

MAINSTREAMING OF ECOSYSTEM-BASED ADAPTATION INTO SPATIAL PLANNING - ANALYSIS OF INCLUSION OF EBA IN TERRITORIAL PLANS AND PRACTICES IN ALBANIA

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ABSTRACT

Ecosystem-based Adaption (EbA) was officially defined in the Convention on Biological Diversity (CBD) in 2009 as the use of biodiversity and ecosystem services as part of an overall strategy to help people adapt to the adverse effects of climate change. The concept of mainstreaming climate change adaptation to foster sustainable urban development and resilience is receiving increasing interest. Adapting to climate change within the coastal environment include options that use infrastructure ('hard' adaption), biodiversity and ecosystem services as part of an overall strategy (ecosystem-based adaptation), or hybrid options techniques of intervention. Up to now researches have shown that conservation and restoration through the mainstreaming EbA as a specific adaptation program not only can lead to risk reduction, but also foster environmental, economic and social benefits. The data here used are obtained literature review and web survey of different national, local institutions websites. In existing territorial plans and instruments, even when considering the role of ecosystem or adaptation, finding entry points for EbA in regulation, policy and planning frameworks remain an ongoing challenge. This study presents theoretical investigation on mainstream EbA level into the territorial planning process. A detailed classification involves land use regulatory planning and strategy of twelve coastal municipalities in Albania, their approach to EbA measures. This study demonstrates that the adaptation mainstreaming in general and the mainstreaming of EbA in particular, are still in their infancy in Albania planning process.

Keywords: ecosystem-based adaption, territorial planning, climate change, risk reduction

1. INTRODUCTION

Mainstreaming referring climate change adaptation, means integrating climate concerns and adaptation responses into relevant policies, plans,

programs, and projects at the national, sub-national, and local scales (USAID 2009; 47).

Albania's membership to the United Nations Framework Convention on Climate Change (UNFCCC)-Paris agreement ratified on September 21, 2016, and Kyoto Protocol since April 01, 2005 with the status of Non-Annex 1 Party, provide the basis for actions on climate change adaption. As a developing country Albania has no obligation toward reducing the quantity of greenhouse gas emissions, but is committed to implementing the 'National Appropriate Mitigation Actions'-NAMAs. While carrying little responsibility for global greenhouse gas emissions, Albania is bearing the majority of the environmental, social and economic consequences caused from climate change (UNDP 2020).

The Third National Communication of Albania to the United Nations Framework Convention on Climate Change Project finalized in 2016, and includes the climate change scenarios, assessment of climate related risks and adaptation with focus on biodiversity, water resources, agriculture, forestry, population and health for the entire coastal region. The Fourth National Communication of Albania is to be submitted by the end of 2022, and the First Biennial Report in 2021 (UNDP 2020).

Albania adherence to Barcelona and Ramsar Convention prioritized the principles of Protocols to be included in relevant legislation concerned with protected areas and environment. Thus, Protocol ICZM Article 6- referring ecosystems approach to coastal planning and management shall be applied so to ensure the sustainable development of coastal zone. Albania Adaptive Plan (NAP) process launched in 2015, as a national adaptation strategy and mainstreaming related to climate change include two action plans—the NAP document and the national mitigation plan NMP, which was expected to be adopted in 2018, but is yet to be approved. Meantime, the Law on Climate Change was approved in December 2020.

Referring to the national legislative framework, mainstreaming of EbA concept in Albania is somewhat chaotic as there are over 40 separate pieces of legislation and some 50 agencies which address environmental matters (EbA guidelines 2018). EbA is a new approach for urban climate change adaptation and little is known about the degree to which it is integrated into existing planning processes.

2. MATERIALS AND METHODS

In the present study data collected from available sources were used. Qualitative data were used for the documents review, process analysis, constant consultancy with all the stakeholders involved in. The study was conceived in two main pillars: i) identification and analysis of current

Territorial Plans in relation with ecosystem intervention approach, by providing information of the General Local Plans of twelve coastal municipalities, Strategy and Maps, Detailed Plan for Area of National Importance, approved or in process, sectorial, regional and other plans in force that involve the coastal area and ii) results showing the degree of EbA integration in Spatial Planning Instruments related to Territorial Planning activities. Discussion of findings aims to draw attention to central and local institutions for the poor involvement of EbA solution, fostering the need to establish as soon as possible specific EbA guidelines in the territorial planning process.

