

Long-term responsibility in managing Baltic peatlands

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Disclaimer

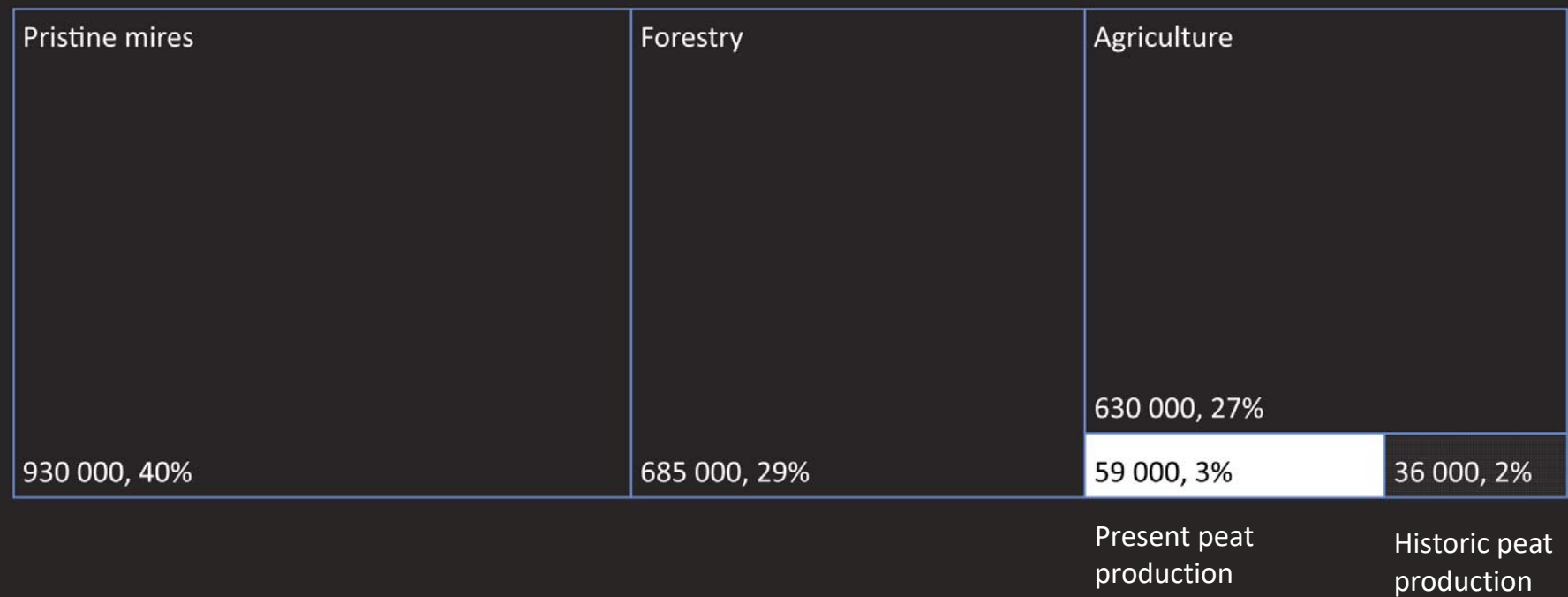
Following presentation is not a scientific report; the figures presented are correct in „exactly wrong, roughly right“ principle.

With this presentation I'm not making any statements.

This presentation is meant to help myself understand IT...

