Jonathan McCue –"Building the Resilience of Kune Vaini Lagoon through Ecosystem based Adaptation (EbA)"

An Upscaling Strategy for Ecosystem Based Adaptation in Albania

My name is Jonathan McCue, and I am the International Ecosystem based Adaptation Expert on the Kune Vain Lagoon project funded by the GEF Special Climate Change Fund. I have been supporting the project team on key aspects of the project since my engagement in late 2017.

The purpose of this presentation video is three fold which can be presented as 3 separate episodes:

a) Episode 1 briefly outlines the importance of EbA in Albania, why it is needed and what has been undertaken so far;
b) Episode 2 briefly outlines what deliverables my consultancy has helped to produce so far;
c) Finally, Episode 3 presents the next steps for Albania, and how an Upscaling Strategy for EbA needs to be embraced, endorsed and implemented.

The following 10 minutes cover Episode 1.

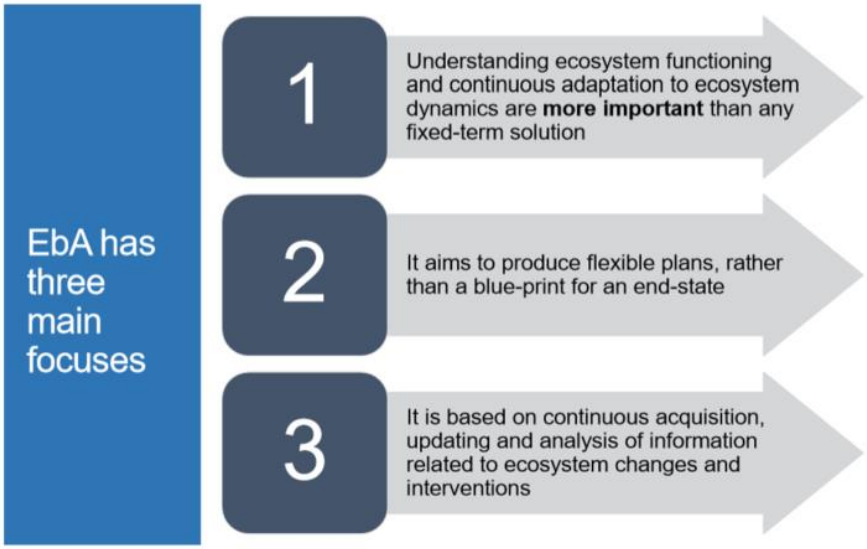
What are ecosystems and what is EbA?

Ecosystems are complex and interconnected. They are naturally adaptable and resilient- up to a point. When ecosystems are healthy, they can better adjust to the effects of climate change and related disasters. Sustainably-managed ecosystems reduce the vulnerability of people to climate change impacts and hazards.An Ecosystem could be referred as a "society" whereas a habitat are the "homes" where different parts of that society live. Importantly, when we are talking about EbA we are saying that we shall be "working with nature" and "not competing with it".

As seen from the video, ecosystems are natural safeguards that are often more effective and cheaper to maintain than physical engineering structures, such as dykes or concrete walls. For instance, planting trees to improve water infiltration and replenish underground water sources is often cheaper and more sustainable than building a new water supply system. Such thinking has already commenced within the Kune Vain Lagoon Systems (KVLS), to help mainstream climate resilient and sustainable intervention measures, policies and actions for the future.

EbA Benefits and Learnings

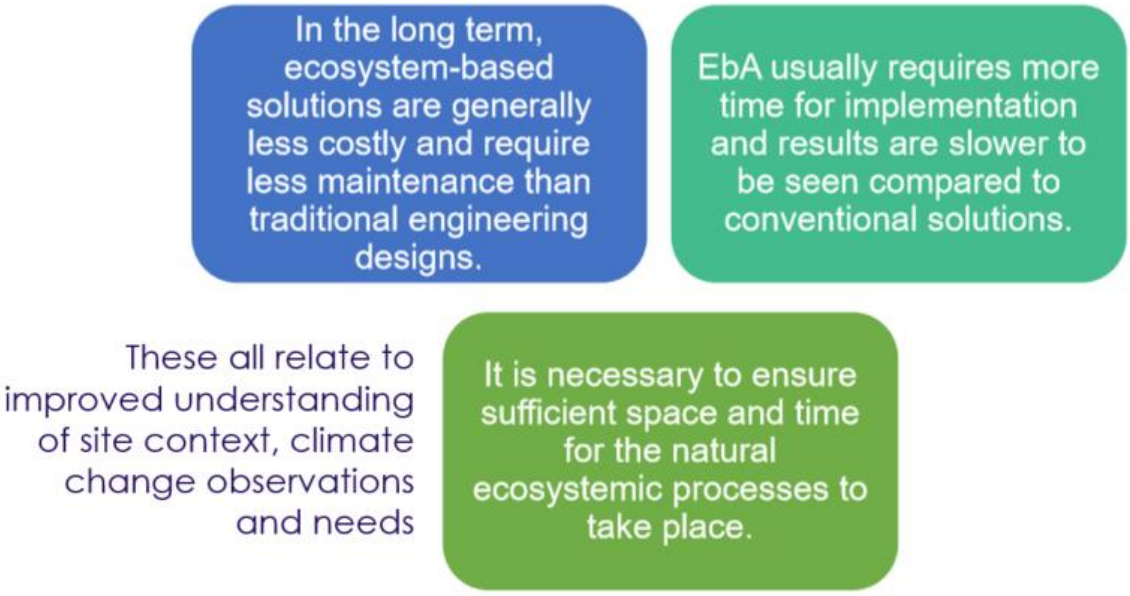
EbA has 3 major focusses, and these are reflected within the 3 Steps, identified to the right of this slide, which articulate the following:



You will see Steps 1, 2 and 3 to the right of the arrows. These all present stage gate “steps” that Albania (through this project) are starting to implement. These shall be addressed as we progress in this presentation.