3. RESULTS

The coastal zone has already shown to be sensitive to the impacts of climate change with consequent degradation of coastal ecosystems (particularly sand dunes, lagoons, wetlands and river deltas) and saltwater intrusion in freshwater systems. According to The Third National Communication of Albania to UNFCCC, the ecosystem coastal zone is one of the most vulnerable area which is divided into 5 sectors i) Drini-Mati; ii) Rodon Cape-Turra Castle; iii) Shkumbin-Seman discharges; iv) South coast, and v) Butrinti areas.

Based on the Law no. 107/2014, dated 31.07.2014 “On Planning and Territorial Development (amended)”, national and general territorial spatial plans are developed. The General National Spatial Plan (GNSP 2016) is defined as the paramount instrument of territorial planning in Albania, which addresses planning issues in an integrated manner, considering the Albanian territory as a whole (NTPA 2016). One of the main objectives of GNSP is to protect, regenerate and promote the sustainable use of ecosystems. Regarding the coastal system GNSP has established the **Blue Line** to protect, monitor and regenerate the natural corridors of water flow. There is a range of guidelines dealing with ecosystem services, climate related risks and disasters regarding precipitation and temperatures. Among inputs, solution applying all-inclusive legislation framework to ensure the integration of adaptation and mitigation in territorial planning and terminology like 'smart and environmentally friendly development' are suggested, but no explicit EbA mention is found. As part of National Spatial Planning Instruments, Integrated Cross Sectoral Plan for the Coast (ICSPC) 2016, give an important guideline on the utilization along the Coastal Belt based on a wide legal framework and international experience, with no mission in showing detailed development condition (NTPA 2016). Identified measures to be taken against climate changes are based on the concept of mitigation and adaptation. The term 'ecosystem-based adaptation' is not used yet, but initiative as reforestation,

planting trees in endangered areas, using ecological materials are encouraged. Alternative terminology such as 'green corridors' and 'infrastructural sensitiveness' is suggested. The adaptation discourse is highly focused on water-related hazards. Like GNSP, ICSPC inputs in national and local level suggested infrastructural intervention to protect the coastline system.

Referring to the Detailed Plan for the Area of National Importance (DPANI), most of them are currently found in the drafted format, and are soon to be approved (MTE 2020). Table 1 shows that EbA mainstreaming is here missing. DPANI 'Karavasta Lagoon-Seman River' approved in 2018, support environmental protection and increase local economy. Interventions with adaptation co-benefits came out of environmental planning defense approach like planting trees *pinus-pinea* along the shore of Karavasta lagoon. The 'aquaponics farm' and fruit growing plantation, two strategic investments, have been approved based on sustainable economic solution where metabolic production of fishes is used to feed plants, thus reducing CO₂ emissions after carbon dioxide emitted by fish is exploited by plants in photosynthesis process. Despite this, no reference of EbA concept has been found, even though erosion hazard is threatening this area.

'Building the resilience of Kune-Vaini Lagoon through ecosystem-based adaptation', with EbA technical Guideline and Protocols Report (KUNEVAIN 2018), and Climate Change Adaptation in Drini-Mati Delta and beyond (UNDP 2013), two important projects, show that EbA approach is known. From a Local Planning point of view, no guidance exists about EbA being incorporated into the Territorial Plans (Table 1). In general land use planning instruments represent the involvement of adaptive measures using mostly hard infrastructure intervention, because the costs are easier to be calculated and the impact effects are short-lived.

Table 1. Mainstreaming of EbA concept in Territorial Planning Instruments of coastal municipalities December 2020

