

Into Action

11

2021 RISK Award

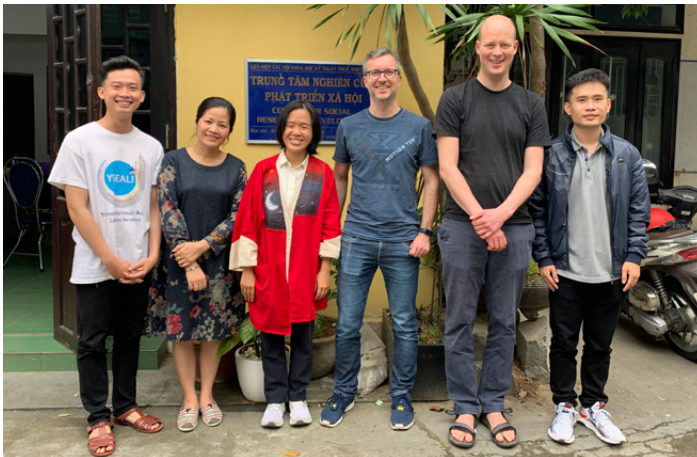
Vietnam

Strong roots, strong women

Edited by Christian Barthelt and Renate Bleich



The 2021 RISK Award, endowed with €100,000, went to the project “Strong roots, strong women: empowering women for community and coastal eco-system resilience in Central Vietnam” co-managed by the Centre for Social Research and Development (CSRD), Vietnam, and the University of Potsdam, Germany. During the two years RISK Award funding phase a mangrove restoration initiative in Vietnam which combined building the resilience of a disaster-prone coastal community with risk-themed theatre plays was established. This brochure presents the most important results.



Truong Nguyen, My Pham, Anh Nguyen (all CSRD), Christian Barthelt (Munich Re Foundation), Philip Bubeck (Potsdam University) and Tuyen Le (CSRD) presented the project in March 2023 during a national conference on eco-based adaptation in Hue on behalf of their respective organisations.

Vision

1

Enhancing the societal and economic resilience of vulnerable women in the project region and beyond through diversifying livelihood options.

2

Enhancing resilience towards natural hazards intensified by climate change for vulnerable communities, especially women.

3

Improving biodiversity and quality of the ecosystems in the project region.

Increasing risks



The world is facing unprecedented pressure. Environmental and climatic changes are projected to worsen with continued emissions of greenhouse gases, ecosystem degradation, population growth, urbanization and economic development. These changes magnify the risk of climate-driven disasters by increasing the frequency and intensity of hazards, altering exposure patterns in many regions, and decreasing the coping capacities particularly of vulnerable groups. Developing countries like Vietnam are projected to suffer disproportionately. One key reason for this is the reliance of the world's poor on ecosystems for their livelihoods and protection from natural hazards, commonly referred to as ecosystem services. The importance of ecosystem services as crucial linkage to and with all dimensions of human well-being is also increasingly highlighted in major international frameworks, such as the Sendai Framework for Disaster Risk Reduction, the United Nation's Sustainable Development Goals (SDG 13, 14 and 15) and the Paris Agreement.



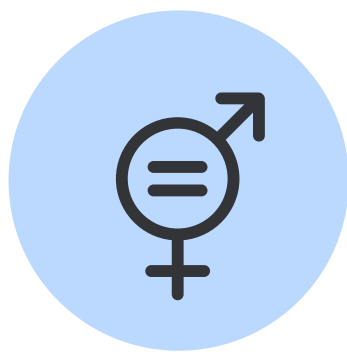
Eco-based adaptation and nature-based solutions



Nature-based solutions (NbS), including ecosystem-based adaptation (EbA) and ecosystem-based disaster risk reduction (Eco-DRR), have recently gained increased importance as no-regret alternatives that can complement, or even replace, grey infrastructure usually being used as a risk management tool. These approaches according to IUCN refer to “the sustainable management, conservation and restoration of ecosystems to provide services that reduce disaster risk by mitigating hazards and by increasing livelihood resilience”. As NbS are more inclusive and accessible for vulnerable groups of society, and because ecosystems support the livelihoods of those directly depending on natural resources, it makes them a promising means to support and protect those vulnerable to natural hazards.



