

Ecological state of the lake during restoration measures

Lake Management



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Poznań and Wągrowiec, 1-15 July 2012

Contents:

1. Introduction

2. Materials and methods

3. Present state of the lake Durowskie

4. Ideas to improve the conditions

5. Conclusions

1. Introduction

- Why do we need nature management?

- Having a healthy environment as an advantage for the whole society
- It is fundamental to keep a balance between human activities and nature preservation
- The harmony between human activities and ecosystems increases the economical opportunities

-Why is Lake Durowskie important for Wągrowiec?

- Preserving the lake helps preserve the community's identity
- The lake plays a major role in community's social and economical activities
- The health of the surrounding environment is directly connected to the community's health

2. Materials and methods

1. Mapping the interest spots using GPS
2. Field investigations
3. Surveys



Satellite image of Wągrowiec area (source www.GoogleEarth)

3. Present state of the lake Durowskie

Improvement of the water quality

Increase of the bioindicator species presenting a lower state of pollution

Demerits of the current state of the lake

- Continuous pollution of inflow area with water from the neighboring lake
- Presence of accumulated sediments with a high gradients of nutrients



Inflow area with water from Kobyleckie lake

Nutrients from inland area



Human activities:

- **Swimming**
- **Kayaking**
- **Fishing**
- **Motor boats**
- **Biking**
- **Water usage for irrigation**



