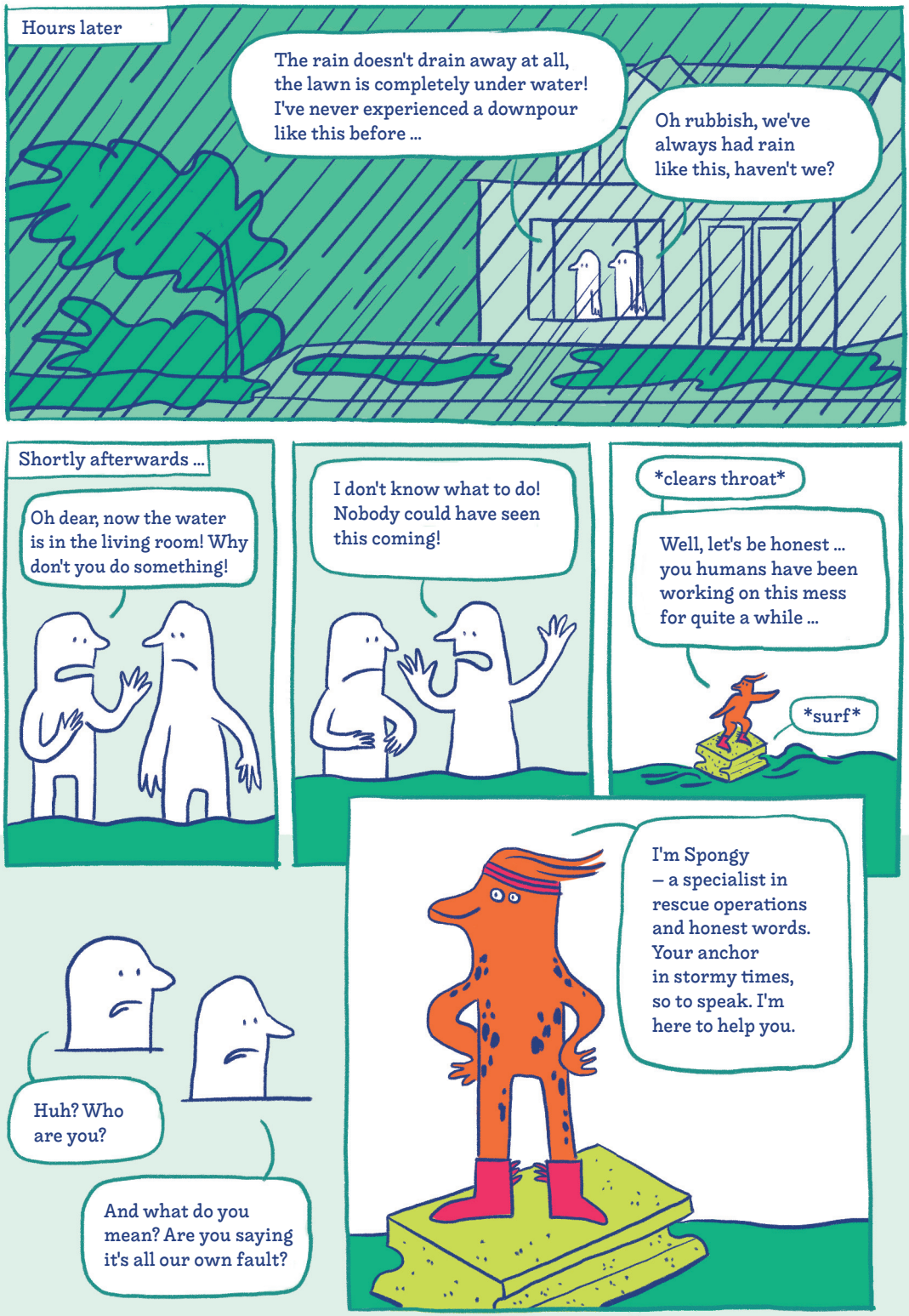
Floods, Facts and Wetlands

How Spongelandscapes help to tackle the Climate Crisis

PART 1 OF THE SPONGEBOOST COMIC SERIES

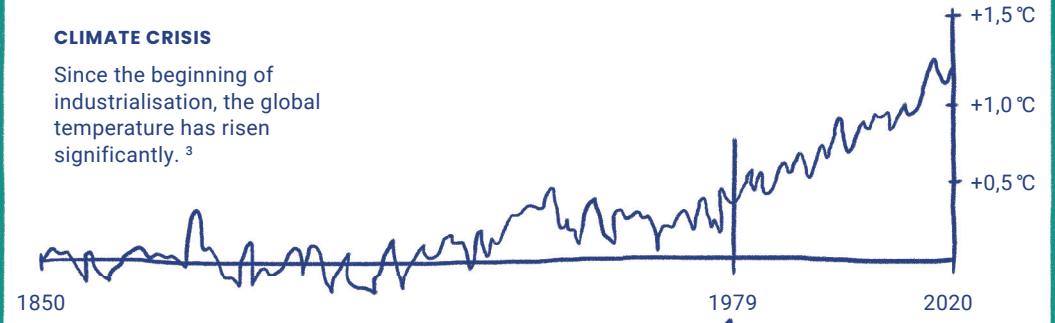
SpongeBoost

Ugh, this heat!
Here, I've got us some cold lemonade.
Thanks!
It hasn't rained for weeks, it sure could start to cool down a bit.
To save drinking water, we are no longer even allowed to fill the pools.
In the news, they were talking about crop failures and heat-related deaths.
It's awful, but what are we supposed to do?
THUNDER
CRACK
Did you hear that?
Phew, finally!
Come quickly!

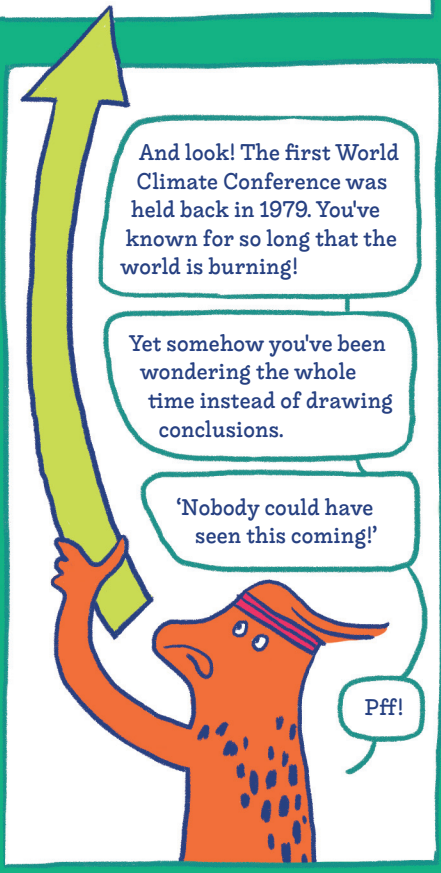

Hours later
The rain doesn't drain away at all, the lawn is completely under water! I've never experienced a downpour like this before ...
Oh rubbish, we've always had rain like this, haven't we?