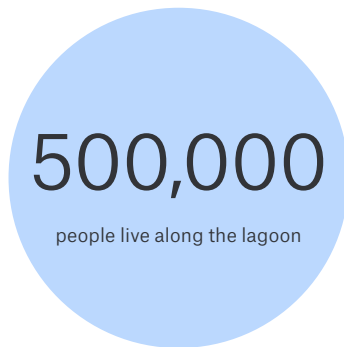
The role of women



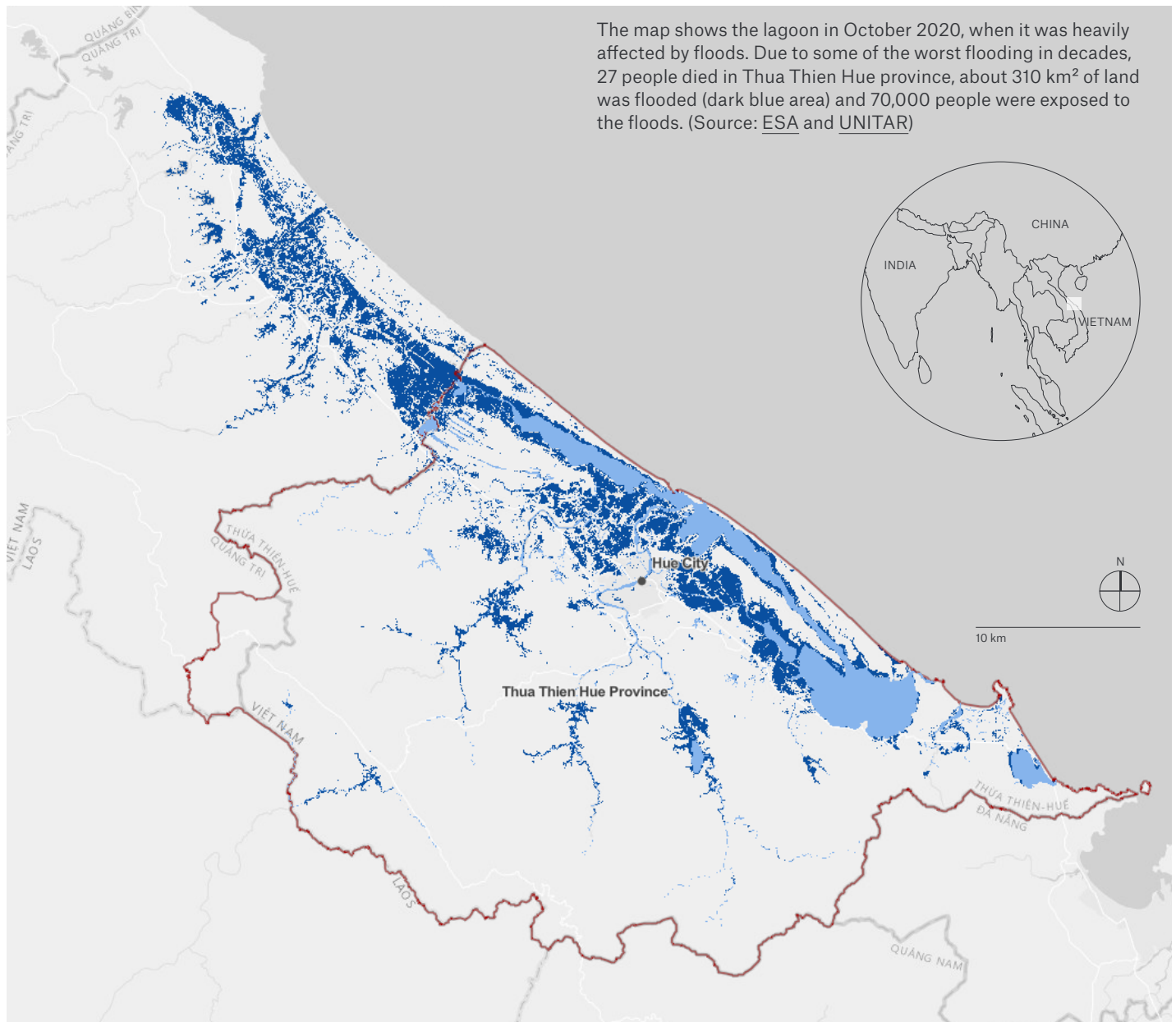
A group that is considered especially vulnerable to climate-related hazards are women in the Global South. They commonly face disadvantages in social, cultural and political domains, as well as legal status and opportunities, affecting all resilience domains of resistance, recovery and anticipatory learning. At the same time, women as important managers of local natural resources and livelihoods have the knowledge and capacity to build community resilience. The urgent need to empower women in disaster risk management to reduce the societal burden from natural hazards is also highlighted by the Sendai Framework. It calls for an all-of-society engagement and partnership to reduce disaster risk, with an inclusive and accessible participation of people disproportionately affected by disasters. Moreover, it explicitly states that “adequate capacity building measures need to be taken to empower women for preparedness as well as to build their capacity to secure alternate means of livelihood in post-disaster situations”. Gender equity is also one of the 17 SDGs (SDG 5).



