

# Decentralized Approach to Wastewater and Water Management

## A Case Study in Switzerland

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### Introduction

The management of both drinking and wastewater in Switzerland is under public law. Due to the Switzerland's political system, the real competences in water management are granted to the cantons which in turn normally delegate these tasks to the municipalities. The size of these is generally small. For example, Switzerland counts 26 cantons. The Vaud area is composed of 382 municipalities with about 650'000 citizens. So the management of water is mainly characterized by a strong delocalisation principally due to the federalism structure of the country.

Today more and more municipalities decide to join together to achieve various tasks such as water management or other public services in order to generate economy of scale. There is also for a few years a large discussion in Switzerland about privatisation or not of water services.

In this context the case of SIGE is relevant to illustrate the main characteristics of water and wastewater's management in Switzerland and an example of integrated system for a sustainable policy in the public interest.

### Future issues and challenges

#### Privatisation vs public management

Which structure is better to guarantee sustainable water management? Proponent to privatisation argue that the benefit is a more efficient management of water. Opponents respond that the control of local decision and the patrimonial aspect of water will be lost.

#### Regionalization or decentralization

The association or merging of several distributors can have positive effects like economy of scale

#### Managing the whole water cycle

The SIGE had prior to manage drinking water and wastewater. These two public services had different organization and structure with different mind. Challenges were to create a team spirit.

#### Economic value of infrastructure

The worth of water infrastructures is today underestimate. For example, a lot of wastewater plants in Switzerland must be modernized, particularly to take account of the micropollutants treatment.

#### Technical challenges

- Climate change and their impacts.
- Energy consumption: How to reduce it? How to produce energy with drinking water and wastewater?
- Key factors driving the future demand
- How to reduce the NRW (Non Revenue Water) and the water losses?

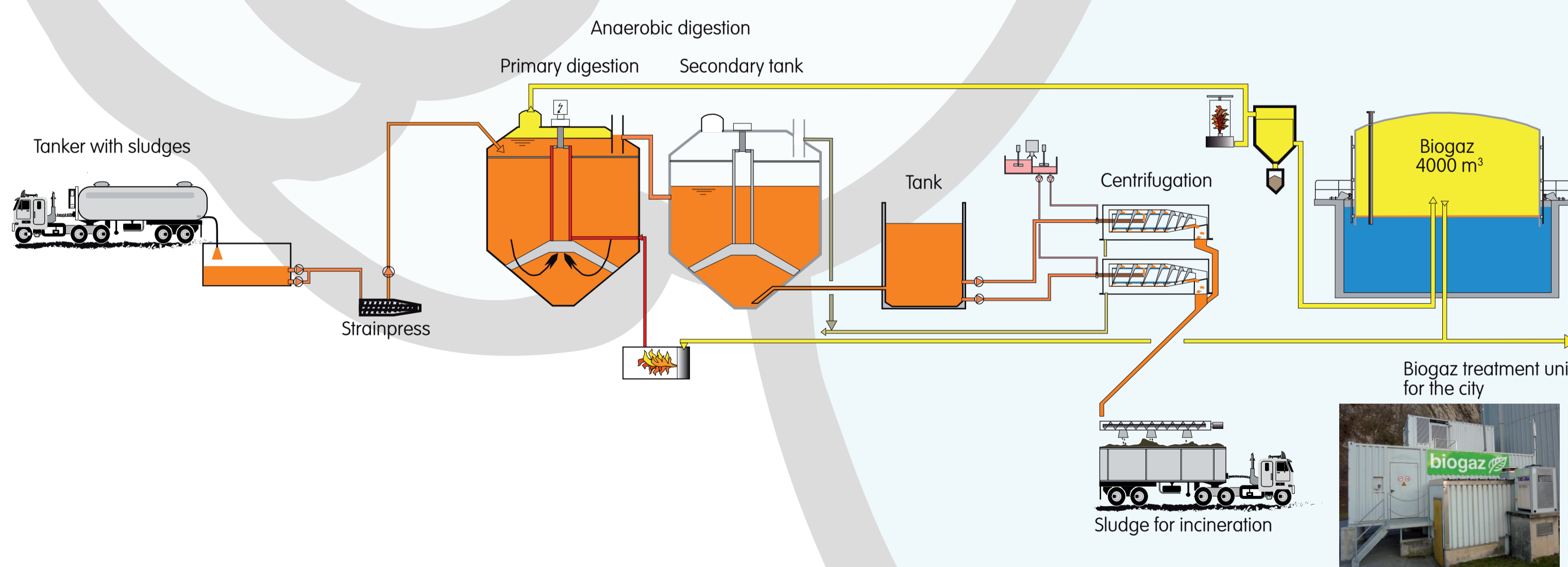


Figure 3: Biogaz production from the sludge. One answer to the challenge of energy production in water and wastewater network

### Historical development

**1868** Private company of drinking water management. The water from the spring of les Avants was primary used for the exploitation of a sawmill.

**1899** Acquisition of the private company by an association of 7 municipalities for the primary purpose of safeguarding the public interest.

**Since 1998** The Service intercommunal de gestion SIGE is formed by an association of 10 municipalities that provides drinking water for about 70'000 people and also managed wastewater for 90'000. This is the result of merging the drinking water and the wastewater management services to develop synergy for decreasing costs.

