Understanding the Efficacy of Environmental Policy Instruments: the APRAISE 3E Method

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Aim of the the APRAISE 3E Method

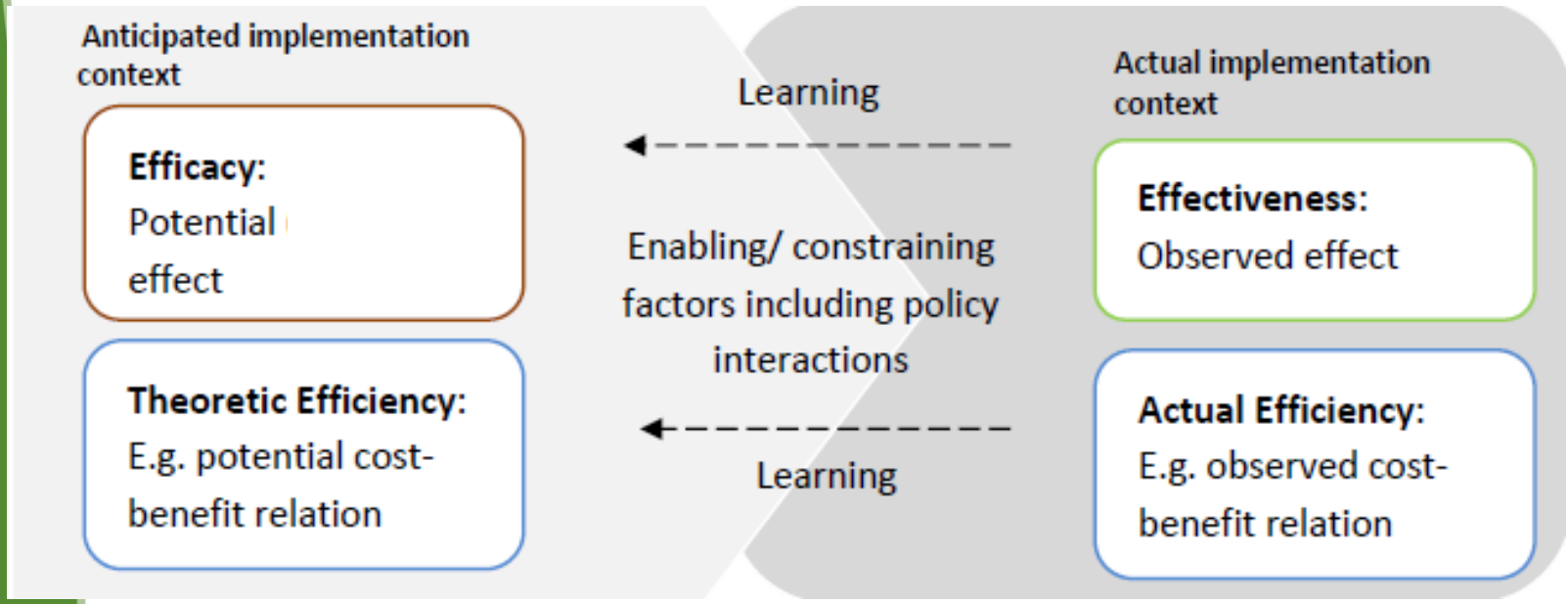
- Evaluation of EU environmental policies and their national implementation in form of policy instruments aiming at promoting EU sustainable development objectives.
- Effectivness, Efficiency and: Efficacy (“3Es”)
- Method development, case studies, modeling

Why did a policy performed differently than expected?

