

Analysis and Comparison Quality of Water in Lanyang Stream & 52-Jia Wetland

2022 International Virtual Science Symposium
Earth and Environmental Science

Objectives

1

To analyze and compare the water quality in two wetlands, **Lanyang Stream** & **52-Jia Wetland**

2

To discuss the possible causes getting the water quality changed

3

To find out the connection between water quality in 52-Jia Wetland and its land use.

Introduction (1): Lanyang Stream Wetland



Section1



Section2



Section3

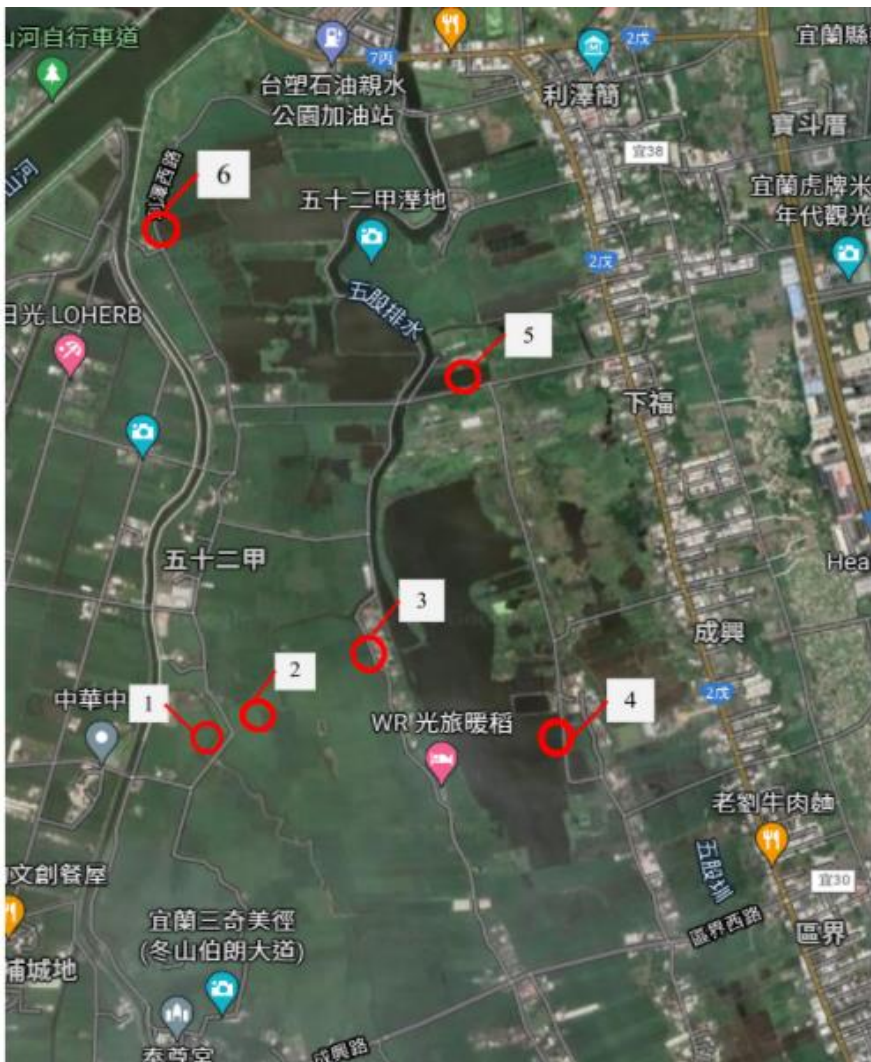


Section4



Section5

Introduction (2): 52-Jia Wetland



Section 1



Section 2



Section 3



Section 4



Section 5



Section 6

Method

STEPS TO GET THE STATISTICS OF DO, pH, CON, TDS

Fetch water



Detect DO, pH, CON, TDS