Shortly afterwards ...
Oh dear, now the water is in the living room! Why don't you do something!
I don't know what to do! Nobody could have seen this coming!
clears throat
Well, let's be honest ... you humans have been working on this mess for quite a while ...
surf
I'm Spongy – a specialist in rescue operations and honest words. Your anchor in stormy times, so to speak. I'm here to help you.
Huh? Who are you?
And what do you mean? Are you saying it's all our own fault?

CLIMATE CRISIS

Since the beginning of industrialisation, the global temperature has risen significantly. [3]

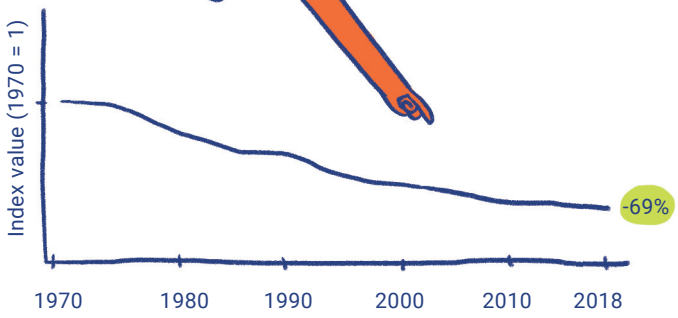


As a result, **heavy rainfall,** for example, has become more frequent and stronger. And on the other hand, **droughts** and **extreme heat** are becoming more frequent.