Tam Giang Lagoon



Vietnam is among the world's most affected countries by extreme weather events and climate change. The project location of the implemented action, Thua Thien Hue province in Central Vietnam, is a coastal province that faces chronic stress from coastal, fluvial and pluvial flooding. In the past three years, the province was hit hard by catastrophic floods and cyclones. The project focused on the Tam Giang Lagoon, which is the largest lagoon in South-East Asia. Roughly 500,000 people live in 33 low-lying communes along the lagoon and the coast. Approx. 100,000 people rely directly on the Tam Giang Lagoon as fishing grounds and for water provisioning; while 200,000 rely indirectly on the ecosystem services provided, such as flood protection and coastal agriculture.



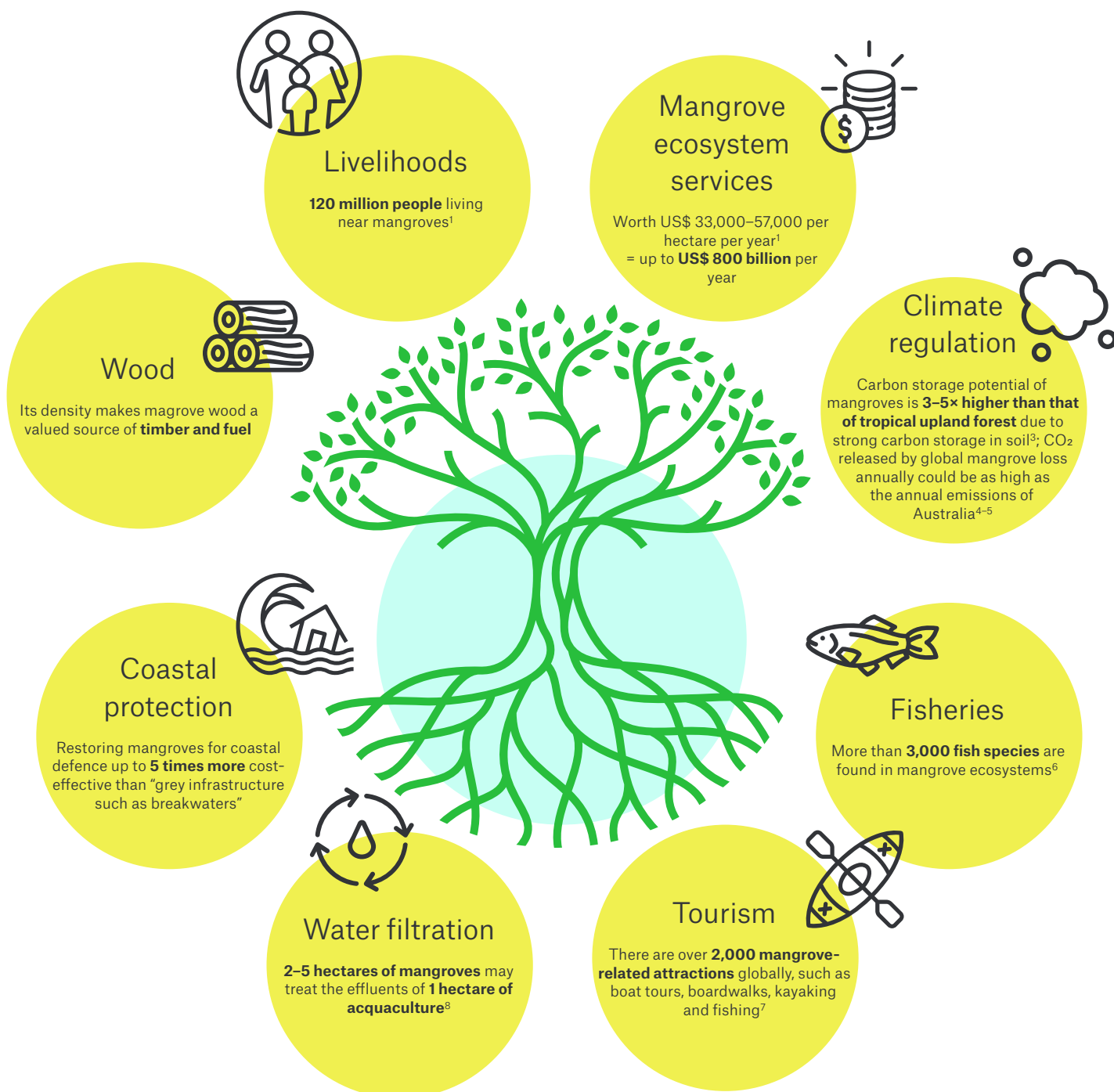
Mangroves for disaster risk reduction

Mangroves can significantly contribute to a reduction of flood risks and coastal erosion by reducing wave and tidal energy by up to 50%. In addition, mangroves generate multiple social, economic and cultural co-benefits that support the livelihoods of poor and vulnerable groups directly depending on natural resources. For instance, mangroves provide critical nursery and breeding habitats to many terrestrial and aquatic species, act as effective nutrient filters, support rural economies and provide opportunities for recreation and eco-tourism. In our project location, livelihoods directly depend on the lagoon and the health of this unique ecosystem. Many women in coastal communities engage in on-shore fishing and thus directly depend on sea-food abundance in the lagoon.

