

SWAN project stakeholders workshop  
“BRIDGES AND BARRIERS TO PUBLIC PARTICIPATION”  
Sofia, 20 April 2015

**THE ROLE OF THE NATIONAL ASSOCIATION OF  
WATER PROFESSIONALS AS LEVERAGE FOR  
WATER SECTOR SUSTAINABLE DEVELOPMENT–  
THE BULGARIAN WATER ASSOCIATION (BWA)  
EXAMPLE**

*Albena Vatrlova*

*BWA and NIMH-BAS*

*Sofia, Bulgaria*



# Contents

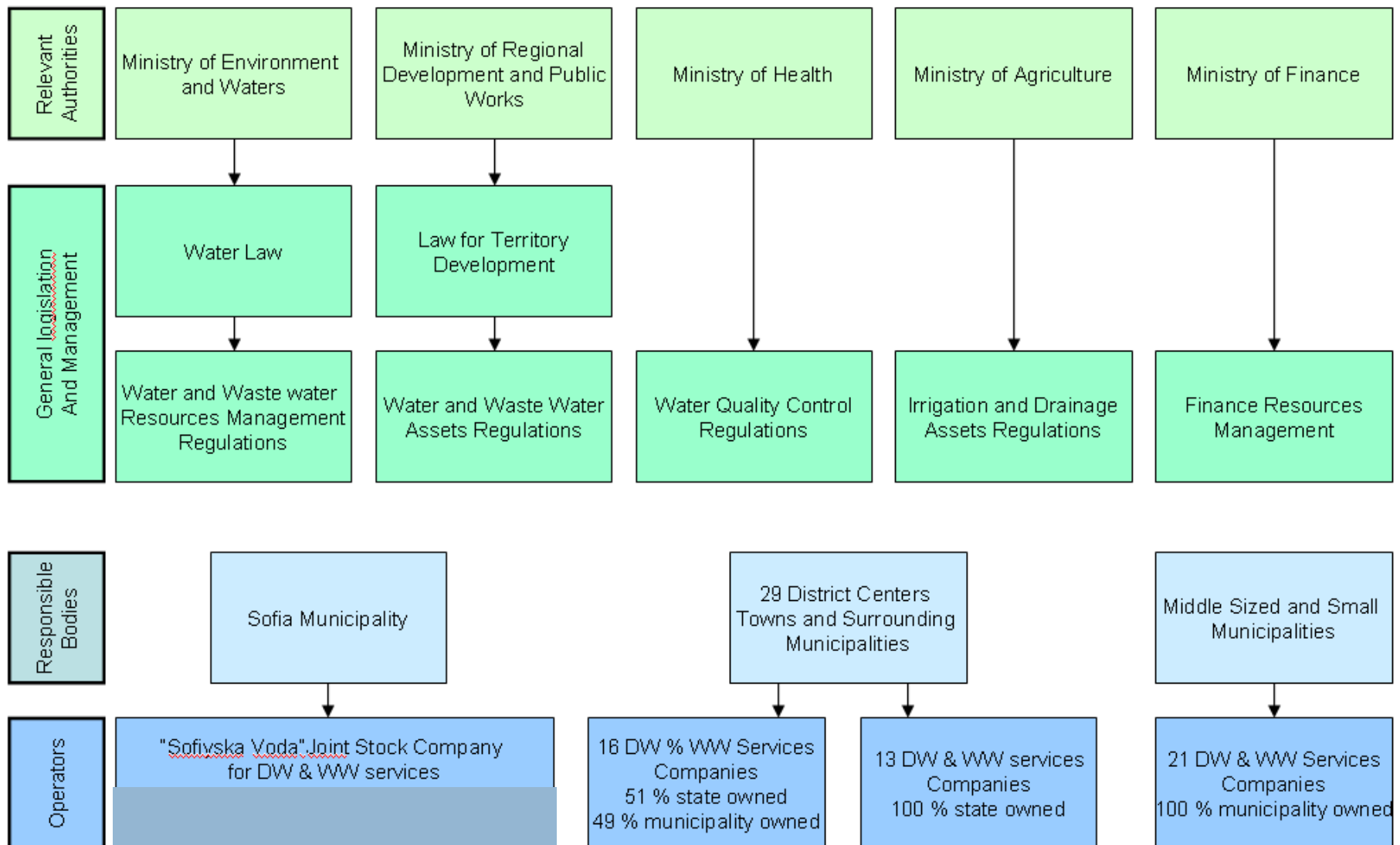
- Overview of the water sector in Bulgaria
- Bulgarian Water Association (BWA) mission and structure
- Bulgarian Water Association partners
- International memberships of BWA
- BWA role in water sector development
- BWA activities
- BWA Professional Training Centre
- BWA analytical projects

