

ALTERNATIVE LIVELIHOODS IN RURAL LANDSCAPES OF THE RIO DOCE BASIN AFTER THE FUNDÃO DAM FAILURE

CREATING OPPORTUNITIES FOR THE FUTURE

The historical trajectory of the Rio Doce watershed has been largely driven by the extraction of natural resources, resulting in widespread environmental degradation. The region's potential is limited by path dependency in which future development is affected by historical activities and decisions and actions traced out in the past.

The response to the large-scale impacts caused by the failure of the Fundão Dam provides an opportunity to rethink the region's economic trajectory and to seek different pathways that will empower the communities that depend on the watershed for their livelihoods and to respond in a more resilient and sustainable way to development opportunities.

PATH DEPENDENCE
HISTORICAL ACTIVITIES BASED
ON EXTRACTION OF NATURAL
RESOURCES

- Mining
- Silviculture with non-native species
- Mechanized export agriculture
- Unsustainable agriculture and overgrazing
- Overfishing in the Rio Doce and coastal areas

LONG-TERM OPPORTUNITIES

LEARNING ECONOMY

- Innovation and knowledge-based activities

RESTORATION ECONOMY

- Agroforestry, natural regeneration, payment for environmental services (PES), sustainable fishing

COMPLEMENTARY ACTIONS

- Public investment
- Technical assistance and rural extension
- Opportunities for apprenticeship
- Financing

IMPACTS ON ENVIRONMENT AND LIVELIHOODS

- Deforestation
- Invasive species
- Water pollution
- Soil erosion and degradation
- Reduction of fish stocks

ECONOMIC BENEFITS

- Increase the number of jobs and revenues related to learning and restoration economy and resumption of economic activities
- Diversification of economic opportunities for youth

BENEFITS FOR ENVIRONMENT AND LIVELIHOODS

- Restore stream flows
- Reduce sediment loads
- Improve water quality
- Support biodiversity recovery



WHAT SHOULD BE DONE?

The Rio Doce Panel recommends possible concrete actions to ensure a transition in the Rio Doce watershed, from day-to-day survival to socio-environmental sustainability through alternative livelihoods in rural landscapes. The recommendations incorporate measures to promote regional economic alternatives.



RIO DOCE FACTS

1. By the time of the Fundão dam failure, mineral extraction and manufacturing were responsible for, respectively, 12% and 27.7% of the gross regional product of 102 municipalities in the Rio Doce watershed.
2. Existing employment data (MTE, 2018) suggested that primary occupations in agriculture and mining were heavily affected by a combination of the suspension of Samarco operations as well as by broader economic and environmental conditions.
3. In the short term, the sector that has been most impacted – vulnerable to layoffs and the loss of markets – is the mining sector itself. Fisheries, tourism and dairy have also suffered repercussions due to restrictions on activities related to the dam's failure.
4. The role of Renova Foundation in restoring 40,000 ha of degraded land through riparian restoration and agroforestry practices was an important stimulus for reinforcing restoration throughout the Rio Doce watershed.
5. Initiatives led by Renova Foundation, such as the production of tree seedlings of native species led by community members in Periquito, MG, or the Desenvolve Rio Doce working capital fund are directly contributing to generate knowledge and economic results related to the restoration efforts.

Recommendations



1. Identify opportunities and constraints on rural value chains and production practices, offering the potential for alternative local products and services to gain in scale and to generate backward and forward linkages between local economies and employment, with an emphasis on forest restoration, good agriculture and cattle-raising practices, rural tourism, ecotourism and environmental improvement. The analysis should examine factors that will enhance the combined effectiveness of policy instruments, investment strategies and risk-sharing mechanisms, such as price guarantees and institutional purchasing.



2. Coordinate capacity assessment/training, business planning, creditworthiness and financial instruments among existing institutions through partnerships, including those with whom Renova Foundation is already engaged, such as the microenterprise and small business support agency Serviço Brasileiro de Apoio às Micro e Pequenas Empresas (SEBRAE). In addition, Renova could extend such partnerships to include local chambers of commerce, rural technical assistance by EMATER (Empresa de Assistência Técnica e Extensão Rural), NGOs and the “S” system* of vocational training, emphasising initiatives that can train and employ youth.



3. Assess the need for additional policy or financial instruments, such as creating a fiduciary fund to stimulate investment in economic alternatives. A forward-looking assessment of synergies between existing and innovative measures, together with approaches to override path dependency and the orchestration of institutional partnerships is required. Among the complementary policy instruments to be prioritized are those which target sustainable rural development, food security, integrated climate mitigation and adaptation, and rural technical assistance to promote associative enterprises and short supply chains for agroecological produce and farm-based or ecotourism.

*The “S” system, created by productive sectors (in industry, commerce, agriculture, transport and cooperatives), offers free courses in key areas of industry and commerce, in addition to having developed a network of schools, laboratories, and technology centres throughout the country.