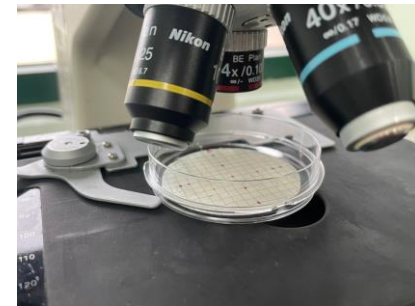


STEPS TO GET THE STATISTICS OF NTU & MICROPLASTIC

Fill the bottles

Bring to the lab

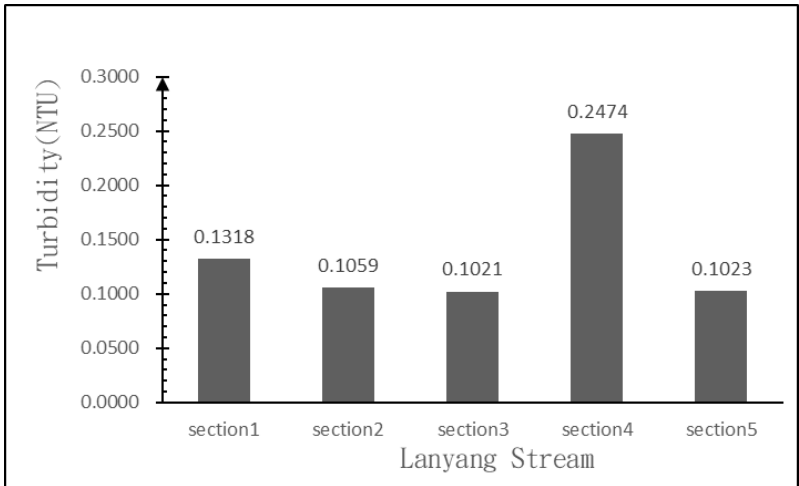
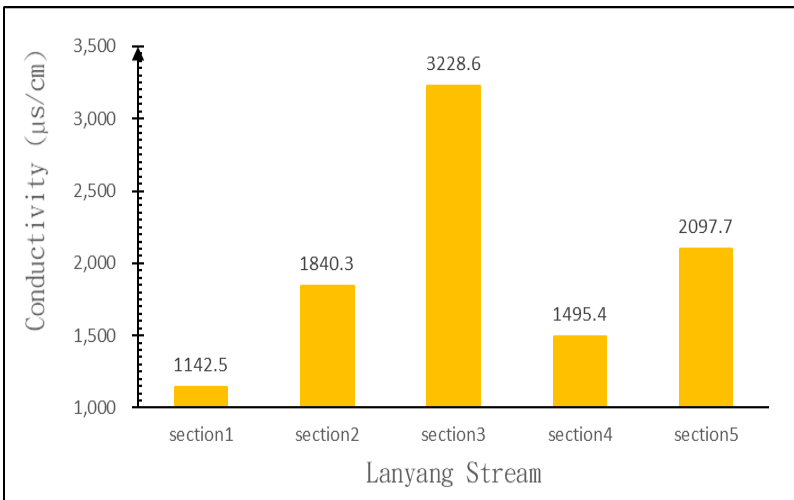
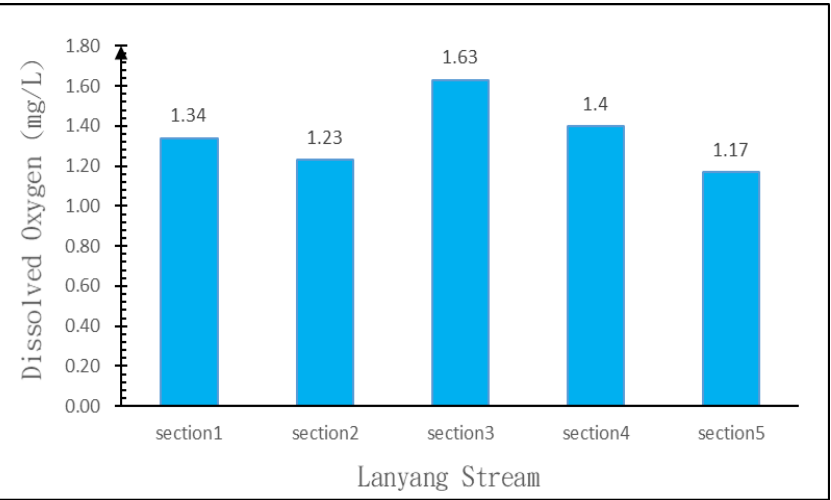
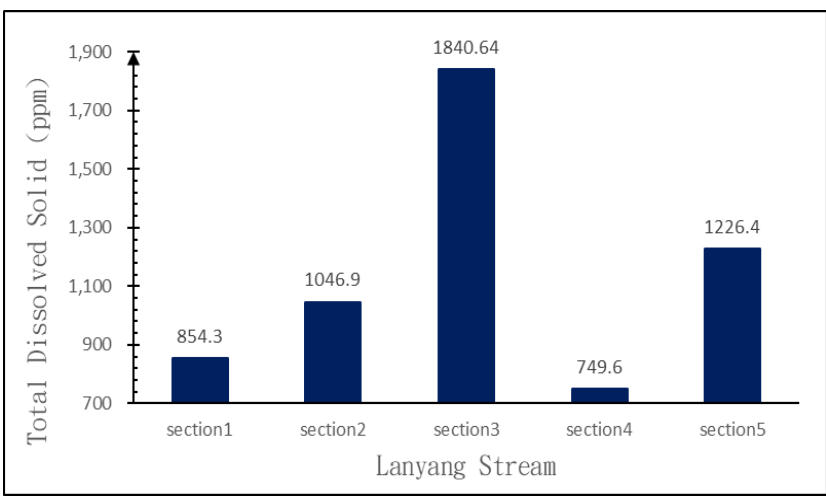
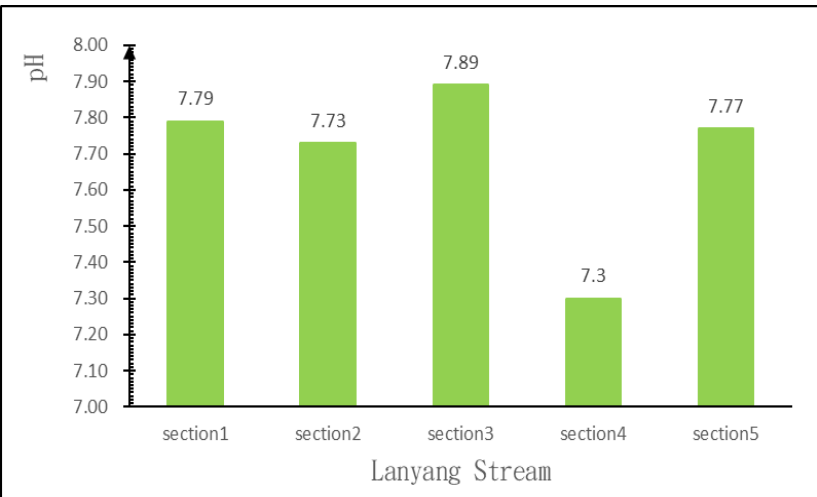
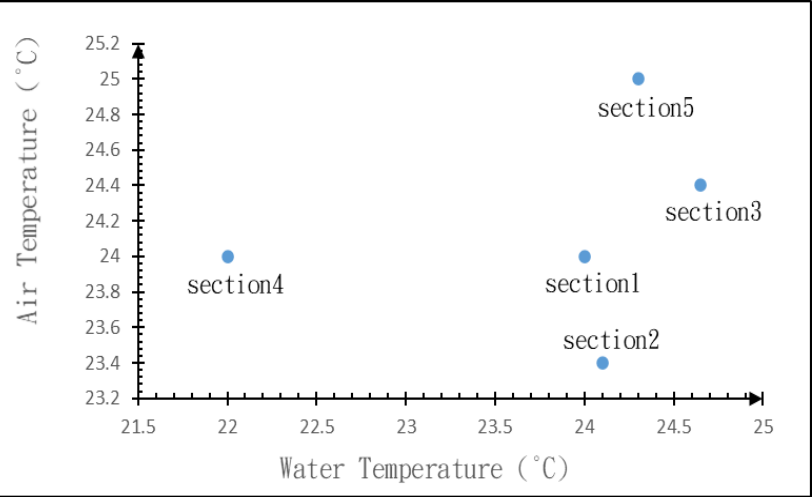
Analyze Turbidity
& microplastic