And there's more!

Here, for example, the Living Planet Index shows the decline in vertebrate populations since 1970.

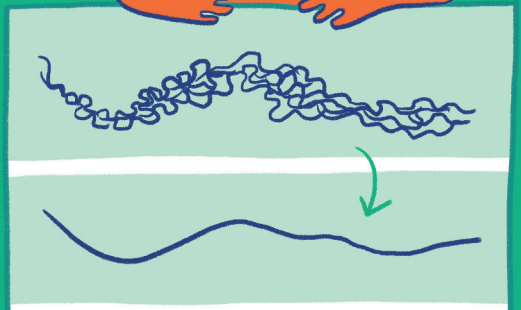


SPECIES CRISIS

The climate crisis, and above all human lifestyles, are directly changing the habitats of plants and animals, thus accelerating the global extinction of species.[3,4,5,6]

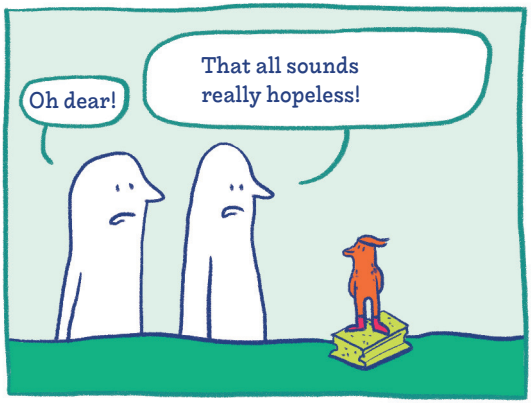
One of the causes: The destruction of species-rich ecosystems. For example, the draining of species-rich floodplains and river straightening since industrialisation

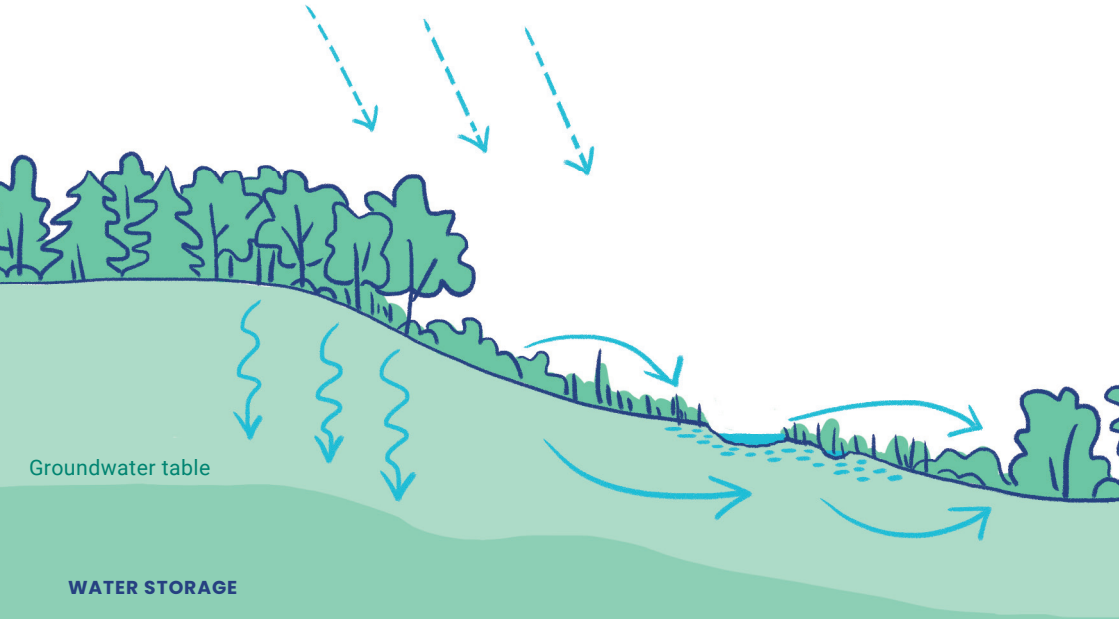
Dykes were intended to prevent fields and settlements from being flooded. What once were species-rich and diverse floodplain areas are now used to build settlements or for agriculture[1,2].