Benefits of applying an EbA “lens” – experience from Albanian(KVLS) observations

Three collective observations have been learned from experiences in Albania and missions to KVLS undertaken since 2018.

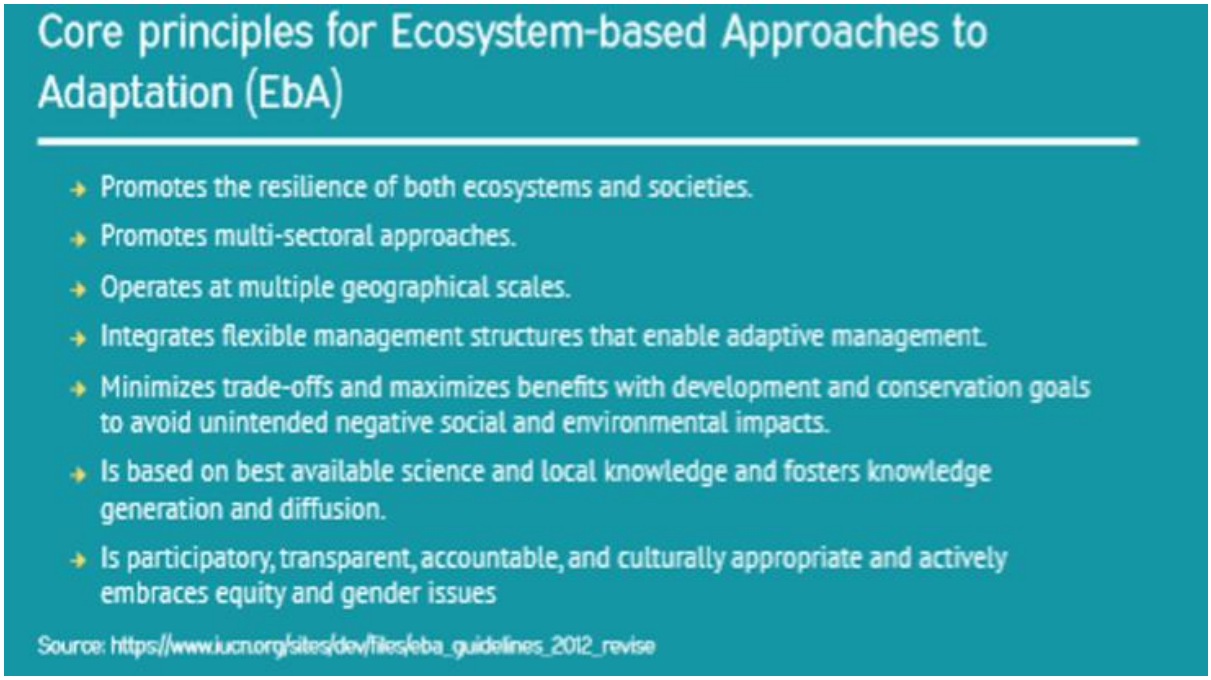


- Firstly (in blue), most (if not all) stakeholders visitedaround lagoons of Albania agree that the initial set up costs (plus future maintenance costs of any EbA intervention)are far less than traditional engineering approaches(i.e.: much cheaper);
- Secondly (to the right), although EbA interventions/projects arebeing designed for implementation and to see success over the long term), the implication of this is that it is difficult to be able to demonstrate EbA success, especially over short term political timelines(3 or 4 years).
- Thirdly (at the bottom), most EbA pilot site specific interventions” (not projects) often appear to be spatially restricted in scale with no “on the ground” examples found of “landscape scale” ecosystem interventions that consider a range of habitats within one intervention.

Importantly these three observations all relate to the need to define the context and assessment of climate risks along with the need to consider societal impacts (such as gender and social issues).

EbA Principles for Project Designs

Some core principles for EbA implementation need to be embraced to support long term success in Albania.



To make these principles implementable, they need to be "mainstreamed" meaning that it is important to integrate them in tandem with climate risks into national development plans, NAPs, other policies and regulatory processes within Albania. We shall consider these points a little later.

Lessons Learned – Local EbA approaches (1)

Even though EbA interventions are relatively new, the experience from around the world shows that nature-based solutions can, and should be proposed as effective, sustainable and cost-effective alternatives to traditional engineering solutions. That said, hard engineering of course has its place, however, I think we can all appreciate that there are very few examples where Man can engineer situations that ***totally*** replicate what natural systems can do.

Regarding local lessons learned, one key observation from KVLS is that EbA approaches need to be designed after a thorough assessment is made once all social, ecological and physical factors are considered to better appreciate what is happening in an area.

