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# Republic of Macedonia

## Development of National Water Study

### *The Water Sector and the Reform Process in Macedonia*

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**EuropeAid/136505/IH/SER/MK**

A project implemented by **ep<sup>t</sup>isa**

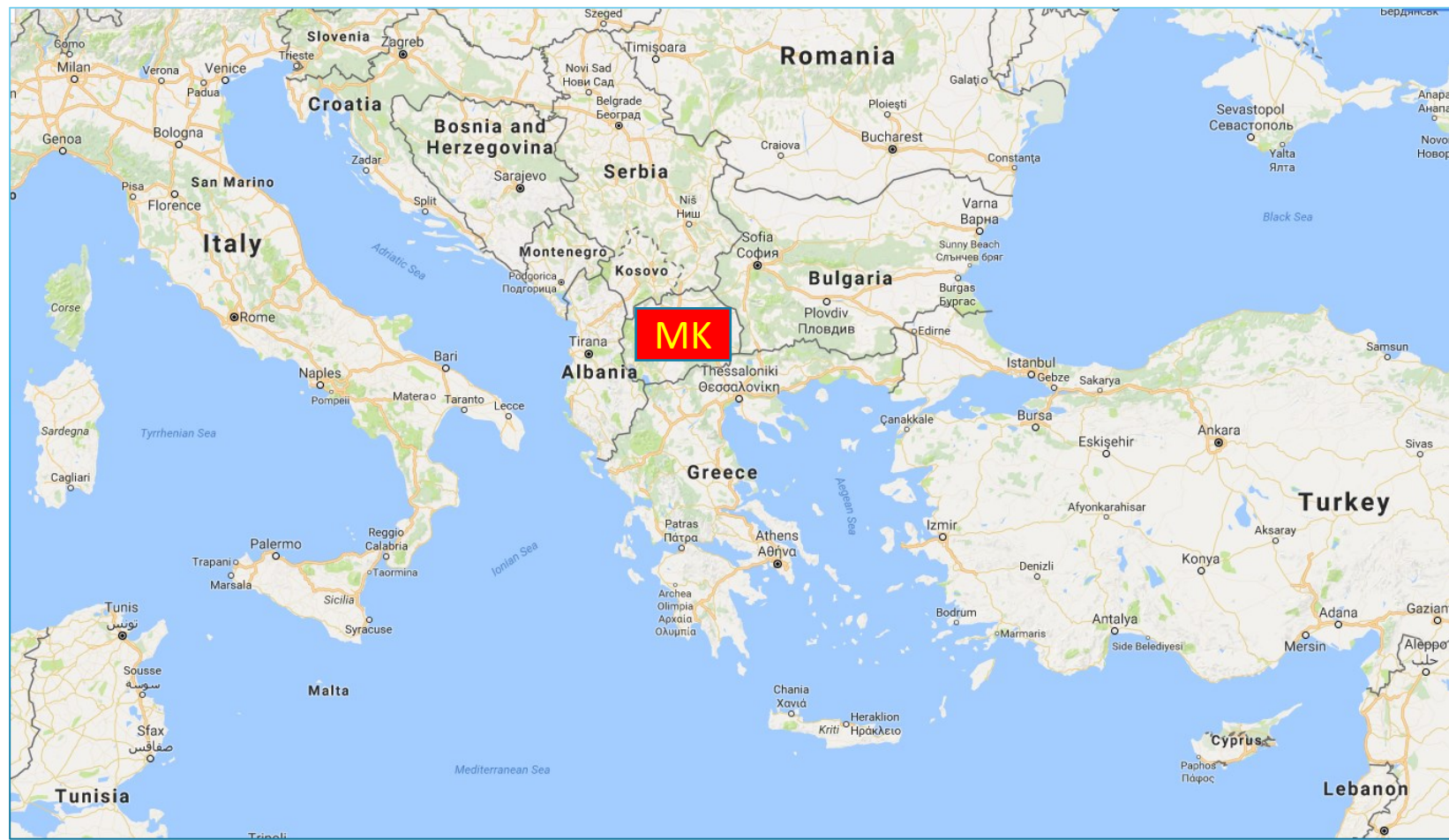




# Macedonia



Introduction



This Project is funded  
by the European Union

Development of National Water Study



06/10/2016



# Quick Comparison



Introduction

	Portugal	Macedonia
Population million	10,35	2,08
Area	92 212	25 713
Municipalities	308	80
GDP per capita (PPP)	\$30 193	\$14 631
GDP per capita (nominal)	\$19 707	\$5 021
Urbanisation (2020)	67%	59%
Capital City million (metro)	2,7	0,6

	Portugal	Macedonia
Coastline	LOTS	NONE!