# Overview of the water sector in Bulgaria

3

- Causes for unsustainable water management
  - ▣ Natural – erosion, floods, droughts, climate change (temperature, precipitation, etc.)
  - ▣ Anthropogenic – excessive water abstraction, water pollution
  - ▣ Limited use of nonconventional water resources
- Water systems
  - ▣ Water supply and wastewater systems - for domestic and industrial needs
  - ▣ Water energy systems
  - ▣ Irrigation systems

# Water sector structure in Bulgaria



Source: Arsov R., 2008

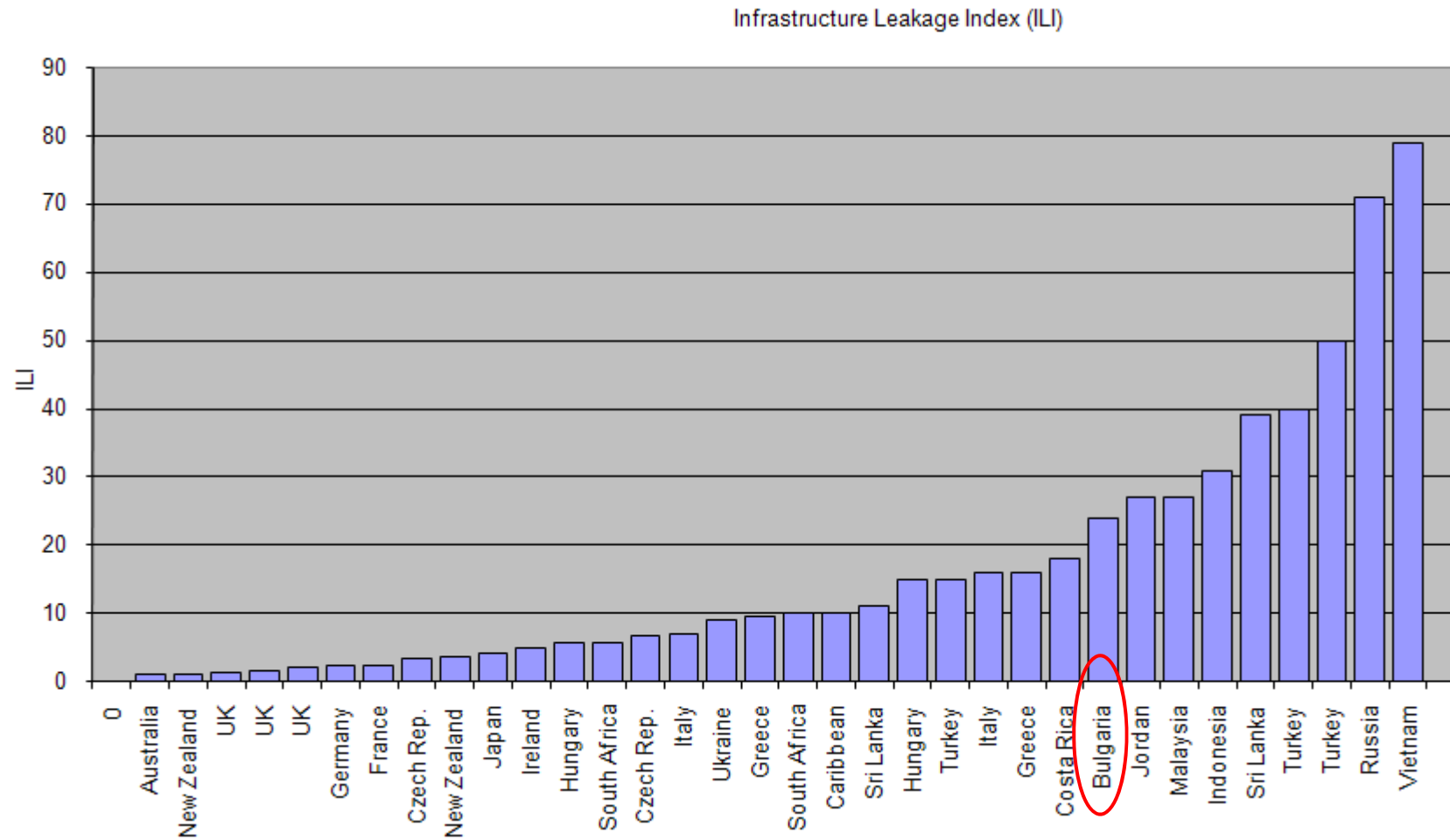
# Water supply and wastewater systems

5

- ❑ Operated by 65 WSS utilities
- ❑ 99 % of the population in BG is connected to water supply systems
- ❑ Average water losses = ~ 60 % (in EU15 = 5-15%)
- ❑ 46 % of the drinking water is treated in 42 WTP
- ❑ 50 more Water Treatment Plants (WTP) needed
- ❑ 70% of the population is connected to wastewater collection systems
- ❑ 65% of the wastewater collected is treated in 80 WWTP
- ❑ 400 more Waste Water Treatment Plants (WWTP) needed