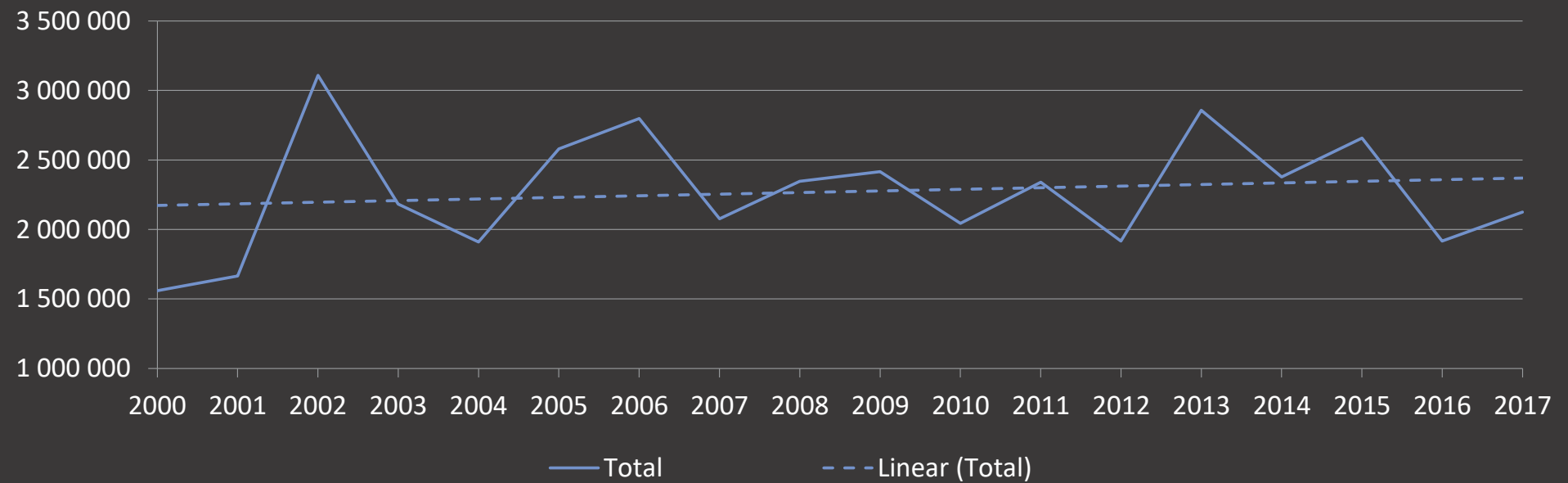
Baltic peatlands

Baltic peatlands



There is 2 340 000 ha of peatlands in Baltic countries | ha | *Estonian Peat Association, 2019*

Baltic peatlands

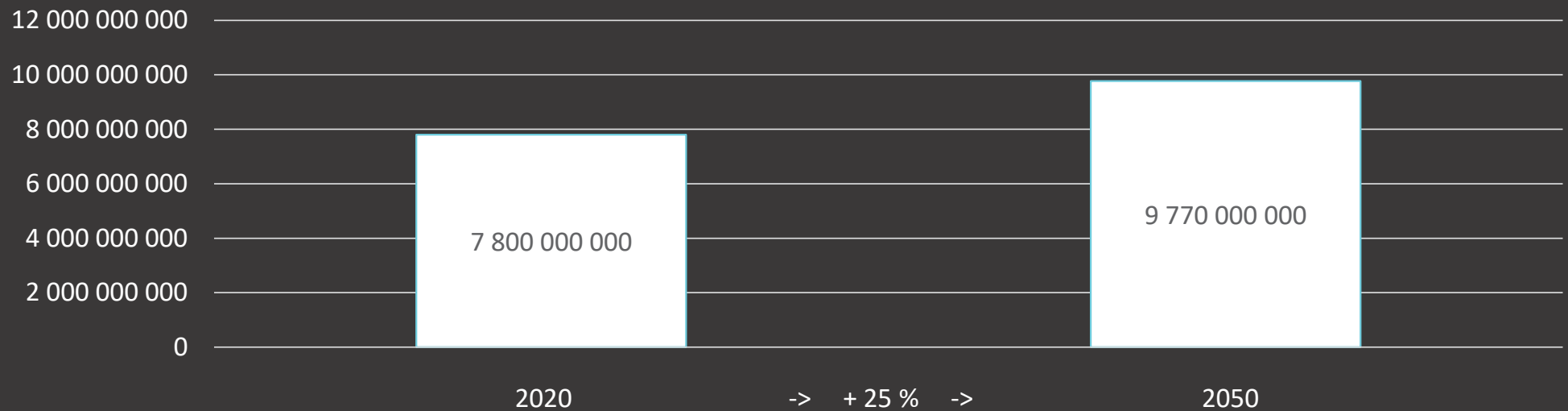


Peat production in Baltic countries 2000 – 2017 | tons | *Estonian Peat Association, 2018*

Global challenges

Global challenges

Population growth



World population will grow in next 30 years by 2 billion people | www.ourworlddata.com

