

MAKE

IT

GREEN



**Coastal
Brownfield
Remediation**

M.I.G. TEAM

DINO RODIĆ JELENA KORITNIK NINA ĆORIĆ ANA BOŠNJAK ANA JURIĆ

ZDRAVI I VESELI BILI

KEEP HEALTHY AND JOYFULL

BROWNFIELD REMEDIATION METHODOLOGY

detailed study of the brownfield area according to the Norwegian protocols (**sufficient number of samples** from both land and underwater waste)

excavation of the underwater waste - used as **secondary resource**

characterization (according to the study) of all waste in:

- a) reusable part (in groups appropriate to the level of contamination and with testing of material characteristics) as a cover/surface layer
- b) unusable part is deposited on the side

during the works & construction - **wetting the material** to prevent dust spreading

if needed: before covering - **fitoremediation** with suitable plants milk thistle (*sikavica*) and brown mustard (*gorušica*)



— ECONOMY ASPECT —

KEY PARTNERS

Jadrolinija
local governments
transport companies (ferry and bus)
dock concessionaires
residential and bussines investors

KEY ACTIVITIES

passanger transport
dock rental
hospitality, residential, bussines,
sports and recreational facilities
tourism
cultural activities

KEY RESOURCES

reusing waste
polluter pays
EU fonds
partner investors

ECONOMY ASPECT

COST STRUCTURE

financial self-sustainability of chosen activities

expensive remediation but necessary

COSTUMER RELATIONSHIP

work opportunities
wide range of content for both local residents and tourists

VALUE PROPOSITION

reliefe of Split ferry port
connecting Dugi Rat with surrounding areas
tertiary sector growth

ECOLOGY ASPECT



POSITIVE EFFECTS

removal of underwater waste lowers the threat to the marine ecosystem

naturally present clay minerals in sea sediment adsorb potential remaining pollution

green areas contribute to biodiversity (bees, ...)

reusing waste as a material

NEGATIVE EFFECT

ferry port effect on the environment acceptable as the depth of the area is not suitable as a beach and is suitable as a ferry port which is **needed in the region**

ECOLOGY ASPECT

POTENTIAL IMPACT OF THE CLIMATE CHANGE

sea level rise
more frequent and intense extreme
weather events

facilities place near the coast are more
resilient and adaptable to the changes
(concrete ferry and green areas vs.
high-rise construction)

METHOD OF MEASURING

long-term monitoring of the environment
according to the Norwegian standards
and protocols (seashells, ...)

END OF LIFE

chosen content is long-lived and not
dependent on economic trends

SOCIAL ASPECT

according to the local interviews

PROBLEM DEFINITION

brownfield remediation
ferry port necessity in the
region
work opportunities to keep the
residentes here

SOCIETAL CULTURE

governance distrust &
resentment
fear of pollution & of
abandoning ancestry

PROBLEM SOLUTION

local trust & satisfaction recovery
by transparent remediation
prevention of health risks and
fears
creating content for a wide range
of local wants and needs

**REMEDICATION OF BROWNFIELD,
REMIATES SOCIETAL CULTURE**

**NOT POSSIBILITIES,
NECESSITIES!**

SOCIAL ASPECT

USERS

local residents of wide age
range
tourists, dock users, travelers

employment for different
levels of education

VALUE

cultural , sport, recreation, health and
green area offer for both residents
and tourists

theatre, museums (remembrance of
the factory and Drago Ivanišević)

eco-awareness

M.I.G - Dugi Rat

urban plan
mj:1:5000



1. PUBLIC AND SOCIAL PURPOSE

The space is created in the center of Dugi Rat. It would contain a small square, a multi-purpose building, a hall, a small museum with a presentation of the history of the area and an exhibition of the works of the writer and painter Drago Ivanišević and a new theatre.

2. PARK

We propose to build a green area that extends from the existing landscaped garden in the north, across the waterfront to the central part of the area. The park is decorated in a Mediterranean style with autochthonous and local plants, inside it there is also a summer stage that the local community would use for cultural events, outdoor concerts and performances. The park would contain a few coffe shops, sports fields, a running track and playgrounds, making it suitable for many ages.

3. PARK / HOUSING AREA

It is proposed to build a residential area that depends on the needs of the local community. Originally, this space was intended as a park with phytoremediation with suitable plants. If the community sees that new residential construction is needed due to increased traffic from the port and new tourist and social facilities, the space can be used for the construction of a residential area after rehabilitation.

4. ADMINISTRATIVE PREMISES AND BUS STATION

We propose to build the administrative and control areas of the port, parking, and move the old and rundown bus station to a new area with a new approach and traffic distribution.

5. FERRY PORT

We propose to build a ferry port with a vehicle loading area. The port area is surrounded by a breakwater and is located in an area that is being rehabilitated and returned to the original coastline before the disposal of waste material.

6. RENOVATION OF THE OLD PORT

We propose to renovate the old port and add a new extension which would also be used as a new recreational area for water sports.

7. TERRACE GARDENS

Construction of terraced gardens for the purpose of remediation of the terrain and protection from the busy road. The gardens are filled with Mediterranean plants. PUBLIC