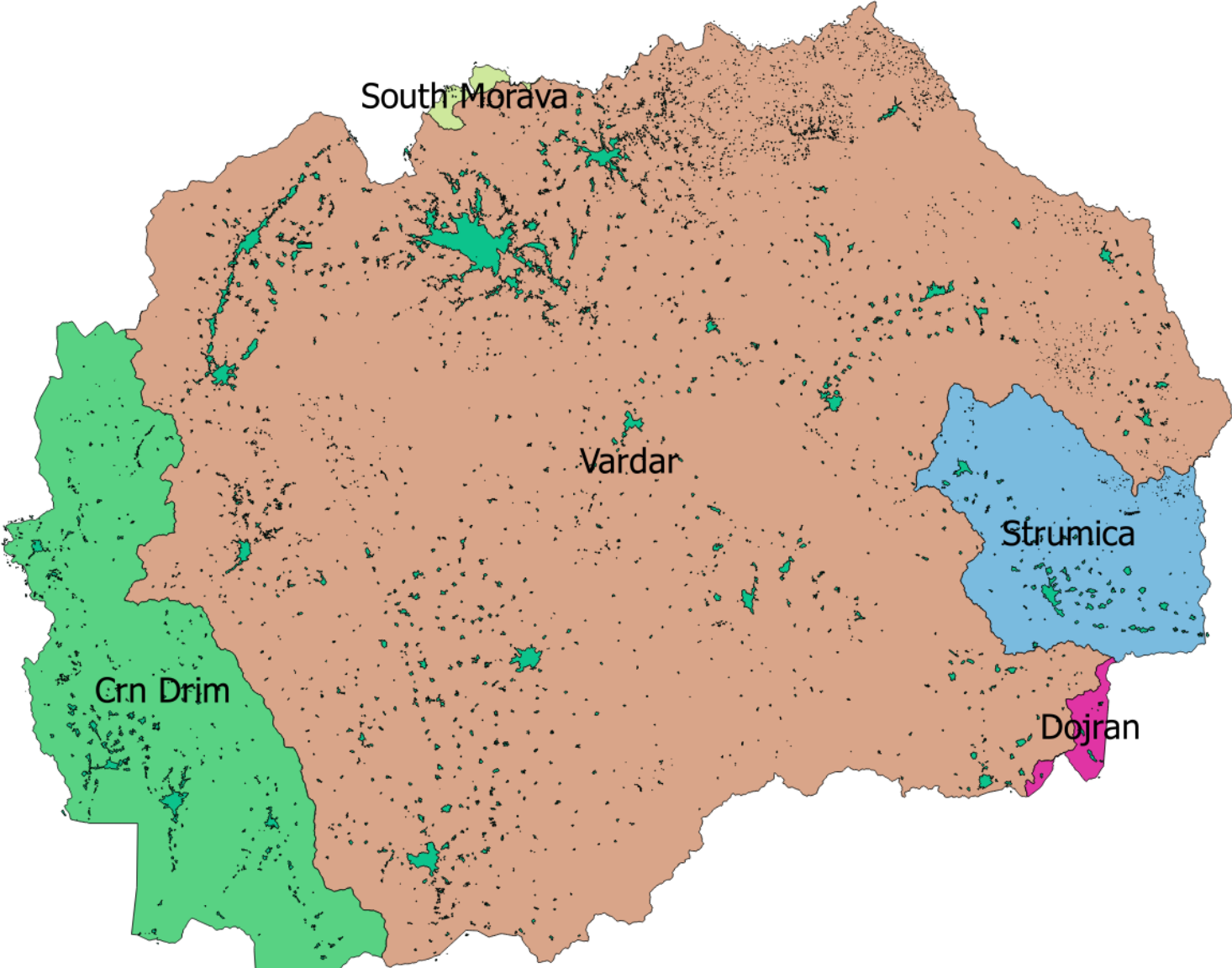




# All Agglomerations



Introduction





# Basins and Agglomerations



Introduction

Number	<10 000	>10 000 <100 000	>100 000	Total
Vardar	59	20	2	81
Strumica	12	2		14
Crn Drim	17	6		23
<b>Total</b>	<b>88</b>	<b>28</b>	<b>2</b>	<b>118</b>

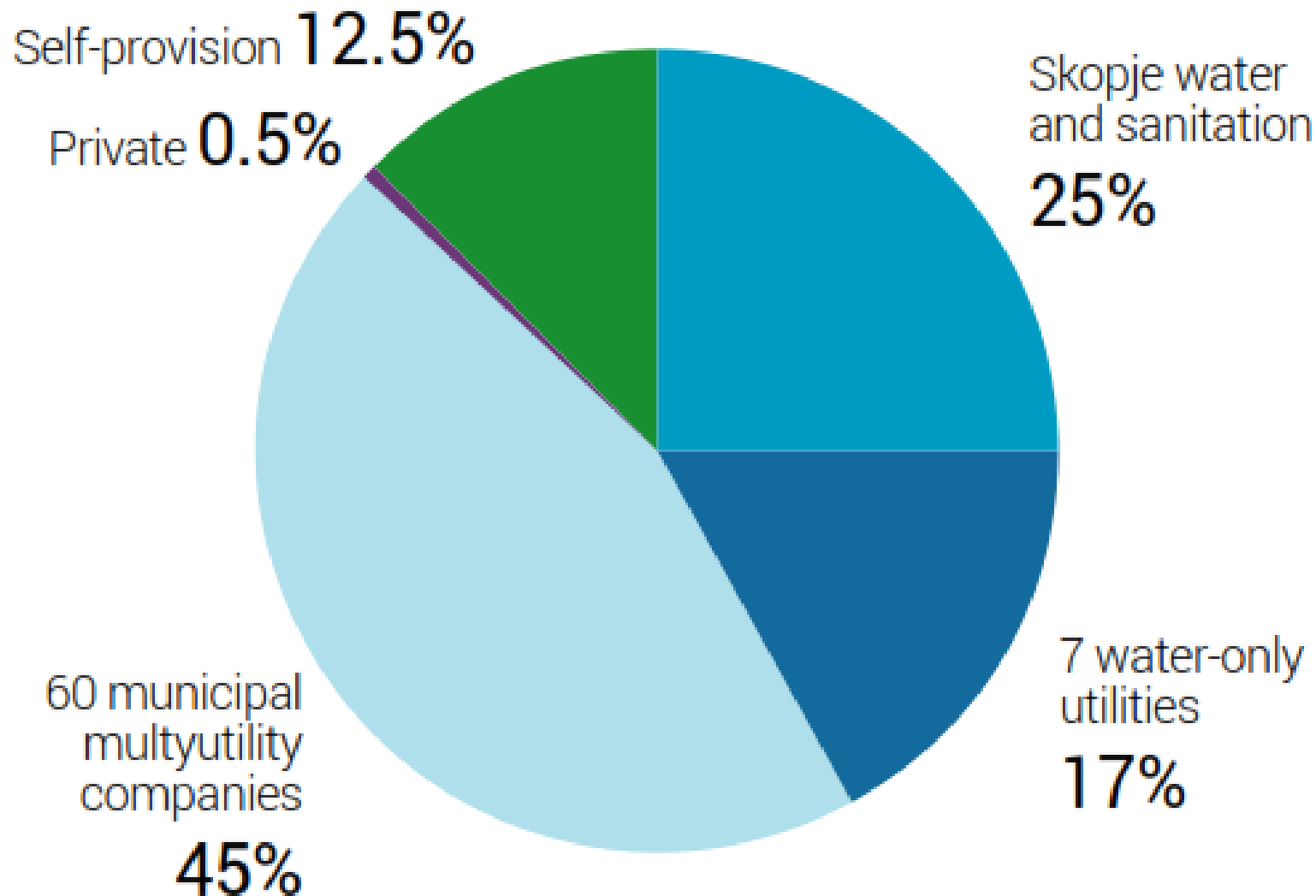
Population Equivalent	<10 000	>10 000 <100 000	>100 000	Total
Vardar	235.306	821.720	803.308	1.860.335
Strumica	33.968	73.521	-	107.488
Crn Drim	38.061	142.272	-	180.334
<b>Total</b>	<b>307.335</b>	<b>1.037.513</b>	<b>803.308</b>	<b>2.148.156</b>