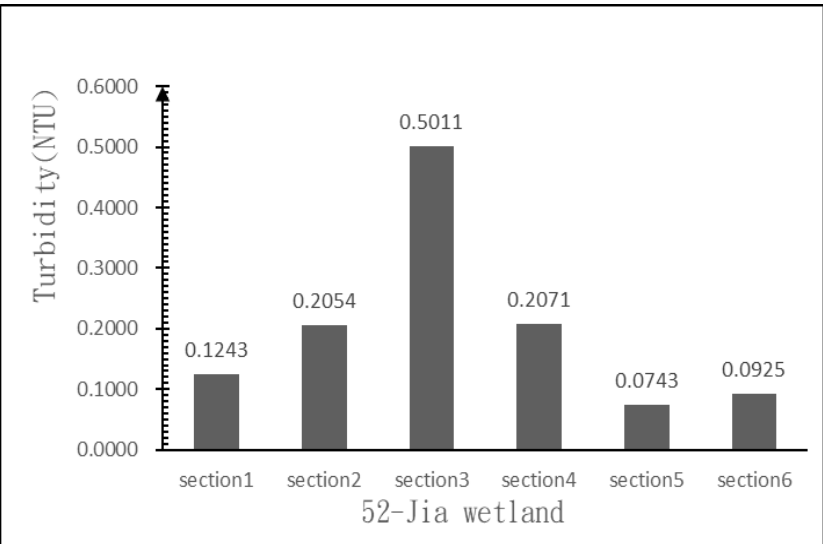
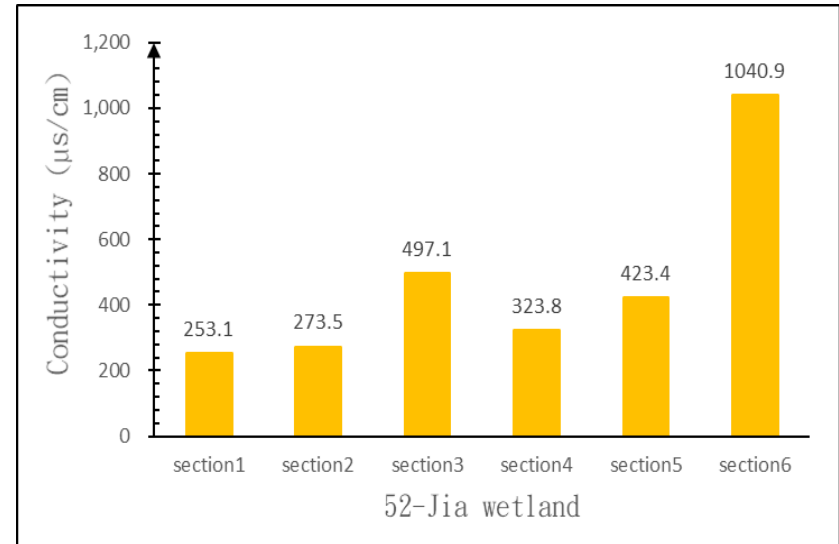
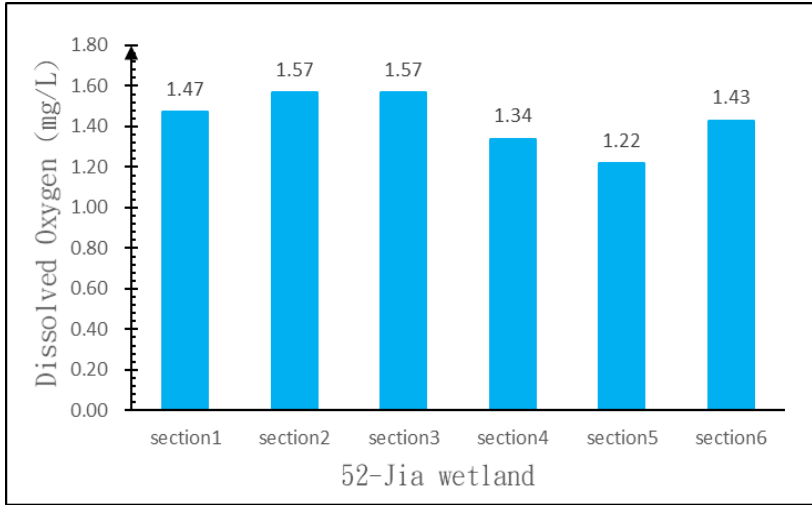