# Infrastructure Leakage Index (ILI)

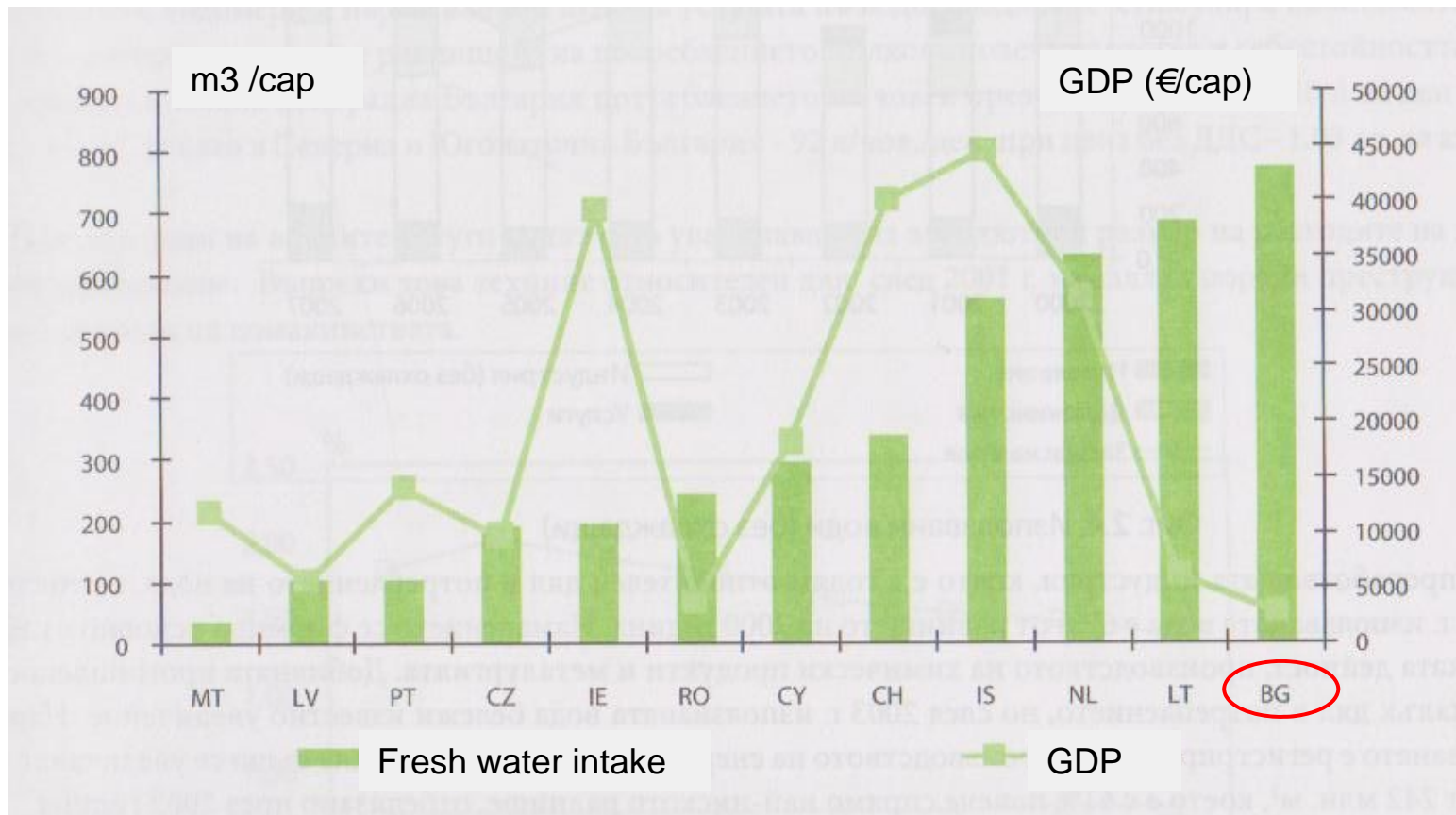
6



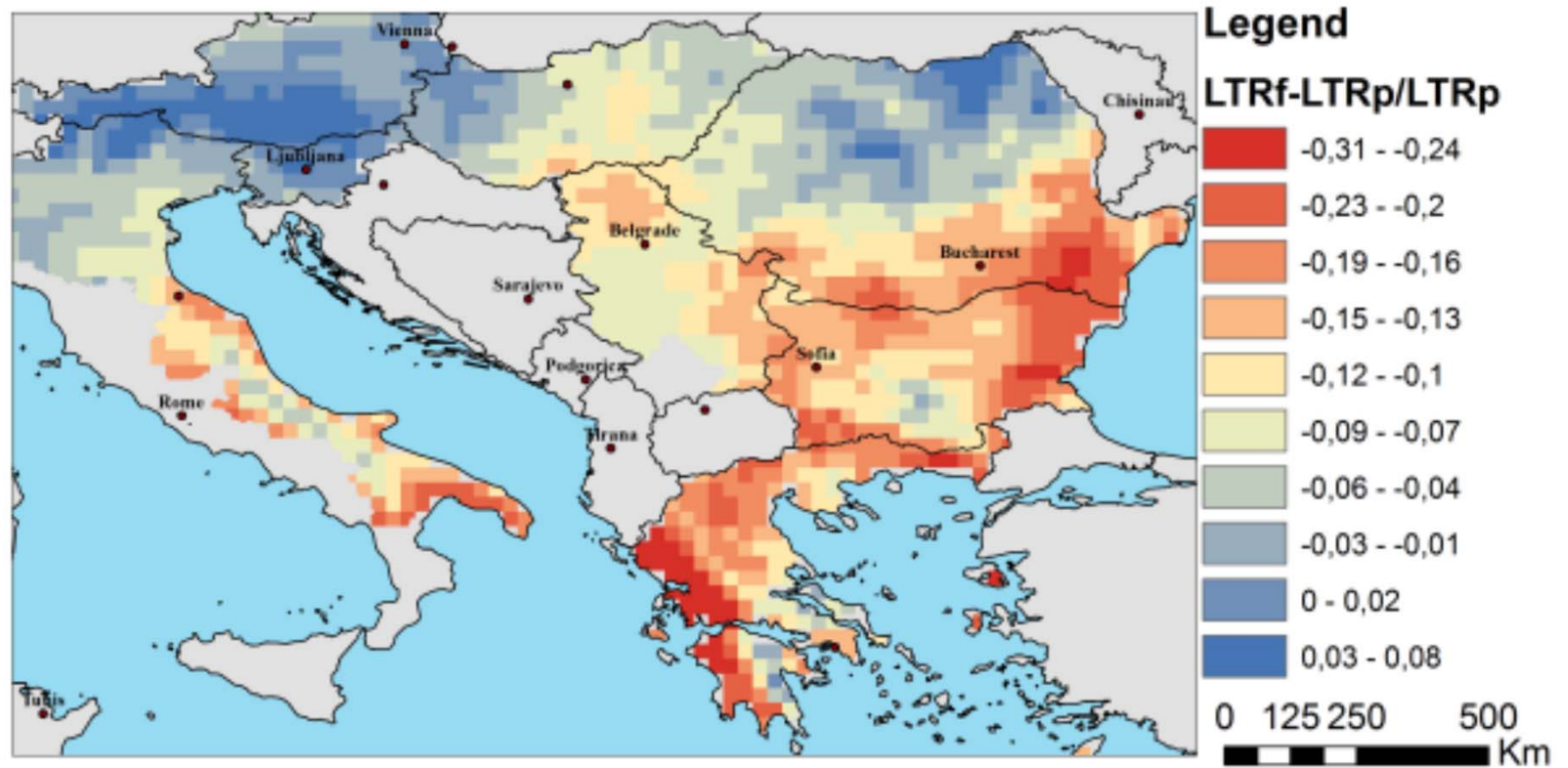
Source: Arsov R., 2011

# Water intake and GDP

7



Source: Arsov R., 2011

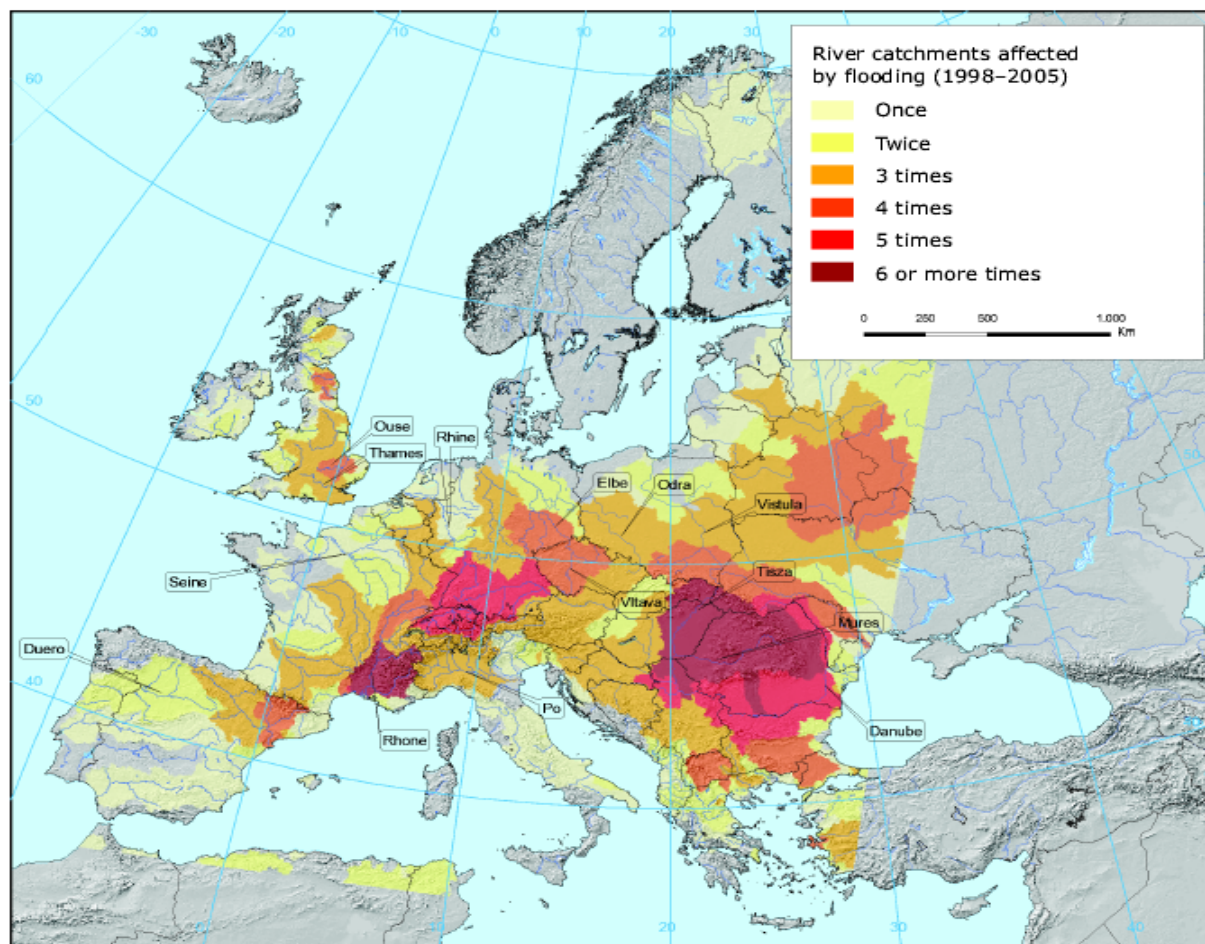


8

Relative change of runoff in future (2020-2050)  
vs. present (1990-2020) - forecast

Source : CC-WARE project WP3 report, 2014





## Flood events in Europe (1998-2005)

Source EU EEA Technical Report No 2, 2007

# Water sector strategies

10

- Water Sector Development Strategy Scope – national water resources management