**2002** The service assume foodstuff management for the communes, especially by the management of public abattoir



Figure 1: Périmètre of SIGE's activities

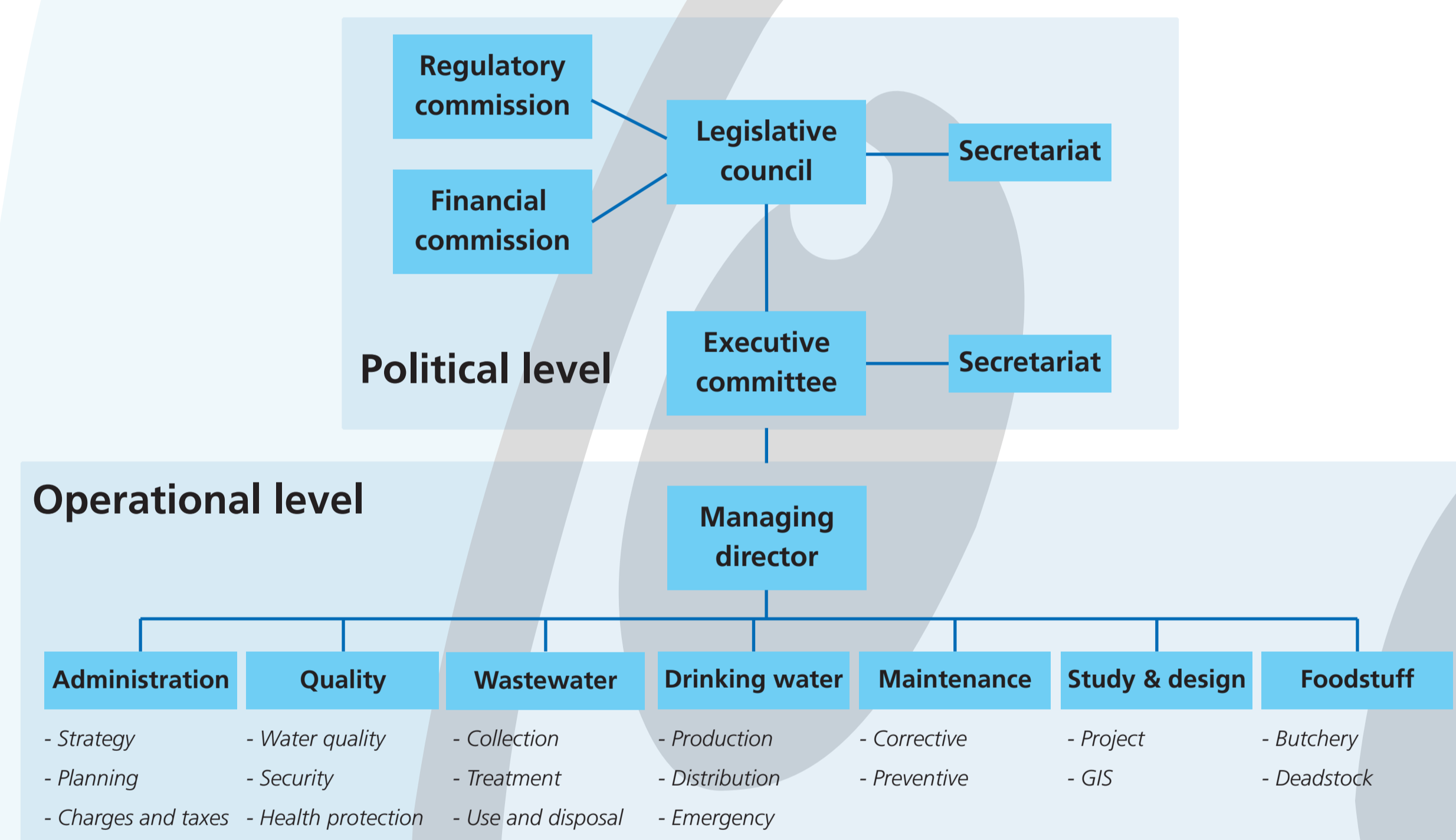


Figure 2: Political and operational structure of the SIGE

### Responses from the SIGE

- The history of SIGE has demonstrated that local authority and also the citizens are attached to the management of water distribution and wastewater by municipalities. In 2008 the political authorities of SIGE signed a declaration recognizing water as public good.

- To achieve its objectives, the SIGE has developed a process based management model that permits a better control of all operations in drinking water and wastewater management. Following this approach, the SIGE has obtain ISO certification for the quality management (ISO 9001), the environmental management (ISO 14001), foodstuff management (ISO 22000) and finally ISO 17025/CEI for the competence of laboratories.

- The SIGE has also developed a transparency approach of its cost management that can permit an adjustment of the water price despite local elections.

- The association of municipalities has clearly demonstrated a positive effect on the operating costs.

### Conclusions

The case of SIGE is relevant to illustrate how the tap water and wastewater are managed in Switzerland despite the fact that there is only few intermunicipalities in the water sector. This public service has the opportunity to cover the whole water cycle, from the springs to the wastewater treatments plants. It shows that a public service can be efficient and effective and can really ensure a sustainable water management by working with a management similar to the private sector.