

# Small isn't beautiful: about small dams in the Balkans



**RiverWatch** 





Wetlands



#### Is hydropower "green" enough to be THE solution towards low carbon energy supply in Balkans countries?



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## Introduction

- UN CCC
- Different approaches



United Nations Climate Change

- what extent policymakers will follow the balance of energy supply, sustainability and economic efficiency
- investments in hydropower plants



- 82,891 SHPs in the world
- 11 SHPs for every one large hydropower plant
- number is estimated to triple if all potential generation capacity were to be developed







#### **Energy production in Balkans**





# Renewable energy source increase in selected Countries between 2009 and 2020

Electricity ∆ (%)	Albania	Bosnia Herzegovina	Kosovo	Macedonia	Montenegro	Serbia
Small Hydro	1161%	433%	372%	1360%	0%	1329%
Large Hydro	88 %	194%	NA	61 %	40%	6%
Geothermal	0%	0%	0%	0%	0%	NA
Solar	0%	NA	NA	NA	NA	NA
Wind	NA	NA	NA	NA	NA	NA
Biomass	NA	NA	NA	NA	NA	NA



#### Hydropower "advantages" in Balkans

- Ancient, well known technology
- Ratio of the energy output during a plant's lifetime to the energy input in its construction and operation
- Role for the power grid integration of intermittent renewable energy sources as wind and solar



# SHPP definition

- In EU 20 MW
- Sweden 1.5 MW
- Italy 3 MW
- France 8 MW
- Croatia 10 MW
- India 20 MW
- China and Canada 50 MW









# Problems

- Unexisting or false EIA
- Neglecting biodiversity
- Cummulative impact
- Construction per se
- Local communities
- Low energy production
- Larger impact per MW than big HPPs
- Subsidies





## Rapuni 1 - Albania





#### Radava - BiH





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# together possible ...



#### Thank you