Vardar	13%	44%	43%	86,6%
Strumica	32%	68%	-	5,0%
Crn Drim	21%	79%	-	8,4%





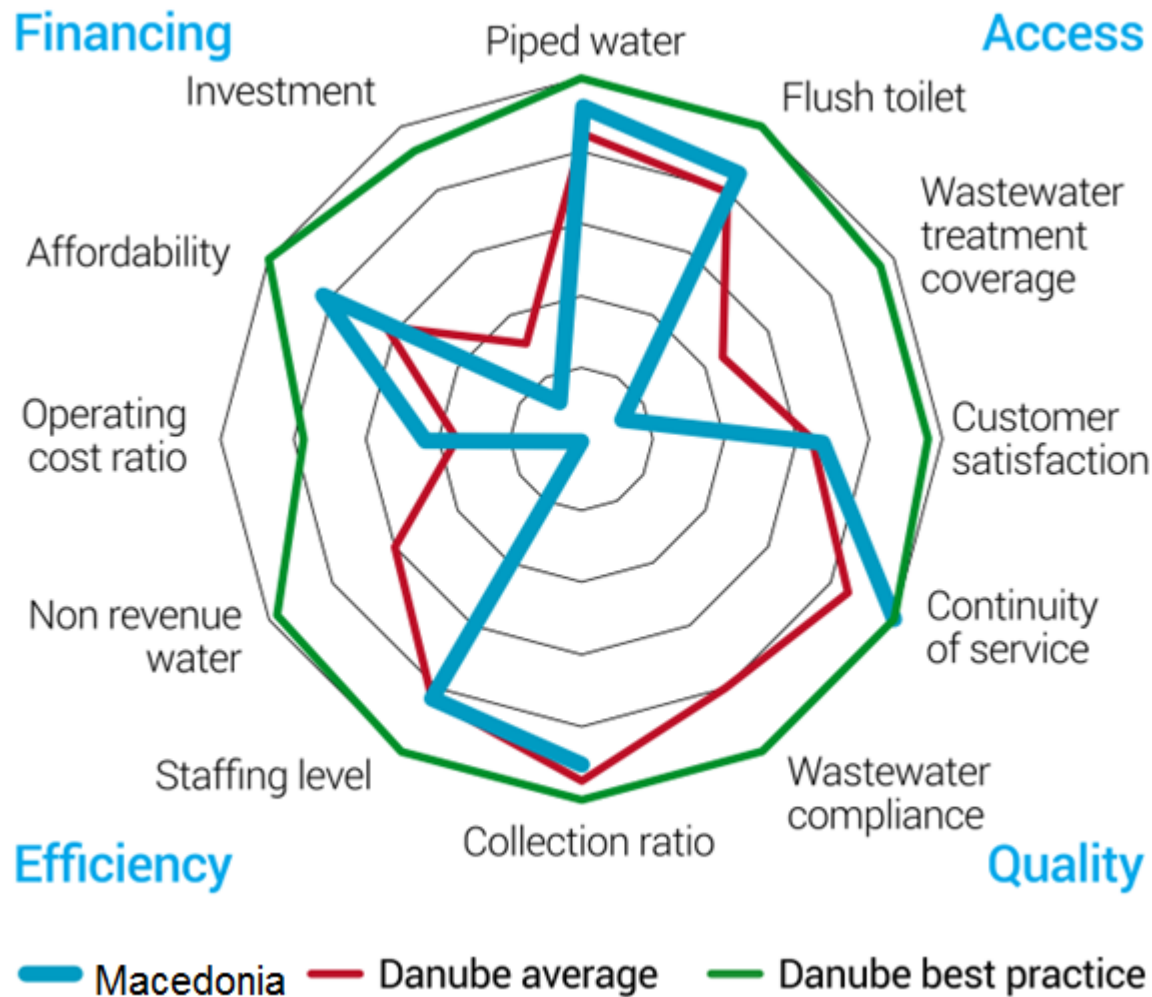
# Types of Service







# Sustainability Assessment



## Good performance

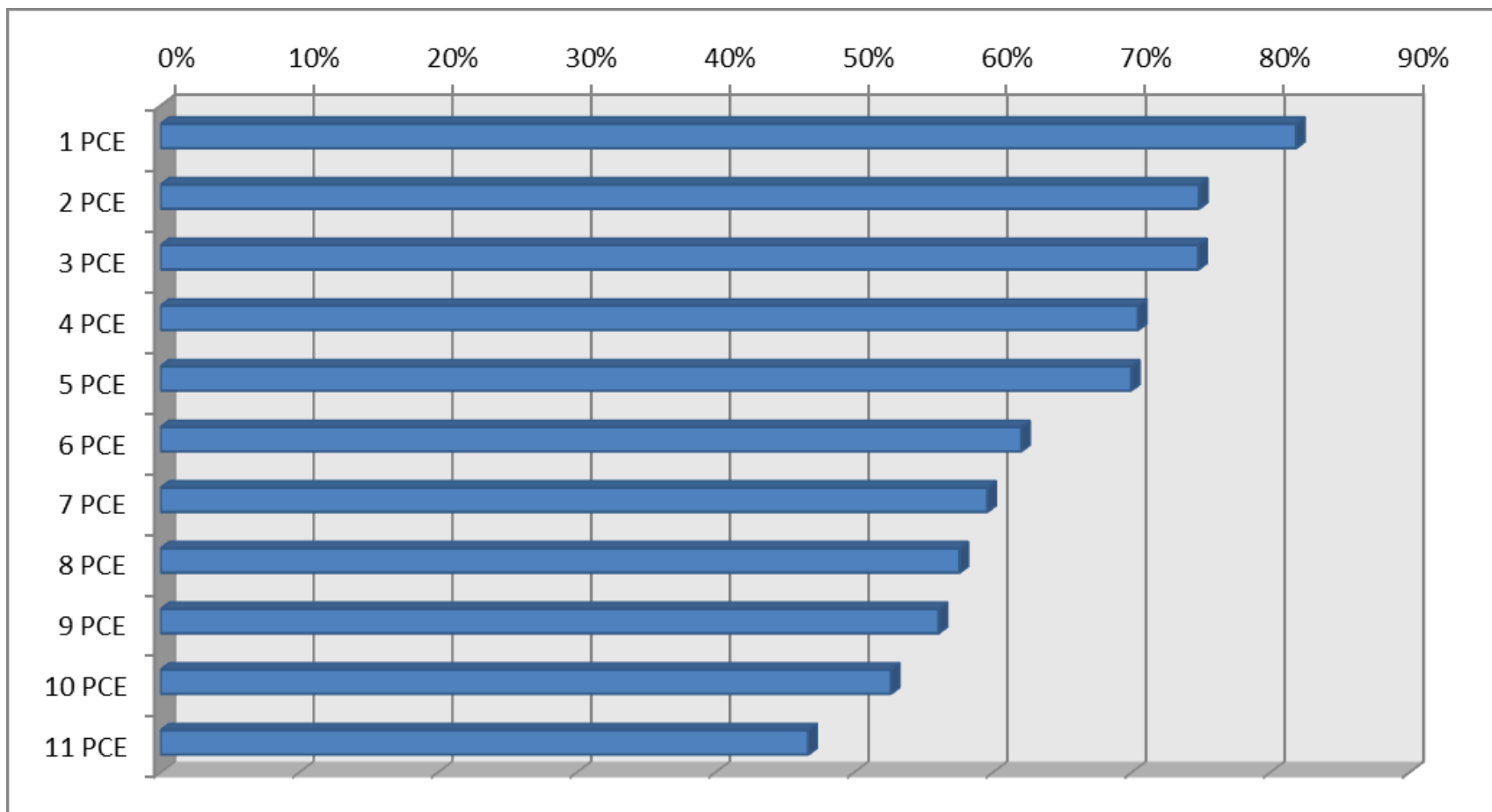
- Coverage
- Affordability
- Continuity
- *Staffing*
- *Collection Ratio*

## Low sustainability:

- Investment
- Operating cost ratio