  - ▣ Responsible institution – Ministry of Environment and Water
- Water Supply and Sanitation Development and Management Strategy
  - ▣ Elaborated within the Support to the W&WW Sector Reform Project funded by OPE 2007-2013
  - ▣ Approved in April 2014 by the Council of Ministers
  - ▣ Scope – W&WW sector reform
  - ▣ Responsible institution – Ministry of Regional Development and Public Works

# BWA role in water sector development

11

- BWA - non-profit professional association
- Exchange professional knowledge and experience
- Deliver expertise, training and education, mediation, collaboration (direct involvement)
- BWA members collectively provide sustainable water and wastewater services
- Country needs appropriately treated
  - ▣ wastewater to protect the public health and the environment,
  - ▣ freshwater available for all applications in a safe way

# Bulgarian Water Association mission

12

- To promote the common interests of its members
- To enable members to adequately deal with threats and opportunities arising from national water policy and its implementation
- To offer its members a platform to exchange information, knowledge and experience
- Through the authority and expertise of its members to contribute to the development and implementation of sustainable policy in water supply, wastewater collection, water and wastewater treatment, water resources effective usage and protection

# BWA structure

13

- Structure
  - ▣ General Assembly
  - ▣ Governing Board – 17 members
  - ▣ Control Committee – 3 members
  - ▣ Office staff
  - ▣ Expert committees
  - ▣ Young Water Professionals Section
  - ▣ Quality Stamp Directorate
- Members:
  - ▣ individual – 352 (~ all with Master degrees, 33 PhD and DSci degrees)
  - ▣ corporate – 129 (incl. 34 WSS utilities, private companies)

