

## Variables:

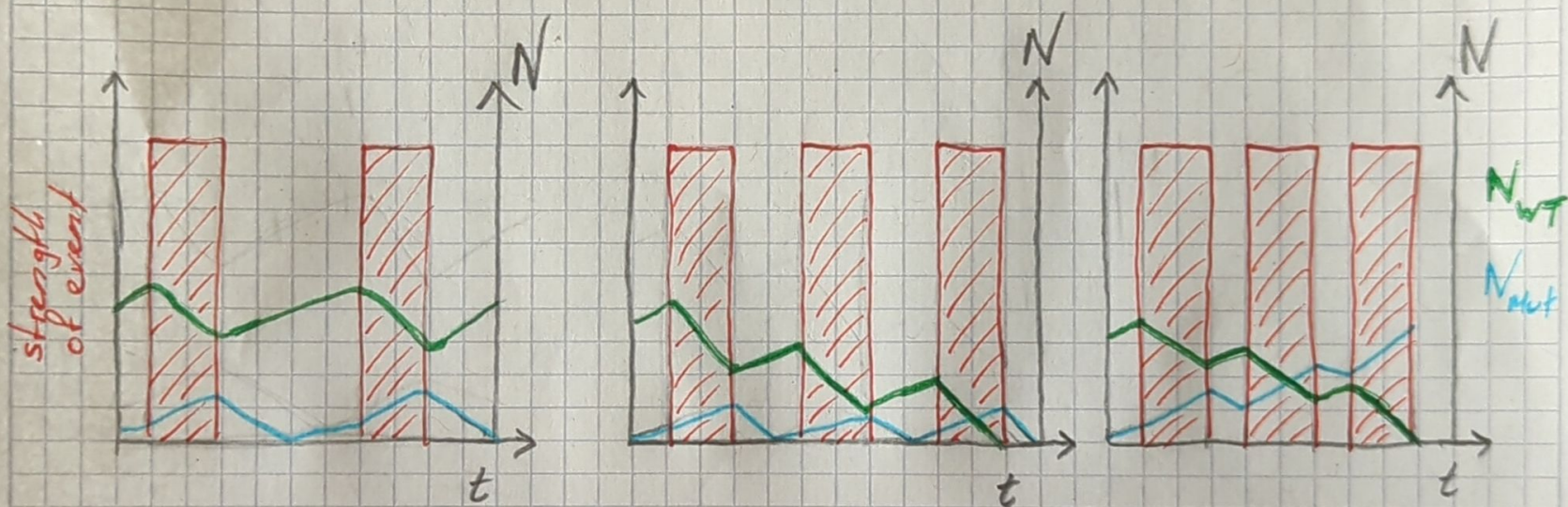
- selection co-efficient of Mutation
- Population sizes of both genotypes
- decay rate

## Parameters:

- initial Population sizes of both genotypes
- Mutation rate
- $t_{max}$
- frequency of events
- duration of events
- strength of events

## Scenario:

Hypothetical population of plants in a water meadow by a river. Frequency of being flooded increases ~~with~~ due to climate change.



