

This is the output directory for this notebook:

```
output/projectdescription
```

It can be called by typing 'project\_directory'

## **Description of survey results: temporal, geographic and administrative scope**

### **Effective dates, river bassins, number of obervations, number of surveys and number of objects**

This data is valid for surveys surveys between 2020-04-01 and 2021-04-01 from the following catchment areas:

```
['rhone' 'aare' 'linth' 'ticino']
```

There are 76,024 observations from 344 surveys.

There were 50,197 objects collected.

There are 120 different survey locations from 67 municipalities with a total population of ~1,575,802

There are samples from 8 different lakes and 14 different rivers.

The lakes where the surveys were conducted:

['Lac Léman' 'Thunersee' 'Neuenburgersee' 'Bielersee'  
'Walensee'  
'Zurichsee' 'Lago Maggiore' 'Brienzersee']

The rivers where the surveys were conducted:

['Limmat' 'Sihl' 'Ticino' 'Aare' 'Rhône' 'Schüss' 'Jon  
a' 'Linthkanal'  
'Maggia' 'La Thiècle' 'Aare|Nidau-Büren-Kanal' 'Dorfba  
ch' 'Escherkanal'  
'Seez']

The municipalities where the surveys were conducted:

['Yverdon-les-Bains', 'Neuchâtel', 'Ascona', 'Salgesch',  
'Bourg-en-Lavaux', 'Tolochenaz', 'Bellinzona', 'Gambarogno',  
'Cheyres-Châbles', 'Unterengstringen', 'Grandson', 'Aarau',  
'Spiez', 'Préverenges', 'Gebenstorf', 'Leuk', 'Luterbach',  
'Ligerz', 'Estavayer', 'Montreux', 'Freienbach', 'Minusio',  
'Weesen', 'Kallnach', 'Küssnacht (ZH)', 'Gland', 'La Tour-de-Peilz',  
'Schmerikon', 'Locarno', 'Port', 'Stäfa', 'Walenstadt', 'Thun',  
'Sion', 'Brugg', 'Boudry', 'Beatenberg', 'Walperswil',

'Nidau', 'Vinelz', 'Rapperswil-Jona', 'Solothurn', 'Hauterive (NE)', 'Riddes', 'Brienz (BE)', 'Le Landeron', 'Allaman', 'Lüscherz', 'Vevey', 'Bern', 'Gals', 'Cudrefin', 'Lavey-Morcles', 'Zürich', 'Brugg', 'Versoix', 'Quarten', 'Richterswil', 'Biel/Bienne', 'Genève', 'Unterseen', 'Köniz', 'Bönigen', 'Lausanne', 'Saint-Gingolph', 'Glarus Nord', 'Saint-Sulpice (VD)']

# The dimensional data summary

## Match the dimensional records to the survey records

**There are two components to the survey:**

1. The objects that are found
2. The context in which they were found -- dimensional data

These two elements are transmitted separately when the surveyor submits the data. The main reason for this is efficiency and speed. The context for each survey is unique and each survey can generate up to 220 observations in the same context.

Before analysis the dimensional data records need to be matched up to the survey data. The *loc\_date* key is the unique identifier for each survey. Here we match up the *loc\_date* keys from both data sets.

Dimensional data with no matching survey is dropped. An inquiry is made to the surveyor to identify the nature of the discrepancy

Missing dimensional data can be recuperated by asking the surveyor. There are paper records generated at each survey.

Records are dropped from the server or amended once the surveyor has replied to the inquiry.

These are the dimensional records that do not have a matching survey in the survey data:

```
Empty DataFrame
Columns: [location, date]
Index: []
```

All dimensional records found a home in the survey data!

These are the surveys that do not have a matching survey in the dimensional data:

```
[('baby-plage-geneva', '2021-03-10'), ('baby-plage-geneva', '2021-02-10'), ('baby-plage-geneva', '2020-12-16'), ('baby-plage-geneva', '2020-11-18'), ('baby-plage-geneva', '2020-08-18'), ('quai-maria-belgia', '2021-02-28'), ('quai-maria-belgia', '2021-01-31'), ('zuerichsee_richterswil_benkoem_2', '2020-11-21'), ('zurichsee_wollishofen_langendorfm', '2020-11-12'), ('luscherz-plage', '2020-12-26'), ('lacleman_gland_lecoanets', '2020-10-27')]
```

The dimensional data for the surveys with no matching dimensional records are not included in the survey dimensions summary.