- Non-revenue water
- Wastewater treatment



# Non-Revenue Water







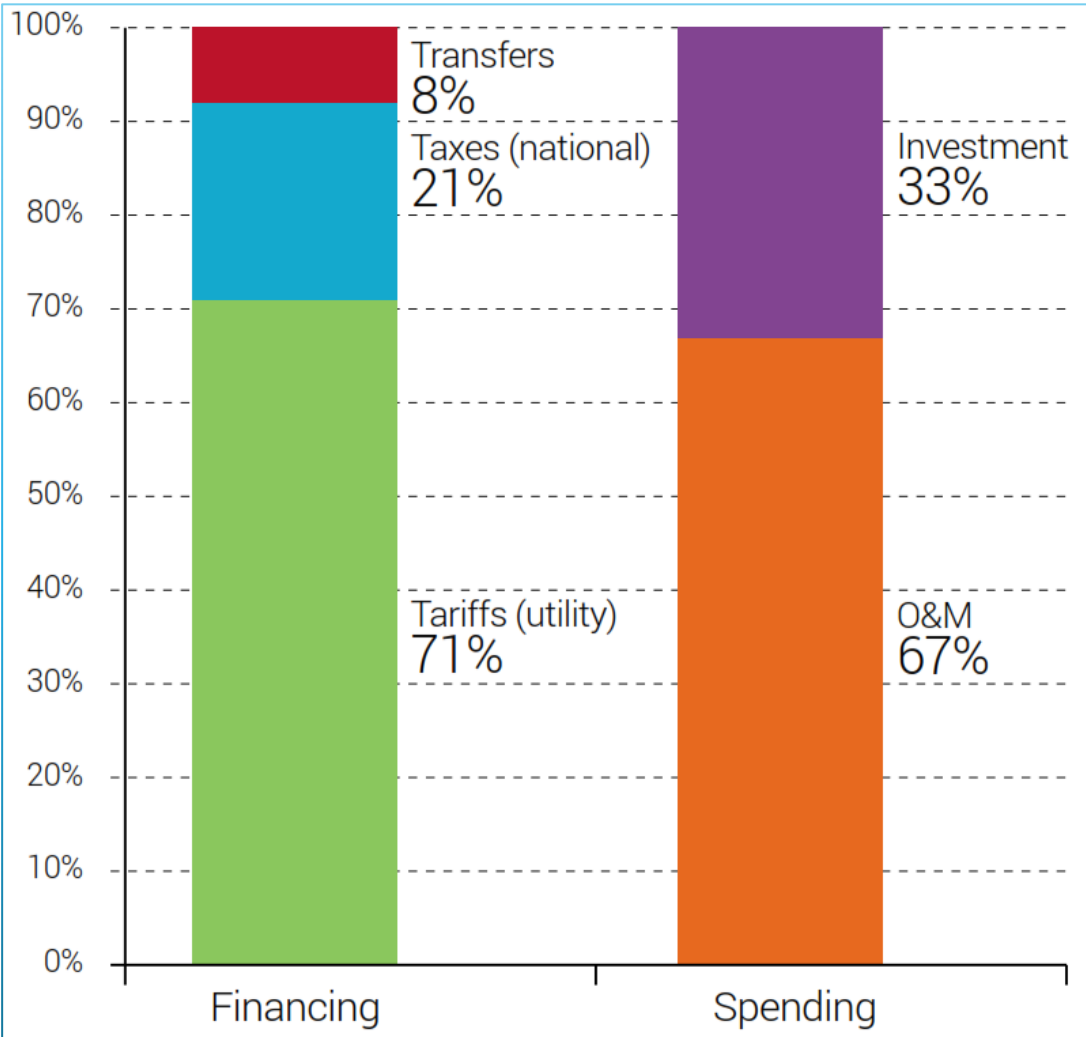
# Overall Sector Financing



State of the Sector

Tariffs fully cover operation and maintenance costs. they are the dominant source of funding in the sector while national and municipal budgets and international grants are used for new investment funding.

