

---

---

**GOVERNANCE  
of GROUNDWATER RESOURCES  
in TRANSBOUNDARY AQUIFERS  
(GGRETA Project)**



---

---

# TRENDS AND DEVELOPMENTS IN DOMESTIC WATER LEGISLATION - A COMPARATIVE OVERVIEW -

*27 March 2017  
Windhoek, Namibia*

**Stefano Burchi, UNESCO**



# Legal status of water resources

---

The indisputable trend is towards the public domain status of all water resources, surface as well as underground – with very few exceptions

This is the result of a variety of legal constructs –

- State ownership
- public trusteeship (e.g., RSA)
- pre-eminent right of use vested in the State (e.g., Uganda)

# Allocation for use

---

- Administrative concessions, licences and the likes are the prevailing instrument of the allocation by Government of available water resources for abstraction & use
- Abstraction & user rights accruing from the above-mentioned instruments are subject to terms and conditions, including in particular as regards the term of duration (rights of indefinite duration are a rare exception)
- Water resources plans (national, basin) provide a reference for the grant of abstraction & use rights – all the more compelling if plan determinations are legally binding (e.g., Namibia, Ecuador, Vietnam, Bangladesh)

# Pollution control

---

- Administrative permits, authorizations and the likes are the prevailing instrument for the regulation of wastewater discharges to freshwater bodies from “point” sources of pollution
- Permits etc. are subject to terms and conditions, regarding in particular the quality of the effluent and/or of the receiving water
- Regulation of the human activities which originate it (notably, cultivation practices, and the use of pesticides & fertilizers) is at the heart of controlling pollution from “diffuse” sources (notably, the drainage from croplands)

# Institutional aspects

---

There is a tendency to create a national Water Authority, tasked with:

- inventory, monitoring, planning
- granting of abstraction licenses and concessions
- granting of wastewater discharge permits

There is a parallel tendency to create basin-level organizations, with –

- functions ranging from consultative to executive
- different complexity of internal structure
- users' representatives in the internal structure of RBOs, alongside government representatives

# The underlying *problematique* / 1

---

## 1. Transition from private property status of water to public property status

### ISSUES:

- takings of constitutionally-protected private property rights
- compensation thereof

### LEGISLATIVE RESPONSE:

- user rights accrue by direct operation of the law to former owners

It is on this basis that the courts have consistently upheld the constitutionality of Water Acts transitioning groundwater from private to public property status

# The underlying *problematique* /2

---

## 2. Transition of existing uses to a new regulatory dispensation

ISSUE: transitioning existing lawful and *de facto* users to the new regulatory dispensation, and encouraging users to avail the new opportunities afforded

### LEGISLATIVE APPROACH:

- conversion/regularization of existing abstraction rights and *de facto* uses, under penalty of forfeiture of rights and consequential unlawfulness of use

# The emerging *problematique* / 1

---

## 1. Factoring the demand of ecosystems in the allocation of water resources

ISSUE: striking a balance between the ecosystem-support function and the development-support function of water

LEGISLATIVE APPROACHES (“Greening of water laws”):

- Ecological flow requirements of watercourses
- Priority of ecosystems demand relative to other uses
- Reserve of water volumes and flows for the ecosystem
- EIA of proposed abstractions/wastewater discharges



# The emerging *problematique* /2

---

## 2. Ensuring flexibility of the established allocation pattern of water resources for different uses

ISSUE: striking a balance between the security of title sought by investors and the uncertainty of available supplies resulting from climate variability, and changing rainfall, economic, technological, etc. circumstances

### LEGISLATIVE APPROACHES:

- User rights subject to term of duration
- Review and downwards variation of existing abstraction rights during their life – compensation issue

## The emerging *problematique* /3

---

### 3. Putting a premium on the economic efficiency of allocation of available water resources

ISSUE: balancing the economic efficiency of allocation of an ever scarcer resource with equity

#### LEGISLATIVE APPROACHES:

- Regulated marketing of abstraction rights
- Charging for the abstraction and use of water (“user pays” principle) - including for the disposal of wastewater (“polluter pays” principle)