EbA approaches should be designed following a thorough assessment of all social, ecological and physical factors.

STEP 1 Definition of the context and assessment of climate change risks considering GESI

Existing Natural Resources/Ecosystems in the Area	State/Degree of Resources Condition (Preserved / Degraded?)	In case of degradation, what are the causes?	Target group more dependent on these resources **
Coastal or Marine			
Mangrove Forest			
Swamps or Wetlands			
Rivers or Streams			
Protected areas or Reservation			

Main Activities	Activity - (Subsistence /Yield?)	Product Type	Who is more involved: men (M), women (W)? or equally (E)
Agriculture			
Fishing			
Aquaculture			
Forest Products Trading			
Trade in other Products			
Tourism			

5

This slide demonstrates a simple tabular reporting approach that needs to be considered early on into a project design to determine what natural habitat needs to be considered, its degree of deterioration being caused/impacted upon by climate change and the target group whom are dependent on these natural resources. A second reporting table seeks to capture the key socioeconomic activities taking place at a specific lagoon site, the economic return that the activity brings local communities, what products are produced and who is involved in the process (men, women, youth or elderly etc).

Episode 2 outlines how this consultancy has produced specific reports to help articulate the implementation of EbA in Albania, specifically at Kune Vain.

EPISODE 2

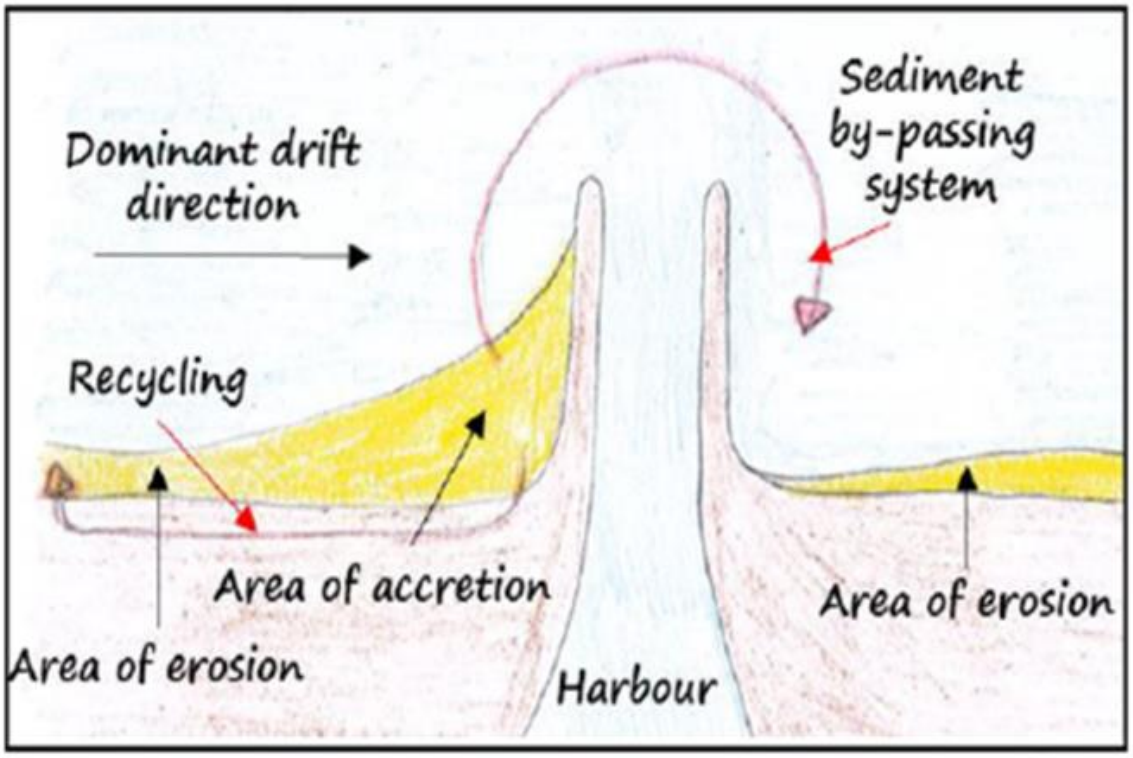
Episode 2 briefly outlines, in around 10 minutes) what deliverables my consultancy has helped to produce so far and how these may be used to help with an Upscaling Strategy in Episode 3.

To support EbA related judgements in the future, the project has produced a series of important documents. One important document is entitled the “EbA Technical Guidelines” which sets out a 7 step process for decision makers and practitioners in Albania to follow and adhere to. A document on EbA Protocols and EbA Training has also been produced.

For each of the 7 Steps outlined, a set of simple guiding questions are presented to help decision and policy makers to determine the validity and sustainability of each EbA step. Copies of this important document are available from the project team. Copies have also been translated into Albania for ease of use.

With a specific focus on Step5 (entitled "Developing an EbA Strategy, Adaptation measures and Action Plan") it is important for decision and policy makers in Albania to understand that EbA interventions should not be interpreted as simply being the substitution of man-made infrastructure for natural replacements in order to improve an ecosystems functionality. In many situations, "hybrid" solutions (that is a combination of natural and anthropogenic interventions) are often needed to achieve the intended outcome.

