

Shaping the Future 2022 Föreningen Global Forum



Under the High-Patronage of

الجمعيـة العمـانية للخدمات النفطية Oman Society for Petroleum Services

### Tools for transboundary management of water and water uses

in the greater Geneva

Etienne Monbaron Geneva State Water Protection Agency – Switzerland

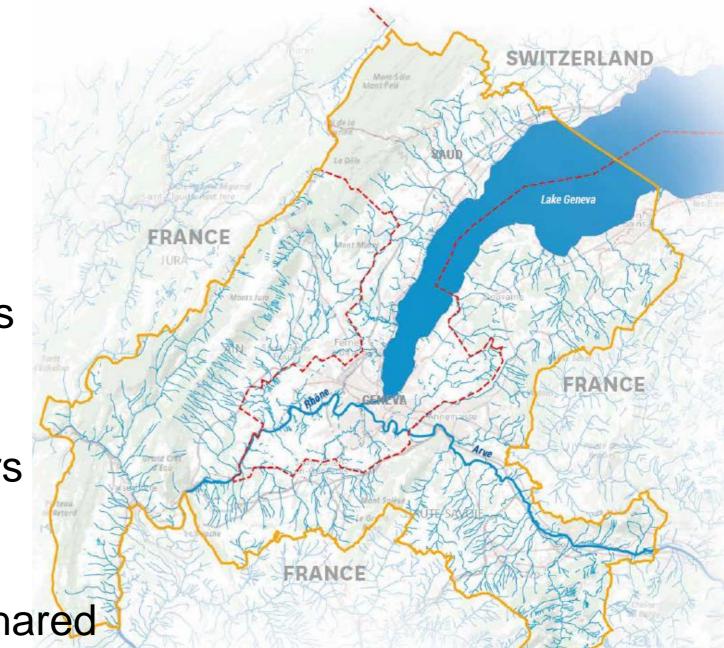




## **Greater Geneva – Geopolitical context**

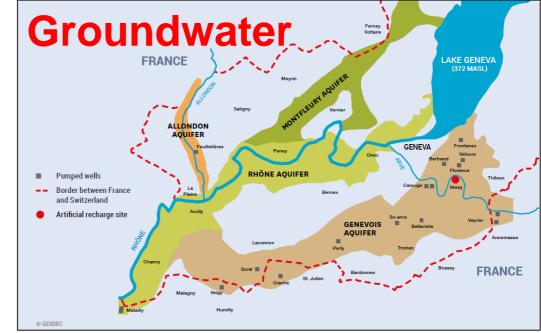


- Diversity of water resources
  - Lake
  - Major river
  - Dense web of small rivers
  - Strategic aquifers
- Management of all these shared resources has, over time, required the development of various transboundary tools.



## Water resources – Freshwater





#### **Surface water**

#### Major transboundary rivers



Rhône

Arve

Small rivers Upstream F – Downstream CH

# Legal frameworks and political systems

Coordination between 2 systems different in nature

Switzerland	France			
<ul> <li>Decentralized system</li> <li>Cantons &amp; municipalities have executive and legislative powers</li> <li>Legislative framework for water management is substantial</li> </ul>	<ul> <li>Centralized system</li> <li>Gradual transfer of water management powers to regional and intermunicipal authorities</li> </ul>			
Greater Geneva				

- Transboundary area (CH F)
- Territorial planning beyond political borders
- Shared goals : Area Plan (2007, 2012, 2016, 2021)
  - Urban development, mobility & environment

# Issues for sustainable water resources



### QUALITY

- Pollution
- Sewage network
- WWTPs
- Micropollutants



#### QUANTITY

- Hydrological regime
- Flood risk mitigation
- Low water flow
- Climate change



#### **MORPHOLOGICAL CONDITION**

- Canalized / Channelled rivers
- Renaturation projets over 20 years
- Major improvment in the situation
- Restore width
- Re-establish ecosystems

