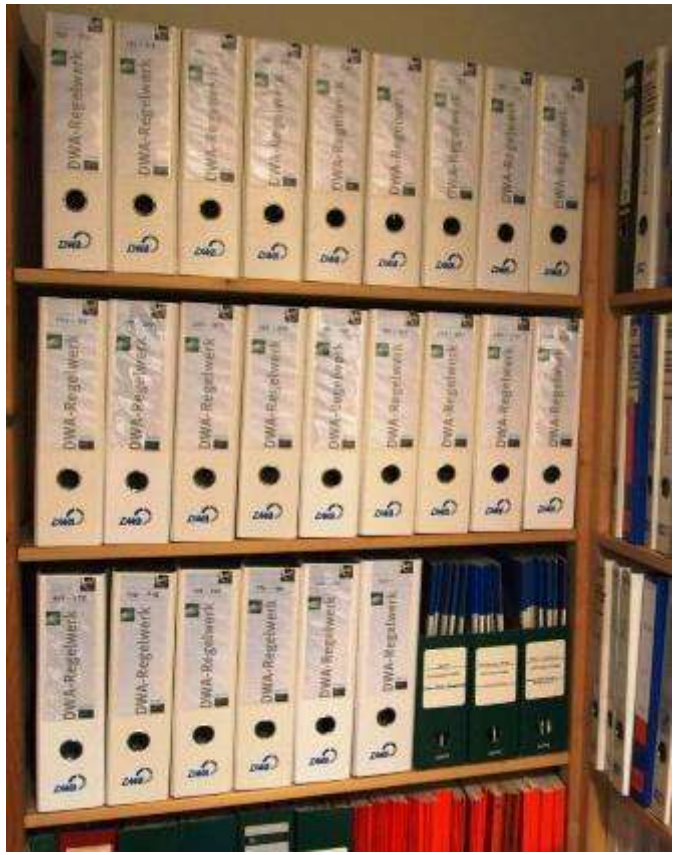
DWA Set of Rules

- **DWA- Standards**
  the objective of the standards is to achieve common recognition and thus a formal, public participation procedure is obligatory.

- **DWA- Advisory Guideline**
  provides recommendations and assistance in solving technical and operational problems or describe procedures, facilities of enterprises and processes which are not yet fully approved.

Standards and advisory leaflets

More than 300 standards with approx. 16.000 pages were published until today. 18 different languages.
55 rules and standards in English
Standards are the basis for teaching new and approved technology.
Water technology “Made in Germany” at its best.



Some of the DWA Set of Rules are translated into the following languages:

- English
- Polish
- Croatian
- Iran/Farsi
- Arab
- Hindi
- Russian
- French
- Chinese
- Spanish

Further information: http://en.dwa.de

Principles of Working Groups

- **Team work**
- **Voluntariness, Honorary Post**
- **Common Public Interest**
- **Gained in Practice for Use in Practice**