# BWA national partners

14

- Parliament, Government, regulatory authorities
- Universities (UACEG etc.)
- Research institutes at the Bulgarian Academy of Sciences
- The Union of WSS Operators
- National Association of Municipalities
- Companies (consultancy, design, construction, trade)
- Other non-governmental professional organizations – e.g. Association of the Industrial Capital in Bulgaria

# BWA international partners

15

- National water associations - in Germany, Austria, Portugal, Poland, Hungary, Romania, Serbia, R. of Macedonia, Greece, Russia, Moldova, Albania etc.
- Foreign universities
- The trade sections of foreign embassies
- Branch associations – e.g. Italian Association of Engineering, Architectural and Consultancy Companies (OICE); British Water – UK
- Private companies and joint ventures in the field - Veolia Water; DHI; Dreberis GmbH; Hobas; Grundfos; WILO; Hawle Armaturen; Infragroup; Merck, Siemens, Hach Lange, Pipelife, Schneider Electric; Brentag, Alfa Laval; InfraBullImpex-BG/Subor-Turkey; etc.

## Membership of BWA in international organizations

16

- International Water Association – IWA
- European Water Association –EWA
- European Federation of National Associations of Water and Wastewater Services – EUREAU
- Through these memberships BWA participates in the elaboration of the European policies in the fields of water resources protection and water services delivery
- Contacts with other water professionals networks – European Water Platform (WssTP), SWAN, EU Parliament Water Group, Global Alliance for Water Operators Cooperation (GWOPA)



# BWA activities

17

- Contribution to development and implementation of cutting-edge technologies, methods and policies in the water sector
- Organization of conferences, workshops, round tables, technical exhibitions and participation in such events
- Dissemination of relevant information among the professionals
  - ▣ Issuing BULAQUA Journal (quarterly)
  - ▣ Website and traditional media publications
  - ▣ Maintaining knowledge data base (library)
- Training to water professionals
- Promoting contacts and cooperation between Bulgarian and foreign companies in the water sector

# Events organized by BWA

1/2

18

- The international conference “BULAQUA” in Sofia – bi-annual
- Conference “ Challenges in Construction and Operation of WWTPs” – annual; co-organizer with the Chamber of Construction Companies in Bulgaria
- International workshop with exhibition “Reducing Water Losses in the Water Supply Systems” - annual;
- Exhibition “Water Sofia” – annual; co-organizer with Bulgarreklama, Wasser Berlin and Inter Expo Centre
- Bilateral water business workshops, co-organizer with the USA, French, British, Russian etc. embassies,
- Workshop “Energy Management in the W&WW Sector”, co-organizer with MRDPW, May 2013

# Events organized by BWA

2/2

19

- Workshop “ IT Solutions and Automation for Modern WSS Services, June 2013
- International conference “PPP in the Water Sector in Bulgaria” – co-organizer with the French Embassy in Bulgaria, April 2010
- National workshop with international participation “IT in the design, capacity assessment and maintenance of sewer systems” – co-organizer together with the Chamber of Engineers in the Investment Design, April 2009
- International round table on capacity building in the water sector – co-organizer with EWA and DWA, November 2008

## BWA participation in working groups and events

20

- OP “Environment 2007-2013” Monitoring Committee
- OP “Environment 2014-2020” Negotiation Working Group
- OP “Science and Education for Intelligent Growth” Working Group
- Advisory Committee for Design, Construction and Investments at MRDPW
- Danube Water Programme realized by IAWD and WB
- International exhibition and conference “WASSER BERLIN” – annually
- International exhibitions IFAT in Munich; AQUATECH in Amsterdam
- World Water Day various events

