

# ZERO TERRAIN AND CIRCULAR ECONOMY OPPORTUNITIES

April 2024

Peep Siitam

Co-founder and CEO



ZERO TERRAIN



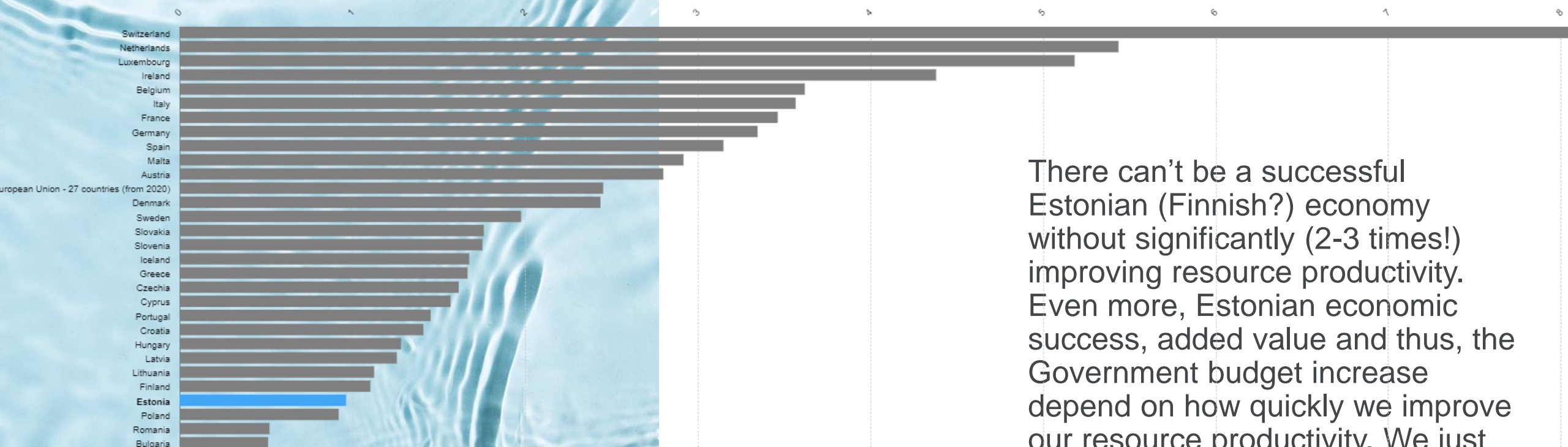
[See Zero Terrain video here zeroterrain.com](https://zeroterrain.com)



# WHY ZERO TERRAIN?

- ✓ **Zero Terrain is a build-it-anywhere pumped-hydro storage (PHS) technology that provides renewable baseload to consumers and supports the grid.**
- ✓ We reduce energy bills by providing clean, affordable and secure power to our consumers when there is no sun and wind
- ✓ We support TSOs by reducing their investment needs and taking care of the fast-ramping needs
- ✓ We support Governments in maintaining their energy transition and decarbonisation goals
- ✓ We support power producers by improving their Capture Prices
- ✓ **We improve resource productivity by promoting circular economy principles in road construction and valuing biodiversity**

# RESOURCE PRODUCTIVITY STATISTICS



There can't be a successful Estonian (Finnish?) economy without significantly (2-3 times!) improving resource productivity. Even more, Estonian economic success, added value and thus, the Government budget increase depend on how quickly we improve our resource productivity. We just waste money!



# WHY DO WE TALK ABOUT ROAD CONSTRUCTION?



- Taaskasutuse ulatust taristuehituses ei hinnata.
- Ei ole välja selgitatud alternatiivsete ehitusmaterjalide ja/või imporditavate ehitusmaavarade kasutamise tegelikku rahalist mõju riigi taristuobjektide kogumaksumustele
  - Puuduvad hüvitised KOVidele ja kohalikele elanikele ehitusmaavarade kaevandamisega tekitatavate häiringute talumise eest
- + Uurida täiendavalt uudsete lahenduste kasutusele võtmise võimalusi tee-ehituses, .... et **suurendada maavarade varustuskindlust ja vähendada ehitusmaavarade kaevandamist.**

**From evaluating the project's costs, we need to move to evaluating the total costs of the life cycle - this is how we save public money!**



# ANY PROOF?



If building from limestone **more minerals** and **financial resources** are needed



If building from crystalline bedrock minerals **less minerals** and **financial resources** are needed. Our roads **last longer** and materials are **recyclable**.





## HOW DOES ZERO TERRAIN PROMOTE A CIRCULAR ECONOMY?

- ✓ We'll make the 300mEUR investment just to introduce a new natural resource – 40 mill tons of high-quality aggregates from the construction of the Paldiski PHS in 2028-2038
- ✓ We promote using underground infrastructure for other purposes – seasonal storage, civil protection and most likely... high-quality crystalline bedrock aggregates production for long period
- ✓ We build construction materials industry to Paldiski
- ✓ We promote the “Paldiski – the Baltic Sea Industrial Hub” concept
- ✓ We believe that the construction sector as one of the least value-added sectors globally will experience a significant transformation in the years to come
- ✓ We believe that a clean, decarbonized and resource-efficient business model is the only way to be competitive

## MAINTAINING BIODIVERSITY IS ALL ABOUT THE ECONOMY!

In the World where:

- ✓ Every individual interacts with thousands of other species within its lifetime
- ✓ The human population has more than tripled since 1950, and human impacts on the environment have enormously accelerated (in 2020, global human-made mass exceeded all living biomass)

and

- ✓ Natural capital is the engine of the economy
- ✓ The degradation of natural capital can cause annual economic losses of up to 2,7 trillion USD by 2030

We need to consider:

- ✓ Loss of land, soil and eroded chemical elements,
  - ✓ Cost of water management and buffering and
  - ✓ Value of the natural and living environment
- when making strategic social decisions by Governments.

Valuing the monetary value of biodiversity is challenging because of human's limitation, not because of the insignificance of biodiversity



## FROM SLOGANS TO DEEDS- ACTIONS ARE NEEDED



- ✓ Public sector and private sector cooperation to improve resource productivity and introduce circular economy principles



- ✓ Introducing circular economy principles in public procurements today!

The budgets of the Governments that implement circular economy principles will increase, while those that don't will decrease!

# UNOBSTRUCTED FUTURE

Peep Siitam

Peep.Siitam@zeroterrain.com