

UKRAINE TEAM



United Nations
Educational, Scientific and
Cultural Organization



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REDUCTION OF THE CONCENTRATION OF BIOGENIC ELEMENTS DURING PURIFICATION OF RIVER WATERS WITH HIGHER AQUATIC PLANTS USING A PONTOON-TYPE FLOATING BIOPATEAU

INTRODUCTION

Recently, one of the main environmental problems of the modern world is the state of water bodies. It is common knowledge that water is the most valuable natural resource. Investigating the issue of water quality was decided to find a way to improve it.



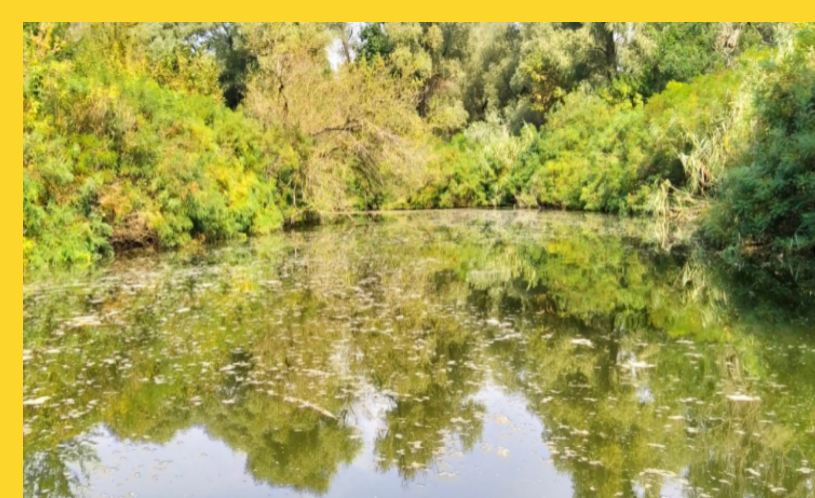
MATERIALS & METHODS

PART 1

Research of the state of the Dnipro river in various natural areas

In September 2021 water samples were taken on areas marked on the picture that is fixed using the Google maps where:

1. The Konka River
2. The Didiv Reservoir
3. The channel of the Dnipro river



1. The Konka River



2. The Didiv Reservoir

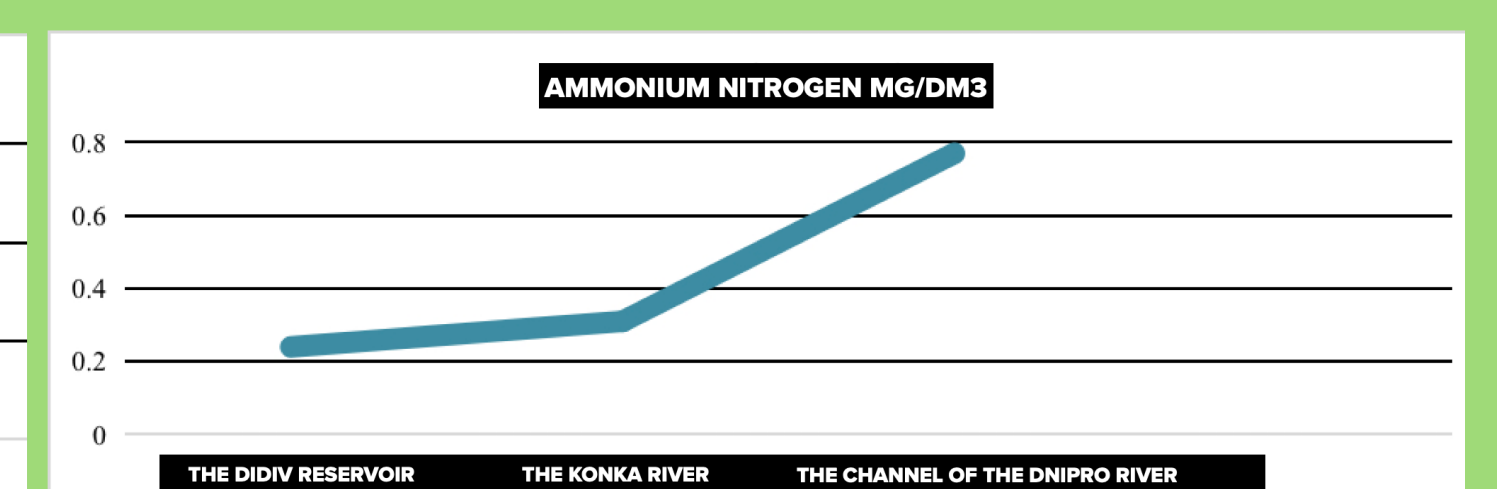
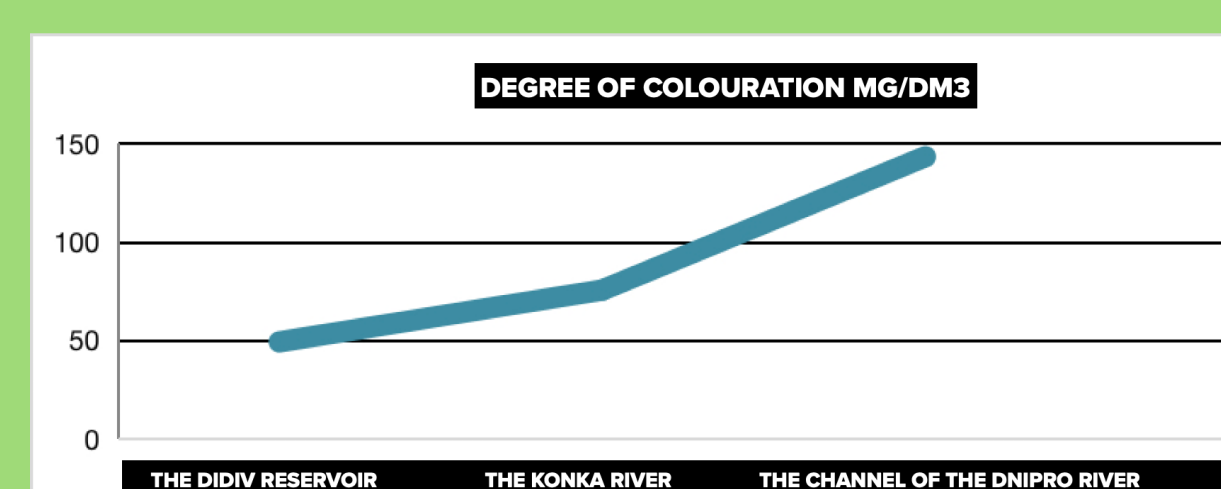
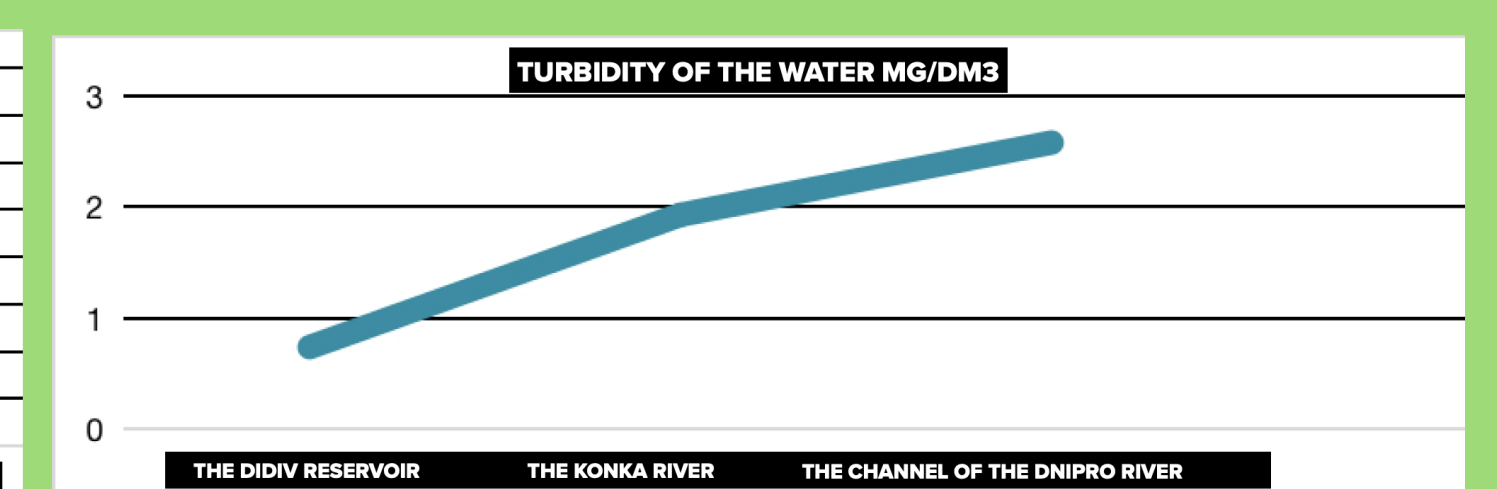
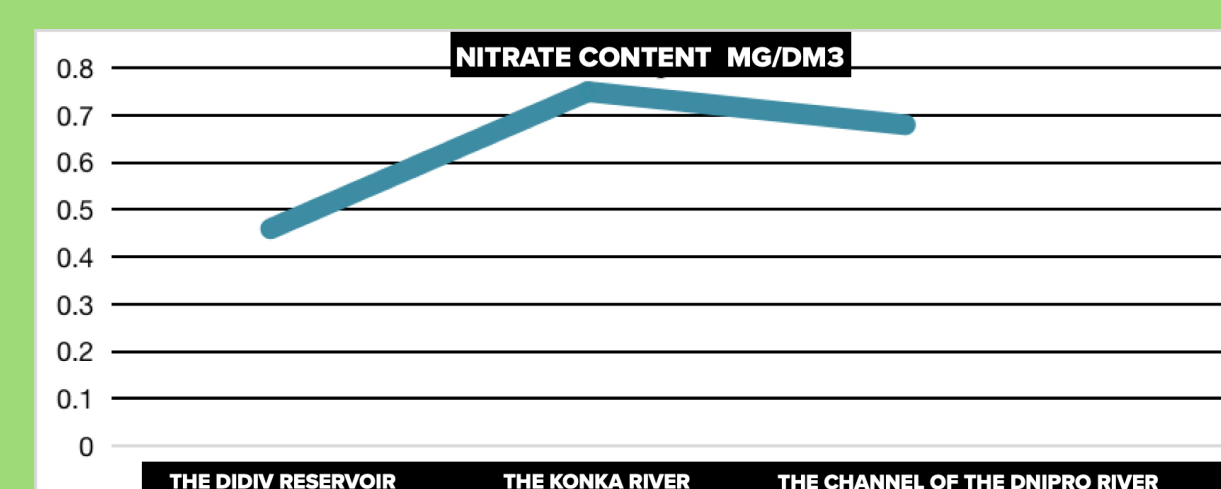


3. The channel of the Dnipro river

PART 2

In the laboratory of the municipal enterprise "city waterworks" in Nova Kakhovka, that research was carried out according to the following indicators:

1. Turbidity of the water
2. Colouration
3. Ammonium nitrogen
4. Nitrates



According to the results of the analysis, The Didiv Reservoir turned out the cleanest reservoir.

RESULTS

In the process of research, the latest type of treatment facility - a Pontoon-type floating bioplateau - was proposed and tested experimentally. This design does not require any energy input and can work directly in the river bed at any time of the year, using only biological filters in the form of a collection of higher aquatic plants.

All photos, diagrams and graphs used in the poster were taken by the author