## The emerging *problematique* /4

---

### 4. Linking the regulation of water abstraction and pollution with land use regulation

ISSUE: recouping at law the connection that exists in nature between water resources and human activities above and under the ground

#### LEGISLATIVE APPROACHES:

- Regulation of land uses that generate “diffuse” water pollution – of groundwater in particular

# The emerging *problematique* /4

---

## LEGISLATIVE APPROACHES (cont'd):

- Regulation of groundwater-consuming cultivation practices (notably, rice)
- Linking regulation of land and sub-soil uses (notably, urban development, mining, the deposit of dangerous substances underground) and the regulation of water resources abstraction and protection from pollution
- Zoning of the recharge and discharge areas of aquifers

## The emerging *problematique* /5

---

### 5. Accounting for customary rights and practices in statutory dispensations

ISSUE: minimizing the potential for conflict between formal water rights and the customary rights of traditional communities

#### LEGISLATIVE APPROACHES:

- Creating a separate legal “space” for customary rights (via wholesale recognition by operation of the law)

## The emerging *problematique* /5

---

### LEGISLATIVE APPROACHES (cont'd):

- Conversion (voluntary) into formal water rights
- Factoring customary rights in the process of granting abstraction licenses or wastewater discharge permits, at the point of –
  - ✓ opening up a proposed abstraction or discharge to public opinion – including that of affected parties
  - ✓ deciding on an application
- Restricting the discretionary authority of government to grant abstraction rights when these affect customary rights
- Prioritizing customary rights in the allocation of available water resources

## The emerging *problematique* /6

---

### 6. Fostering the participation of water users

ISSUE: promoting users' involvement in the management of water resources they depend on

LEGISLATIVE APPROACHES:

- prior consultation to micro- (grant of abstraction licences and discharge permits) and macro-level (water resources planning) decision-making
- direct management of water resources under stress from over-extraction and/or pollution (groundwater) by water users' associations
- users' representation in the RBOs

## The emerging *problematique* /7

---

### 7. Implementation & enforcement

ISSUE: implementing the water laws, and ensuring their observance by the citizenry (and by government)

#### LEGISLATIVE APPROACHES - IMPLEMENTATION:

- Advance planning of phased-in law implementation
- Capacity-building of government
- Attention to target water users' population (information & education) requirements



# The emerging *problematique* /7

---

## LEGISLATIVE APPROACHES (ENFORCEMENT):

- Oversight & inspection authority of government
- Fines and imprisonment for those who flout the water laws
- Capacity-building of the police corps, the public prosecutors, and the judiciary in environmental law – and in water law
- Integrating environmental police functions
- Coordinating the action of public prosecutors and those of the police in the pursuit of environmental crimes

# CONCLUSIONS /1

---

A vast majority of contemporary water laws:

- Assert the public property status of water
- Pursue the integrated management of water resources through the regulated allocation of water resources for abstraction & use, and for the disposal of wastewater
- Factor the requirements of water-dependent ecosystems in the allocation of water resources for productive uses

# CONCLUSIONS /2

---

- Seek to achieve flexibility in the allocation pattern of water resources for different uses
- Pursue economic efficiency in the allocation of available stocks, without neglecting equity
- Strive to link the regulation of water abstraction and pollution control with the regulation of land uses and uses of the sub-soil that impact on water resources
- Seek to reconcile customary water rights & practices with formal water rights
- Foster the involvement of water users in the management of the resource
- Pattern the public-interest administration of water resources after the river/lake basin (or aquifer)
- Pursue integration of the government water administration through a national Water Authority

# CONCLUSIONS /3

---

Implementation & enforcement of water laws are areas of water law most in need of attention

The capacity of the government water administration to deliver tends to be an issue

---

# THANK YOU!

Stefano Burchi  
Chairman, International Association  
for Water Law (AIDA), Rome, Italy  
[Stefano.burchi@gmail.com](mailto:Stefano.burchi@gmail.com)