The approach demonstrates that by introducing and implementing EbA principles into a project concept, that environmental and societal improvements can be achieved to help rehabilitate an already damaged "footprint" that was caused by poor planning and decision making. Coastal ecosystems at KVLS are attempted to be restored by blending a combination of engineering excavation interventions (to improve water circulation – tidal lagoon inlet) with more nature based interventions. A "hybrid" approach is likely to need to be adopted based on current problems being faced. This is an important point to make as by ***simply adhering to a nature-based solution (without any engineering support), the time required to achieve the intended outcome would have taken many more years*** (if at all). The following slides set out a series of possible options that could be considered



Firstly,I shall explain a little on the role of beaches, and beach sediments, as tools to support EbA. Beach recycling is a soft technique that has been trialled in many locations around the world. It is the process of collecting material from where it has naturally accumulated in a down-drift location and transporting it to the up-drift end of a beach frontage on a regular basis. Beach recycling does not provide additional materials to the coastal cell, it only offers a redistribution of what is naturally there. Beach bypassing is where material that is locally in excess of requirements and accreting against a structure such as a harbour arm causing a blockage is moved further along the frontage in the natural drift direction.

Option 1: DO NOTHING.

Continued close of the tidal channel mouth as a consequence of south to north littoral drift.

Material

N/A

Cost
nothing

Lets assume we need a baseline position from which to judge the performance of a “hybrid” scheme at the tidal inlet of the Kune-Vain lagoon system. With reference to the “Do Nothing” option, this would basically result in the continued closure of the tidal channel mouth as a consequence of south to north littoral drift experienced here.

OPTION 2: HARD ENGINEERING TIDAL CHANNEL GROYNES (X 2) Hard engineering tidal entrance structures on either side of the tidal channel mouth (longer to the south to capture littoral drift as a consequence of south to north littoral drift) <u>Material</u> Rock or geotextile tube structure. <u>Cost</u> $$$	
OPTION 3: HARD ENGINEERING TIDAL CHANNEL GROYNES (X 1) Hard engineering tidal entrance structures on the southern entrance only of the tidal channel mouth (to capture littoral drift as a consequence of south to north littoral drift). Possible siltation from the north from periodic storms events. <u>Material</u> Rock or geotextile tube structure.	

Option 2 shows hard engineering tidal entrance structures on either side of the tidal channel mouth (note the structure is longer to the south to help capture littoral drift as a consequence ofa prevailing south to north littoral drift). Depending upon materials used, this can prove a costly option, though it would seek to guarantee the tidal entrance to remain open.

Option 3 represents a slight variation to Option 2 showing hard engineering tidal entrance structures on the southern entrance only of the tidal channel mouth (designed to capture littoral drift as a consequence of south to north littoral drift). This may result in possible siltation from the north caused by periodic storms events.

OPTION 4: HARD ENGINEERING TIDAL CHANNEL GROYNE (X 1) PLUS SOUTHERN GROYNE FIELD

Hard engineering tidal entrance structures on the southern entrance only of the tidal channel mouth (to capture littoral drift as a consequence of south to north littoral drift). Possible introduction of 2 geo-synthetic or rock groynes to capture littoral drift.

Material

Rock or geotextile tube structure.

Cost
$$$

OPTION 5: HARD ENGINEERING TIDAL CHANNEL GROYNES (X 1) PLUS SEDIMENT BYPASSING TO THE NORTH

Hard engineering tidal entrance structures on the southern entrance only of the tidal channel mouth (to capture littoral drift as a consequence of south to north littoral drift). Possible introduction of sediment bypassing to the north to reduce impact on coastal processes to the north.

Material

Rock or geotextile tube structure. Sand pump (or pipeline – see below)

Cost
$$$

Finally two more options present themselves. Option 4 shows 1 large hard engineering tidal entrance structures on the southern entrance only of the tidal channel mouth (to capture littoral drift as a consequence of south to north littoral drift) plus possible introduction of 2 groynes to capture additional littoral drift. Option 5 however only proposes 1 hard engineering tidal entrance structure on the southern entrance of the tidal channel mouth (to capture littoral drift as a consequence of south to north littoral drift). This would then require a sand pump/dredger to support the introduction of sediment bypassing to the north to reduce impact on coastal processes to the north.In addition, RAPA staff will need to be trained on equipment use and monitoring protocols in addition to local staffs from the Lezha Municipality. This is required especially in the summer months to maintain the opening to avoid risk of eutrophication.

The main purpose of these slides is to convey the need for detailed studies, and detailed cost benefit analyses to help determine the most suitable and sustainable option and way forward.

To this end, the consultancy has produced an EbA Protocol Document. This is designed to improve understanding of a sites context, climate change related predictions and observations in addition to societal needs. It focuses on reforestation and dune rehabilitation in the Kune-Vaini lagoon, though in

time, this could be updated to reflect findings and best practice for hybrid solutions such as tidal lagoon entrance interventions to promote improved water circulation.

In addition to the detailed text and appendices provided on individual costs and material sources (suitable saplings and seedlings etc), the protocol document includes useful diagrams to show strategic diagrams to demonstrate the role of trees to trap dune sands and the importance of planting frontal and rear (hinterland) dunes. Likewise the document includes diagrams to outline distances for planting dune vegetation etc.