Results from a household survey in 2018 showed that, on average, 55% of household incomes and a little less than 20% of households' food consumption, comes from self-caught seafood. Moreover, mangrove forests are some of the most carbon-dense ecosystems globally and can act as long-term carbon sinks thus contributing to climate change mitigation. With these benefits in mind, the RISK Award aimed to set up sustainable structures to support mangrove reforestation in the project area.



Ecosystem services: the benefits people derive from mangroves



Source: Increasing success and effectiveness of mangrove conservation investments. A guide for project developers, donors and investors, Raphaëlle Flint, Dorothee Herr, Francis Vorhies and James Roland Smith; Federal ministry for Economic Cooperation and Development, WWF, IUCN, 2019, →[Link](#)

- 1 UNEP, 2014
- 2 Giri et al., 2007
- 3 In the Indo-Pacific region; Donato et al.
- 4 Up to 450 million t CO₂; Pendleton et al., 2012
- 5 In 2015; EDGARv4 3.2., 2018
- 6 Sheaves, 2017
- 7 Spalding et al., 2016
- 8 Primavera et al., 2007
- 9 In Vietnam; Narayan et al., 2016

The values in the chart refer to various regions and sources (see Sources). They do not refer directly to our project region.

The nursery

45,000

seedlings grown

The project team established a mangrove nursery and firmly embedded it in community structures. The nursery is located at Tam Giang Dam and comprises more than 3000 m². It is run by two community groups of 11 people each. About 45,000 mangroves were raised in three planting cycles in the nursery during the RISK Award funding period. About 25,000 of these survived the severe floods in 2021 and 2022 and were or will be used for reforestation on about 12 hectares of land mainly in Hai Duong. Although this rather small area of mangrove forest cannot provide flood protection on a larger scale, it has considerable positive impact. It stabilizes the ecosystem, increases fishing opportunities, serves as a barrier against the discharge of waste into the sea, and fishermen can safely moor their boats during storms.