Straightened and deepened rivers enabled the use of heavy transport ships. Gravel and shallow banks were lost as habitats and the groundwater level sank.

It's no wonder that this can't go well in the long run ...





WATER STORAGE

Healthy soils can absorb water. This means that excess water is stored and remains available even during dry periods.

DECELERATED WATER RUNOFF

Structurally rich vegetation slows down water runoff and improves infiltration. Peatlands, ponds and wetlands not only help natural water retention, but also biodiversity.

STORAGE OF SUBSTANCES

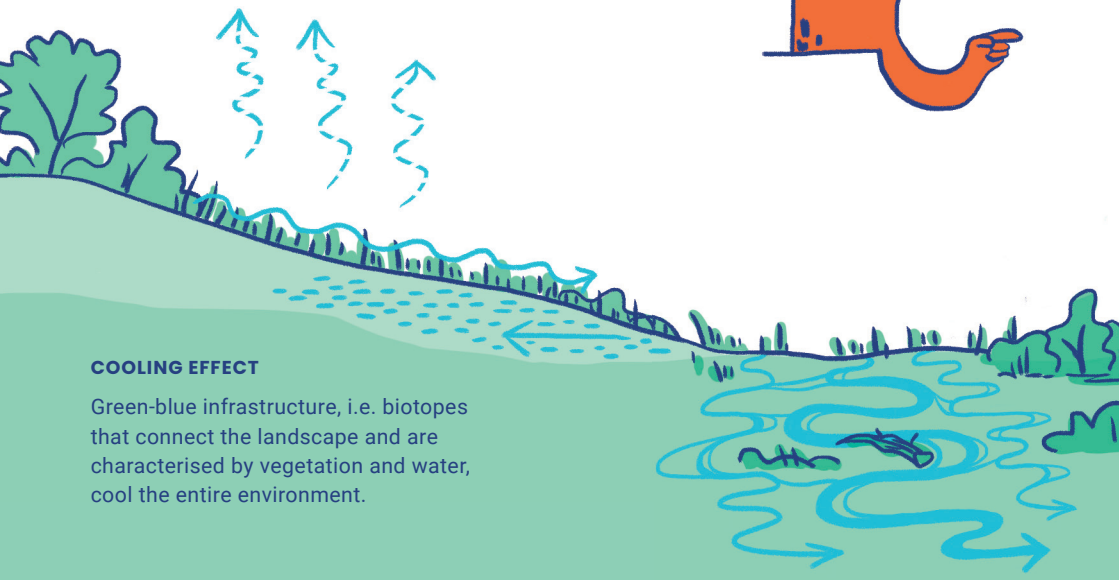
Substances such as nitrogen, nitrate or phosphate can be absorbed and remain in the soil instead of being carried into the river.

There are good strategies in the fight against the climate and species crisis.

These include nature-based solutions such as the **sponge landscape.**

When sponge landscapes are in good condition, they can absorb a lot of water and slowly release it back into their environment – a bit like a kitchen sponge.

There are various ways to restore our landscapes and turn them into natural sponges.



