

EIDGENÖSSISCHE FINANZKONTROLLE
CONTRÔLE FÉDÉRAL DES FINANCES
CONTROLLO FEDERALE DELLE FINANZE
SWISS FEDERAL AUDIT OFFICE



Evaluation at the Swiss Federal Audit Office (SFAO)

Evaluation of public policies and programmes by Supreme Audit Institutions
European Court of Auditors – 25 June 2019 – Conference room K2

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Overview

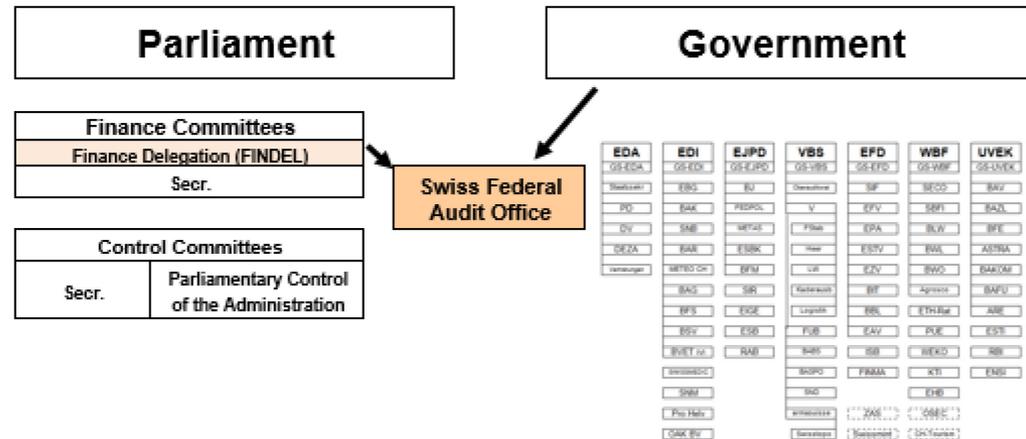
- 1. Mandate of the SFAO**
- 2. Evaluation vs. performance audit**
- 3. Methods**
- 4. Resources**
- 5. Example of an evaluation**
Promotion of agricultural biogas installations
- 6. Conclusion**





1. Mandate of the SFAO

- Assists Parliament and the Federal Council (Government)
- Independent (bound only by the Constitution and the law)
- Elaborates its own annual audit programme and can refuse Parliament or Government propositions
- Can question legislations (ex. problem of coherence, adaptation to new evolutions, technologies, problems of implementation due to the formulation, etc.)





Auditing criteria

- Regularity and legality
- Economy, efficiency and efficacy

Federal Audit Office Act

Art. 5 Criteria of financial audit

1 The Swiss Federal Audit Office shall execute the supervision of finance according to the criteria of regularity, legality and economic efficiency.

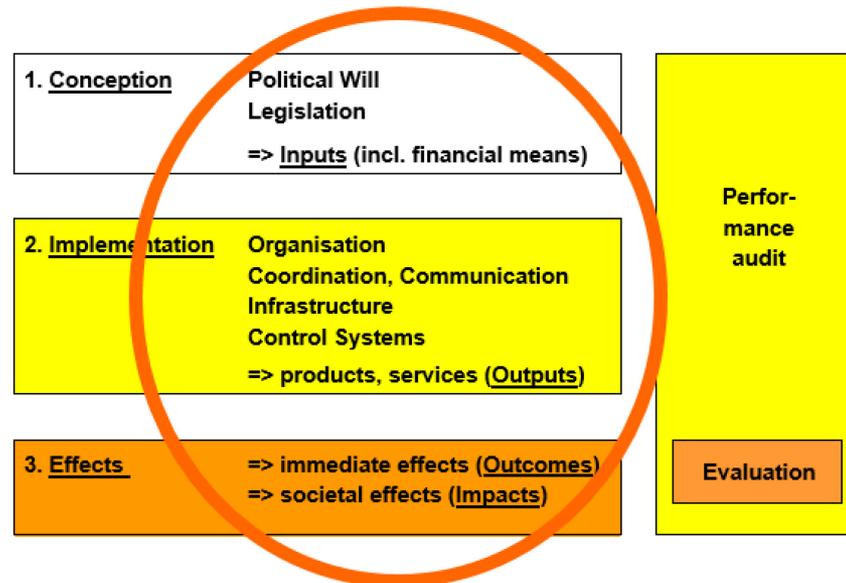
2 It shall execute financial management audits to clarify whether:

- a. the resources are being used economically;
- b. costs and benefits are in a favourable proportion;
- c. **the financial expenditures have achieved the intended objectives.**



2. Evaluation vs. performance audit

- INTOSAI GOV 9400 vs. ISSAI 300, 3000, 3100, 3200
- SFAO (now!): evaluation is a systematic and transparent assessment of **the effects of a policy**, taking into account its conception and implementation. It aims to assess the relevance of the policy.



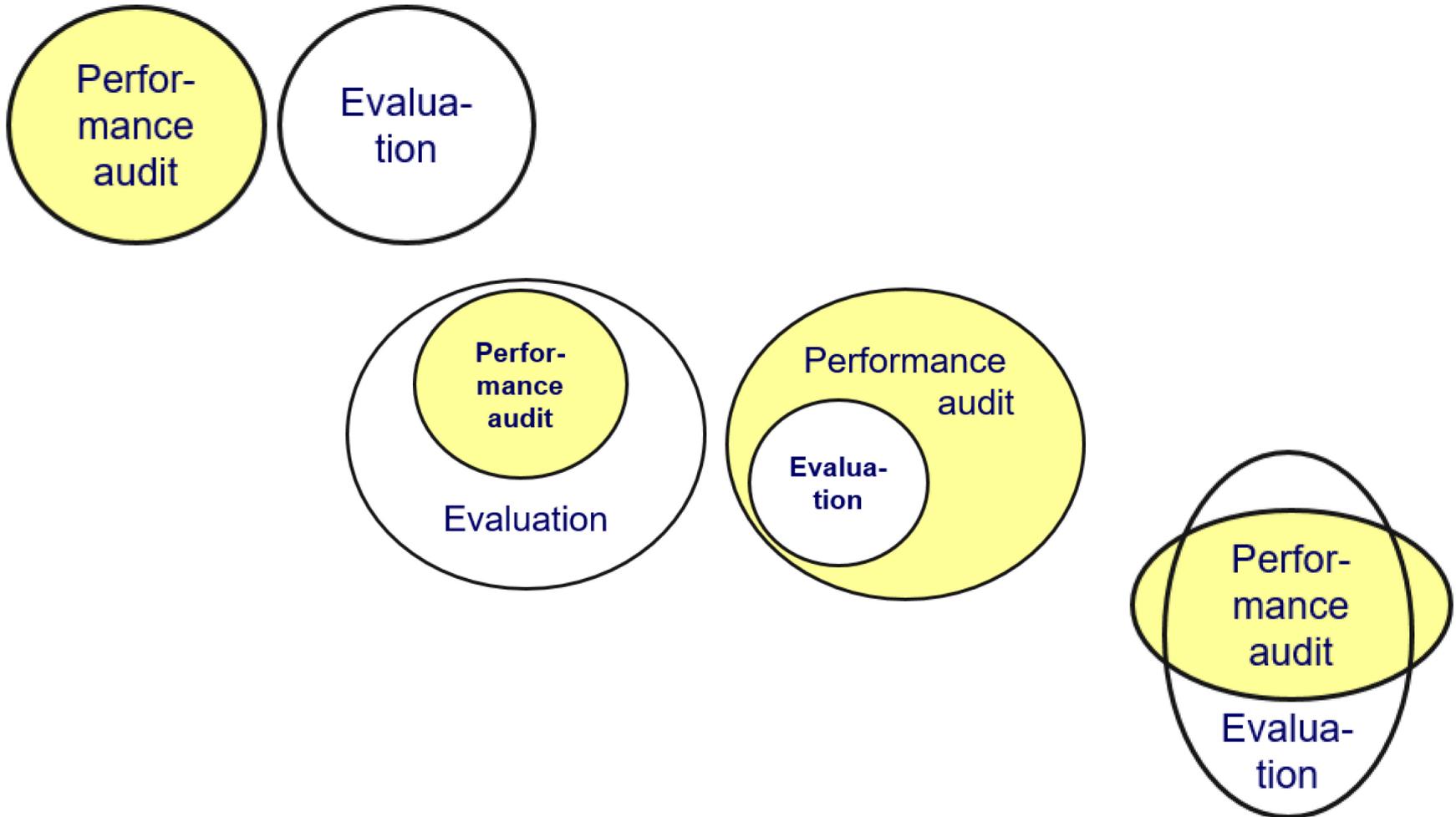


Former distinction at the SFAO...

Are you planning an audit or an evaluation?

	Yes (2 pt)	Likely (1 pt)	No (0 pt)
1. Purpose: Does the project examine a public policy or state measure, without focusing on a particular administrative unit?			
2. Political stakes: Does the project potentially include the politically defined objectives and could it lead to legislative changes?			
3. Impact model: Does the project examine the causal relationship between governmental action and external effects?			
4. Participation: Does your project systematically include stakeholders?			
5. Methods: Does the project require a combination of social research methods, including quantitative methods?			
6. Publication: Does the project include the publication of a report with a transparent description of the methods used?			
Total	> 8 Points => Evaluation !		

Different ways to define evaluation and performance audits...





3. Methods in use at the SFAO

The choice of methods is determined by the nature of the questions to be addressed!

Principal methods in use:

- Literature reviews / document analyses (100%)
- In-depth interviews / group interviews (100%)
- Statistical data analysis (60%)
