

Climate, nature and people are complex systems, intimately interlinked. We depend on both climate and nature for service provision and our prosperous livelihoods. With climate change effects on the rise across sectors and regions, vulnerable communities and ecosystems will be disproportionately affected. Human-induced climate change is leading to irreversible impacts as natural and human systems are pushed beyond their limits and ability to adapt.

The Western Balkan economies are among the most vulnerable regions with respect to the impacts of climate change on many domains. The devastating consequences of the 2014 floods in Serbia are still fresh in human memory, resulting in 51 casualties and 1.5 billion euros in damages and losses and even further deepening inequalities and gender gaps. Such events have continued with frequent occurrence in 2016, 2019 and 2020, overlapping with the already challenging effects of the COVID-19 pandemic.

Certain developments and adaptation efforts have reduced vulnerability to such events, though these efforts need to intensify to better cope with climate change—achieving this objective will require strong political will and financial resources. The Western Balkan leaders have shown their goodwill and interest in the European Union's (EU) commitment to move towards a climate-neutral economy by 2050. The EU Green Deal is an ambitious plan that aims to make the EU economy sustainable by boosting the efficient use of resources through a clean, circular economy, restoring biodiversity and decarbonising the energy and transport sectors.

The Green Agenda for the Western Balkans translates these goals to accession countries, simultaneously aligning them with the EU Biodiversity Strategy to 2030. Nature protection, biodiversity and specifically Nature-based Solutions (NbS) are integral components of the Green Agenda and its accompanying Action Plan. The Western Balkans would benefit greatly from its implementation by fostering an increase in the percentage of effectively managed and coherent protected areas (PAs), as well as restoring degraded ecosystems. As an example, only 10 per cent of the Western Balkan territory is currently protected, leaving the region behind the global target of 17 per cent set by the Convention on Biological Diversity, which should soon grow to 30 per cent of land and sea by 2030.

It is in this global and regional context that the International Union for Conservation of Nature (IUCN) promotes Nature-based Solutions (NbS) as actions to protect, sustainably manage and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.

NbS are part of the answer to the climate crisis as they can provide cost-effective, no-regret

solutions, which help communities adapt to climate change and increase resilience beyond their capacity to absorb and recover from a single disaster, such as floods, droughts or forest fires. Yet, the value derived from deploying Nature-based Solutions in response to societal challenges remains underexplored and the application of approaches that integrate natural infrastructure remains insufficient and fragmented in many regions, including the Balkans. Beyond the positive impact on societies and improved management of disaster risks, Nature-based Solutions benefit both habitats and biodiversity, while creating opportunities for growth and improved livelihoods.

IUCN is currently piloting an NbS by designing and implementing a Forest Landscape Restoration (FLR) project in the city of Kraljevo in Serbia, an area considered highly vulnerable and exposed to climate-induced disasters. The project started by conducting a series of environmental, socio-economic and gender assessments that paved the way to successfully identifying a pilot location in the Gledić Mountains and defining a set of FLR measures to be deployed on the ground. Before proceeding with field implementation, the state of the forest ecosystems and biodiversity were assessed and a Cost Benefits Analysis (CBA) and Gender Analysis were performed to examine the cost-effectiveness and gender responsiveness of restoration actions.

The purpose of this NbS is to reduce flood risks, increase the resilience of the local communities to disasters, and help create additional revenue streams for vulnerable groups and women. The FLR piloting measures applied in the Gledić Mountains are briefly discussed below to offer a glimpse of the benefits they provide, hoping they can inspire, help in multiplying and finally scale up to other projects and initiatives in the region.

One of the first FLR recommended measures was natural forest rehabilitation, a simple and low-cost FLR intervention targeting ecosystems with average degradation levels to speed up natural regeneration processes and preserve a part of the pre-existing forest ecosystem. In addition, rehabilitation by planting was proposed with the objective to restore forest and ecosystem functions on bare land or in very degraded areas. This can be done through direct seeding or planting on bare land and conversion of coppice to the high forest by planting in gaps or following the tree cutting.

These measures can be applied by local people after receiving some training, therefore creating seasonal employment opportunities for inhabitants during the planting phase but also later for maintaining the pilot. To complete the set of forestry measures, enrichment planting was recommended to introduce valuable timber or multi-purpose species in existing, degraded, secondary forests that in exchange increase forest stability, resilience and biological diversity. This restoration action will provide high-value timber and non-wood

forest products (NWFP) that can constitute a source of additional revenue source for local inhabitants. A co-benefit of increasing the value of secondary forests is that it can prevent their conversion to other land uses, thus reducing deforestation.

Bio-engineering measures will be applied to the most degraded land plots to control torrential floods, soil erosion and small-scale hillslope instabilities. In the Gledić case, bio-engineering measures could rely solely on vegetation but could also be combined with civil engineering structures. The experts suggested combining high-value tree growing with the production of livestock, often known as a silvopastoral system. This measure has been recognised as being especially favourable to women since they are usually active in the agriculture sector and could reap the financial benefits. Lastly, the cultivation of Medicinal and Aromatic Plants (MAPs) was recognised as a restoration action that would encourage local farmers, especially women, to cultivate, harvest and process MAPs to generate additional income.

The example of the FLR in the Gledić Mountains is just a start in undertaking NbS in the Western Balkans, including smart planning and the design of actions that can benefit both nature and people. Restoring natural forests and improving the sustainability of managed forests enhances the resilience of carbon stocks and sinks, plays an essential role in the stable provision of clean, freshwater, regulates climate, and provides many other water-related ecosystems services, such as flood and erosion protection, while improving livelihoods for otherwise vulnerable communities, CEE writes.