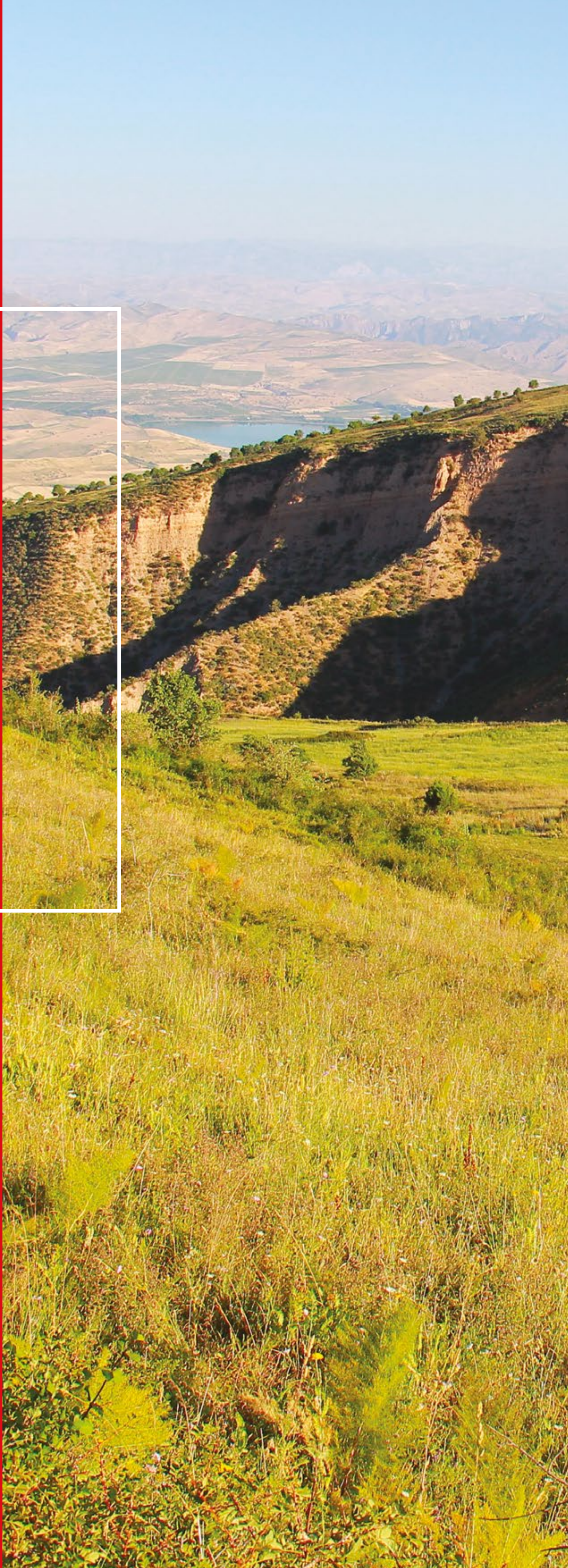

Disaster Risk Reduction in Tajikistan

Leveraging non-traditional financial sources

Policy Brief: TJ20-01
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CARITAS Schweiz Suisse Svizzera Svizra

> « DRR should be viewed as a development process that takes a proactive role in generating required finances – both internal and external – to induce innovation aimed at discovering and implementing effective systems for risk reduction and risk management. »

Summary

Statistics provided by the Committee of Emergency Situations and Civil Defense (CoES) indicate that over the past two decades, 60% of the costs of disaster damage in Tajikistan – approximately US $350 million – are attributable to flash floods and mudflows. These figures do not include the loss of income of rural dwellers resulting from these natural disasters. The only financial options for transferring disaster risk in Tajikistan are an underdeveloped private insurance market and the limited coverage offered by the state insurance agency. While multilateral organizations such as the Asian Development Bank are making efforts to test contextually relevant and affordable insurance products, the reality is that these can only partially cover the costs. They cannot mitigate the risk of natural hazards or reduce the vulnerability of rural communities to these hazards. The central remaining role of the state is to invest prudently in disaster risk reduction (DRR) and, more generally, in risk management. In contrast to the prominence of international and multilateral organizations in funding and implementing DRR initiatives, the role of public investment in the maintenance of protective infrastructure – such as gabions, palisades and other forms of riverbank reinforcement – remains murky. Indeed, given that external funding continues to cover routine maintenance and replacement of damaged physical infrastructure, albeit at a declining pace, little advancement is being made in the development of sustainable approaches and systems for effective disaster risk reduction funded by resources generated in country and leveraged through contributions from external sources.