Tariffs are also meant to cover depreciation expenses, but usually part of water tariffs are used for other municipal expenditure in case of a local multi-utility company.

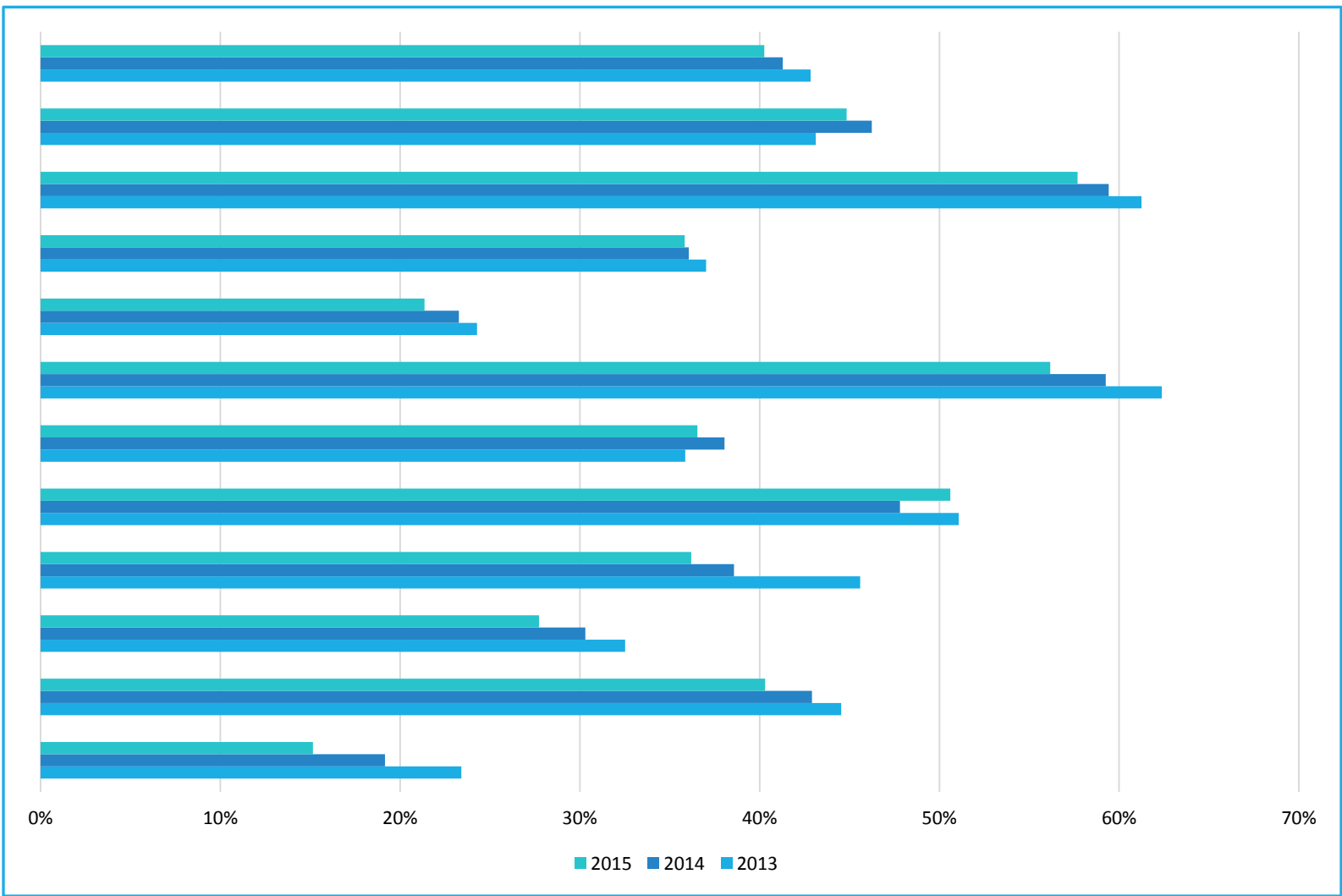




# Asset Value: NET / GROSS



State of the Sector





# Tariffs in Macedonia - EN



Tariffs are calculated and proposed by utilities and approved by municipal councils. However, in practice, there are many examples of municipal councils not approving the proposed tariffs due to political and/or social reasons.