Main Principal

Members are stakeholders and
should cover all sectors concerning the subject

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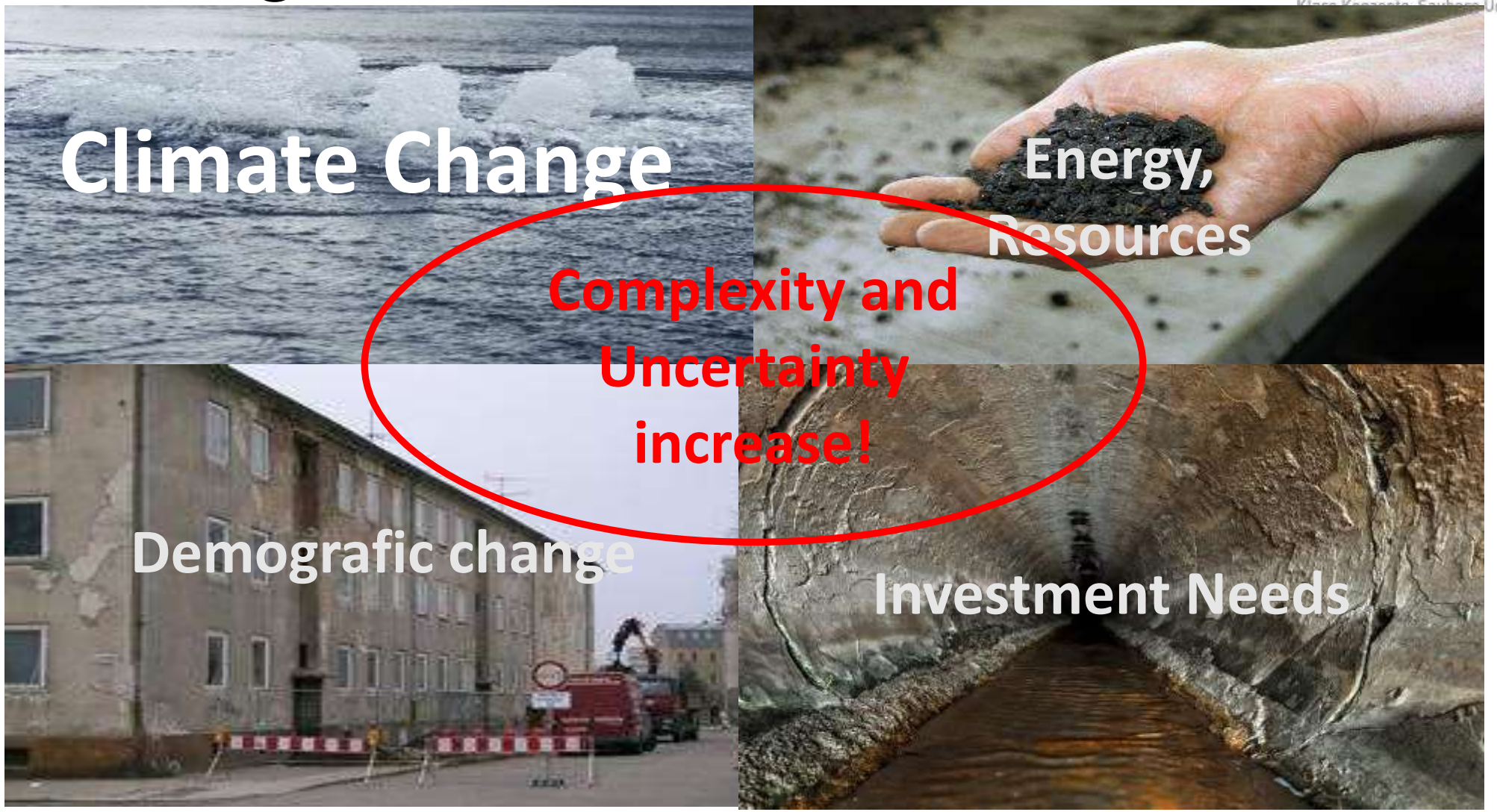
Challenges are well known



Activities on local level

Fotos (v.l.o.n.r.u.): Matsou/iStockphoto.com, Dieckmann/Badische Zeitung, Bock/Difu, Oliver Sved/Fotolia

