Water allocation in transboundary basins: a global workshop on the status and good practices
Geneva 16-17 October 2017

Water allocation provisions in the Genevese Aquifer agreement

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GESDEC - Geological survey of the Canton of Geneva
10 wells on the Swiss side

5 wells on the French side
Stakeholders

SEA
7 wells
~ 7 Mm³/y

SIG
6 wells
~ 6 Mm³/y

Annemasse
3 wells

CCG
1 well

Viry
1 well
~ 2 Mm³/year
Urgent hydraulic management:

To consider a decrease in withdrawal rate by using another water resource (the construction of a new water filtration and treatment plant in the lake)

To carry out a reinforcement of the natural capacity of groundwater by artificial recharge

2 criteria:

1 - water supply security (diversification of water resources)

2 - economical criteria (the cost of a groundwater A.R. is not the same as a new water treatment plant in the lake)
Technical issue:
Studies and tests carried out on the experimental plant
Administrative and political issues:
Several meetings and discussions (CH-F) in order to

1 - impose restrictions on use until an A.R. plant completed
2 – Establish equitable cost sharing

1972 to 1977 work on drinking water resources and hydrogeological issues (losses, natural recharge, future pumping and fees) in order to laying the bases of a future Franco-Swiss agreement.
Localisation des piézomètres de la nappe du Genevois

- Piézomètres
- Nappe du Genevois
- Limite cantonale

0 0.5 1 2 3 4 Kilomètres
1977: artificial recharge benefits underlined:

◆ **All users**: availability of 15 Mm3 of drinking water stored in the underground.

◆ **Swiss water companies (SEA & SIG)**:
  ability to exploiting all the existing pumping wells without the construction of a water plant for treating lake water.

◆ **French communities**:
  Extraction of supplementary amounts of water paying their part of the costs beyond the annual minimum allowance of 2 Mm3/year.

◆ **The cost of A.R. (depreciation, interest, usage and renovation costs) spread among all groundwater users, whatever the origin of the water (natural or artificial recharge)**
1978: Arrangement between the canton of Geneva & the prefecture of Haute-Savoie

- The Arrangement covers the following matters:
  - The Commission
  - The annual aquifer management programme
  - The groundwater recharge installation
  - Water rights
  - Water pricing
  - Miscellaneous provisions

- The arrangement entered into force on June 1978 and was agreed for 30 years
Impact of MAR after 35 years (1980-2015)

- **Pumping**: 12-15 Mm$^3$/year
- **Artificial recharge**: 7-10 Mm$^3$/year
- **Average level of water-table**: 372 m asl
Nappe du Genevois

Evolution des niveaux plézométriques 2015-2016

[Graph showing water levels over time with various stations labeled]

Service de géologie, sols et déchets - Département de l'environnement, des transports et de l'agriculture
2007-2008: extension of the 1978 arrangement

- Franco-Swiss working group of the committee created in order to produce a basic document outlining the management of Genevese aquifer for the next 30 years, with legal support

- Technical specificities agreed on by the parties placed within a global context recognised at administrative and political levels

- Setting up the cross border legal bases for the new agreement.

Agreement relating to the use, recharge and monitoring of Franco-Swiss Genevese aquifer signed on 18 December 2007 and entered into force on January 1, 2008 for 30 years
Key success factors

- The Arrangement ignores territorial sovereignty and territorial integrity concepts.

- To adopt a strategy for common use of the transboundary resource.

- To tackle a problem relating to international water resources at local level, rather than at the level of sovereign states (Canton of Geneva & Department of Haute-Savoie).

- The technical aspects (hydrogeological studies, management of pumping stations, local hydraulic assessments) well known and dealt with by local actors who would then relay the information to decision-makers at the local level.

- The Committee: as main stakeholder, being at the center of all discussions and meetings, this commission has been crucial to this success.
Thank you !!!

Any questions ?

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