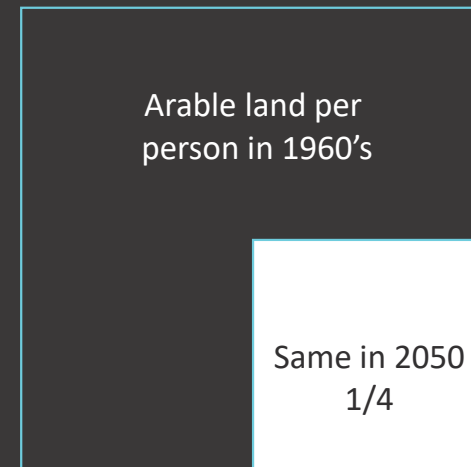
Global challenges

Food security

By 2050 50% more food is needed

At the same time:

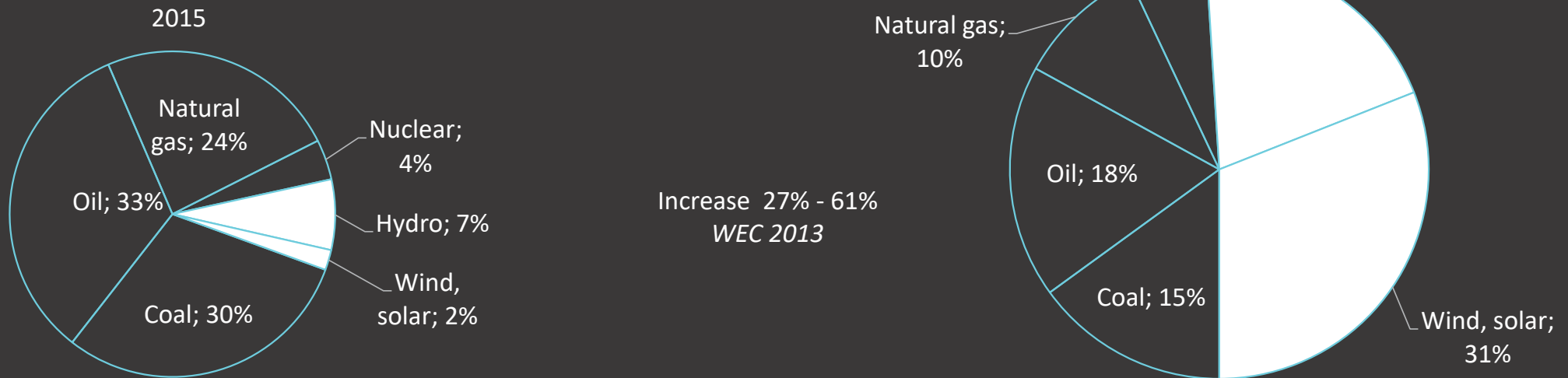
- during last 150 years 50% of the planets topsoil has been lost
- about 40% of arable land is degraded
- with such speed of degradation only 60 harvest have left



World agricultural land usage is 37% i.e. 48,6 million square kilometers | *World Bank*