This note highlights the potential of three non-traditional sources for financing DRR in Tajikistan:

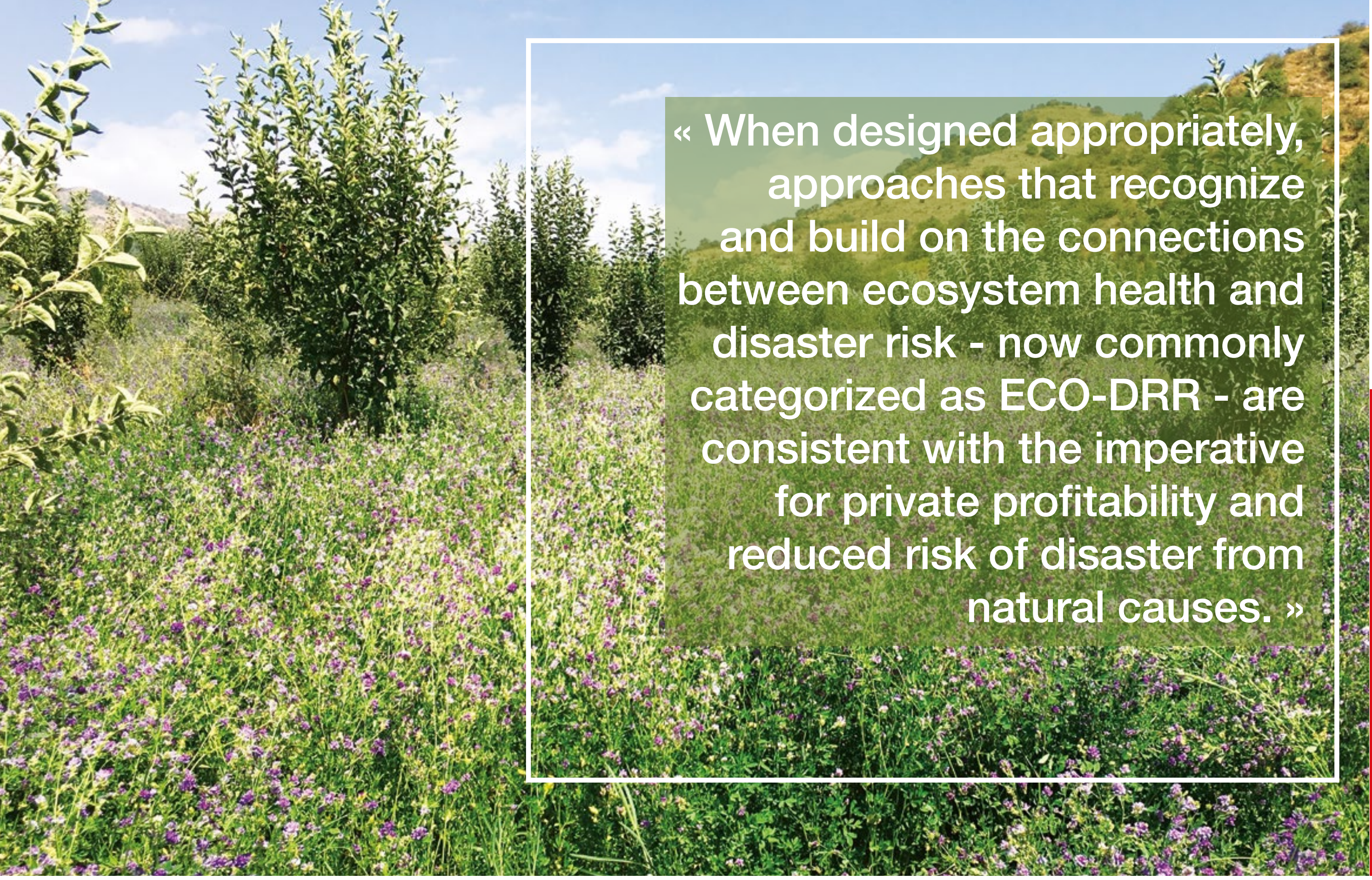
- **Community contributions to district level plans and budgets for DRR**
- **Targeted public sector revenue streams**
- **Outcome-based contingent funding**

In over two decades of engagement in Tajikistan, Caritas Switzerland has uncovered a wealth of knowledge and sustainable approaches for the first two, and is now cognizant of the need for promoting greater recognition of the third. This note provides valuable knowledge, gained through experiential evidence, of significant value to ongoing deliberations on the national strategy for DRR, and to the linked reforms in the water and agriculture sectors. One key message is that DRR should be viewed as a development process that takes a proactive role in generating required finances – both internal and external – to induce innovation aimed at discovering and implementing effective systems for risk reduction and risk management. The grim alternative is the persistence of stopgap financing that does little to advance social and economic development in Tajikistan.

