



FORUM SYNERGIES AND ABCD INNOVATION CENTRE

Seeing the forest and the trees

A story of environmental learning and
resilience in Kalavan village, Armenia

By Adam Beswick

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rhoncus tempor placerat fermentum.*

Forum Synergies was founded in 1995 and has since worked to connect rural. Since 202x Forum Synergies has a scholarship programme.

Trouble in Forestlands

A forest is more than the sum of individual trees. A forest is a host to soils, biodiversity and ecological structures that are not easily replicated by tree planting alone. A forest can also be located within a social economic and cultural systems.

We get a myriad of services form forests. Forests provide habitats for biodiversity that we not only depend on and they also retain soils by preventing erosion. Forests are also capable of absorbing CO₂ from the atmosphere, making it an invaluable asset in combatting climate change. The Global Deal for Nature estimate that 30% of the earth's surfaces should be converted into forests, with an additional 20% being dedicated as climate-regulatory land in order to prevent a 1,5 degree warming. The numbers here are not the main concern, however what research

suggests is that we need to not only halt existing rates of deforestation, but reforest and use our forests in a climatic-friendly way. Seeing the forests and the trees is required.

Developed societies however have tended to overlook this, not seeing the forest for the trees. Extractive and marketised approaches to environmental governance and land-use has resulted in forests ecosystems suffering, becoming the arena of economic rationality rather than ecological necessity. Land-use pressures are leading to loss of forest habitats. Forestry furthermore employ questionable tactics such as clear-felling, leading to environmental disaster.

Whilst our need for timber needs to be considered we must find ways that we can meet are demands in a way which is not at the expense of planetary boundaries and stability, nor at the expense of disastrous decline of biodiversity. It is furthermore not as simple as cornering off forests to let “nature take care of itself”. Instead, **Protecting forests means learning to live and flourish in forests.**

There are opportunities to facilitate synergies in forest governance instead and to turn reforestation into an opportunity, an asset for development. What if we could find ways to economically benefit from forests, yet also retain their ecological structural integrity?

Finding solutions to these problems requires learning, listening and empathy

In June 2023 I received a scholarship from Forum Synergies, an organisation founded in 1995, to learn about ways to facilitate transitions for more sustainable



environmental and rural governance. Upon a conversation, I was asked to reach out to ABCD Innovation Center based in the village of Kalavan. Founded in 2018, ABCD Innovation Center has been active in promoting asset-based development approaches, helping Kalavan become a centre for eco-tourism and sustainable living. Surrounded by forests, this provided me an opportunity to set out and

learn from the local communities about their forests, their interactions, systems and ways of life. In doing so,

Journeying to Kalavan

Leaving Yerevan, the capital city of Armenia behind us we ascend onto the Seven plateau. The destination is Kalavan, a village north of Seven Lake in a forested valley. I am finding it difficult to imagine however, since the road so far has been dominated by grasslands, distant settlements with their distinctive socialist apartments towering over the grasses. No trees in sight as the lake opens up to us. It is said that the lake emits a different hue from each angle, at times appearing turquoise.

Large workers' resorts complexes, since abandoned, dot the shoreline.

The road up to Kalavan is not for the faint hearted (or all vehicles). We change to a 4x4 in Chamberek and the rest of the journey takes us on backroads, snaking gravel roads as well climb the hills. The grasslands and scrubland is left behind and towering trees meet us. Birds of all kinds call these forests home. Armenia lying at the crossroads of different biomes and continents gets a myriad of birds. Bird enthusiasts should almost journey to Kalavan for the birds alone.

The temperature is milder in Kalavan, with the oppressive late-summer 35 degree heat of Yerevan giving way to a 25 degrees and a breeze.



Why biodiverse forests matter

The capacity to identify synergies with environmental processes and thus find solutions to sustainability challenge is not nothing new. Human land-use has not only always looked the way it does. No time in human history has our various ecosystems been under so much pressure.

The need for change is no longer questioned. A first good step is to approach the way we govern forests from the perspective of resilience. In a nutshell.

A changing climate probably requires resilience thinking too. With more intermittent weather and extreme climate phenomena, ensuring diversity in ecosystems allows our systems to be resilient to changes and the unknown. Having

a forest entirely made up by one species, a practise popular in forestry, means that changes in climate or the outbreak of a disease can pose significant issues.