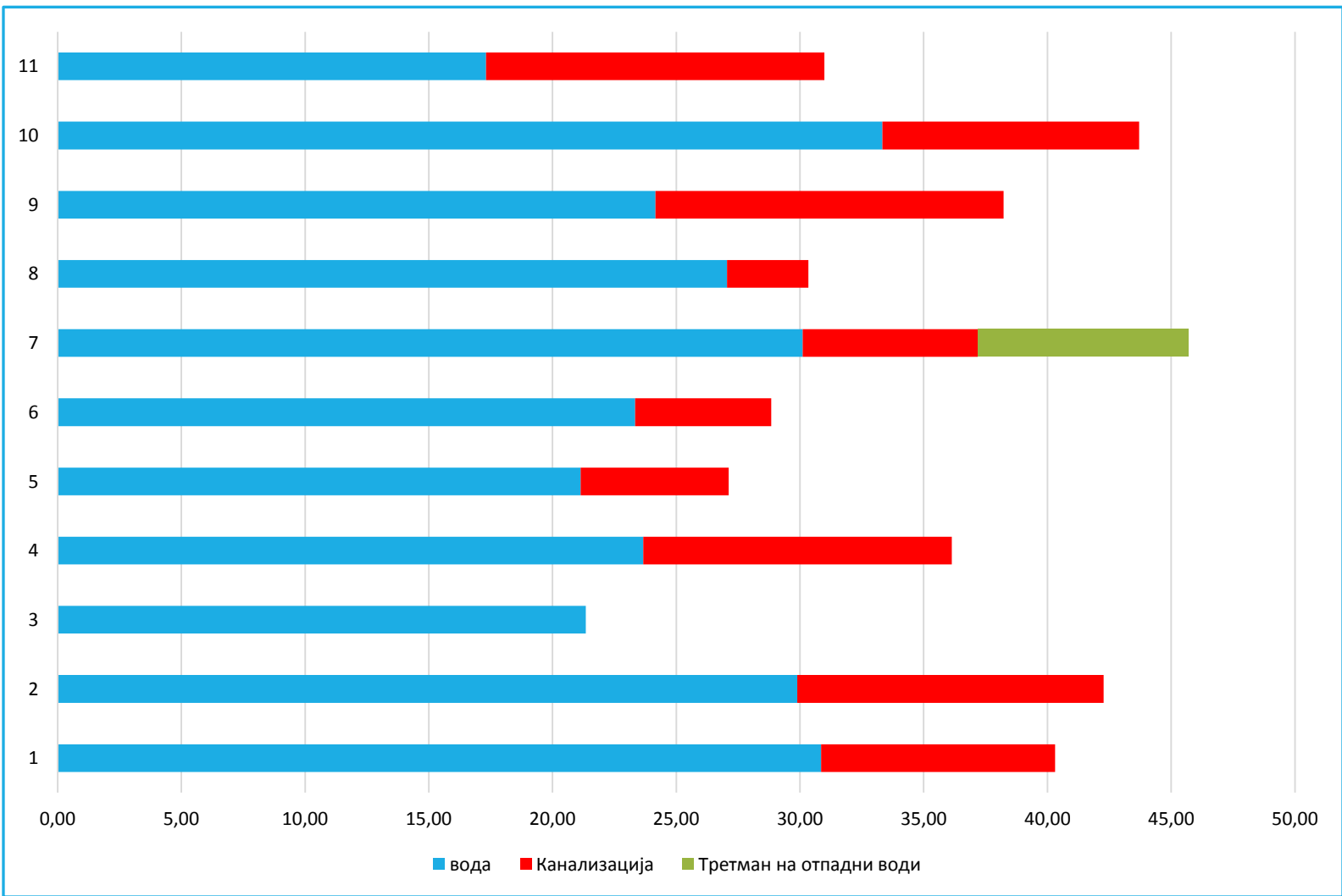
Water tariffs barely meet the water companies' operating and maintenance costs, and do not allow for upgrading or modernization of distribution networks, which **significantly contributes to the unsustainability of the water companies.**



# Average Weighted Tariff/m3



State of the Sector





# Affordability - EN



Current water charges are below the average income threshold, but low-income households face increased problems.

The average cost of water services to the average household is **1.7% of household income (SSO 2008)**, which is less than the affordability threshold of 3%, the benchmark in the water services sector in Europe.

For the **lowest-income quintile**, the cost of water is already **6%**, and for the **second lowest quintile**, it is slightly above the **3%** threshold, while the cost of the highest-income quintile is less than 1%.

State of the Sector

Rich	Average	Poor	Very Poor
<1%	1.7%	3.1%	6.0%





# Ambitions: Water Service Sector



Sustainable infrastructure management

Self-financing

High quality of service: continuity, reliability, pressure ...

Efficient service provision and resource use

Fair & equitable pricing

Services are affordable for the population

Facilitate investment





# Reform Process



## Enforced Economic Regulation

- Tariff Adjustment Plan (3-6 year)
- Business Plan

## Sector wide investment planning

- Directive Specific Implementation Plans
- National Investment Programme
- Mixture of top-down and bottom-up

## Capacity Development

- Local Level

## Consolidation – Regionalisation ... Commercialisation

- Opening salvos
- Battles have started, but the war could last “some time”





# Projects Supporting Reform



## Central Reform Project:

- Economic Regulation
  - Legal and Policy Framework
  - Capacity of the Economic Regulator
- Local Capacity Building

## Local Reform Project

- Local Capacity Building
- Indicator Monitoring and Reporting
- Potential for Consolidation of the Sector