- Surveys among stakeholders (45%)
- Case studies (30%)
- International comparisons (30%)



Triangulation of methods

- “Triangulation”: by applying several methods to cross-check results we make them more robust
- Every evaluation has 3 to 7 different methodological modules
- Qualitative / quantitative methods: if possible combination of qualitative and quantitative methods

Involving stakeholders

INTOSAI GOV 9400 : “the association of stakeholders is a key point of the evaluation of public policies”

1. Involving stakeholders as source of information for the evaluation (interviews, online, phone, postal survey etc.)
2. Involving stakeholders in the organisation of the evaluation (conception, results and recommendations) => an advisory group accompanied **30%** of realized evaluations

We increase the independence of the SAI if we don't forget to involve all the different stakeholders!

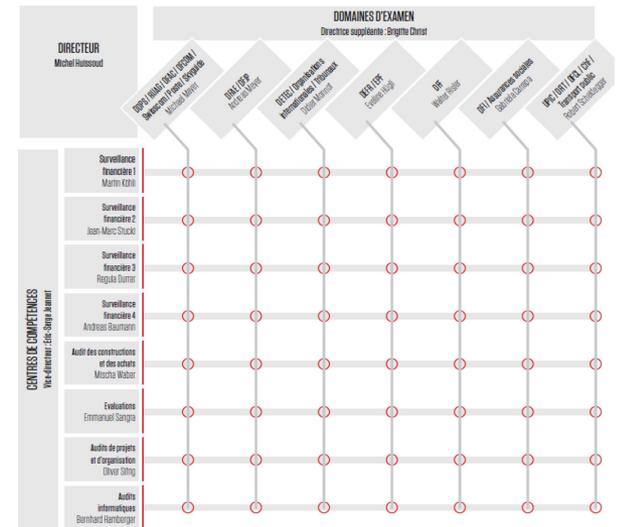
Designing an evaluation

	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Module 1: Interviews															
Module 2: Statistic analysis															
Module 3: Document analysis															
Module 4: International comparison															
Module 5: Survey (external mandate)															
Synthesis and report															
Advisory group	X									X		X		Parliament	Diffusion



4. Resources

- SFAO: 105 FTE in a matrix organisation
- 8 competence centers:
financial, IT, construction and procurement, project and organisation, performance, evaluation
- Evaluation competence center: 9.5 FTE
interdisciplinarity! different university education
- Possible external assignments (max. 1 or 2 modules), but the SFAO keeps the lead on the whole project.