What are the costs of this paradigm shift I hear you may ask. Who pays? I find this question misleading for two reasons. The current (and future) costs of mismanagement are likely to be greater than improving and transition to more resilient forest practises. Take water filtration for example. Treeless and eroded soils tend to be eroded by rainwater and run-off (water that travels on land). Currently about 2/3 of rainwater becomes unusable due to flooding risks. Trees are able to slow it down run-off in times for soil to absorb the water and retain its systemic and structural integrity. This water is then able to access aquifers (ground water) and can become available for human use. Not only that, forests function as temperature regulators, enabling milder climates and less dramatic swings in temperature. In order for these services to work effectively, a diversity of species are needed as they interact with their systems in different ways. This also means retaining large trees for the sake of integrity. A timber-oriented management model would see these large trees as those with the most promising yield, ignoring how their harvesting can have negative consequences across the board.

However perhaps most poignantly, forests are important carbon sinks. What I mean by carbon sinks is that forests help aboard atmospheric carbon from the atmosphere. Different trees have different CO₂ sequestration potential and generally the larger the tree the more CO₂ it holds. This process called photosynthesis also provides oxygen, essential for clean and healthy air. An often overlooked aspect here is that whilst trees can store carbon, one of the largest carbon storages is in fact the soil. Making sure that a

soil is well kept, healthy and diverse is a good approach to ensuring the soil can sequester as much carbon as it can. Having a diversity of trees, bushes, mosses and grasses ensures that soils have access to a diversity of different minerals and nutrients, enabling a more complex soil structure to emerge. A more complex soil structure is furthermore can hold more CO₂. In return, a healthy soil is also able to provide the nutrient demands of a diversity of



trees, enabling a wider variety of species to flourish. Monocultures of one tree species put an excessive pressure on the soil to access certain nutrients

What are the costs of eroding soils and water scarcity and lack of oxygen and CO sequestration?

Nature can provide these favourable systemic interactions as these interactions are products of a process of millions of years of evolution and adaptation. The

planetary system is furthermore the product of nearly an infinite systemic interactions across scales to produce systemic interactions at the planetary level. As systems reproduce themselves through complex interactions and feedbacks, ensuring the stability and context.

Human impacts, which in climate science we call anthropogenic impacts, have seen us erode the planets resilience, or in other words, its capacity to successfully reproducing its systemic structure. This includes its ability to regulate weather patterns, seasons, as well as chemical and nutrient cycles. The current approaches this through a warming planet and climate change. Forests and soils regulate planetary cycles, and as we are cutting down forests, eroding soils through land-use, expansion of infrastructure, agriculture, these services and interactions that I mentioned above are not working as well as they can and should. It does not help either that we are emitting millions of years of accumulated carbon into the atmosphere to power all things transpiration, aviation, production and consumption. Therefore finding ways to live and flourish in forests is a key-task for planetary and environmental resilience.

Maximising benefits from ecosystem services requires us to find local solutions.

We should be cautious however with how we create resilience in forests. Resilience should not only be seen solely in climatic terms or planetary terms, but resilience also requires you to take

social, economic and cultural aspects into account. The environment does not happen in the backdrop of human activity, but is largely shaped and influenced by it. We depend on our ability to access resources.

. Having worked and researched forest governance in Kosovo for a year, the government's approach has resulted in local communities becoming disenfranchised from their forests. Despite good intentions, the failure to see forests as a systemic issue has resulted in current laws and protection arrangements fail to take into account the socio-economic needs of rural and forest dwelling communities. Instead of reducing deforestation by outlawing forests, it has rendered the practise illegal inviting illicit groups to practise devastating harvesting practises. In a sense, Kosovo now has less control over their forests than if they had allowed and monitored selective

Agroforestry is a research and practise based approach trying to identify the synergies between creating and protecting forest systems and structures as well as finding ways to provide economic and cultural benefits to humans. Some of these benefits are indirect, tangible and intangible, such as the ecosystem services mentioned above, but can also provide direct benefits such as nuts, fruits, herbs and medical plants. They can also provide spaces for cultural reflection, inspiration for art and identify formation, and a destination for ecotourism or a context in which ecotourism products exist.

Maximising these benefits our natural forest ecosystems provide means that we need to understand them. Unlike how we approach monoculture, questions of what grows best, and where, and how, and what provisions can be extracted where and how is not obvious off the get-go.



Systemic interactions are complex and often very context dependent, meaning that some knowledge of an area is important. It is also not something policy makers in Yerevan or any other major European capital for that matter are trained to have expertise in. Quite often the



experts who can provide important information are those who are not talked to or consulted in policy making: **the locals.**

I am taken out into the forest by Kalavan local xxxx. She runs a B&B right below the main road leading into the river gorge. A sense of being surrounded by trees makes the location attractive, and gives you a sense of existing and taking part in the forest. Collecting herbs from the forest and meadows, xxx shows me which type of herbs for tea, some of which are claimed to inhibit medicinal properties. A neighbour comes on by with a basket full of walnuts she had gathered from the forests. Berries are drying in the



heat, to be saved for winter. Pickling culture is also prominent, with pickled vegetables. Many of the locals have extensive vegetable gardens employing a mixture of



techniques. Growing in a mixed landscape of trees also provides shade, soil integrity and water access.

