

# Case study Dugi Rat

TEAM LAKI

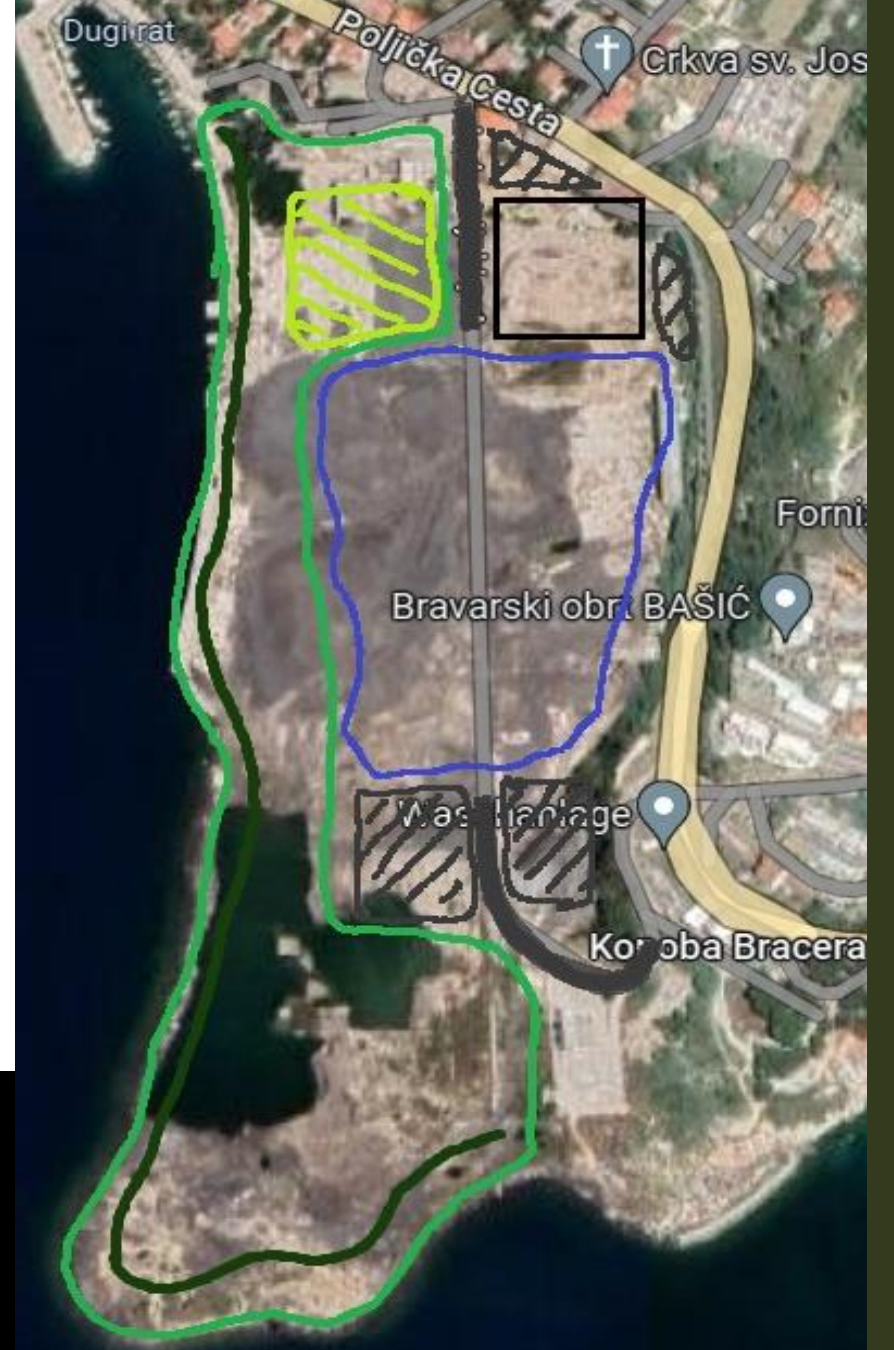
# Goal

Removal and reuse  
slag material

Transforming  
current state into  
functional and  
useful area to serve  
local community

# Zoning plan

- Green areas with square
- Recreation/ medical centar with additional building
- Community centre
- Parking space