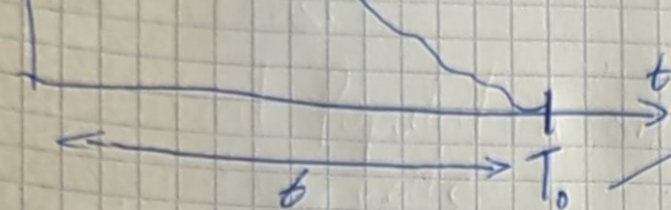


# Procedure:

①

$N$

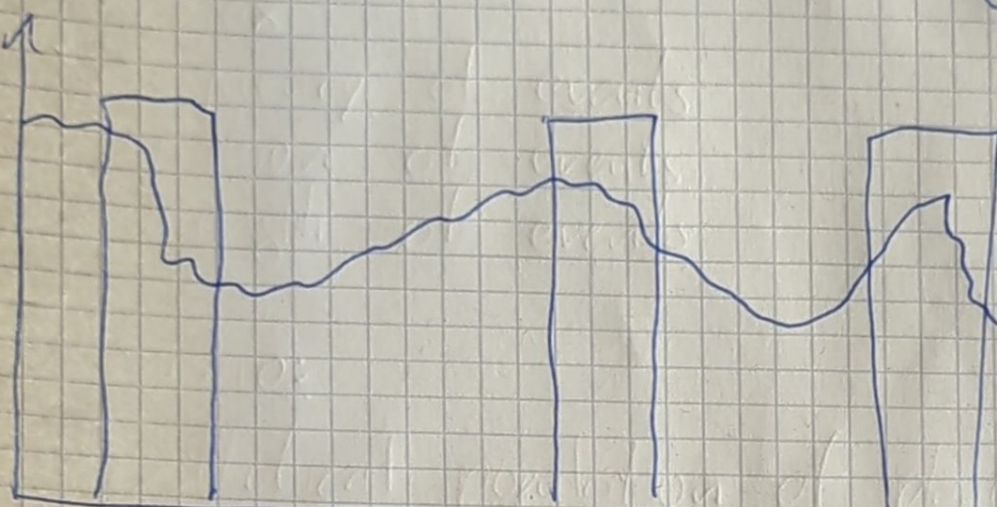
→ "forever" event, only decay  
→ only WT, see how fast it goes extinct  
→  $T_0$



→  $T_0$ : max. duration of E

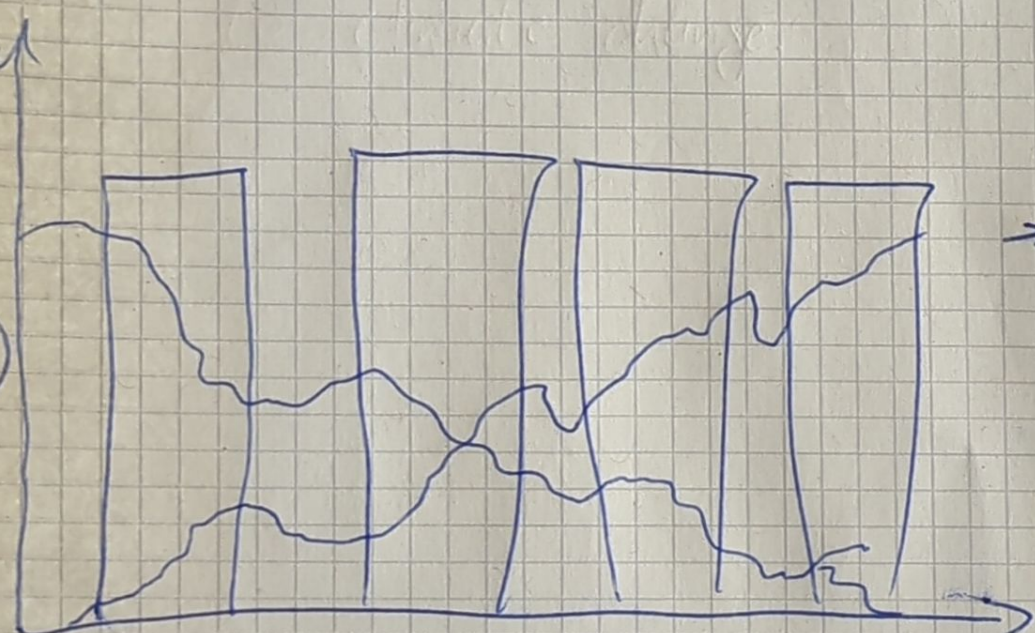
→ to figure out duration of E  
( $< t$ )

②



→ figure at frequency  
of Es without Mut  
find a range of  
interesting frequencies  
→ (from "struggling" to  
extinction)

③



→ find interesting scenarios  
• VT + Mut both extinct  
• VT ext., Mut takes over  
• Mut ext., VT takes over  
→ Mut is defined by  
mutation rate, not  
as an initial population