Capacity training for management of the nursery

22

community members are trained
for nursery care

In order to run the mangrove nursery independently, the local groups were trained in three ways: from a biological point of view, to select the right seedlings and care for them; from an organizational point of view, to independently manage the tree nursery; and from a financial point of view, to organize the sale of the seedlings to fund the nursery in the long run. At the beginning, the project team assembled a core group of 30 volunteers, divided into two groups. They received training on the various topics. A biologist presented different mangrove species, their advantages and disadvantages, explained risks and how to counteract them, and determined the optimal planting and distribution times. Furthermore, the core group received instructions on how to organize the planting of the more adult seedlings in the lagoon. The core group has also been supported in its work by the management board of the commune's people's committee, which is the main decision-making body at the communal level. The integration of project structures into local political systems was important for the long-term success and acceptance of the project. Today the core group consists of 22 people.



Selling of seedlings



In the course of the project, several thousand seedlings from the nursery were planted in the lagoon. At the beginning, this was financed as part of the project. However, it quickly became clear that the nursery had the potential to attract community investments from the private sector. Businesses from Vietnam and abroad showed interest in buying mangrove seedlings and financing their planting as part of their corporate responsibility activities. Two well-known financiers were found, the British furniture manufacturer Cotswold Co. and the Vietnamese organization Morico. Around €30,000 of private adaptation funding have already been secured during the project period. The goal is to further expand this financing option. The mangrove nursery can thus largely finance itself without having to rely on donor funding. The 22 volunteers should also coordinate the sale of the seedlings independently. However, access to the market is a great challenge for this group (→see challenges).



Empowering women for disaster risk reduction

In order to strengthen resilience in the project region, the RISK Award project pursued a multi-part approach. Besides the establishment of the nursery, a second goal was to train the target group, women in local communities, as risk managers, climate adaptation actors, and active agents of change. For this purpose, ten training groups were established in five communities around the lagoon. These consist of about ten members each, 80% of whom are women. CSRD organized a series of trainings on EbA, NbS and climate change in close cooperation with the Women's Union Vietnam and local community leaders.

As a result, women gained access to knowledge and information that empowers them to increase safety for themselves, their families, and subsequently their communities. Their visibility was strengthened in the communities and links established with the governmental Disaster Management Centre (DMC) hence highlighting the important role of women in DRR.



A nursery employee shows a mangrove branch with a caterpillar. These infest young plants and can become a real nuisance. They are removed by hand to protect the trees.

Alternative livelihood models

100

people directly trained in
NbS and EbA

In addition to the disaster preparedness and risk management trainings, there was also a need to promote a holistic understanding of EbA. Climate adaptation is not only about disaster mitigation, but also about new sustainable income opportunities. EbA can be used to develop alternative livelihood models. Especially in times of storm, flood or drought, many day laborers cannot pursue their regular jobs. Fishermen — very present in the lagoon — are massively restricted during these times. That is why it is important to give people alternatives. These alternatives were developed in workshops by the communities themselves, building on groundwork laid by CSRD. The project team had shown the theoretical potential of sustainably managed ecosystems as income resource beforehand. Various ideas were developed in a contest-like format. Three alternatives were finally implemented in the course of the project, two of them also financed. The financed models are organic food production for fishery and organic fertilizer for small-scale farming. A third model for sustainable eco-tourism was involved as well. This project had been organised by the participating women's group on their own and started already before the RISK Award funding. The three alternatives can become a more secure source of income in the future for communities threatened by natural hazards.



Workshops, exhibitions and theater plays for dissemination

1,000

people sensitized via exhibitions
and theater plays

The core group of the project which consisted of around 100 mainly female participants of the risk seminars, were to pass on knowledge to their families and thus strengthen the communities. At the same time, the aim was to disseminate the know-how acquired by the project core group to a wider public. For this purpose, several exhibitions were organized, further workshops with local politicians conducted and theater plays were performed. The latter are considered memorable, educational teaching tools, especially in regions without constant access to digital media. Well over 1,000 people were reached via these activities. Important network partners from politics, research and administration joined in. More transparency on DRR and expertise on EbA was built up that way.