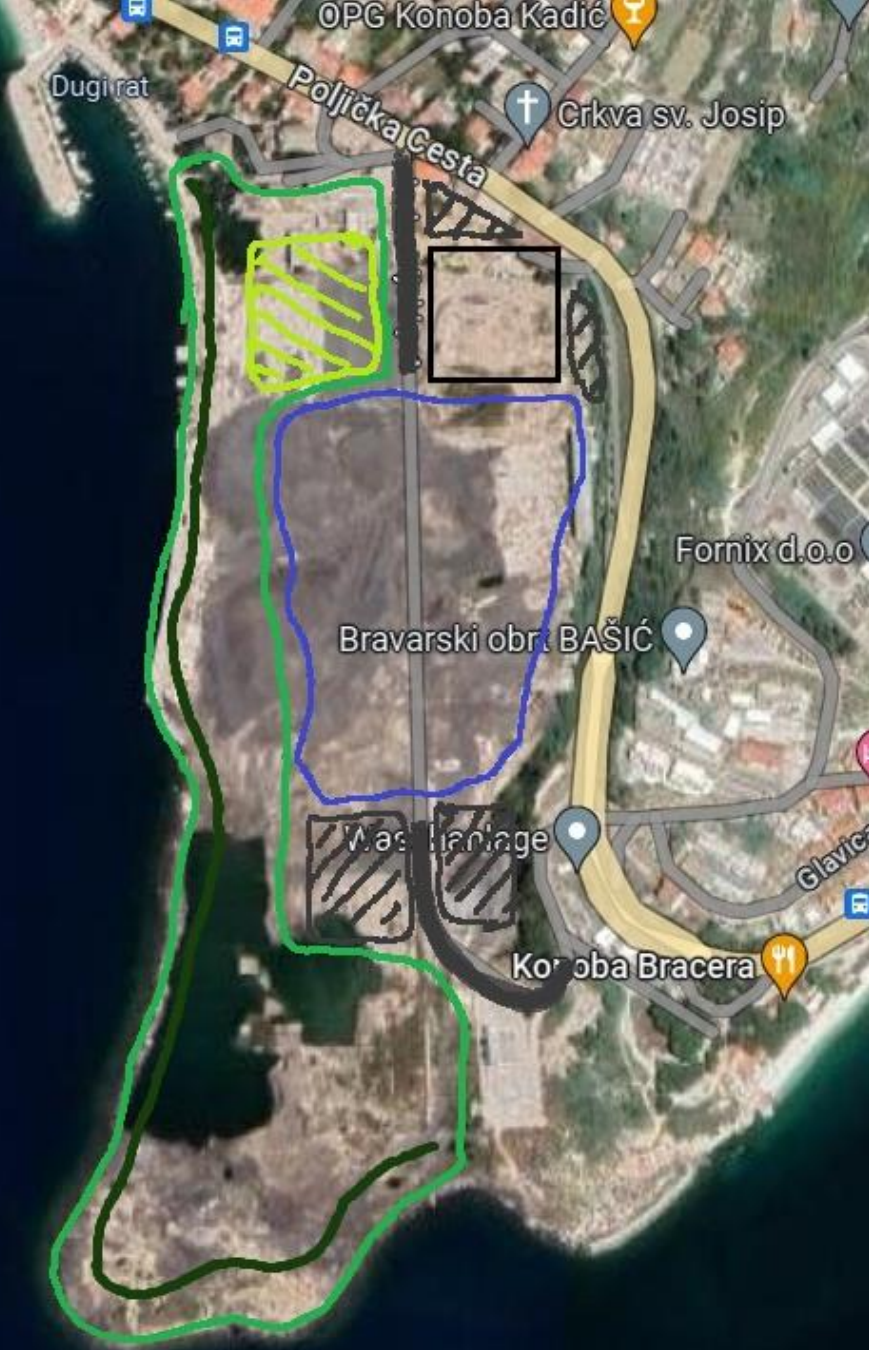
# Sampling

- Zoning the area
- Take representative samples according to EU regulative (Environmental Protection Act, Regulation on Liability for Environmental Damage, Regulation on Environmental Remediation Measures and Remediation Programme...)
- Rolmodel by Norwegian examples