Evaluation projects

- 72 evaluations since 2005
- Project management and resources:



5. Example of a SFAO evaluation

Promotion of agricultural biogas installations

The methanisation of agricultural biomass is used to produce energy and to recover green waste, food and farmyard manure.





Why this example?

The topic was hard to focus and shows different characteristics between performance audit and evaluation!

First topic: coordination of three federal support policies and income for the concerned farmers

Is the farmer income from the sale of electricity and the three support schemes adequate? And what happens when the main support stops? Performance audit perspective - analytical accounting skills requested.

Second topic: efficiency in terms of electricity production from renewable energies

This question arose quickly during the mandate. Evaluation perspective.



Coordination of three support policies and income for the concerned farmers

1. Feed-in remuneration at cost during 20 years to produce electricity from renewable energies “**RPC**”.
2. **CO₂ certificates** to reduce methane emissions compared to manure left out in the open air.
3. Free investment **credit** to support farms’ development.

Main indicators

- profitability of the installations (annual return on total capital)
- sustainability after 20 years of feed-in remuneration

Seven case studies – hard job - very different ways of accounting depending on the farm

Costs and efficiency of the installations compared with the RPC calculation model and the model for obtaining CO₂ certificates



Results

- Every year, 100 agricultural biogas installations receive € 32 million in aid via three federal support schemes.
- The feed-in remuneration at cost (RPC) : most important subsidy (€ 30 million).

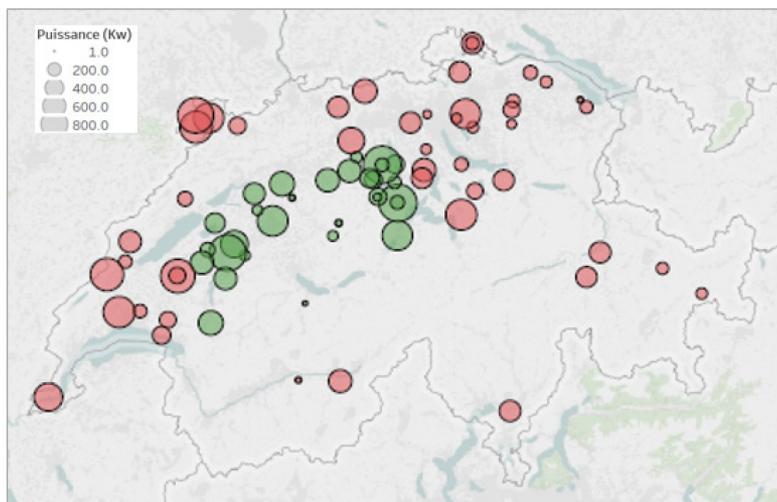


Figure 1 : Répartition cantonale des IBA avec RPC (2016), N=77. En vert : les cantons dans lesquels les études de cas ont été réalisées, à savoir BE, FR, LU et OW. La taille des points indique la puissance de l'IBA. Source : [Swissgrid](#). Illustration : CDF.

Cases	RPC	Crédit	CO ₂	Autre
1	X	X		X
2	X	X		X
3	X	X	X	
4	X		X	
5	X	X	X	X
6	X	X		X
7	X	X	X	X
TOTAL	7	6	4	5

Tableau 12 : Cumuls d'aides financières. Source : CDF.



Results

- Adequate calculation models (RPC and CO2 certificates) :
5 of 7 installations viable. Annual rates of return: between 1% and 9% (depending on labour costs and scenarios).
But 2 installations in deficit!