National Plans	Local Territorial Plans / Coastal Municipalities	EbA approach	Detail Plan (DPANI)	DPANI Phase			EbA	Other Project	EbA approach		
				in process	Approved	Implement					
General National Spatial Plan 2015-2030	ICMP Izama- Durres	Integrated sectoral plan for the Coast	DIVJAKA	No	Karavasta Lagoon- River Seman		revised	No			
			DURRES	Territorial plan in process	Mandatory Local plans			No			
			FIRZ	No, but action used for ecosystem protection					No	Management Plan Porto Palermo-Lanane (2015)	action relate to sustainable use of ecosystem
			HIMARE	No					No		
			KAVAJA	No					No		
			KONISPOL	No					No		
			KURBIN	No	Gryke derdija ishëm				No	Climate Change Adaptation in Driut-Maci Delta 2008-2013	Yes
			LEZHA	No	Rana e Hedhur - Port of Shengjin				No	Building the resilience of Kune Vatri Lagoon through EBA 2018	Yes
					Kune Vatri Lagoon				No		
			RROGOZHINE	No	Tale Spille				No		
									No		
			SARANDE	No					No	Integrated management plan Durres 2020-2030	action for sustainable use of ecosystem
			SHKODER	No		Baks-Rzjoll			No	Buna management plan 2016-2025	
VLORE	No		Narte Lagoon			No					
National Adaptive Plan			Not Approved yet								

4. DISCUSSIONS

Different initiatives have taken place in the framework of Territorial Planning of coastal municipalities and beyond. It is noted that the Mainstreaming of EbA in Albania is not included in the General Local Plans or DPANI, but in the heading line 'protect and ecosystem', focusing on disaster risk approach where technical solution dominates. EbA has already been incorporated in informal planning, but the coordination between management plans and local development strategies seems to be distant. There is little cooperation between local land use planning and national spatial plans on providing entry point to EbA. Many stakeholders are unfamiliar with EbA as an alternative and predominately use efforts to adapt to climate phenomena via 'hard' infrastructure measures in local investment due to short-time frames, regardless the high costs. In local level organizational structures and financial budget allocation for adaptation to climate change are poorly developed or inexistent. The Mainstreaming of EbA cannot be effective by separate initiatives, but ongoing policy-making, planning and activities across all sectors (Olhoff and Schaer, 2010). Entry points of EbA should be clearly defined at national and sectorial level to provide an enabling framework in local planning implementation.

Developing EbA interventions applicable to the territory planning process is challenging. Given the difficulties in identifying, monitoring and evaluating financial resource, and technical capacity, further research and collaboration is needed.

REFERENCES

KUNE-VAIN (2018). EbA guidelines 2018-Building the resilience of Kune-Vain lagoon through Ecosystem-Based Adaptation (EbA)[Online] Available from: <https://kunevain.com/wp-content/uploads/2018/09/EbA-Protocols-2017-english-compressed.pdf>.

Ministry of Tourism and Environment (MTE).2020. [Online] Available from: <https://turizmi.gov.al/konsultimi-me-grupet-e-interesit-i-planeve-te-detajuara-per-zonat-e-rendesise-kombetare-ne-bregdet-baks-rrjoll-rana-e-hedhun-port-shengjin-grykederdhja-e-ishmit-tale-dhe-spille/>[Accessed: 5th August 2020].

National Territorial Planning Agency (NTPA). 2016. General National-Spatial Plan Albania 2030; Integrated Coastal Plan for the Shore Albania 2016,General Local Plans [Online] Available from: <http://planifikimi.gov.al/index.php?id=home&L=2>. [Accessed 12 May 2020].

Olhoff A, Schaer C. 2010. *Screening tools and guidelines to support the mainstreaming of climate change adaptation in development assistance- a stocktaking report*. New York: UNDP

PARLAMENT. (2020). [Online] Available from: <https://www.parlament.al/ProjektLigje/ProjektLigjeDetails/51258>[Accessed 25 December 2020]

UNFCCC.2016. Third National Communication of The Republic of Albania on Climate Change. [Online] Available at: https://unfccc.int/sites/default/files/resource/Albania%20NC3_13%20October%202016_0.pdf[Accessed: 19th August 2020].

USAID.2009. *Adapting to Coastal Climate Change. A Guidebook for Development Planners*. Available at https://pdf.usaid.gov/pdf_docs/pnado614.pdf [Accessed: 22th September 2020].

UNDP. 2013. Climate Change Adaptation in the Drini Mati River Delta and Beyond 2013 [Online]Available at:https://www.al.undp.org/content/albania/en/home/library/environment_energy/climate-change-adaptation-in-the-drinimati-river-delta-and-beyond.html[Accessed: 10th June 2020].

UNDP (2020). Development of Albania' Fourth National Communication to the UNFCCC and First Biennial Report Available at: <https://www.al.undp.org/content/albania/en/home/projects/development-of-albania-fourth-national-communication-to-the-unfc.html>