COOLING EFFECT

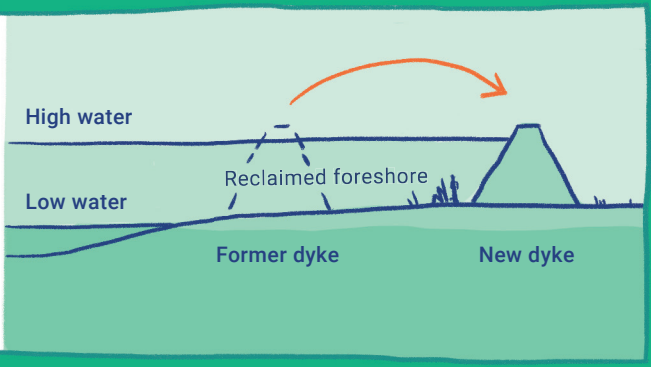
Green-blue infrastructure, i.e. biotopes that connect the landscape and are characterised by vegetation and water, cool the entire environment.

FREE-FLOWING RIVERS

If a river has room to meander, its natural dynamics create a unique mosaic of habitats. Water can spread into the surrounding sediments and supports groundwater recharge – this is where the sponge effect is particularly evident.

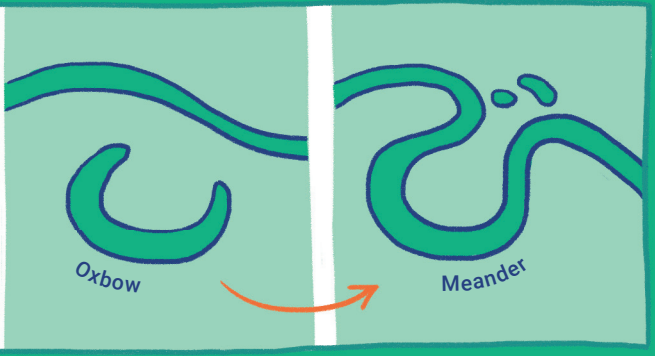
LET WATER INTO THE LANDSCAPE!

Relocate dikes, slit dikes, remove bank reinforcements, outlet structures for flooding floodplains



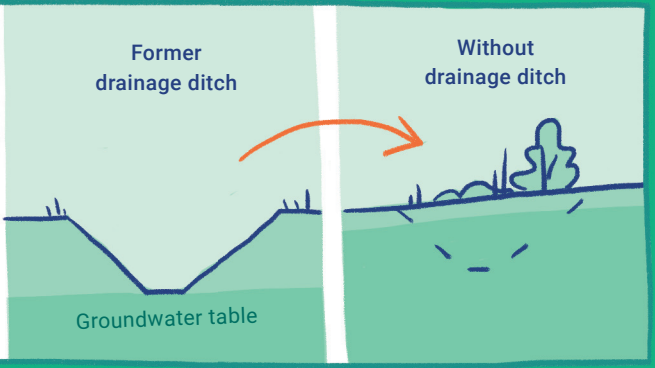
KEEP WATER IN THE LANDSCAPE!

Slow down water runoff, reconnect oxbow lakes, reroute existing rivers to slow them down and wet drier floodplain areas