Returning to the Step by Step EbA Technical Guide document produced, Step 7 focuses on how to mainstream and importantly Upscale EbA in Albania. This is the final aspect of this presentation and arguably the most important for consideration. To this end, a specific deliverable was prepared to outline the options and recommended way forward to upscale the work. This is critical as key government ministries currently do not have a framework for implementing (upscaling) EbA across the country.

EPISODE 3

Episode 3 briefly outlines, in around 15 minutesthe key messages of Episodes 1 and 2, to propose a way forward to upscale and replicate EbA to other lagoons around Albania.

In Albania, there currently is a major gap in terms of implementation at scale, and a preference to continue with investing in 'business as usual' solutions with regards towards climate change adaptation (i.e.: to address coastal flood risk). As over 90% disasters in Albania are water-related, consequently, ecosystems such as wetlands and lagoons deserve much higher attention within climate change and disaster risk reduction (DRR) strategies and investments within the country. It is clear that in order to make any EbA upscaling approach nationally acceptable and financially sustainable, that a series of "guidance advisories" need to be produced to help decision makers to identify preferred interventions for any future project, whether that is a shoreline protection project or a development project within the coastal zone of Albania.

This Upscaling Strategy Framework includes an approach and subsequent structure from which Ministries (with support from others) can follow and populate with up to date information and monitoring data. A series of recommendations (including guidance tools) are also included to help Albanian decision makers to prepare a sustainable "route-map" for EbA upscaling in order to help Municipality and National planners to determine the appropriateness of specific coastal or lagoon EbA related intervention "approaches" that may be considered.

As shown in the slide, the focus of this Upscaling Strategic Framework and any subsequent EbA approach is therefore placed on lagoon and coastal ecosystems within the following geographic locations:

a) NartaLagoon;

b) Karavasta Lagoon.

c) Kune Vaini Lagoon

To set the scene, some observations from my missions to each lagoon are presented below.

With reference to Narta Lagoon, salt production takes place in the lagoon area (through a company called Alba Sal). They manage the extraction of seawater through artificial entrances cut through into the lagoon and then pump salt water to the receiving stations further inland from the lagoon. Alba Sal keep the lagoon entrances open through dredging and deepening of the narrow entrance channel. Entrances need to be regularly dredging to enable salt water to enter the lagoon to assist with hydrodynamic flushing and also for the salt industry to gain easier access to sea water (to be pumped to the receiving ponds). Keeping the lagoon mouths open will also help to maintain the equilibrium of sediment budgets within the lagoon plus influence biodiversity health levels.

Whilst it is known that water levels vary seasonally (high in the winter and low in the summer) due to evaporation and limited inflow of fresh water into the lagoon, there is a poor understanding of hydrodynamics at Narta Lagoon. Coastal erosion is also becoming a problem on the sand dune peninsula of the lagoon where the dunes are less stabilized. Therefore stabilization of the dunes appears to be a key issue for consideration as their loss is likely to dilute the visual appeal of the area as a Protected Area, especially for tourism.

With reference to Karavasta Lagoon, levels of biodiversity are reducing as a consequence of poor flushing with the open sea and poor human activity practices. Two years ago, for example, water quality tests were undertaken and these showed that to the south, high levels of E.coli were recorded and which were sourced from urban waste and close to the lagoon. Sewage also derives from farms (through their own leaking sewage tanks). A landfill is also situated close to a river and impacting on the lagoon health. Therefore a key issue that need addressing is to improve upon the poor water circulation being monitored. In fact, at least 2 artificial entrances are commonly partially blocked which is exacerbating this issue. Likewise, certain forests in the past have relied on freshwater or brackish

water supplies, but now salinity levels (due to SLR) has increased and tree growth is being impacted upon as a consequence.

With reference to the Kune Vaini Lagoon,you have seen earlier the issues faced with regards to the tidal channel entrance. Wherever undertaken, this approach needs to ensure that no down-drift impacts on sediment transport occur. The need for improved initial pre-feasibility site planning and subsequent management is clear based on current observations at the site to reduce dredging needs. Studies including new hydrodynamic modelling are required as a pre-requisite to any actual intervention measure takes place at this (or similar new) sites. Urgent engineering intervention requirements may also be needed to stabilize “walls” at the mouth of the channel. Tree planting interventions close to the current tidal channel entrance may prove a positive upscaling strategy for this site plus for other lagoon areas where tidal channel openings are being considered. The use of wood (as part of any engineering “wall” intervention) may possibly be a possible solution which aligns better with NbS related principles.

In addition, other challenges have been experienced that relate to this issue of increased salinity and flooding levels. This relates to tree sapling growth rates.Land used for forest replanting has been exposed to regular flooding which has impacted in the survival rates of many pines species. Whilst the planting techniques used are believed to be sound (in addition to the use of protective fencing), the actual locations agreed upon at the outset of the project do not appear to be appropriate as replanting locations.