Temperature regulation is also desirable when growing vegetables that do not want too much sun.

Kalavan villagers have livestock including cows, pigs and goats which are free to roam. The forests and meadows provide food and nutrients for the animals, reducing the villagers need to substitute. In return, the animals act like forest managers, eating weeds and their manure promoting nitrogen into the soil, an important mineral for healthy soils and soil fertility.

Dani, the village dog arrives and accompanies us down to the stream. It is a much welcome opportunity to cool-off and take a bath. The river has seen fish return after a successful reintroduction programme after they had gone virtually extinct. A boy meets us on the road to another B&B xxx with a fish in his hand, taking home. He is excited to exhibit his catch to us.

At XXX we are treated to cherries and sunflowers seeds. Most of comes from her garden. Her mother produces cheese in a neighbouring village.

Xxx shows me (no. 10) the different type of herbs and flowers suited for herbs and flowers for tea. Dani the village dog takes the opportunity to get some rest.

It is important to note that the village is not self-sufficient entirely, they still need to travel to the closest town for supplies. The condition of the road makes this a hassle and often villagers coordinate with each other over who needs what, or whether villagers can rides with each other.

Absolute self-sufficiency is neither a desirable goal however absolute dependence is neither. Striking a balance



and identifying ways that one can benefit from environmental processes in a particular locale is therefore needed. For other communities, achieving self-sufficiency in one area, be it walnuts or tomatoes is something to celebrate. If this can be done in a way to compliment natural processes, expand on biodiversity or help soil restoration this is an example of environmental symbiosis and sustainable development. Sustainability therefore does not mean self-sufficiency, but it does speak to the need to diversify land uses and do more to connect environmental thinking to how we interact with our resources and food systems.

Unlocking these cultures and interactions that forest communities like Kalavan have to reveal shows the importance local knowledge and cultures have to squaring these environmental governance challenges. Whereas previously traditional communities may have been seen as obstacles and the perceived targets and beneficiaries to development, they are in fact assets for us transition to more sustainable land-use. Development practitioners can themselves become beneficiaries in that local expertise can reveal synergies for complex governance solutions.

Tree carvings in Azeri, a relic of a village past. The Azeri locals of Kalavan were substituted by Armenian refugees from different cities and towns in Azerbaijan in the 1990s. I would like to say that this sort of action is one of the past.

Mobilising “assets” for rural development

How do we talk to locals in such a way that we unlock their expertise? A first step is to recognise the importance of local and situated knowledges in unlocking aspects of human-environmental interaction. The second step is to identify methodologies that enable these knowledges to come to the forefront; to be revealed in a policy-making and governance-doing context.

Learning is also important. Combining local knowledges of how to use plants with scientific knowledge of how and where these plants flourish, their properties can reveal synergies vital for sustainable development. In academia, these two knowledge systems are sometimes referred to as *tacit* knowledge, the knowledge one gets of the local forest growing up there or the knowledge one gets which is passed down from generations, and *explicit* knowledge, the knowledge that we have been able to gather from the scientific process. It is no doubt that the latter has resulted in human progress but perhaps at the expense of holistic thinking and approaches. There is also a growing trend in sustainability studies to try to combine these knowledge systems as tacit knowledge can reveal knowledge and contexts relevant for explicit knowledge production and vice-versa. This is particularly relevant as sustainability challenges are complex, systemic, and solutions contested. This aim to bridge the gaps between practice and research has culminated in an academic literature aimed at analysing, evaluating and experimenting with what we call *interdisciplinary* and *transdisciplinary* research and practice.

ABCD Innovation Center are seeking to create and facilitate spaces for this sort of knowledge exchange to take place. The aim is to create a space where expert knowledge and research is able to be applied, disseminated and

transformed through its application in a practical context. This is not only in terms of talking all things sustainable development, but connecting researchers and practitioners and local communities. We can see this as reducing the gap between science and practise. This is more important than it appears. With a lot of resources at their disposal, and tens of thousands of scientific articles in any given topic being churned in yearly, one could would not be incorrect to describe that academic publishing as more of a production-line rather than curiosity. With most of these articles going behind expensive paywalls (an academic article can cost anywhere between xx-xxx to access), it puts up barriers for interested parties and communities to benefit of this wealth of knowledge. A common aspiration named by many of the villagers is that despite having developed systems of interacting with the forests, they feel like there is an information deficit relevant for them. It is a damning indictment of current research practise that despite an abundance of research, it is not reaching those which it should. In the context of sustainability research, this is particularly alarming given that a lot of research is aimed at bringing about and facilitating change in societies for sustainability goals. A critical dialogue about the culture of knowledge production through academia is perhaps warranted here.