## National Water Study

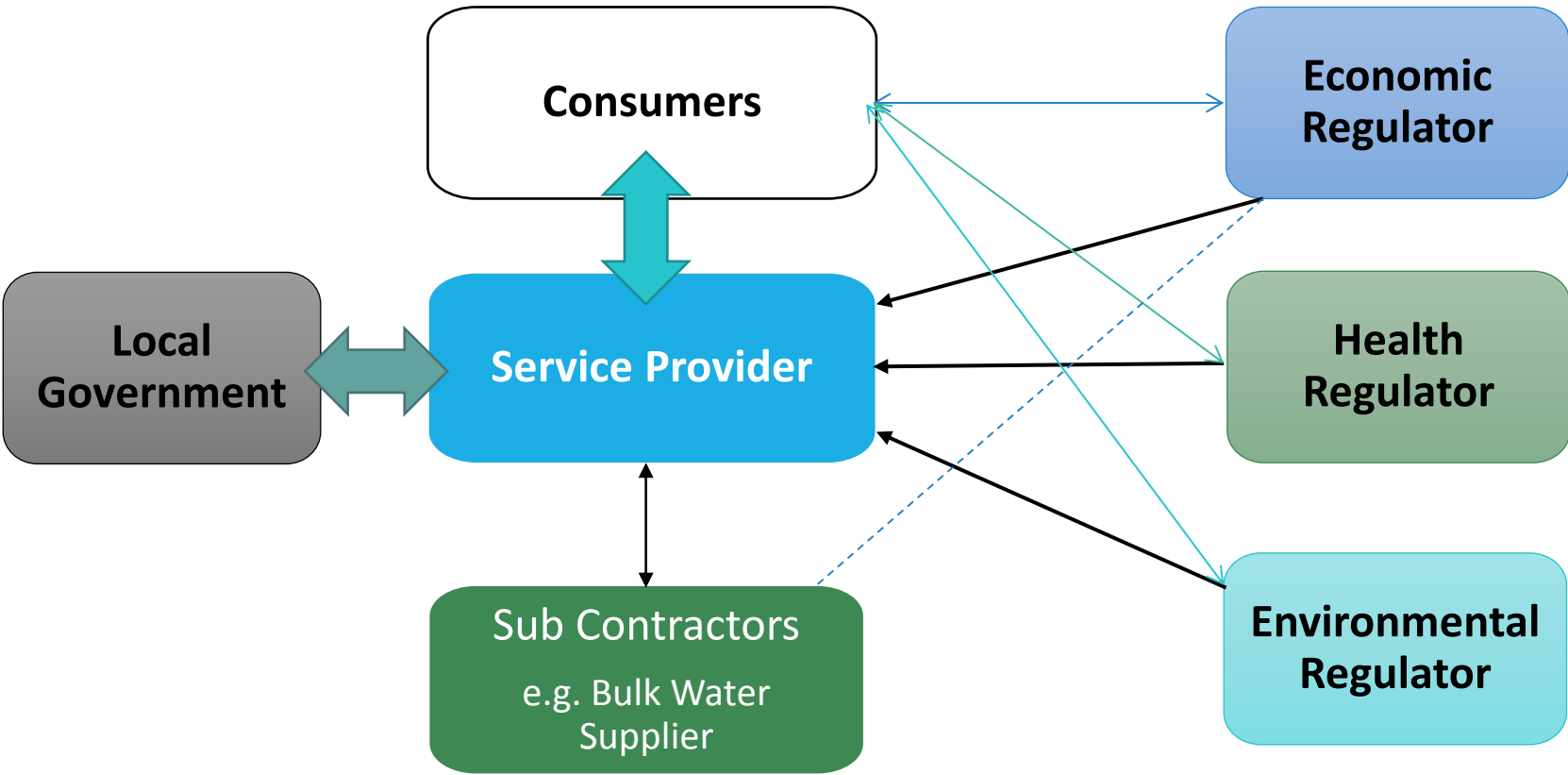
- Directive Specific Implementation Plans
- National Investment Programme
- Capacity Building at Central and Local Level