The following observations are also of relevance towards potential EbA upscaling:

a) The success of specific EbA interventions proposed in any of the 3 lagoon sites are likely to be highly influenced by pollution or lagoon health related issues. Careful consideration on any EbA or NbS intervention must therefore be given that fully appreciates this observation. This is key as the Kune and Vaini lagoons are accreting with sediment derived from pumping stations as well as the sea. This accretion (and lagoon filling) is affecting in the ecosystem health of the lagoon and as a consequence a series of NbS or EbA interventions need to be planned to address this in the coming years.

b) Tidal exchange related NbS interventions appear to be an important area of work that needs careful consideration in any upscaling strategy. This directly can support and improve the issue raised above (pollution issues which are often linked to poor water circulation). Specific lessons learned from the KVLS on this matter need to be understood and new intervention approaches adopted.

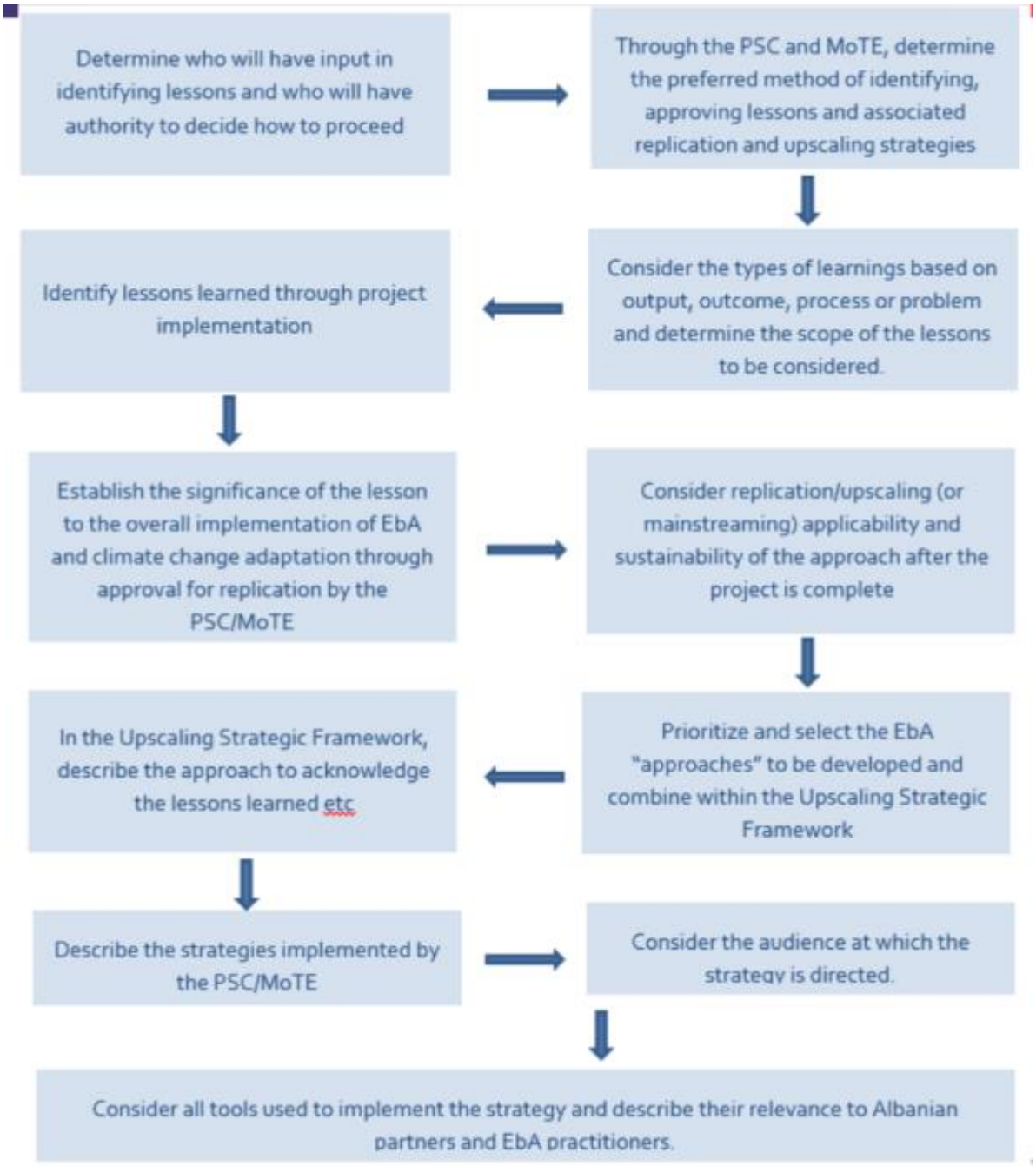
c) All projects results, outcomes, lessons learned and experiences achieved to date need to be better shared and communicated within relevant and strategic fora in Albania and around the Mediterranean.

d) The current Albania National Forest Policy (2019-2030) represents a relevant and a potentially important entry point for a sustained EbA upscaling strategy. This represents an important policy (recently produced and funded by the Swedish Government) as it is directly linked to a new draft law specifically set for the forestry sector. This is important for Lezha as deforestation in the area (due to illegal logging practices) continues to contribute towards causing erosion and flooding within the Municipality (away from KVLS).

So what are the options for Albania to start moving forward with EbA upscaling?What are the ingredients for a successful Upscaling Strategic Framework?

