

# WATER POLICY CHANGES IN TURKEY'S AGRICULTURAL SECTOR: CHALLENGES AND RESPONSES

AYSEGÜL KIBAROĞLU  
PROF. DR.

DEPT. OF POLITICAL SCIENCE  
AND INTERNATIONAL  
RELATIONS

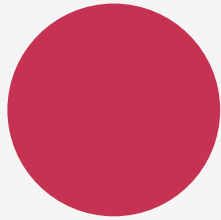
MEF UNIVERSITY

ISTANBUL, TURKEY

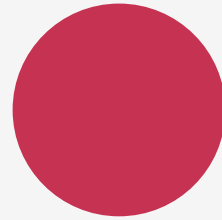
[aysegul.kibaroglu@mef.edu.tr](mailto:aysegul.kibaroglu@mef.edu.tr)

# KEY DETERMINANTS

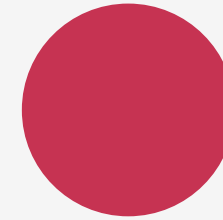
---



Structural



Institutional



Technological

# STRUCTURAL FACTORS

---

- Structural factors comprise macro-level planning for policy changes and investments in infrastructure and techniques:
  - improving the competitiveness of agricultural sector through sustainable use of soil and water resources
  - expansion of irrigation infrastructure
  - land consolidation
  - increasing irrigation ratio and irrigation efficiency

# MAIN INSTITUTIONS

---

Ministry of  
Forestry and  
Water Affairs

**DG State Hydraulic Works (DSI)**

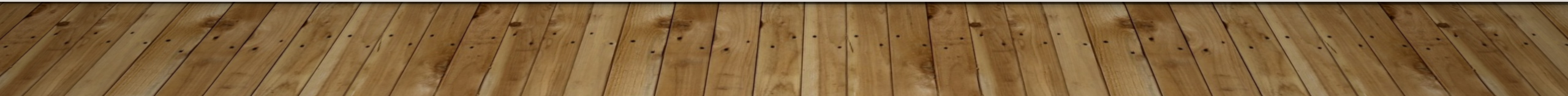
Ministry of  
Food,  
Agriculture  
and  
Livestock

**DG Agrarian Reform**

Ministry of  
Interior

**Provincial Administrations**

**Water User Organizations (Irrigation  
Associations)**



# INSTITUTIONAL RESTRUCTURING

---

DG Rural Services (abolished, 2005)

DG Land and Water (abolished, 1984)

This institutional restructuring in water and land management became disruptive and ended up with delays and failures in the efforts for land consolidation and increasing irrigation ratio and irrigation efficiency.

# IRRIGATION ASSOCIATIONS

---

**Irrigation Associations** has helped to overcome some of the problems such as collection of irrigation fees and operation of the irrigation network.

However, an increase in water use efficiency remains a challenge.

Moreover, maintenance and rehabilitation become even more critical, because about one-third of the irrigation network is over 40 years old.

Over the next decades Turkey will likely face a rapidly growing repair and renewal challenge and corresponding investment requirements.

# TECHNOLOGICAL FACTORS

---

Since water scarcity is a pressing issue for all water-user sectors, the diffusion of water-saving irrigation methods such as drip and sprinkle irrigation is promoted, especially by the DSI and the DG Agrarian Reform.

Successful implementation of this instrument depends on the farmers' adoption, which is related to training and extension services, **suitable irrigation infrastructure and economic incentives** (Özerol et al., "Irrigated agriculture and environmental sustainability: an alignment perspective" Environmental Science & Policy 23, 2012, p. 63).

# IRRIGATION INFRASTRUCTURE

---

Regarding the infrastructure, 92 percent of the irrigation infrastructure is **open canals**, which is not suitable for direct installment of drip or sprinkle systems.

However, since 2003, DSI has been constructing **piped** irrigation systems. If expanded on larger areas, these systems can facilitate water-metering and contribute to the diffusion of water-saving irrigation methods by eliminating the extra energy costs (Özerol et al., "Irrigated agriculture and environmental sustainability: an alignment perspective" Environmental Science & Policy 23, 2012, p. 64)





# ECONOMIC INCENTIVES

The pricing of irrigation water by the state and WUOs does not support the diffusion of water-saving methods. WUOs collect irrigation fees to cover the operation, maintenance and administration costs; there is no charge for the amount of water used by the farmers.

In many regions, the irrigation fee is based on the type of the cultivated crop and the size of the irrigated land.

With the existing canal irrigation systems, it is impossible to measure the water consumption at the farm level and to implement volumetric prices.

Thus, the widespread adoption of water-saving technologies does not seem probable in the short-term due to the lack of an enabling combination of training, economic incentives and infrastructure (Özerol et al., "Irrigated agriculture and environmental sustainability: an alignment perspective" *Environmental Science & Policy* 23, 2012, p. 64).

# IRRIGATION RATIO

At the national level, the irrigation ratio is reported to be 65 percent. Despite the low irrigation ratio, the DSI targets to open all the irrigable land to irrigation, which implies tremendous amount of irrigation investments. The main argument of the DSI with sticking to its target is that the economic benefits of irrigated agriculture justify the cost of investments.

However, there is no mention to the negative social or environmental impacts of irrigation, which are also the 'costs' of irrigation. It is essential to evaluate and reflect on social and environmental factors so that the irrigation ratio can be improved. Then the rationality of the target to irrigate all the irrigable land can be revisited (Özerol et al., "Irrigated agriculture and environmental sustainability: an alignment perspective" *Environmental Science & Policy* 23, 2012, p. 64).

# CONCLUSION

---

- In many countries there is a substantial gap between what is stated at macro level and what actually is happening on the ground. Turkey is no exception to that.
- We identify this as the policy-implementation gap, which means that the institutional arrangements, incentives and resources mobilized are not properly aligned resulting in a gap that is the difference between what is stated in the law and related policies and in their actual implementation.