International visibility

The goal of the RISK Award is not only to provide local support but also to create visibility for the project and the topic on a national and international level. In addition to intensive reporting on the websites of the project partners and their social media platforms, many other channels were used for “Strong Roots, Strong Women”. One peer-reviewed journal contribution was published in Climatic Change and one article on the evaluation of the theatre performances is currently in progress. A StoryMap accompanied the project, films on local television and on Youtube created visibility. The project was featured in about 10 newspaper articles in Vietnam. Further, the project was presented at international platforms such as the Resilience Hub during the World Climate Conference 2021 (COP26), at a side event of the Global Platform for Disaster Risk Reduction (2022), the UNEP Conference 2022 on „Commission on the Status of Women” and the Potsdam Summer School 2022.



Challenges and lessons learned

The project was complex and touched on environmental, social, economic and politically relevant areas. Thus, it is clear that there were and still are risks to the progress of the project.



Environmental challenges

The project region is a highly flood-prone area. Unfortunately, during the project period, the nursery was flooded twice by extreme floods, some of them long standing, which destroyed a significant part of the seedlings. The team successfully managed risk via elevating the cultivation areas and installing pumping systems. However, with climate change, rare severe or extreme events threaten to become more frequent, making further adaptation difficult.

Political challenges

The land in Vietnam belongs to the state and the state decides on land use. There is a certain risk that land use planning will change, disrupting operations of the mangrove nursery. Also the space for mangrove afforestation is very limited and has to be assigned by public authorities. On the positive side, the province around Hue is putting a lot of (political) energy into the renaturation of the lagoon. Synergies may be realized with other conservation efforts.

Social challenges

The whole project is built on the voluntary cooperation of local women. They show great enthusiasm and are intrinsically motivated. However, the project must also show lasting success in order to be accepted in the local communities in the long term. Here, the team benefits from its good networking in local structures through the Women's Union and other players such as the DMCs, and local community leaders.

Economic challenges

The approach of selling the mangrove seedlings on the private market is promising. However, there are hurdles to overcome. The local core groups hardly have access to national or international companies. An intermediary will be necessary to support them in the medium term. Complete ownership by the local communities cannot be achieved in this way. In addition, all the actors involved are non-profits, which also makes it difficult to develop the nursery into a self-sustaining business model.

To address these challenges, the project team has come up with manifold strategies. Based on that we formulate three key recommendations for similar projects.



Build partnerships and networks

The project team succeeded in working together with actors from private sector, academia, civil society and public authorities in Vietnam. In this constellation, the project can be sustainable and create a long-term impact. Investment in networks and partnerships is immensely important. At the same time, placing ownership of the project mainly in the hands of the local communities from the beginning on is indispensable. Already existing local networks helped to create local ownership.

Create sustainable financing mechanisms

By selling the mangrove seedlings, the project team manages to refinance at least parts of the costs of mangrove reforestation. Also, the development of alternative livelihood options reduces the project beneficiaries' dependence on cash payments from external donors. This setup allows the project to bear fruit beyond the grant period.

Plan for the long-term

The RISK Award supported a two-year period of the project in Vietnam. However, the groundwork for this was laid well in advance. I.e. we could build on results from a predecessor project. The outlook also shows that an end to the project work is not in the near future. For truly effective measures in the field of climate change adaptation, time horizons of several years must be planned accordingly. Shorter time frames are unlikely to lead to the desired impacts.

Conclusion

The project has made many important connections for local women. Collaboration with the Women's Union has increased visibility and raised awareness of the role that women play in building resilience. Stakeholders in the DMCs have confirmed the need to further involve women in administrative DRR processes. In the communities themselves, awareness of climate change and adaptation opportunities has significantly increased.