Well one important development relates directly what Government focused priority attention is being placed in the climate adaptation sphere. Importantly, and one key supporting development, is that as of 2019, Albania is the only country in the Balkan region to have developed a National Adaptation Plan (NAP) document (which was produced in 2017). The NAP and its financing strategy became an integral part of the National Strategy on Climate Change, and related action plans on mitigation and adaptation, which was approved by the government on July 2, 2019. Compliance to the NAP process appears to be a very sensible strategy to help upscale EbA related activities in the future.

This process is demonstrated in this flow diagram which stresses the importance of learning from previous projects, consultation and message communication, defining upscaling strategies that are “site specific” and “relevant” to a Municipality and consider the use of a range of planning tools



A draft Upscaling Strategy has been set out for Kune Vain lagoon. Separate strategies for Narta and Karavasta still need to be produced following further consultation with local groups. This Upscaling Strategy include summary information (in tabular format) on the following:

a) An indication of the relevant “Approach” that coincides with the action being considered (i.e.: Restorative, Issue-specific, Infrastructure, Management, Protection focused).

b) The scale of the action (i.e. whether it is a national or Municipality focused action);

c) The applicability of the action (building on lessons learned and observations identified);

The tables produced identify a list of possible guides and toolkits that exist and that may be of value towards supporting a strategic move towards implementing EbA in Albania.

e) Timeframe relates to the urgency of the action (0-2 years; 2-5 years; 5-10 years);

f) Costs are generic and are grouped as low cost (<US$1k; mid cost (US$1k to US$10k) and high cost (>US$10k);

Recommendations defined for this Upscaling Strategy Report, and to help Albania move forward with the implementation of EbA across the country are defined as follows:

Firstly, design a Strategic Monitoring and Research Programme

Monitoring and evaluation of EbA interventions are critical to support adaptive management. It is strongly recommended that research programmes are designed to help support reforestation activities, not only in the coastal zone but along the whole coastal area. This will help to prevent erosion, flooding and improve the life in general and so as a result, an upscaling activity that is designed to support forest nurseries in the country (including one specific plant nursery in Lezha) is required as part of a national policy to set up nurseries that can grow Albanian tree and shrub species, and to reforest with imported seedlings, and in some cases even with exotic plants.

A Research focused Management Plan is therefore needed for the entire Kune-Vain Protected Area, which should address its major concerns, urbanization and tourism, pollution, eutrophication and harmful algae, lagoon tides, erosion and related hydro-technic works, Drini revitalization, reforestation and plant nurseries, fishing, aquaculture and hunting, etc. This should be designed to influence future plans for urbanization and tourism, especially in some coastal areas of the Adriatic.

Secondly, ensure there is a link to the NAP for Albania

Firstly, there is a need for the PSC to determine the most likely “entry points” to upscale and mainstream EbA at a national level. It is also recommended not to review individual sites for EbA interventions, but instead to align any intervention to ongoing national “Strategies” to secure climate related funds. This links squarely with the need to align any upscaling strategy to the NAP process which identified 15 priority actions. The 12th action, entitled an *“Initiative for Municipal Climate Change Adaptation Plans*” focuses on adaptation in some of the largest and most vulnerable cities in Albania, including Tirana, Elbasan, Durrës, Shkodra, Vlore and Fieri.

Linking to Existing Strategies and Plans

Firstly, a key consideration should also be placed on implementing recommendations and actions set out within the Lezha Sustainable Development Strategic Plan. Should an upscaling approach be proposed for the City of Lezha, then more detailed consideration shall be made on the policies and actions identified within the Sustainable Development Strategic Plan for Lezha Community (2013 to 2030). It is therefore recommended that an upscaling strategy would be more valuable to demonstrate the “Municipality of Lezha” is a key focused EbA success story area. Government currently have programmes (water irrigation channel interventions) in place for the area and trying to support this the introduction of EbA techniques to support these programmes could prove very valuable to then convey and promote the same approach in other regions in the future.

Secondly, another key activity to be completed (to help identify priority needs is to review and update the current NAPA Protected Areas Management “Action Plan” which is now outdated. This will help to determine critical areas for EbA intervention and management under the umbrella of protected areas management. This would be the best entry point for EbA upscaling around Albania and should be translated into English for review. This can embrace efforts to update a specific Monitoring Plan for protected area management.

Creating an Inventory of EbA experts, practices and networks

It is recommended that there is a need to assess the levels of expertise in the country (expert criteria, relevant experts, communities of practice and networks) that are needed for EbA implementation in

the future. A good recent example of this is shown in this slide whereby the Organisation of Eastern Caribbean States (OECS) have produced a similar model to help EbA delivery around the Caribbean.

The outcome of this shall help to identify the capacity needs within the country to help deliver the EbA upscaling strategy. There possibly a need to extend this (if possible) to be a list of relevant EbA experts in the Adriatic/wider Mediterranean region along with any existing EbA networks that may prove of value. For example, there is already in existence the South-South network for EbA.