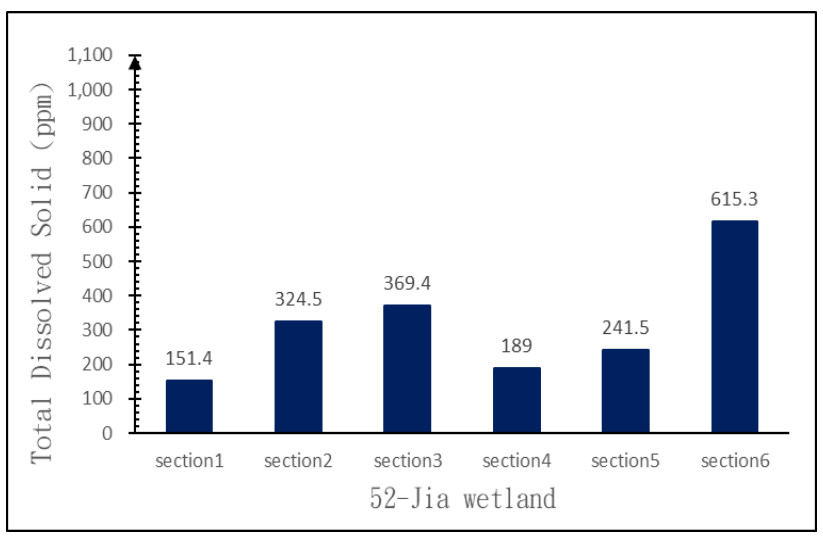
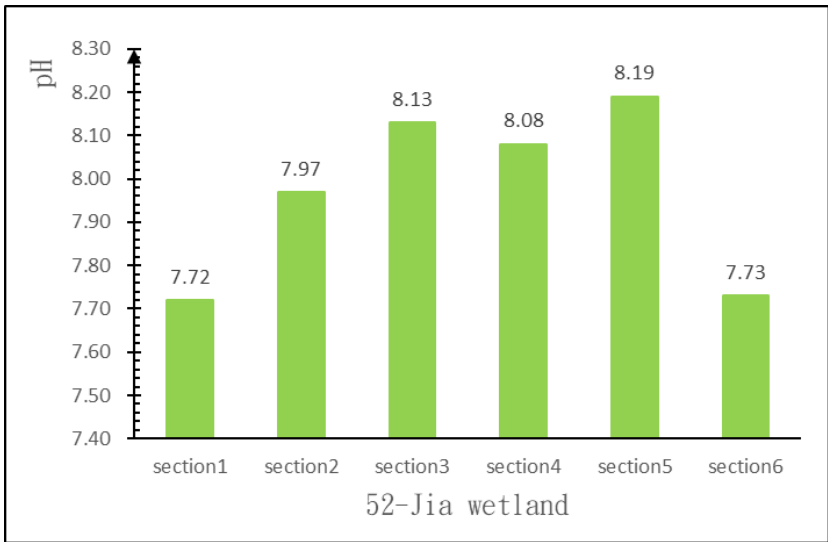
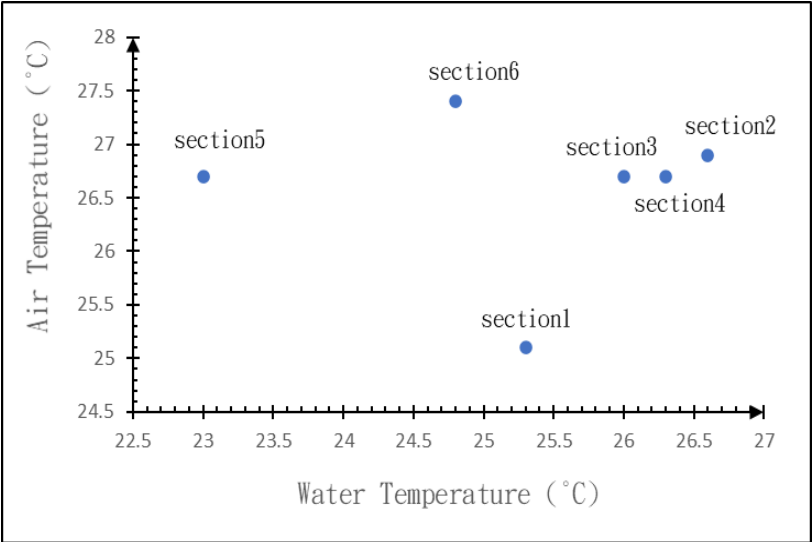
STEPS TO GET THE STATISTICS OF TIDE