Norwegian  
Environment  
Agency



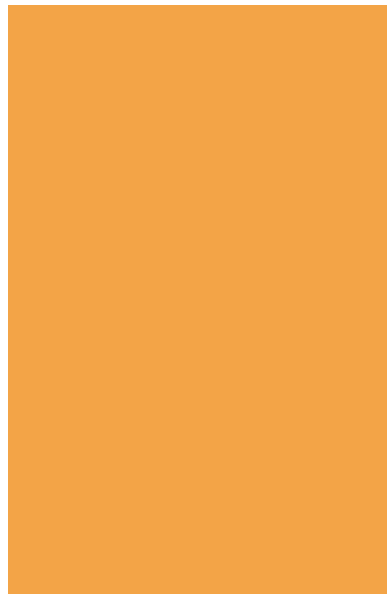
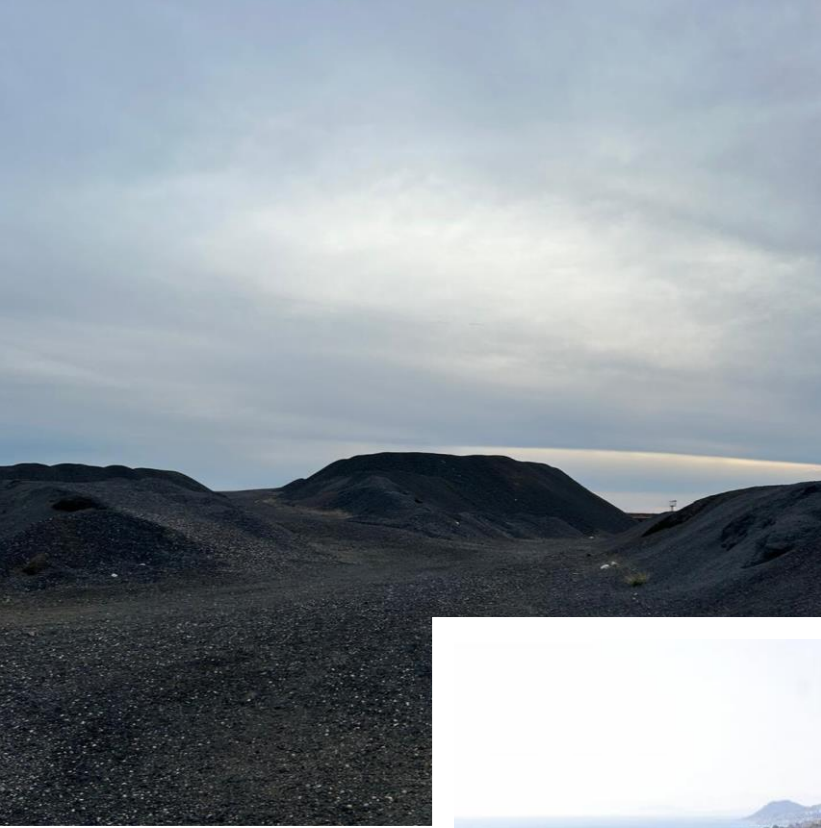


Tilstandsklasse/ Stoff	1	2	3	4	5
	Meget god	God	Moderat	Dårlig	Svært dårlig
Arsen	< 8	8-20	20-50	50-600	600-1000
Bly	< 60	60 -100	100-300	300-700	700-2500
Kadmium	<1,5	1,5-10	10-15	15-30	30-1000
Kvikksølv	<1	1-2	2-4	4-10	10-1000
Kobber	< 100	100-200	200-1000	1000-8500	8500-25000
Sink	<200	200-500	500-1000	1000-5000	5000-25000
Krom (III)	<50	50-200	200-500	500-2800	2800-25000
Krom (VI)	<2	2-5	5-20	20-80	80-1000
Nikkel	< 60	60- 135	135-200	200-1200	1200-2500
ΣPCB <sub>n</sub>	< 0,01	0,01-0,5	0,5-1	1-5	5-50
DDT	<0,04	0,04-4	4-12	12-30	30-50
ΣPAH <sub>n</sub>	<2	2-8	8-50	50-150	150-2500
Benzo(a)pyren	< 0,1	0,1-0,5	0,5- 5	5 -15	15-100
Alifater C8-C10 <sup>1)</sup>	< 10	≤10	10-40	40-50	50-20000
Alifater > C10- C12 <sup>1)</sup>	< 50	50- 60	60-130	130-300	300-20000
Alifater > C12- C35	< 100	100-300	300-600	600-2000	2000-20000
DEHP	<2,8	2,8-25	25-40	40-60	60-5000
Dioksiner/furaner	<0,00001	0,00001- 0,00002	0,00002- 0,0001	0,0001- 0,00036	0,00036-0,015
Fenol	<0,1	0,1-4	4-40	40-400	400-25000
Benzen <sup>1)</sup>	<0,01	0,01-0,015	0,015-0,04	0,04-0,05	0,05-1000
Trikloretan	<0,1	0,1-0,2	0,2-0,6	0,6-0,8	0,8-1000