Research and Development Needs

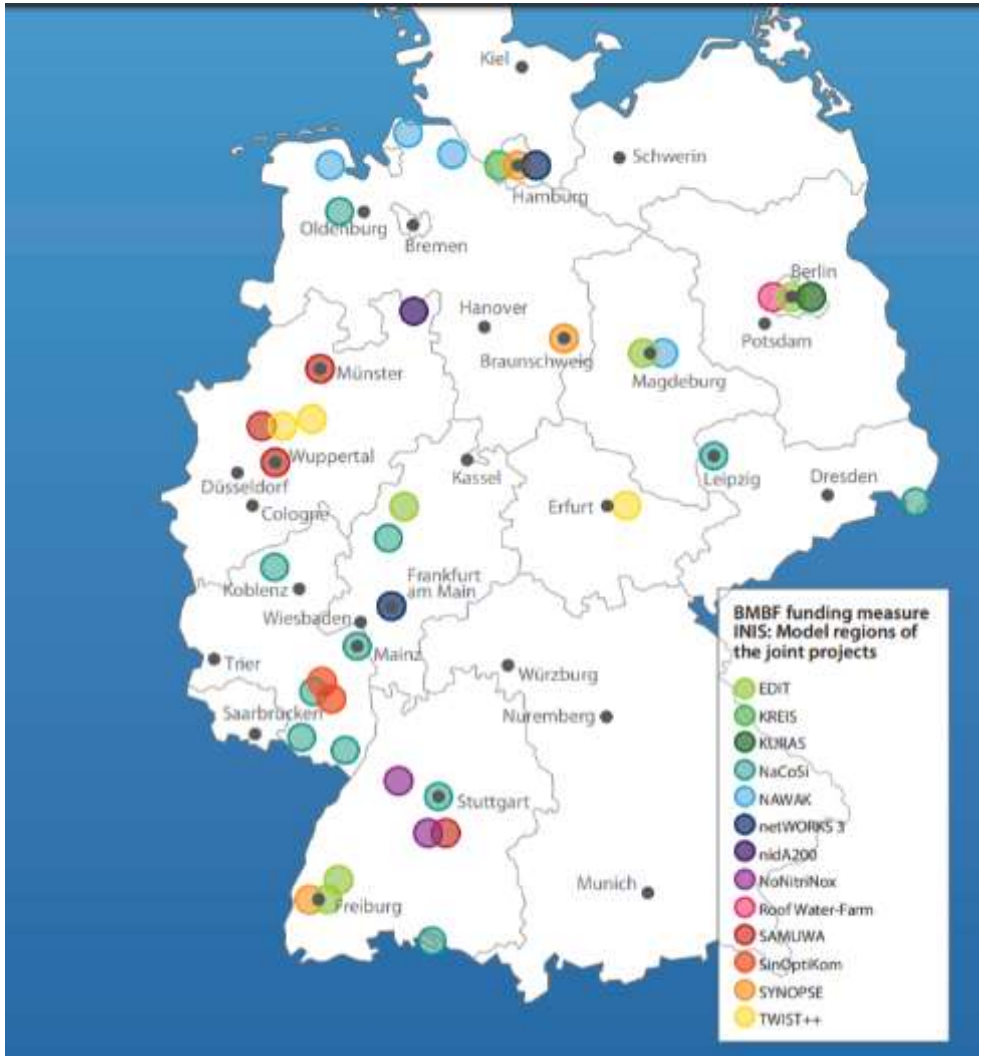
Smart and Multifunctional Infrastructural Systems for Sustainable Water Supply, Sanitation and Stormwater Management

Challenges include

- Innovative technical systems
- Management tools and strategies
- Municipal infrastructure concepts
- Institutions and governance structures