Cas	1	2	3	4	5	6	7
Rendement annuel du capital total	-	-	2.5 %	2.3 %	1.5 %	8.6 %	4.9 %
Bénéfice annuel	-10 000	-45 000	70 000	80 000	15 000	90 000	100 000
Bénéfice après 20 ans	-200 000	-900 000	1 400 000	1 600 000	300 000	1 800 000	2 000 000
Investissement initial	200 000	600 000	4 000 000	5 000 000	2 000 000	800 000	2 800 000

- After 20 years of feed-in remuneration, big risk that the biogas installations stop. According to the law, long-term viability of the technology is a prerequisite for support...
- Bad sustainability in comparison to other renewable energies.



Efficiency in terms of electricity production from renewable energies

Main indicator: Cost per kWh produced

Method: comparison with other renewable energies

Results

- In 2016, the 100 agricultural biogas installations produced 116 GWh of electricity, i.e. 0.24% of inland production.
- Its resale generate revenues of around € 5 million with a market price of 5 cents per kWh.
- biogas costs between 35 and 70 cents per kWh almost totally covered by the Confederation
- Much higher support than the other supported renewable energies in Switzerland and in international comparison!



Efficiency

Comparison renewable energies in Switzerland

Energie renouvelable	Rétribution en 2016 [CHF]	ct./kWh	GWh	Part [%]
biogaz agricole	40 800 000	42.18	96	3.8
photovoltaïque	16 400 000	34.26	450	17.7
autre biogaz (CCF)	12 300 000	25.37	49	1.9
éolienne	27 600 000	18.73	74	2.9
hydraulique	177 500 000	15.21	1167	45.9
biomasse (vapeur, incinération)	220 000 000	14.93	705	27.7
Total	494'600'000		2541	100

Tableau 13 : Contribution des différentes technologies à la production électrique suisse et coût moyen pondéré (somme [production en 2016 *rétribution en 2016]/production annuelle totale par technologie). Source : [Swissgrid](#). Illustration : CDF.



Support of biogas installations

International comparison

Allemagne*		Autriche		Suisse				
Puis- sance (kW)	Ct./kWh	Puis- sance (kW)	Ct./kWh	Puis- sance (kW)	Ct./kWh (y inclus prix du marché) ***	Bonus agricole Ct./kWh ***	Bonus chaleur Ct./kWh **	Total ***
75	27.0			≤ 50	28.0	18.0	2.5	48.5
150	15.9	≤ 250	21.6	≤ 100	25.0	16.0	2.5	43.5
500	13.7	≤ 500	18.7	≤ 500	22.0	13.0	2.5	37.5
5 000	12.3	≤ 750	15.0	≤ 5 000	18.5	4.5	2.5	25.5
20 000	6.8	> 750	14.4	< 5 000	17.5	0	2.5	20.0

Tableau 3 : Rétribution du courant injecté en Allemagne, Autriche et Suisse.

Pour l'Allemagne et l'Autriche, les euros ont été convertis en francs suisses au taux de 1.1669, selon le taux du 29.11.2017.

* Les tarifs ont évolué et correspondent à la situation en 2014. ** Le bonus chaleur a disparu dans la nouvelle LEne du 01.01.2018. *** La rétribution est allouée selon un système de tranches : chaque kWh est rétribué selon un tarif propre à chaque tranche. Il faut donc additionner la part de kWh produits par tranche. Ex : pour 150 kWh produits, la rétribution est : $50 \cdot 48.5 + 100 \cdot 43.5$.



6. General conclusion

- Comprehensive evaluation (topics concern effects)
- Preparation of the evaluation = 1/3
- Triangulation of methods - between 3 and 6 methodological modules for each evaluation
- Recommendations can concern legislation
- Statements from the agencies about results and recommendations and then a follow-up.

Thank you for listening!

Questions ?