The concept of efficacy

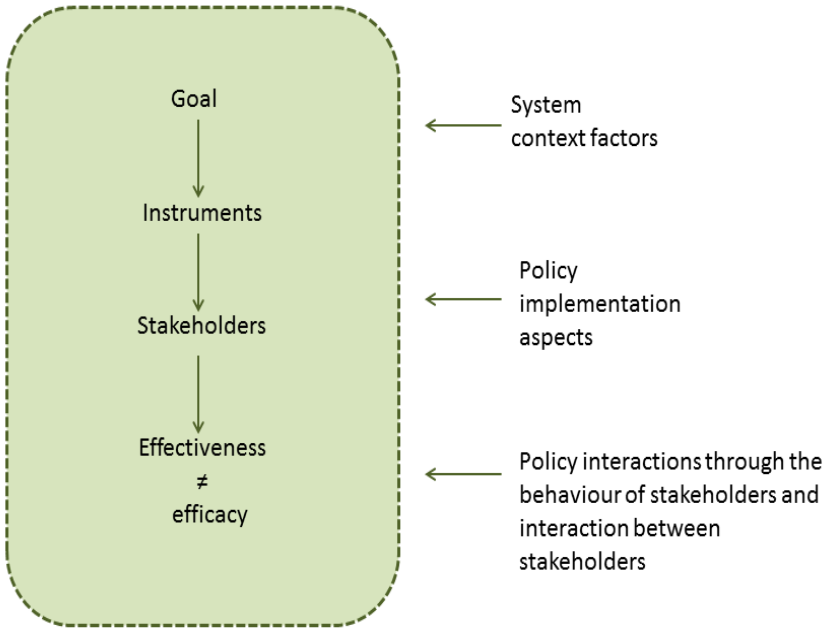
Efficacy, as defined in this project refers to

- anticipations that policy makers held prior to the implementation of policy or policy instrument concerning its outcomes.
- mechanisms through which the instrument would bring about its desired effects taking into account the above mentioned factors.



Enabling and limiting factors

When similar policies or policy instruments are compared in different EU member states, the outcome can differ widely depending on the presence or absence of favourable or unfavourable factors. These factors can result from:

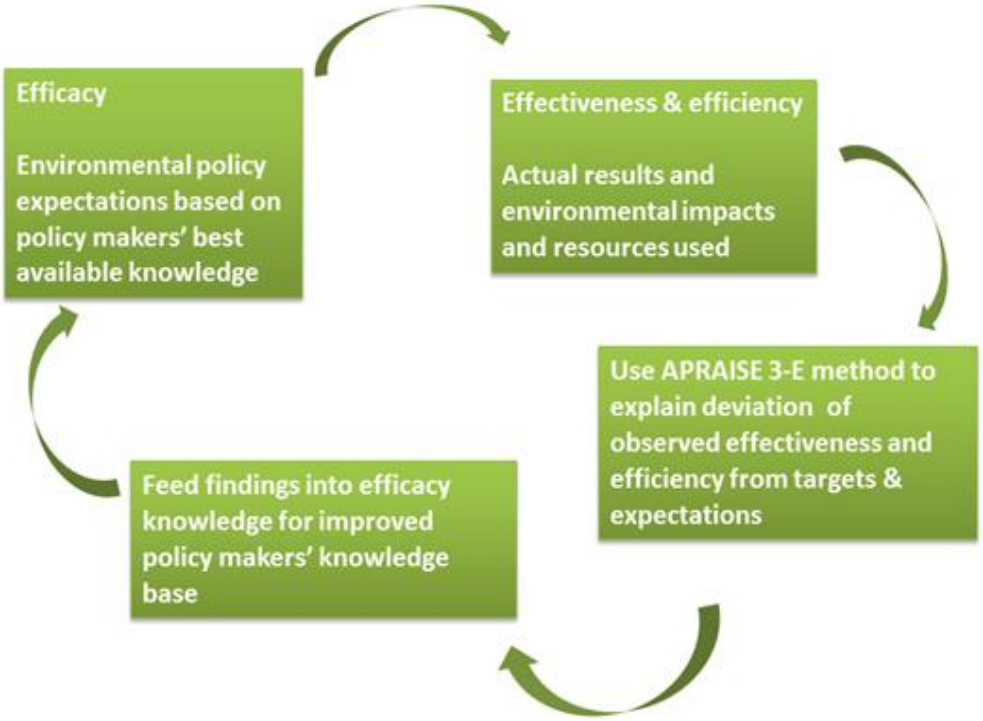


- broader contextual factors:environment, economic, social, and technological factors, national factors (i.e. institutional factors) (system context)
- policy specific context such as policy instrument design, operation and enforcement; and
- interactions between policies and policy instruments

Theory based evaluation

- Design of an individual policy instrument thus – up to a certain extent – includes a reflection on how well the context of an individual policy instrument has been taken into account before the implementation stage.