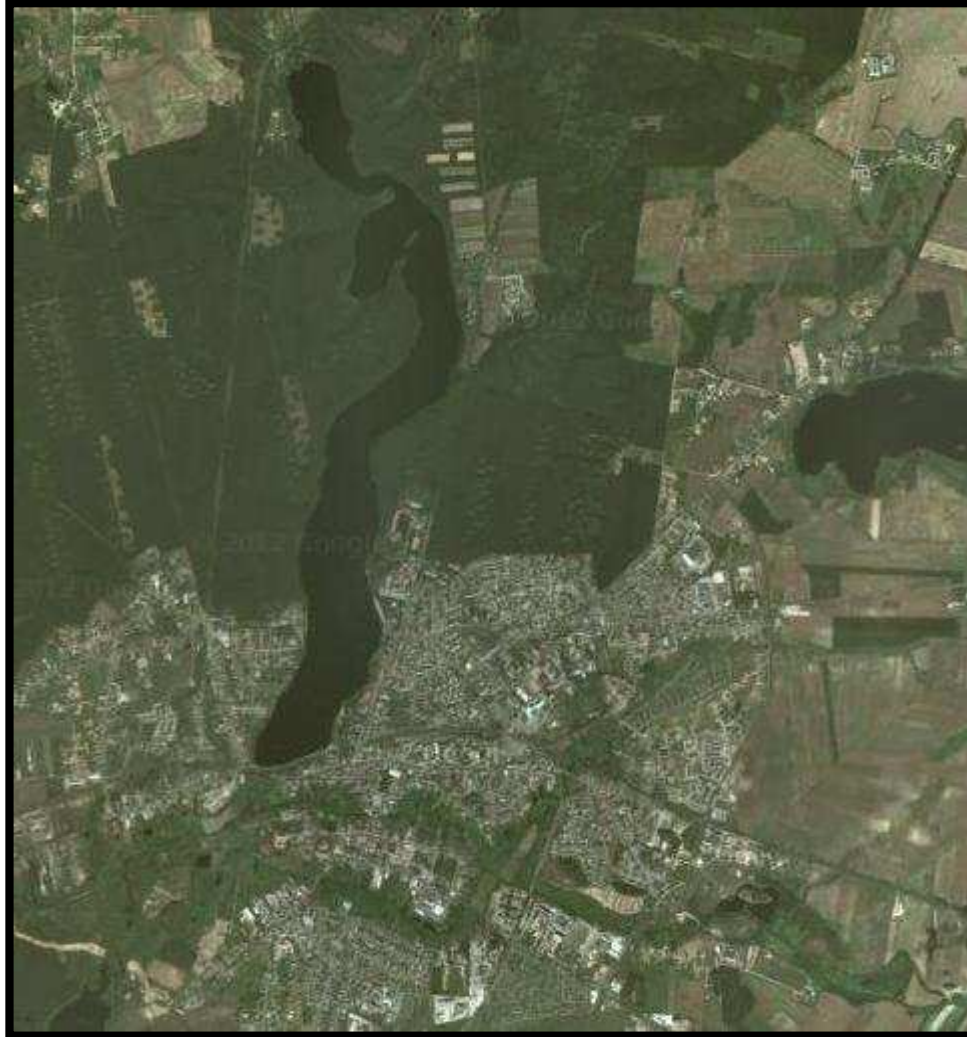
Motor Boats



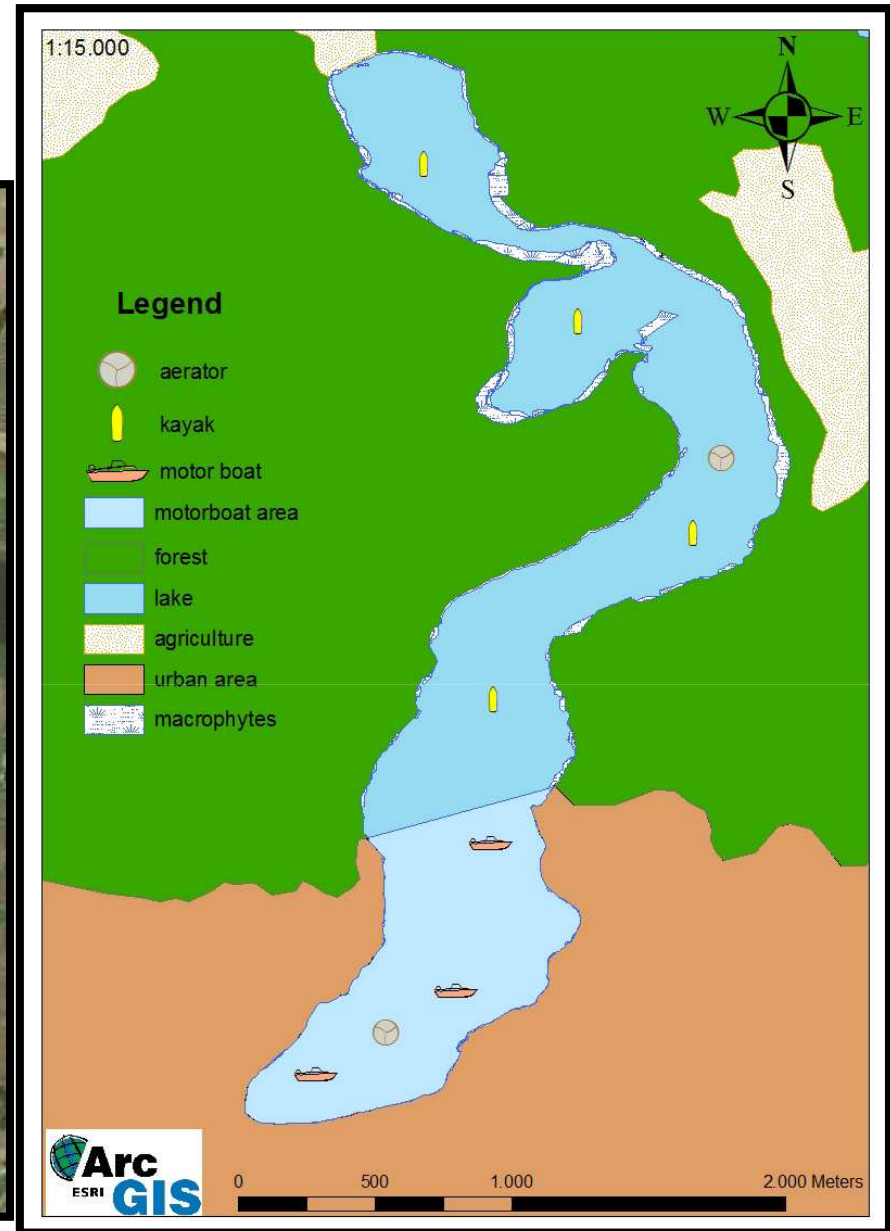
Kayaking and camping



Fishing



Satellite image of lake Durowskie (source www.GoogleEarth.com)