Communities as partners – not bystanders

One outcome of the current water sector reform process is the devolution of flood risk management to district government in line with the development of river basin organizations. This complex process needs to coordinate among various actors and across districts, and has to account for district level budgets that are generally insufficient to provide basic public services. In Muminabad, unofficial estimates suggest that the district budget is often 30% less than that required to maintain basic public services and infrastructure. District officials explain that revenue from tax collection remains low as a consequence of the extensive poverty in rural communities; yet the willingness of communities to invest in DRR measures remains high. Swiss investments in Muminabad district between 2010 and 2019, undertaken jointly with district governments and communities, leveraged community contributions of 20% for physical mitigation infrastructure. For DRR measures that embodied sound environmental underpinnings such as agroforestry plots, sustainable land use management and rotational grazing, community contributions reached 45%. Proposals from communities to invest jointly in maintenance and new construction of riverbank protection infrastructure and in sustainable land use management highlight the interest of communities in co-investing in areas that provide direct and tangible benefits. Caritas Switzerland experience in Khovaling and Shamsidin Shohin districts strengthens this claim, with evidence of community contributions of a similar magnitude.

Unfortunately, however, district level budget processes do not align with the contemporary movement towards the use of community contributions to augment local budgets. One constraint is a seeming lack of ability or authority to pledge and execute a commitment of public funds that is contingent on private co-financing. A second is the lack of systems to effectively separate funds from the general budget for targeted initiatives. One approach implemented by district governments is to tap wealthy entrepreneurs, where they exist, to fund local development initiatives with minimal public resources. Another employs ongoing requests for support from international organizations in the form of diesel fuel or material supplies to support urgent rehabilitation of mitigation infrastructure – an unsustainable situation. An urgent need exists, therefore, to develop effective regulatory and financial systems and processes to tap into the willingness of communities to co-invest and partner with local governments for DRR.

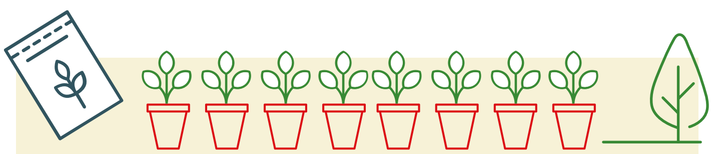


Targeted public sector revenue streams to support DRR

With limited ministerial budgets to support needed agricultural, environmental and water-related initiatives, and with district budgets that are insufficient to provide basic public services, Tajikistan cannot realistically expect to meet its sectoral mandates. In response to this challenge, the country may want to consider income-generating activities, especially those that recognize and build on the connections between ecosystem health and disaster risk, now commonly categorized as ECO-DRR. When designed appropriately, these approaches are consistent with the imperative for private profitability and the provision of public services.

Between 2015 and 2019, German investments in the forest sector of Tajikistan, coordinated by Caritas Switzerland with the State Forest Agency, developed 579 joint forest management contracts between private farmers and state forest agencies (leskhoze) at the district level, covering close to 10,000 hectares of public forest. The 20-year lease agreements were part of a larger forest management plan and commodity-sharing mechanism.[1] The sustainability of this approach is grounded in active involvement of farm households in forest protection, afforestation and rehabilitation, and in sustainable land use management that supports local livelihoods and the prevention of natural disasters. Economic incentives for the state forest enterprises are equally important – reduced need to undertake forest management initiatives, and a negotiated share of the commodities produced, generally on the order of 50%, convertible through commercial sales to cash for local and state budgets.

Caritas Switzerland is testing the development of commercial nurseries in response to the lack of available tree seedlings and rootstock needed to develop afforestation and multi-purpose plantations. These nurseries are strategically placed under the aegis of CoES and backed by sound business and environmental plans. The goal is to combine profitability with the stabilization of fragile environments subject to natural disasters. Efficiently managed nurseries can produce up to **150,000 seedlings per hectare per year**, and supply local communities with healthy and affordable rootstock. With annual profits of approximately **CHF 10,000** **per hectare**, these nurseries (should they increase in area) are likely to play an important role in freeing up sectoral budgets for the maintenance of critical infrastructure and initiatives aimed at prevention of natural disasters. While CoES does not maintain an official mandate for disaster risk prevention, these locally secured resources enable national ownership of the process and promote sustainability.