  -> Comparting assumptions with evidence



System based approach

- Systems approach, whereby policies are examined as part of a policy and stakeholder system operating within a policy specific and a more broader context.
- Particular attention to the orientations and motivations of the involved actors and actor constellations acknowledging that interaction can take place through the changed behaviour of targeted stakeholders as a result of policy instruments.

Identification of relevant EU Directives

	RES expansion	Nature (water) protection	
Directive	**Renewable Energy Directive (2009/28/EC)**	**Water Framework Directive (WFD) (2000/60/EC)**	**Habitats (92/43/EEC) and Birds (2009/147/EC) Directive; Environmental Impact Assessment Directive (2011/92/EU)**
Target	Individual RES target achievement obligations for different MSs	Prohibition of further deterioration in future/ achievement of a good status of all water bodies until 2015 (2027) at the latest	Halt and reserve the loss of biodiversity (disclosing “Natura 2000 “ areas); assessing possible environmental impacts of planned projects
Relevance in regard to hydropower decision-makings	Construction of new HPPs/ improvement of already existing plants may help MSs in achieving their RES target	Hydropower decision-makings need to ensure coherence with objectives given by the WFD – newly planned projects as well as reconstruction of old plants which are no longer in line with the new implemented policy targets	Not generally relevant for hydropower decision-makings, relevance depending on specific criteria such as hydropower plants size, hydropower plants location

System context

National water act/ nature conservation legislation

- Economic development
- Importance of energy import independency
- Political priority of hydropower generation
- Political programm of provincial government
- Awareness of biodiversity
- Monitoring of national implementation of EU environmental legislation
- National existing property rights

Green electricity act

- Economic develpement
- Price of electricity
- Awareness of biodiversity
- Hydro potential

Positive — Negative

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(*) Angelika Wolter/ pixelio.de; Andreas Hermsdorf /piexelio.de

Policy implementation and transposition

 (*) National water act/ nature conservation legislation	 (*) Green electricity act
Coordination among institutions	Adaptability – *PI not changable on short notice*
PI consistency with Sustainable Development targets – *lack of criteria regarding hydro permissions*	Motivation to invest
Enforeceability - *large interpretation tolerance*	Financial feasibility – *high uncertainties*
	Administrative set up & legal certainty