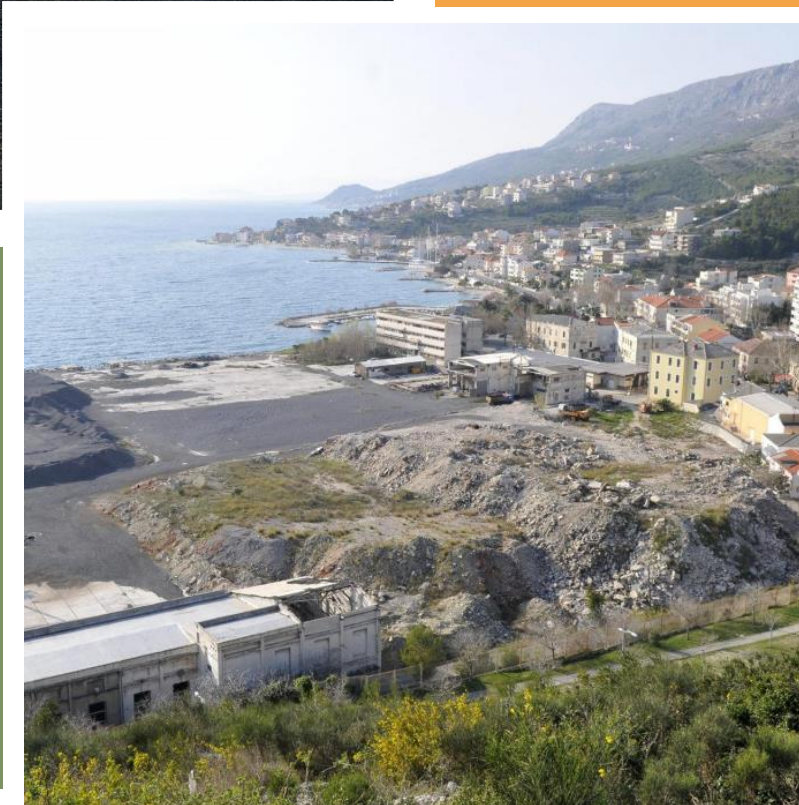
## Involvement of local community

- Education of locals
- Presenting our plan for remediation and reuse of our area
- Starting public discussions



# Remediation

- Separating the slag ( wet separation method)
- Using construction waste for filling and flattening
- Methods of reusing slag





- Preserving the coastal area by building concrete „walls”
- Leftover construction material to be reused
- Adding bigger masses of stone for reducing erosion caused by sea waves





## Partnership with Norway

- Shipping the unusable slag to Eramet

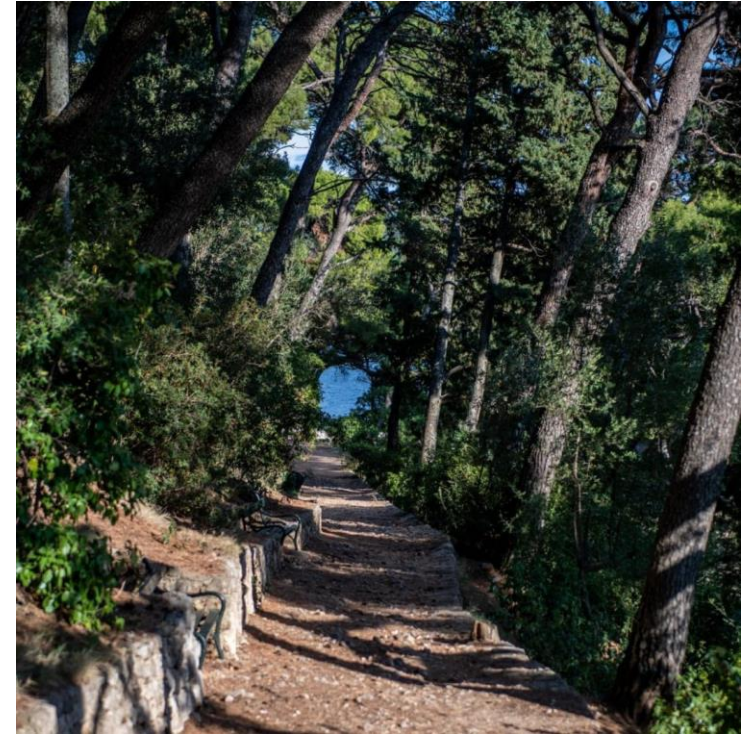
A photograph of two workers in safety gear (hard hats, high-visibility vests, and gloves) examining a sample in a field. The worker on the left is wearing a red vest and a white hard hat, while the worker on the right is wearing a yellow vest and a white hard hat. They are both wearing blue gloves. The worker on the right is holding a small white container with a yellow substance inside. The background is a blurred outdoor setting with green foliage.

# Monitoring the area

- Securing cleaned up area
- Pervasion of leakage, unexpected increase in the concentration of pollutants
- Monitoring of the situation in the environment
- Observation of restoration of environmental status

# Arhitecture

- Green area and promenade follow the coast line
- Rehabilitation center
- Community building





# Economical aspect

Using natural materials

Reusing existing ones

Tourism developement

Creating new job opportunities



Thank you for your attention!

Team LAKI

Lea Lelas, Ana Pećnjak, Kristina Kolarec, Terra Leona Korpak, Ivan Kovačić