The nursery is pre-funded for still some time and, if all goes according to plan, can be largely self-sustaining through seedling sales. It continues to be the basis for further mangrove restoration efforts in the project region and the improvement of livelihood opportunities. The mangrove nursery now empowers women to enhance community and ecosystem resilience in Hai Duong and the wider Tam Giang Lagoon and contributes to social and economic stability.



"One of the biggest impacts of the "Strong Roots, Strong Women" project is to change the mindset of every woman and man. It was common that disaster prevention and rescue were majorly male responsibilities. However, the project has shown that women can play a crucial role in risk disaster prevention and management, and in increasing local resilience. Now, in this project, women are doing risk prevention and management through mangrove nursery activities and their theatre plays."

— Representative of Womens Union, 2023

The risks posed by population development, environmental and climate change are increasing. Complex technical systems and infrastructure are additional risk factors. The RISK Award partners recognise the need to address this development. This award has been set up to improve risk reduction and disaster management by providing financial support to projects dedicated to this topic. We want to support innovative ideas, to help them develop further and to scale them. Visibility, impact and enthusiasm should be embodied in the projects. Climate change, disaster risk reduction and sustainable development must go hand in hand to secure the future. For this reason, our projects are in line with the 2015 Paris Agreement, the UN Sustainable Development Goals (SDGs), and the Sendai Framework for Action.

The RISK Award, endowed with €100,000, is assigned to operational projects in the field of risk reduction and disaster management. The prize is awarded every two years. The endowment for the RISK Award is provided by the Munich Re Foundation. We use UNDRR's networks and platforms to inform about the topic, select winners, and organise the award ceremonies – on site and online. Together, we can provide the winners with the visibility their outstanding project ideas deserve.

[→ RISK Award](#)

[→ RISK Award LinkedIn](#)



UN Office for Disaster Risk Reduction (UNDRR)

The UN Office for Disaster Risk Reduction (UNDRR, formerly known as UNISDR) was established in 1999. It is mandated by United Nations General Assembly Resolution 56/195 to serve as the focal point in the UN system for coordinating disaster risk reduction. It advances the implementation of the Sendai Framework for Disaster Risk Reduction and guides and coordinates the efforts of a wide range of partners to achieve a substantial global reduction in disaster losses, and to build resilient nations and communities as a fundamental condition for sustainable development. It is an organisational unit of the UN Secretariat and is led by the UN Special Representative of the Secretary-General for Disaster Risk Reduction (SRSR), Mami Mizutori.

[→ UNDRR](#)

Munich Re Foundation

The Munich Re Foundation is an independent, non-profit organisation founded by Munich Re in 2000. People are ultimately at the core of the foundation's work. The foundation's task is to prepare people for the risks they are exposed to and to minimise these risks wherever possible. It clarifies issues and provides support, including in developing countries. In dialogue with partners worldwide, Munich Re Foundation stimulates ideas and creates perspectives.

[→ Munich Re Foundation](#)

Implementing organisations of the 2021 RISK Award

The Centre for Social Research and Development (CSR)

CSR was founded in 2008 and is based in Hue, Central Vietnam. It is a self-funded, women-led non-profit organization (NPO) working to seek justice for vulnerable communities threatened by external hazards. CSR has retained a geographical focus in Thua Thien Hue and adjacent provinces in the Central Region of Vietnam but has also undertaken projects throughout the lower Mekong. CSR has ample experience in implementing pro-vulnerable projects on climate change adaptation, disaster risk reduction, gender equality, livelihood development, water management and waste management, and environmental protection.

[→ CSR](#)

UP Transfer GmbH at the University of Potsdam

The activities were carried out by members of the working group 'Geography and Disaster Risk Research' at the Institute of Environmental Science and Geography at the University of Potsdam through the UP Transfer GmbH. UP Transfer GmbH at the University of Potsdam, founded in 1998, is a 76% subsidiary company of the University of Potsdam. UP Transfer is actively engaged in the transfer of current research outputs to businesses, and in assisting them to develop innovative products, processes and services. UP Transfer GmbH offers scientists and their project teams extensive benefits along with the flexibility of a "temporary company", mainly in the fields of basic scientific, applied and development/contract research.

[→ UP Transfer](#)

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Page 6: Data set from ESA and
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