Positive Negative

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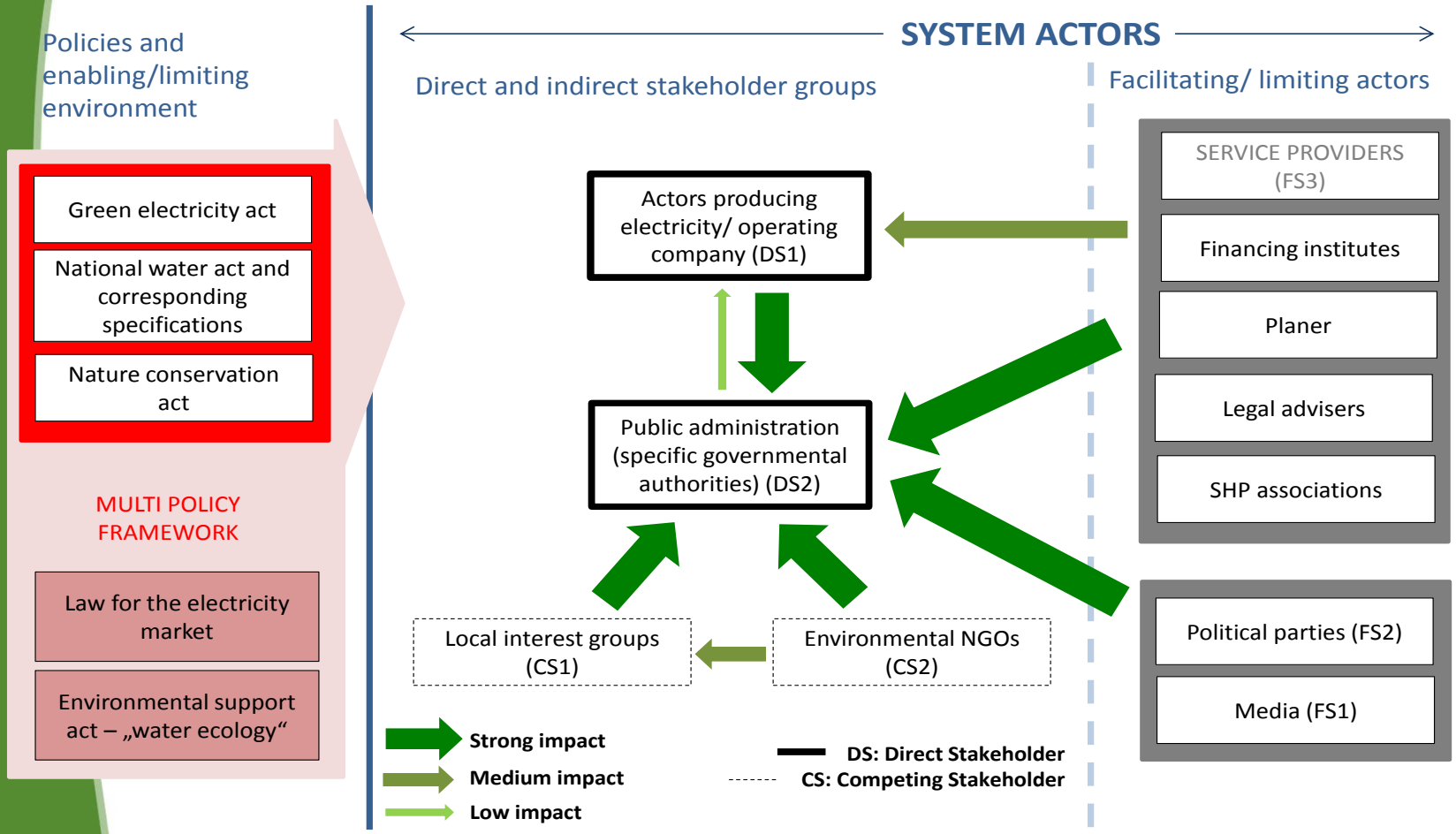
Policy interactions – overall system overview



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Policy interactions – conclusion on interaction analysis

- Key stakeholders are separated into two groups: pro vs. contra small hydropower generation
- Public administration/ specific governmental authorities is/are exposed to enormous pressure from all sides ↔ decision making becomes very difficult for authorities resulting in a very longsome duration of the permission process, long waiting period, increasing expensess, lack of criteria for decision-making, etc…

 **National water act/ nature conservation legislation** (*)	 **Green electricity act** (*)
„ Hydropower conflict“ – *has actually led to or reeinforced the occurrence of a lot of before given system and policy implementation and transposition context factors*	

Positive Negative

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COUNTRY COMPARISON

Initial frame conditions

Austria	Slovenia
→ Historically and high ongoing focus on hydropower generation ↔ **50% of total electricty produced in Austria originated from HPPs** (2011)	→ **30% of total electricity produced in Slovenia orginated from HPPs** (2011)
→ The share of HPPs regarding total electricty produced from RES sources has been reported as almost 90% (2011)	→ The share of hydropower plants regarding total electricity produced from RES sources has been reported as exceeding 90% (2011)
→ A lot of **hydro potential already exhausted**	→ Still a **lot of unused hydro potential**
→ Nevertheles, plan to **increase hydropower generation in future** (especially small and mid-sized hydropoer generation)	→ **Expansion of hydropower in future** is pursued