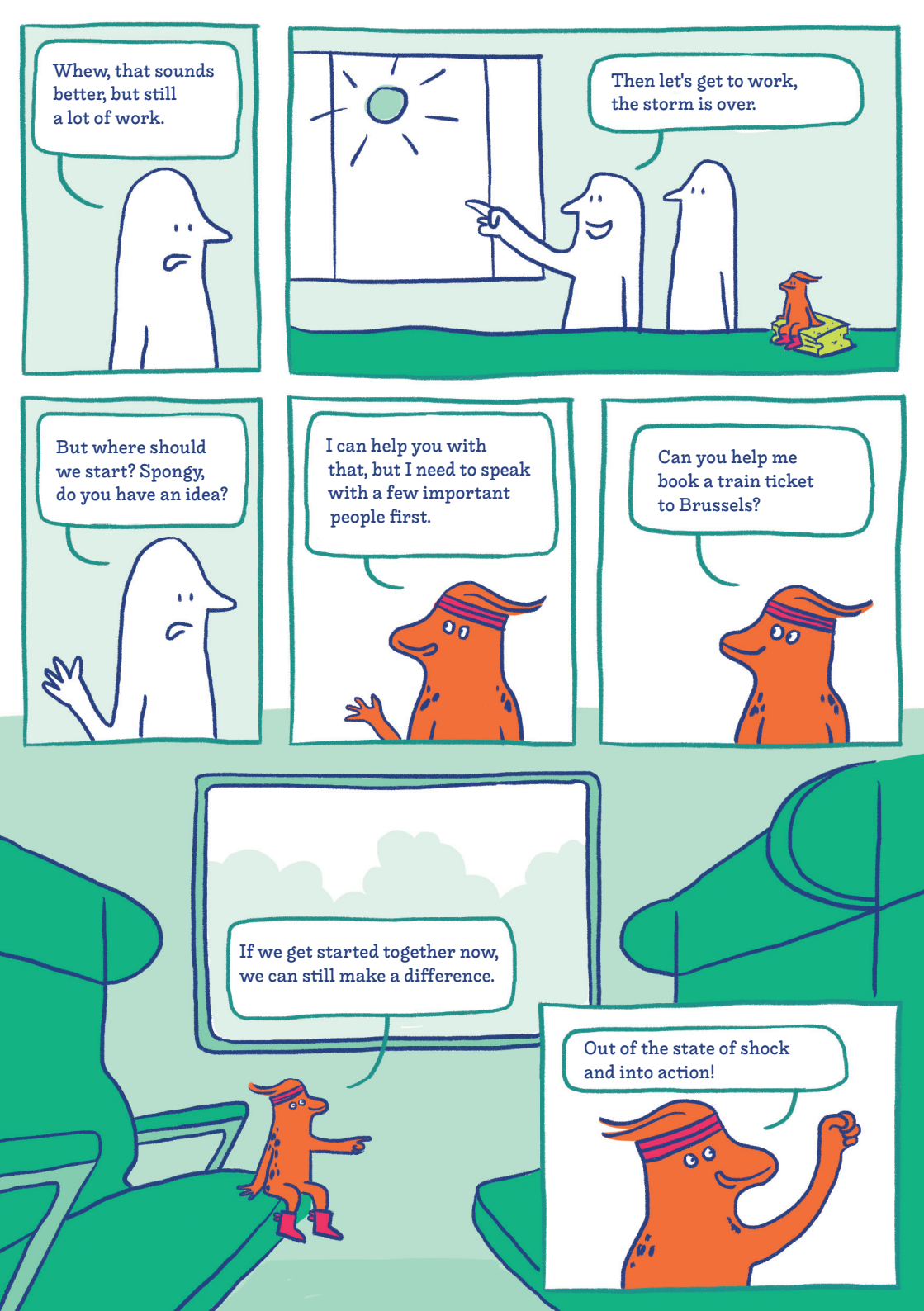
STOP DRAINAGE!

Close drainage ditches, remove drains



The specific measures always depend on the local situation.

In order to define suitable measures, we need to bring together various groups such as farmers, residents and policymakers.


Whew, that sounds better, but still a lot of work.
Then let's get to work, the storm is over.
But where should we start? Spongy, do you have an idea?
I can help you with that, but I need to speak with a few important people first.
Can you help me book a train ticket to Brussels?
If we get started together now, we can still make a difference.
Out of the state of shock and into action!

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WE ARE THE SPONGEBOOST PROJECT

Europe's landscapes have faced extreme weather, from heatwaves and droughts to heavy rains, severely damaging ecosystems and society. To combat these challenges, the SpongeBoost project was launched. It brings together a team of 10 partners from 7 European countries, spanning research, policy, and management fields. SpongeBoost focuses on enhancing landscapes' natural sponge-like characteristics to manage water flow and storage. This involves refining existing methods, implementing them on a larger scale, and exploring innovative solutions. The project aims to strengthen landscapes' resilience against climate-related extremes through natural water retention.

PARTNER

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9. Bureau Stroming
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Further information on the project and ongoing activities can be found on the project website and on our social media channels:

www.spongeboost.eu @spongeboost_eu SpongeBoost Project SpongeBoost Project

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