# The Framework of Regulation

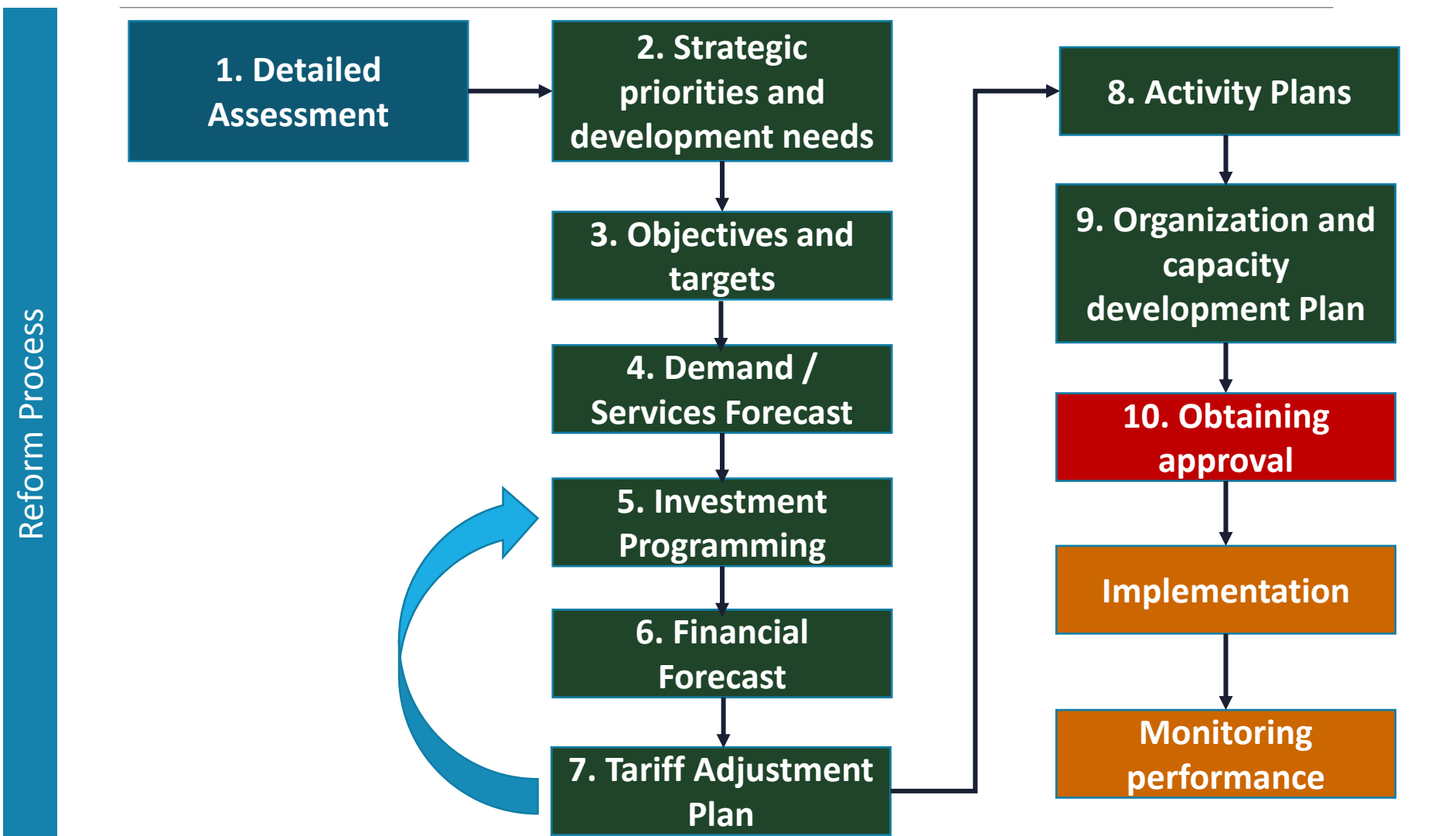


Reform Process



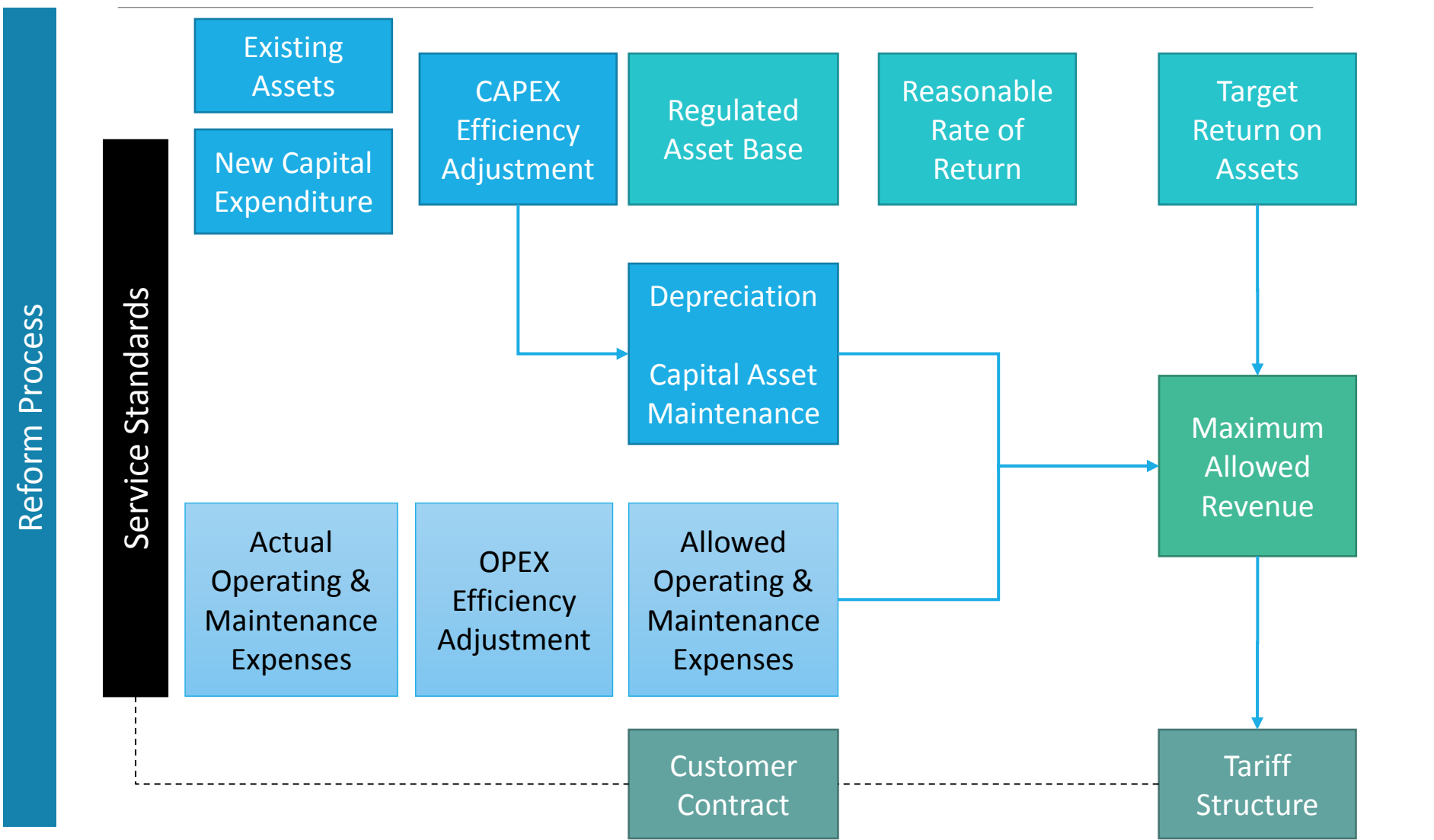


# Business Planning





# Tariff Adjustment Planning





# Approach in Macedonia



## In Summary – PUCs prepare

- Multi-annual Business Plan, including:
  - Multi-annual Investment Plan
  - Multi-annual Financial Forecasts
  - Multi-annual Forecast of Changes in Performance
- Multi-annual Tariff Adjustment Plan

Municipalities submit for approval to Regulator

Regulator assesses the submissions and then:

- Approves
- Negotiates adjustments
- Rejects



# Assessment Criteria



## Business Plan

- Coherent, logical, addresses priority issues
- Investment Plan is realistic and finances available
- Financial forecasts: comply with the methodology
- Performance Indicators: significant improvements

## Tariff Adjustment Plan

- Complies with the methodology
- Gradual increases
- Affordable
- Gradually reducing tariff differentials



# Segmentation



## Minor segmentation in MK

- Bulk water supply – Vodostopanstvo
- Untreated raw water supplied to Public Utility Companies
- Multi-functional water management schemes:
  - Drinking Water
  - Hydro-Electric Power
  - Irrigation
  - [Flood defence]
- Some cases of waste water conveyance

## Versus – major segmentation in PT

- Bulk services at multi-municipal level
  - Treated Water
  - Treatment of Waste Water





# Investment Programme



Waste Water Treatment: €450 million

Waste Water Collection (new): €300 million

Waste Water Collection (renew): ????

Drinking Water Treatment: €100 million

Drinking Water Supply: ????

Total: €1 – 1,5 million

Duration: 15 – 20 years (~3 \* 6 year programmes)





# Issues / Challenges



## CAPEX

- Donor Finance
- National Finance
- Local Contributions

## OPEX

- Affordability
- Economies of Scale

## Enforcement of Tariff Regulation

- Central Independent Regulator vs. Municipalities

## Legacies

- Infrastructure Replacement Backlog
- Financial Sustainability



# Thank-you for your attention



*Please feel free to contact us at:*

## **Development of National Water Study**

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