# Issues for sustainable water resources



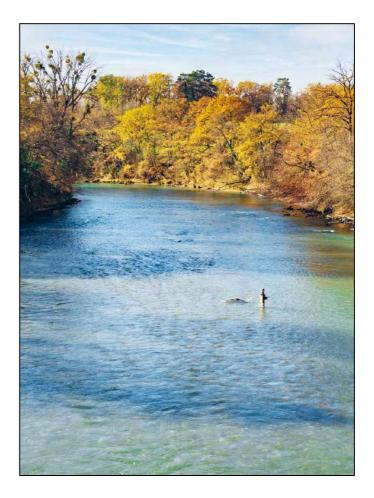
#### BIODIVERSITY

- Renaturation
- Promote return of species

#### **USES of WATER / benefits**

- Drinking water
- Ecosystem benefits
- Leisure activities
- Geothermal energy





### Transboundary tools for water management

#### Any legal instrument

(treaty, convention, agreement) that makes it possible for two countries to cooperate across borders on different topics of concern in water management and water use"

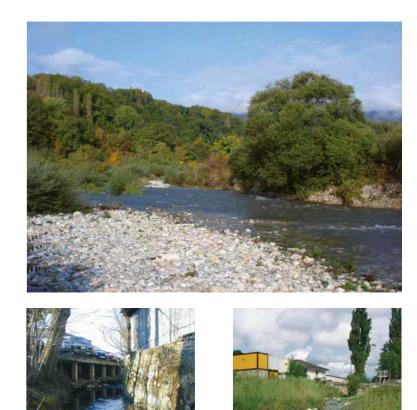


# **DEVELOPMENT OVER TIME**

		Agreement to share data to improve	knowledge of deep groundwater flows for developing drinking water or energy reso	urces 39
			Agreements on micropollutants treatment (Villette & Ocybèle W	
			Comprehensive agreement for the Arve B	isin 💼 37
			Area agreement for Salève-Genevois Sensitive Natural S	ites 36
			Area agreement for Vuache-Champagne-Genevois Sensitive Natural S	ites 35
			Area agreement for alluvial Sensitive Natural Sites in the Arve B	asin 34
			Arve Local Water Development and Management Scheme (SAG	E) 33
			Thonon Area connection agreemen	
			Annemasse Area connection agreemen	
		Green & Blue Network	Contract for the Arve - 'Gateway to the Alps' (formerly a biocorridors agreement	
			Area agreement for Foron Sensitive Natural Sites	
	Urban uses	Pays de Gex single contract	(mers contract + biocorridors agreement/Green & Blue Network Contract)	28
	Fishing	Transboundary Memorandum of Under	standing on managing Upper Rhône sediment flushing & hydropower reservoirs	27
	-		Vesancy-Versoix biocorridors agreement	26
	Commercial & recreational navigation		Area agreement for aquatic & land environments south-west of Lake Geneva	25
	Energy production		Flood Action and Prevention Programme - PAPI 1 (Arve)	PAPI 2 (Arve) 24
	Environment, leisure & landscape		Arve-Lake Geneva biocorridors agreement	23
	· ·		Champagne-Genevois biocorridors agreement	22
	Safety of people & property	Memorandum of Understanding for co-operation on transboundary	water pollution between French Gendarmerie & Geneva Canton Police	21
			Genevois Area connection agreements	20
			Pays de Gex connection agreements (CCPG)	19
			Charter for the Area Plan - Landscape Plan	18
	Permanent agreement		South-West Lake Geneva Basin Rivers Contract	0
	(can be revoked at any time with		Water purchasing agreements (SITSE - Pays de Gex)	16
	3-6 months'/1 year's notice, or subject	Choully Waste	water Tunnel GLCT (investment & operating agreement)	15
	to automatic annual renewal)		Pays de Gex Rivers Contract	14
	Renewable once for 3 years		Foron River Contract	13
	-	Trans Memorandum of the	boundary Rivers Contract 'From the Arve to the Rhône'	
		Transboundary Memorandum of Understanding	for Rehabilitation of Geneva's Rivers	Transboundary Memorandum of Understanding on Water 10
		Transboundary memorandum of onderstanding	Arve River Contract	Management
Agreement establishing the La				9
	Convention on	the protection, use, recharge and monitoring of the Franco-Swiss Geneva	Aquifer	2
			ances	
Franco-Swiss Convention on the Emosson Dam Hydroelectricity Development				
Franco-Swiss Convention on the protection of Lake Geneva against pollution				
Franco-Swiss Convention for development & use of Rhône hydraulic power between planned La Plaine plant and a point upstream of Pougny-Chancy bridge				
	Franco-Swiss Agreement on Lake Geneva navigation			2
		greement on fishing in Lake Geneva (France and Switzerland)		
1000				2020
1880	1900 1920	1940 1960	1980 2000	2020 2040 2060
1880		1962	1986 2000	5
				-
	Shared use	e Protect	tion Restoration	Transboundary WM

