EXPLOITATION CANVAS

Arena: Trento [The Fersina, regenerating an urban river]

BioValue

BioValue's Ambitions:

Ambition 1: spatial planning safeguards, restores, allows recovery and enhances biodiversity.

Ambition 2: spatial planning significantly contributes to balanced and responsible consumption and production (avoiding external social and environmental costs).

Ambition 3: spatial planning significantly contributes to reducing socioeconomic inequalities.

About this template

The Business Model Canvas **maps** out key actors, activities and resources, the value proposition and more.
Here, it has been revised to **strategise** and inform the experimentation of BioValue's research framework.

The focus is on the **post-project exploitation**, providing a template for developing a short-run (4-year) action plan and presenting it to the outside.

ARENA AMBITION

Contextualisation:
Transform how the Fersina River corridor is understood and managed, shifting from a hydraulic-infrastructure approach to a model of ecological and social regeneration, to align spatial planning with ecosystem service logic and to restore lost relationships between the river and the communities it traverses. Reframe the river as both a spatial connector and a vehicle for climate resilience, social cohesion, and health.

*What is the intended **post-project ambition**?*
Intend biodiversity not as a constraint, but as a generative force that can guide zoning, stimulate inclusive co-design, and elevate well-being. Consolidate this model through new governance practices, planning standards, and monitoring strategies embedded in municipal and provincial frameworks (revision of the General Regulatory Plan).

IMPLEMENTATION ACTIVITIES AND ROADMAP

*What **activities** will the Arena ambition and transformative change be achieved through?*

- Launch of SEA/PRG coordination work
- Development of pilot project concept and participatory validation
- Execution of €100,000 pilot project
- Finalisation of Fersina Masterplan with scenario-based zoning and ES mapping
- Launch of voluntary SEA for the Masterplan
- Voluntary environmental monitoring before and after execution.

*What exploitation **roadmap** is envisioned to reach the intended post-project ambition?*

- Creation of an interdepartmental biodiversity coordination unit
- Possible replications of BioValue methods in similar regional Rivers
- More frequent adoption of participatory procedures into municipal planning regulations
- Continuous evaluation and data feedback into PRG monitoring.

CONTRIBUTION AND RESULTS FROM BIOVALUE

*Detail the role of **Key Exploitable Results** in the Arena:*

- KER1: Enabled a redefinition of the Fersina River corridor as a socio-ecological infrastructure, elevated biodiversity and ES to drivers of urban transformation, and supported narrative framing for political communication and funding proposals
- KER2: Delivered mapping techniques, causal loop tools, ES assessment frameworks, and scenario design methods scaled into real planning processes (Masterplan, PRG, SEA), and contributed to design spatial indicators for regulatory zoning
- KER3: Structured multi-actor governance, aligned planning and environmental procedures across departments, and generated momentum for voluntary SEA and to integrate participatory milestones in PRG updates.

*In terms of **contributions** during the project, BioValue:*

- Positioned biodiversity and ES as central pillars in Trento's urban planning narrative
- Created an enabling environment for cross-sector collaboration through facilitation and participatory planning formats
- Provided planning legitimacy and technical justification to integrate ES mapping and governance reform into the PRG revision.

*In terms of **post-project** potential:*

- BioValue's methods will be used to design and assess future scenarios along the neighbouring rivers
- The approach is transferable to other Italian cities addressing river-based urban regeneration
- The causal map tool and facilitation formats will be adapted for school programmes and civic learning.

KEY STAKEHOLDERS AND MAIN ACTORS

*Which stakeholders do you expect to be most **relevant** for the post-project exploitation?*

- Municipality of Trento (Urban Planning, Regeneration, Environmental Transition departments, Parks and Gardens Office)
- Province of Trento (PAT)
- Academic and technical partners (University of Trento)
- Local associations and NGOs (Ecomuseo Argentario, Associazione Pescatori Trentini, SAT, and other civic associations)
- Health and education (Azienda Sanitaria, Liceo Galilei, primary schools)
- Community representatives (neighbourhood councils and residents along the river)
- Private and hybrid actors (energy providers, consultants involved in masterplanning processes).

KEY INSTRUMENTS AND TOOLS

*Which instruments do you expect to employ for the post-project **exploitation**?*

- SP&MIs: Biodiversity-based zoning overlays (e.g. ES hotspots, urban cooling zones), spatial guidelines in the PRG and Green Plan
- EAIs: SEA methodology tailored for green infrastructure, use of indicators for carbon sequestration, habitat quality, flood retention
- E&FIs: Betterment levies and land value capture, sponsorships and crowdfunding (including to support the Canyon Park development), experimental PES (Payment for Ecosystem Services) schemes in development.