Compare samples with tidal information given by the **Central Weather Bureau**

Results (1): Lanyang Stream Wetland



Results (2): 52-Jia Wetland



Conclusion

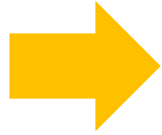
1. pH values of the water in Lanyang Stream and 52-Jia Wetland > 7
2. The closer to the sea, the higher of CON, DO and TDS
3. Section 2 in Lanyang Stream Wetland: more substances and CON, TDS $\uparrow$
4. No obvious connection between water quality and tidal change in Lanyang Stream Wetland

5. Turbidity : 52-Jia Wetland > Lanyang Wetland Wetland

6. Tourist rest area of 52-Jia Wetland : DO, pH, CON, TDS, Turbidity ↑
→ Human activities affect the water quality.

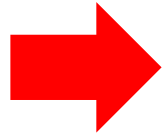
Challenges

Tidal information



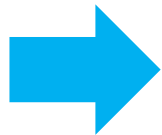
No access to accurate
statistics

Fetching the wetland



Shortage of the equipment

Weather condition



Adverse weather, heavy
rain, typhoon

References

- 宜蘭縣 99 年度國家重要溼地環境。 <http://tny.im/VZKXt> ,
(serching date : 2021/9 / 10) 。
- 溶氧量檢測方法。 <http://tny.im/1zGSZ> ,
(serching date : 2021 / 9 /10) 。
- 濁度(2021 / 4 / 17)。 <http://tny.im/Dn1Cd> ,
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- 水中生化需氧量檢測方法(2011 / 1 / 27)。 [http:// tny.im/VvPZE](http://tny.im/VvPZE) ,
(serching date : 2021 / 9 / 10) 。
- 行政院環境保護署環境檢驗所(2021 / 09 / 28) <http://tny.im/ywgk> ,
(serching date : 2021 / 9 / 10)