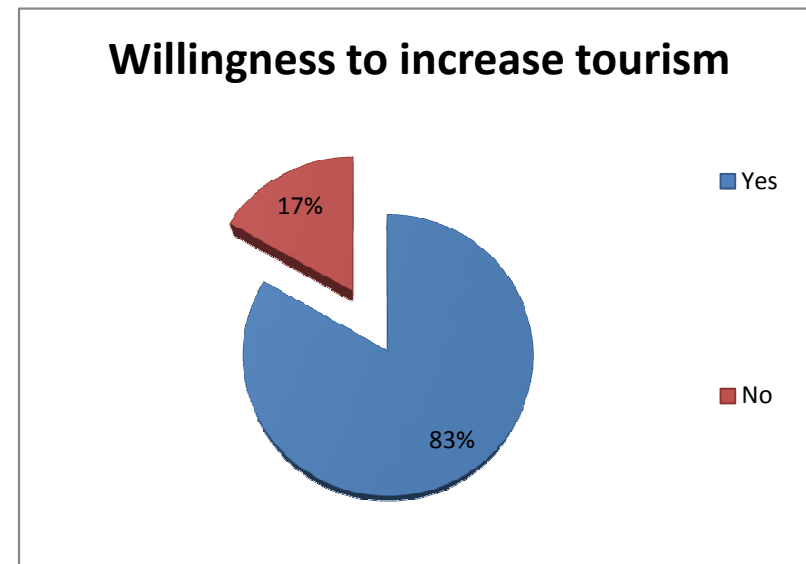
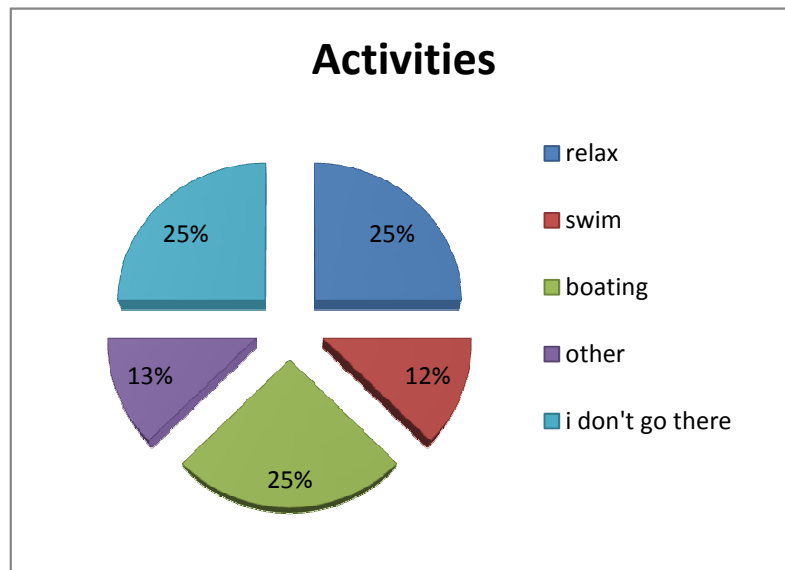


Source Lake Management Final report July 2011

Opinions about current activities

According to the survey, most of the people enjoy the lake for it's relaxing atmosphere and for doing sports.

Natural activities are the most favored.



4. Ideas to improve the condition

Collaboration and benefits sharing

- It is fundamental to avoid the inflow of huge quantities of nutrients from the upstream lakes
- The benefits should be shared with the other communities to involve them in the restoration process
- The whole area should cooperate to develop activities with a low natural impact



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The benefit net

- The natural activities which are already successful in Wagrowiec could be extended to the whole region.
- The different communities could develop common routes for bikes and kayaks.
- Resting places like camping and small guesthouses should be positioned on the whole territory.



Example of successful regional cooperation

Some more ideas

- Restaurants and shops could offer a wide variety of local products.
- Farmers could organize their houses to host tourists and show the best sides of the local life.

www.lafattoriadelcilentocom



Tree-climbing park

commons.wikimedia.org



Paintball

duckofminerva.blogspot.com



Local solutions

Harvesting the reeds in winter for making different handmade products

vendix.ro



Planting and further growing the macrophytes in the inflow area for a better water treatment and phytoremediation



5. Conclusions

- **There are many future ways to invest for benefits of the community.**
- **The only way to ensure a stable improvement of the water quality is to intensify the complex collaboration among the different communities of the lakes system that can link the protection of the ecosystems with the increase of the economical activities.**



Wągrowiec in 1940

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Wągrowiec in 2012

www.googleearth.com



Wągrowiec in 2072?

Thank you for your attention!