VALUE PROPOSITION

*What **motivates** the intervention in the specific Arena context? What **transformations** will be achieved in your Arena? How do these relate to and build towards the **post-project ambition**?*
The intervention is driven by the gap between the Fersina River's ecological potential and its heavy anthropization in Trento's urban fabric. The river's fragmentation highlights the need to reconnect nature, communities, and urban policy.
The Arena aims to transform the river corridor into a socio-ecological infrastructure - enhancing biodiversity, public health, and social inclusion through ecosystem service-based planning.

POLICY AND SPATIAL PLANNING FRAMEWORK

*Which spatial planning law and regulations **impact** your Arena?*
*How is the regulatory environment expected to affect the post-project **exploitation**?*
The policy and regulatory framework is shaped primarily by the General Regulatory Plan (PRG). Through BioValue, key principles such as green-blue infrastructure, accessibility, and ES-based prioritisation are being introduced into Article 86 of the planning code, which governs river buffer zones. The PRG revision process is also supported by the Urban Green Plan and the Building Code, particularly in terms of climate adaptation and the implementation of nature-based solutions. The voluntary application of Strategic Environmental Assessment (SEA) to the Fersina Masterplan has demonstrated how traditional assessment tools can be reinterpreted as proactive instruments of transformation. Post-project, the Arena expects these frameworks to institutionalise BioValue methods, embedding participatory procedures, biodiversity indicators, and scenario-based planning into official spatial instruments.

KEY RESOURCES

*Which resources are expected to be **crucial** for the post-project exploitation?*

- Institutional resources: Political mandate and planning legitimacy provided by the Municipality of Trento and PAT, formal governance instruments such as the Protocol of Objectives and planning mandates
- Human resources: Cross-sectoral technical staff (urban planners, engineers, ecologists), community engagement facilitators and school programme coordinators
- Knowledge and data: Ecosystem service maps and hydrological simulations, co-created knowledge from participatory mapping and scenario building
- Financial resources: Municipal investment lines (pilot project funding secured), EU programme access (LIFE, Interreg, Horizon), private sector partnerships for specific sites (e.g. Canyon Park).

*Which ones are **not** currently present and will have to sourced or developed?*
Long-term facilitation and mediation capabilities, mechanisms for inter-institutional alignment with PAT, legal design for PES and hybrid E&FI tools.

BARRIERS AND CHALLENGES

*Which are the main barriers and challenges foreseen for post-project **exploitation**?*

- Fragmented governance between municipal and provincial authorities
- Resistance to reducing infrastructure, especially car based, dominance in river spaces
- Lack of integration with valuation of ecosystem services
- Risk of political shifts deprioritising long-term biodiversity goals
- Difficulties in aligning sectoral logics (e.g. engineering, health, environment)
- Limited staff time and budget for process facilitation and co-creation.

ENVIRONMENTAL VALUE LOSS

*What **negative impacts** and **costs** could result from the activities envisioned for post-project exploitation, from an environmental point of view?*

- Risk of ecologically unsound river redevelopment
- Risk of pressure on river habitat due to tourism over-development
- Possible symbolic use of ES terms
- Risk of reduced habitat quality.

ENVIRONMENTAL VALUE CREATION

*What **positive impacts** and **benefits** could result from the activities envisioned for post-project exploitation, from an environmental point of view?*

- Riparian habitat restoration
- Improved flood resilience and green infrastructure connectivity
- Nature-based urban cooling and increased biodiversity near urban areas.

SOCIAL VALUE LOSS

*What **negative impacts** and **costs** could result from the activities envisioned for post-project exploitation, from a social point of view?*

- Loss of trust if participatory promises are not fulfilled
- Potential reinforcement of spatial inequalities
- Risk of gentrification for the Clarina neighbourhood.

SOCIAL VALUE CREATION

*What **positive impacts** and **benefits** could result from the activities envisioned for post-project exploitation, from a social point of view?*

- Stronger civic identity
- Health benefits
- Educational opportunities via school involvement
- Empowered neighbourhoods through engagement and co-design.

ECONOMIC VALUE LOSS

*What **negative impacts** and **costs** could result from the activities envisioned for post-project exploitation, from an economic point of view?*

- Possible inefficiencies in land use
- Risk of high costs due to vegetation maintenance in urban sector of the river

ECONOMIC VALUE CREATION

*What **positive impacts** and **benefits** could result from the activities envisioned for post-project exploitation, from an economic point of view?*

- Improved planning efficiency
- "Green" job creation
- Climate adaptation savings
- Attraction of public-private investment and improved access to EU funding streams
- Financial self-management of the Canyon park through revenue of Orrido di Ponte Alto ecomuseum and other activities.