# **Example 1** – Transboundary rivers contracts

- Investment tool covering a whole catchment area, funding a varied programme of activities
- Aim: restore and enhance aquatic environments (studies, works, awareness).
- Truly comprehensive, area-wide operational tool, which is able to deal with a large number of water-related issues.



#### 1 year

**Diagnosis** (taking stock, reaching conclusions)

#### 6 months

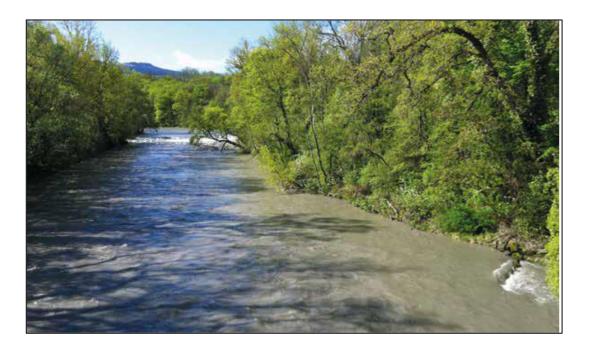
**Draft version** (main objectives, studies required, action proposed)

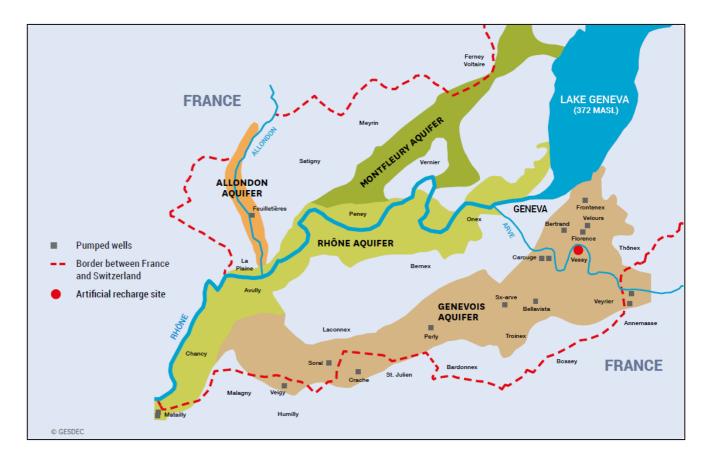
#### 6 months

Final version (fixed targets & action programmes) 2 to 5 years Implementation (work, interim report, final report)

# Example 2 – Convention for Geneva Aquifer

- Convention on the protection, use, recharge and monitoring of the Franco-Swiss Geneva Aquifer
- Aim: facilitate joint use and management of groundwater for drinking water
- 1960's: excessive pumping led to drop of groundwater level
- 1978: agreement CH-F Artificial groundwater recharge
- 2008: new convention, based on fruitful transboundary collaboration





# Factors shaping the system & development

- The existence of a community of practices, functioning in the transboundary dimension and cutting across different sectors
- The existence of a shared political will and vision, carried forward by regional policymakers with more room for manoeuvre than central governments
- The evolution from an essentially sector-based, troubleshooting outlook to an integrated, pre-emptive perspective
- The role of civil society

# **Directions for improvement**

- Legislative policies and co-ordinated legal approaches
- Data and information sharing
- Joint funding
- Shared planning and implementation
- Consolidating political will and strengthening ties with civil society
- Raising public awareness

# Join us! Call of Dakar



• 9th World Water Forum – March 2022 in Dakar / Senegal

#### StoryMap

https://app2.ge.ch/tergeoportal/apps/storymaps/stories/c46b45ad8f5144af883ebc3468c471e0

- In view of the increasing pressure on resources and the urgency to act together, we invite you to a dialogue in order to collect, compare and develop instruments applied in other transboundary contexts
- We hope to contribute to the development of a useful and creative toolbox for water management in any transboundary territory.
- Contact : <u>CallofDakar@etat.ge.ch</u>