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

Albena Vatralova
BWA and NIMH-BAS
Sofia, Bulgaria
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Overview of the water sector in Bulgaria

- 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

- 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)

Source: Arsov R., 2011
Water intake and GDP

Source: Arsov R., 2011
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)

Water sector strategies

- **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**: Support to the W&WW Sector Reform Project funded by OPE 2007-2013
  - **Approved**: 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

- 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

- 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

- **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

- 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

- 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

- 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

- 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

- 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

- 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

- OP “Environment 2007-2013” Monitoring Committee
- 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

- 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


- 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


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

Albena Vatralova
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; albenav[at]mail.bg