National key policy instruments

- Similar policy instruments in both countries

Austria	Slovenia
→ **Green electricity act:** provides subsidies for SHPPs	→ **Energy Act** including regulation on supports for electricty generated from renewable energy sources
→ **National Water Act:** command and control instrument which covers all water related questions (authorization process for HPPs, implementation of WFD)	→ **Act on Waters:** anyone who plans to use water bodies beyond public use needs permission with legal basis on this act , thus to ensure achievement/ preservation of a good water status
→ **Nature conservation act:** aims to halt and reserve loss of biodiversity („Nature 2000“ areas – stricter regulations in regard to SHPP authorization)	→ **Act on nature conservation:** protection and preservation of biodiversity (disclosing of „Natura 2000“ areas)
	→ **Environmental protection act:** process of impact assesment procedure (*), grants permits

(*) In Slovenia HPPs are affected if their max. capacity achieves at least 1 MW or if their volume of the accumulation dam is above 10,000 m^3

Effectiveness/efficiency of key PIs
Water/ nature protection

- **Both countries are not on track of target achievement,** although **Slovenia is on a better track** to meet water/nature protection targets
- In Slovenia nature conservation is stricter implemented, e.g. "Natura 2000" areas are barely endangered by newly planned hydropower projects – **river "Mur" in which a lot of exemptions approval have been granted in Austria, is completely unused in Slovenia**

Austria	**Slovenia**
→ Shifting of target achievement to 2027	→ Shifting of target achievement to 2027
→ Frequent exemption approvals	→ Stricter implementation of nature conservation legislation, however a few exemption approvals have been also already granted

COUNTRY COMPARISON

Effectiveness/efficiency of key PIs
RES expansion

- **Both countries face problems to meet interim or 2020 expansion targets** if staying at current expansion level, although e.g. in Slovenia the years before enough new capacity has been installed
- Hydro = generally cheap form of RES expansion support, however **differing issues regarding costs in both countries**

Austria	Slovenia
→ The 2020 target will likely be met, although the 2015 target will be failed	→ Current expansion level for target projections is generally to low
→ Hydro = cheap form of RES expansion support, however possibility of high transaction costs due to „hydropower conflict“	→ Hydro = cheap form of RES expansion support, however other technologies, esp. PV, have increased more due to more lucrative feed-ins

COUNTRY COMPARISON

Factors influencing PI performance

System context

Austria	Slovenia
→ **High focus on hydro expansion in the overall political agenda** and adverse to it the ongoing **increase in public awareness of biodiversity** has fueld the „hydropower conflict“, thus also supported by a already **low hydro potential**	→ No such problems occured, however: **long approval procedures and massive administrative burden regarding hydropower permissions** = negative influence on RES expansion

Both countries: **Economic development** was crucial for the achievement of both policy targets, **low electricity prices** hindered RES expansion

Factors influencing PI performance

Policy context

Austria	Slovenia
→ Significant problems regarding the **coordination among institutions** when implementing EU Directives → **Various interpretation failures** of the WFDs implementation	→ No such problems occured

Both countries: **Decreasing motivation to invest , financial feasibility and legal uncertainty** crucial for achievement of RES expansion

Factors influencing PI performance

Policy interaction

- In **Austria** there is a **strong conflict between SHPP expansion and the national water act as well as nature conservation legislation** in some cases.
- In **Slovenia** this **conflict** is also present but **much less accentuated** than in Austria

Conclusions (1)

- important role of contextual factors and policy interactions for transposition of EU directives into national legislation and performance of corresponding policy instrument:
  - Many of them were not sufficiently considered in policy design, neither on EU or national level and significantly reduced effectiveness and efficiency.
  - different legal, institutional, administrative and socioeconomic circumstances impact the effectiveness and efficiency of policy instruments, and that some of the national framework conditions are critical for the achievement of EU policy targets.

Conclusions (2)

- inconsistencies of policy targets at the EU level:
  - problematic policy interactions at national level and trade-ffs in environmental target achievement and
  - contextual factor can reinforce these
- Only systematic understanding of the mechanisms that affect effectiveness and efficiency of policy instruments at the national level can help understand, to what extent these were induced by EU policy making and how to improve efficacy of national and European environmental policy.

– Thank you!

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