1- Surveys suggest that hay and fodder (48%), fruits and nuts (28%) firewood (19%) and timber (5%) were primary commodities produced and harvested.

Outcome-based funding

The nature of DRR calls for the development of indicators that are generally defined by outputs – the number of individuals or households covered, measurements of protective infrastructure rehabilitated or newly constructed, the extent of training and the number and workshops delivered, et cetera. From a development perspective, indicators may further consider geographic area covered, number of trees planted, changes in production yield, and growth in household incomes. From an ECO-DRR perspective, however, less visible and often overlooked outcomes should also be embedded into the assessment.

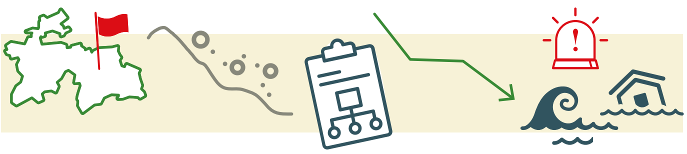
Capitalizing on knowledge gained through the Muminabad experience, Caritas Switzerland has now confirmed the positive effects of sustainable land use management practices on soil health and has identified the mitigation implications of improved soil health on soil erosion, flooding and landslides. Laboratory results from the assessment of a wheat plot under contour ploughing and terracing (treatment) versus a wheat plot under traditional hill slope ploughing (untreated) show significantly higher humus content (2% versus 1.3%). The phosphorous content in the treatment plot was also 50% higher than in the untreated plot. Phosphorous is mostly particle bound, so a higher phosphorous content indicates a lower erosion rate (sediment yield). Interviews with the owner of the wheat plot under the new practice reveal an almost doubling of seed production from 550kg per season to 1,000 kg, confirming that profitability and efficient environmental systems can coexist.

Laboratory tests further revealed that soil hydraulic conductivity in an agroforestry site was 10 times greater than in a nearby untreated wheat plantation site. While soil hydraulic conductivity, defined as the ease with which water can move through soil pore spaces or fractures, is not the same as rainwater infiltration, there is a close correlation between the two. These results indicate that tree planting and agroforestry can reduce run-off and thus reduce flood risk in downstream areas to a significant extent.

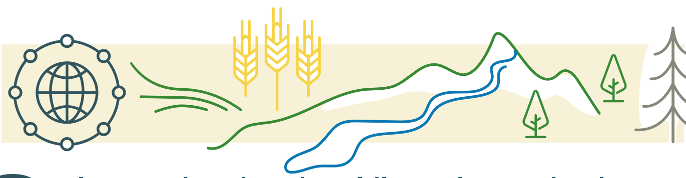
These simple yet effective measures are essential to understanding the impact of ECO-DRR initiatives. Funding agencies should realize that higher production yields and greener landscapes do not always correlate with efficient environmental services and should consider taking measures to hold implementers and governmental partners accountable for delivering sustainable social and economic development.

Development practitioners' concerns about an increased burden of scientific proof may be allayed by the possibility of the scientific community providing funding for DRR linked closely to development – an area not yet fully realized in Tajikistan. The challenge lies in creating appropriate partnerships between the development and scientific communities within Tajikistan and internationally. The scientific community may also open up avenues for DRR financing through "pay for success" initiatives, more commonly known as environmental impact bonds. While these financing mechanisms are complicated, Tajikistan may be able to pilot such initiatives.

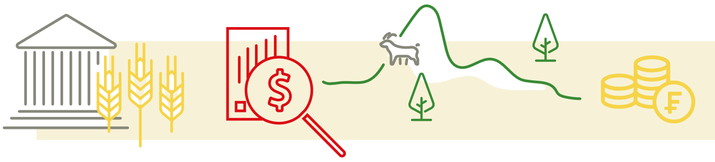
Recommendations



1 Governments at the national, oblast and district levels need to urgently adopt contemporary district development planning processes, particularly those that embrace the willingness of communities to jointly plan and co-invest in measures for reducing vulnerability to natural disasters.



2 International and multilateral organizations should concentrate more heavily on the development of systems and processes that assist ministries and committees with mandates related to agriculture, the environment and development to generate public revenue to support their core mandates. This is of particular and immediate importance for DRR, with linkages spreading across and between the agriculture, forestry and water sectors.



3 Funding agencies must consider alternative modalities for investing in DRR in Tajikistan. While funding for rescue and recovery will remain imperative, funding that is linked environmental services for effective DRR is urgently needed. In the absence of outcome-based funding, the use of external resources to fill budget shortfalls is likely to persist, together with a focus on short-term outputs.

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