Whilst the research-hub project is still in its inception phase, taking direct action to bridge the gaps between research and practise could prove important and vital for the sustainable development of Kalavan and Armenia as a whole. To put on an asset-based approach, I would argue there are already assets in place for Kalavan which could be important in influencing the direction and design of a reserach-hub. For one, Kalavan is already interesting for

different academic disciplines. During my short-stay in the village, the local residents received ethnographers from the National University in Yerevan and a group of archaeologists from Israel. For the former, they were interested in researching and facilitating learning about intangible cultural heritage.

Areas of interest for bridging research and practise could be research on agroforestry systems or forest farming. Such research would also be complimented by a focus on governance, which also entails looking at social, economic and cultural aspects and interconnections with forest management. Research into systems and structures of organisation, involving youths in sustainability learning and education and promoting are all examples and opportunities for transdisciplinary and sustainability scholars to get engaged in.

Facilitating this learning is not easy. When in the village I held a workshop on transition management with locals and the aforementioned ethnographers. The idea of creating a space in transition management is vital for transformative and new knowledge to be produced. A research centre and hub could take-on such a role. In transition management, the new knowledge or products of transdisciplinary research is referred to as innovations. In this case, from an academic and knowledge production sense, such a space would literally be called an innovation. In other words, **an ABCD Innovation Center in everything and in name.**

A village gathering in the form of a BBQ party. Local produce and meats are shared grilled. For sustainability practitioners appreciating local customs and are important to understand and facilitate environmental learning.

The road ahead is uncertain but exciting (and formable).

Kalavan says its goodbye as we jump in the car and slowly work our way down the hill. The birds swing across the road between the canopies. Eventually the terrain changes and we are again on open roads, grasslands and open landscapes.





"The Azeris are in the hills" we are told on a pitstop at a military base close the border over coffee, reminding us that in our sustainability work, the backdrop of politics is not far away. However, I find there is something liberating with this sort of rural development. Creating something together for each other and the planet to me is a break from the geopolitical realities of what we are told to worry about. The world and our realities we are surrounded by are not set, even though they may feel so. Much of our existence is mediated by us humans, and with some reflexivity and empathy, there is a lot of issues we can overcome. Sustainability asks questions of what we want to do, and where we want to go?

In this sense, this does not mean that geopolitics does not matter, but that its future importance to the development of cultures and societies are up to us.

Borders were invented, Armenians are well aware of this. Instead of worrying about borders, we can try to live the best lives we can, and take care of each other. In the case of Kalavan, the latter has left scars still felt today. Even the trees are scared with the public declaration of young lovers of a community past.

The road ahead is therefore to recognise that instead of following the road laid before us, we perhaps need to jointly construct the type of world we need to live. Perhaps necessities or “realities” on which we justify inaction to change are not as set as we see them to be? By opening this space for a different way of being, we are setting a path ahead into uncertain territory. This could be the road of a more sustainable forest governance system, to the road of leaving geopolitics behind as undemocratic and authoritarian systems of coercion and control which says nothing about how we as communities and people can learn to live together and with nature.

To whom does that benefit and in whose name? Armenians lost thousands of years of history in Anatolia due to the politicising. Seeing the Azeri-Armenian conflict as a product of “ancient rivalries” ignores our capacities. It was not that. In the case of Azerbaijan, “strong government” has spurred and necessitated violence, not preventing it. It makes us ponder on wider questions about our role in this world and to each other. Kalavan has an opportunity to change the debate of Armenia, from one solely defined by its precarious geopolitical location by the international community to a beacon of democratic, decentralised and empowered communities. The process starts somewhere,



an innovation, and perhaps greater investment in Kalavan could spur on such changes.

Much of interdisciplinary research and practise should also end in some policy prescriptions or call for broader action. Given that a lot of this knowledge exchange is experimental I would invite those of you who are interested in facilitating learning, or feel like they have experiences, practises or methodologies to share to please do so. Perhaps together we can identify innovative practises for sustainable rural development.

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About the Author



Adam Beswick is a Kiwi-Swedish sustainable development professional and advocate based in Stockholm. A current holder of the Forum Synergies Youth Scholarship, Adam interned with ABCD Innovation Center in Kalavan and Yerevan in September 2023.

Combining his academic background with an MSc in Sustainable Development from Uppsala University, and practical experience working with Swedish development cooperation at the Embassy of Sweden in Kosovo, Adam has an interest in participatory environmental governance and transdisciplinary research. His master thesis explored transition management in producing new knowledge relevant for sustainability transitions of Kosovo's forest governance.