# BWA Professional Training Centre

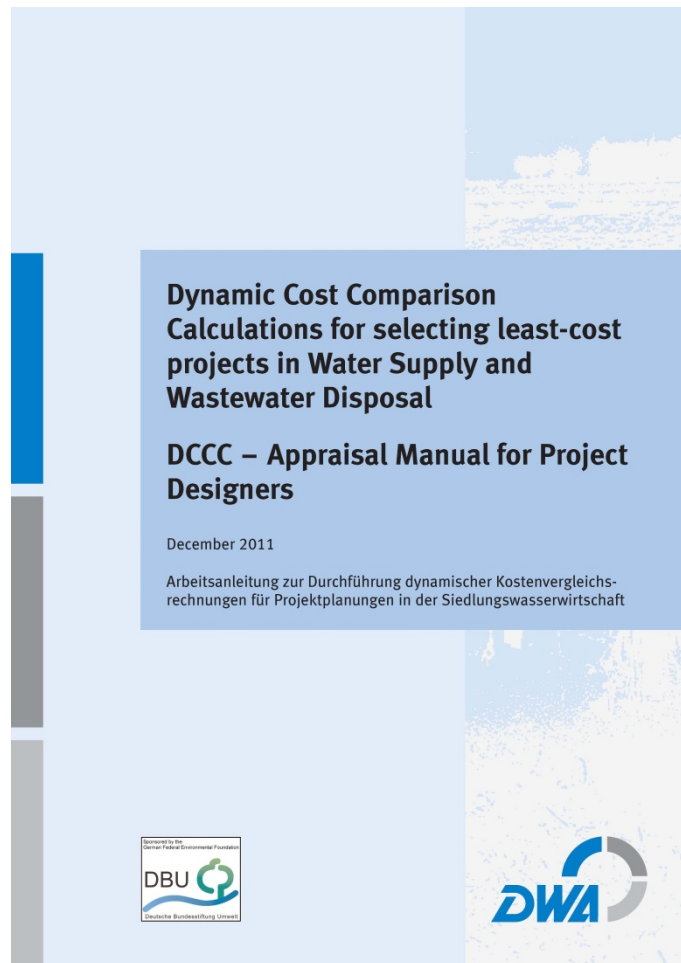
21

- Provides training to the WSS operators
- Co-operates with the University of Architecture, Civil Engineering and Geodesy (UACEG), Sofia - based in it
- Its establishment is necessity driven - by the water sector practical needs and by the state regulations that require training for all kinds of WSS operators
- Created in 2011 - joint project between BWA-DREBERIS GmbH- Stadtentwässerung Dresden GmbH
- Preliminary experience— joint projects for training of WTP/WWTP operators with: (1) TU –Vienna and Austrian Water and Waste Association (2000-2001); (2) Delaware Tech College Environmental Training Center

## BWA expert projects

22

- Introduction of Process Benchmarking in W&WW Sector (Danube Water Programme, World Bank and BWA, 2014-2015)
- Update of Sofia Municipality Engineering Infrastructure Development Strategy, 2014-2015
- Elaboration of a User's Project Appraisal Manual for the planning, construction, operation and maintenance of water supply and wastewater disposal systems in Bulgaria, Hungary, Romania and Slovakia (funded by German Federal Environmental Foundation (DBU) and German Water and Waste Association, 2010 -2011 )



- Dynamic Cost Comparison Calculations for selecting least-cost projects in Water Supply and Wastewater Disposal  
DCCC – Appraisal Manual for Project Designers  
*December 2011, 133 pages, ISBN 978-3-941897-05-2*
- Training Workshop on Dynamic Methods for Appraisal of Water Supply and Wastewater Investment Project Costs was held in Sofia in 2011

# Thanks for your attention

24

Albena Vatrlova

Member of BWA

Chief Assistant Professor

Department of Water Management and Usage

National Institute of Meteorology and Hydrology (NIMH-BAS), Sofia, Bulgaria

E-m: [albenav\[at\]bas.bg](mailto:albenav[at]bas.bg); [albenav\[at\]mail.bg](mailto:albenav[at]mail.bg)