!In other terms THE DIMENSIONAL DATA IS CALCULATED USING 96.8% of the dimensional data.

Requests have been made to surveyors to submit the missing records. The dimensional data is initially recorded

ed in the surveyors notebook.

## Records that are kept

The following information is recorded at each survey:

- 1. Length of survey area
- 2. Surface area
- 3. Weight of all objects
- 4. Weight of all plastics
- 5. Weight of all plastics < 5mm
- 6. Time to complete a survey
- 7. Number of participants
- 8. Participating groups

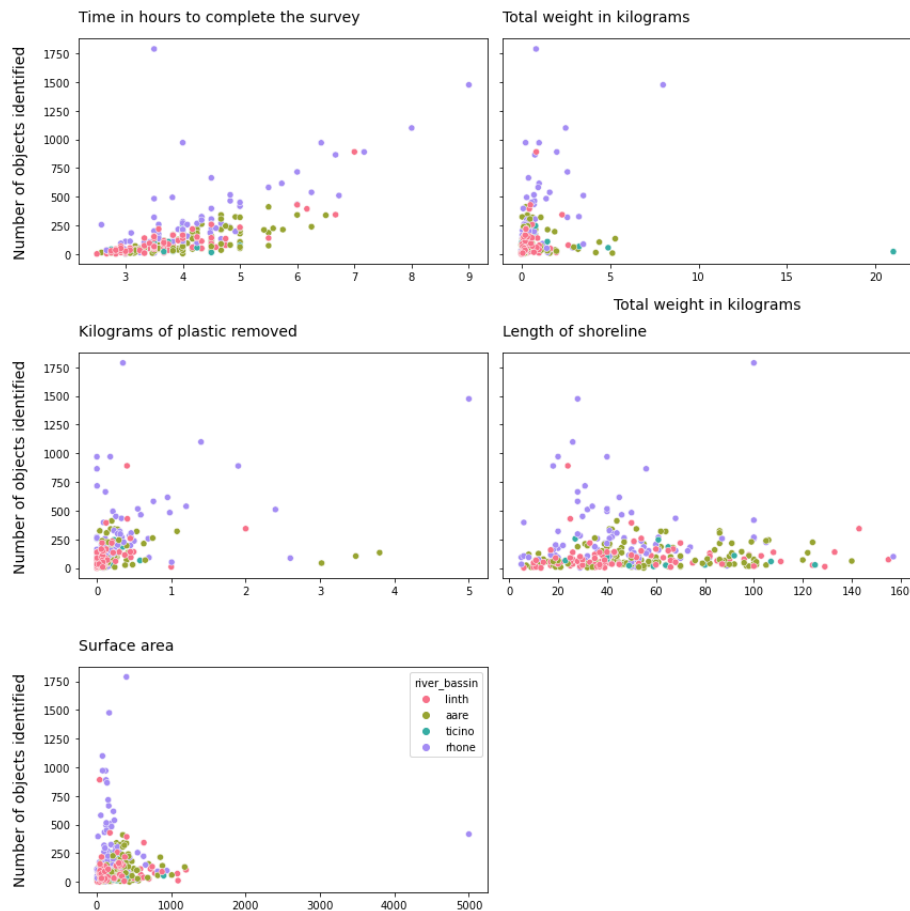
The cumulative results from 333 samples, weights are in kilograms

index	# samples	meters surveyed	m <sup>2</sup> surveyed	total weight	plastic > 5mm weight	plastic < 5mm weight	quantity
summary total							
summary total	333	17125	84388	978	82	0.43	50197

The cumulative results for each river basin, weights are in kilograms

river_bassin	# samples	meters surveyed	m² surveyed	total weight	plastic > 5mm weight	plastic < 5mm weight	quar
aare	128	7220	33912	64	28	0.377277	1
linth	97	4755	23055	361	12	0.004179	
rhone	91	4095	22433	520	41	0.047683	2
ticino	17	1055	4988	33	1	0.000249	

The number of objects identified versus time to survey, length, weights, surface area



**Hopefully that just worked for you**

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