INIS addresses these challenges

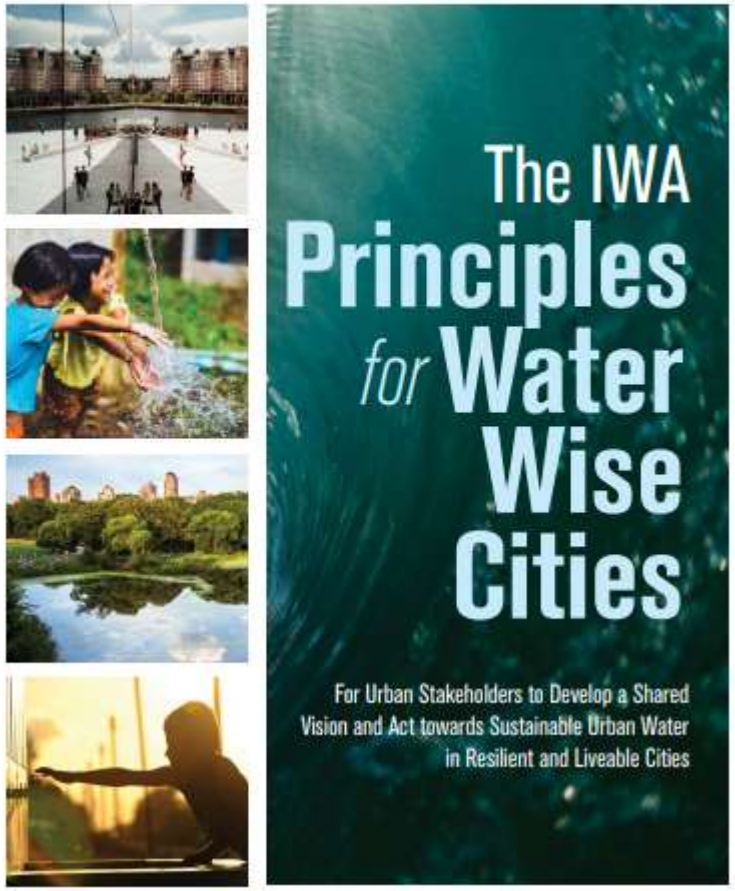
BMBF funding measure in numbers



- 13 Joint Research projects
- 1 networking and transfer project (INISnet)
- About 100 participating institutions
- About 40 model areas in 11 federal states (Bundesländer)
- Term 2013 – 2016
- Budget 33 Mio. €

INIS **pushes transition** of existing water infrastructure systems to more flexible, ecological, economical and ressource efficient alternatives

Example: Outlook worldwide

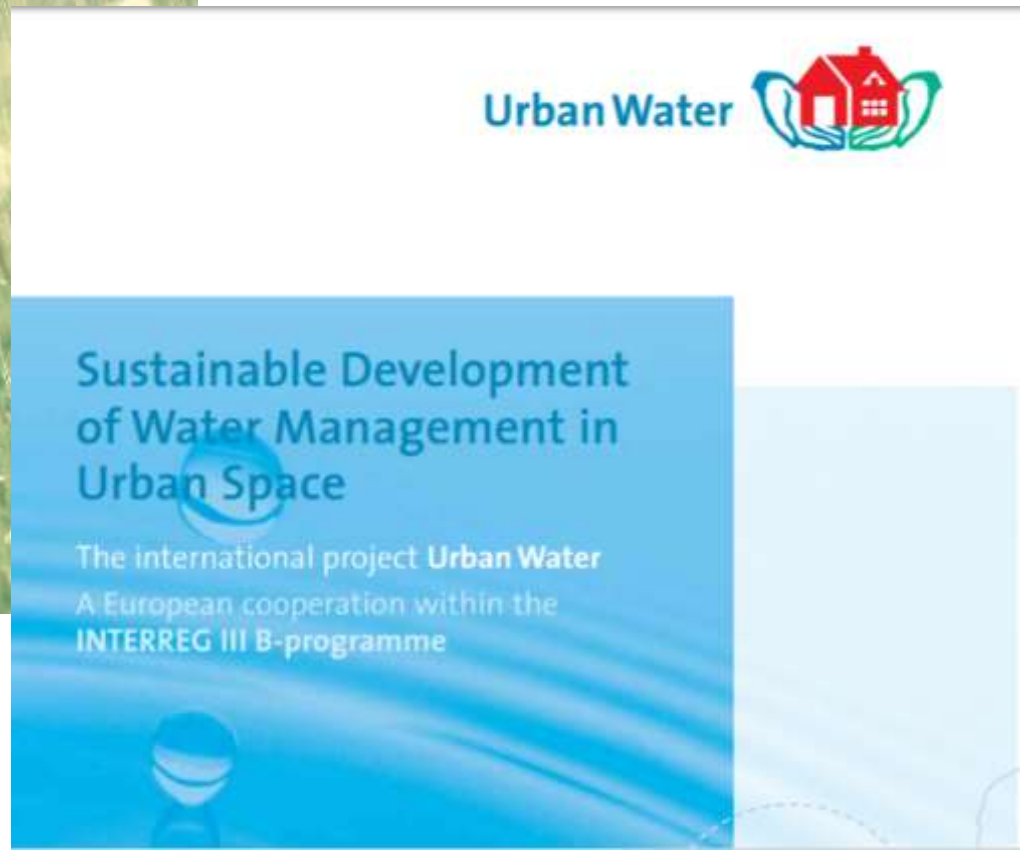


Four Action Fields
1 – Regenerative water services
2 – Water sensitive urban design
3 – Basin connected cities
4 – Water wise communities

Building Blocks
5 – Vision, Governance, Knowledge, Planning, Implementation

http://www.iwa-network.org/wp-content/uploads/2016/10/IWA_Brochure_Water_Wise_Communities_SCREEN.pdf

Example 4: Emscher Region



Water in the City of tomorrow

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The DWA – a strong community.