Harmonize EbA and Gender

One important aspect of most successful EbA projects, and something that all donors are keen to ensure is better integrated into upscaling strategies, relates to the importance of gender issues. Although guidelines for mainstreaming gender and social considerations have existed for some time, there has been limited useful guidance in support of sustained action, and often attention to gender and social issues have been overlooked by financial concerns. This will bring a level of value-added support to ongoing work by various actors on EbA and gender equality in Albania that is often still quite siloed and hampered by the lack of integrated conceptual and analytical frameworks.

Financing the Way Forward

Meaningful engagement of non-financers with financial practitioners requires understanding the difference between funding and financing. As used in this context, “funding” refers to the source(s) of cash required for implementation over a project’s lifespan. A project’s funding model typically describes the source of long-term funding (e.g. taxpayer base, benefit off-takers, users and/or customers) and funding mechanisms (e.g. specific taxes, tolls, user fees etc.) used to support the project. By comparison, project “financing” refers to the sources of capital required for front-end investments in project development and establishment.

In general, the financial feasibility of infrastructure projects are determined based on the ability of project funding to repay initial financing and financing costs (e.g. interest expense on debt, required returns on equity) over the project’s lifecycle (or some other pre-determined time horizon). EbA projects on the other hand have the potential to generate self-sourced funding, providing an investment opportunity for lenders/investors looking for financial return while providing important social and environmental outcomes.

In evaluating the potential sources of project financing or funding in Albania, it is important to identify the requirements, and risk and return objectives of public and private investors and the respective roles they may play within an overarching project financial model. Project investments need to align with landscape-scale (regional and watershed) plans, policy priorities, and investors’ mandates. This alignment can accelerate the funding, financing, and implementation of EbA projects.

Commonly, EbA (hybrid) solutions are often regarded as a more cost-effective solution than conventional alternatives;

• EbA (hybrid) approaches usually entail higher upfront, capital investments and longer term annual maintenance costs over the project life, compared to solutions with green components;

• when well-articulated at the landscape level, hybrid solutions provide numerous long-term benefits, including land security, climate regulation, and water security;

• hybrid) solutions can outperform fully green solutions in economic terms as they can be less land demanding, which avoids land-use conflicts and leads to lower opportunity cost;

• the life-cycle cost of conventional infrastructure is often perceived as more certain than the hybrid life-cycle costs; and

• hybrid solutions are less vulnerable to activities that can deplete natural capital compared to fully nature based projects.

For several reasons, the Upscaling Strategic Framework cannot accurately estimate the cost of protecting the coastal zone of Albania using EbA approaches.There are many possible EbA technologies that could be used, all with widely varying costs. This Strategy does not determine which approach is most suitable for each wetland/lagoon in Albania as that is for the existing Albanian planning and EIA process to determine.

Without detailed site-specific analysis, it is not possible to actually estimate the cost of a given intervention. Despite this, and as the GoA begins to set priorities for where to begin work, and to evaluate the options for each lagoon site, it will be able to estimate the actual costs of each option and compare that with the benefits it should achieve.

Despite this, there is a general sense of what the money will have to cover. Major capital investments will be required to construct structures that can protect specific stretches of coast. Somewhat lower investments will be required for "soft" coastal protection, such as tree planting, tidal lagoon exchange or interventions that can help buffer storm impacts while providing rich habitat for terrestrial or marine wildlife. All of these investments will require ongoing maintenance to keep them operational, both as storms and sea level rise affect them and as human activities may cause further degradation. In addition, funds will be needed to educate local coastal communities about how to protect their resources and how to adapt to avoid the harm that will unavoidably be caused by increasingly severe storms.

Whichever route is adopted, be it maintaining/restoring wetland or lagoon ecosystems etc, a major opportunity for investment of climate finance in Albania presents itself via the role of the private sector. This could have a great impact setting examples of and upscaling nature based solutions. They can drive innovation, economic growth and job creation. Such measures are cost effective and instrumental to save lives, prevent and reduce losses, reduce risk of displacement and ensure rapid recovery and rehabilitation.

It is likely that most businesses and citizens would be willing to pay an “ecosystem” related tax as long as they are sure that their money goes to the purpose for which it is nominally being collected. As long as the money is routed through the Consolidated Fund, and its use can be tracked in the same system as other government funds, this is a route that could be followed. This calls for creating a trust of some sort, managed by the Ministry of Environment that will receive the funds, allocate them as appropriate, track both revenues and expenditures, and make the tracking data readily available to the public in a timely fashion.

Section 5.7 and Annex C should be read to better understand the types of financing instruments that may be used to support EbA upscaling in Albania.

The words of Albert Einstein excellently articulate the way that decision-makers now need to think with regards to EbA. He stated,

“We cannot solve our problems with the same thinking we used when we created them”

Embracing this sentiment, it is important for Albania for move forward, building on the lessons of the Kune-Vaini lagoon project. In fact, some excellent proposals have been put forward by Prof. Dr. Ferdinand Bego in 2019. Here a long-term monitoring and research strategy for the EbA and climate change adaptation interventions for the KVLS are proposed for consideration. It is strongly recommended that these ideas are updated in line with local consultation programmes, and the protocols and guidance reports produced for this project are likewise updated to allow upscaling programmes to occur elsewhere around Albania.

We should feel confident that a change can be made as part of a post COVID world!

Thank you for listening……..

SEE THE PROJECT WEBSITE FOR FURTHER INFORMATION AT www.kunevain.com