Global challenges

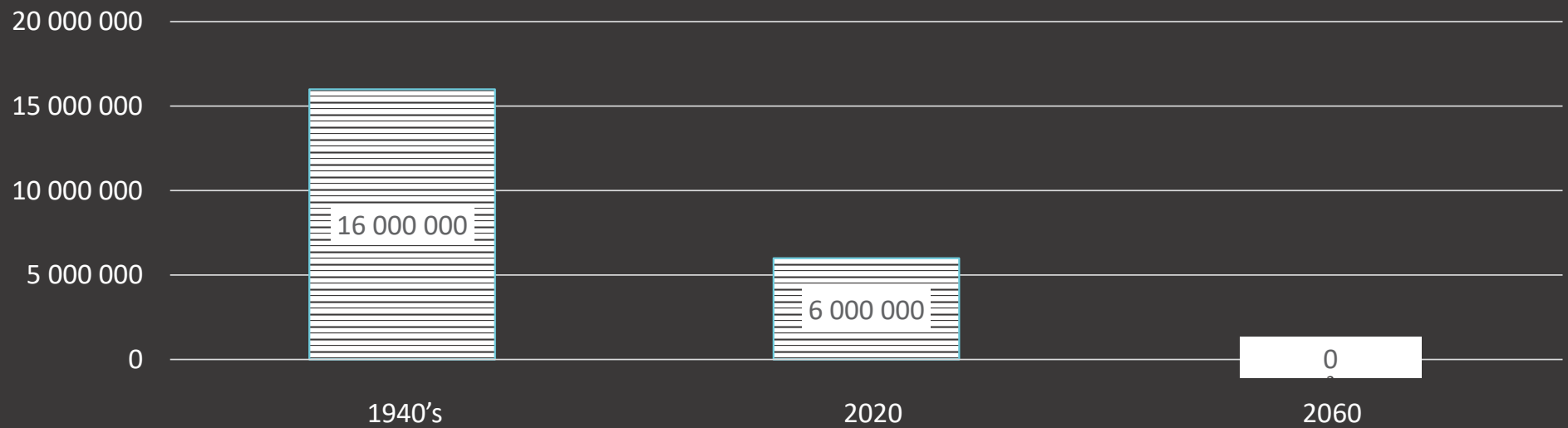
World energy consumption



Primary energy consumption in the world in 2015 was 160 00 TWh | TWh | www.wikipedia.com

Global challenges

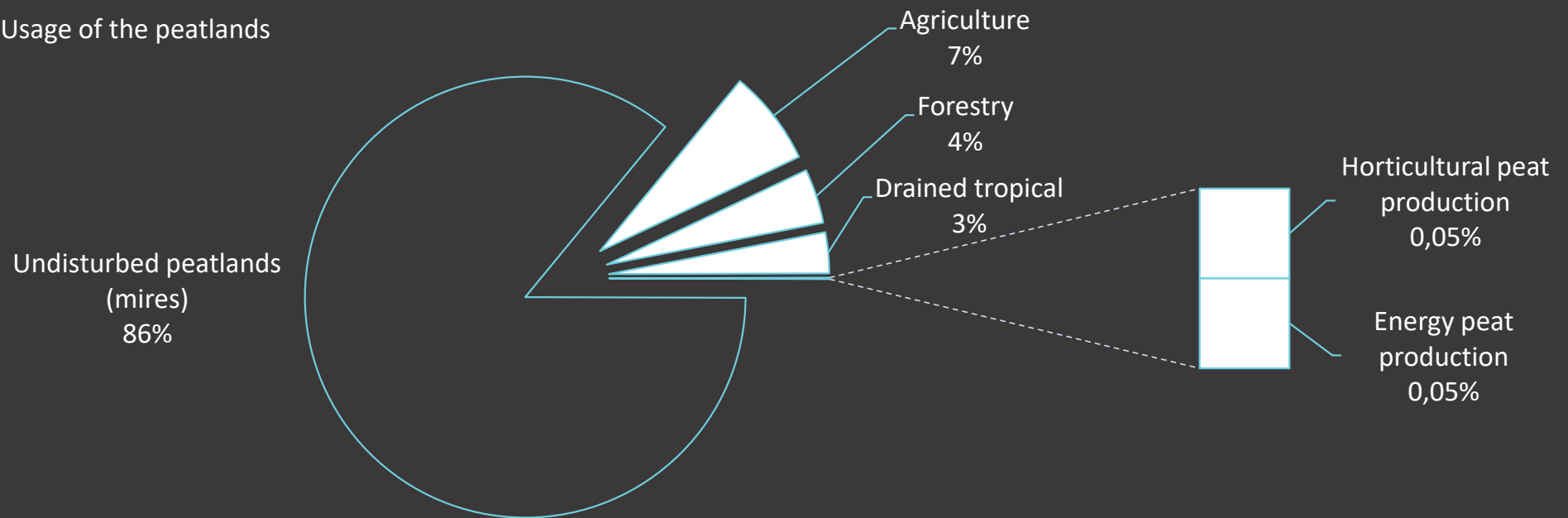
Deforestation of tropical forests



World forest coverage is 31% i.e. 40 million square kilometers | www.wikipedia.com

Global challenges

Usage of the peatlands



Uses of the peatlands worldwide by territory | % | *Strack 2008 / IPC 2008*

Alternative way of thinking

Alternative way of thinking

SAMPLE 1 - 25 MWh CHP (electricity output 25 MW and heat 50 MW)

Annual fuel consumption of such CHP is about 600 000 MWh or 660 000 m³ of peat

Annually about 400 MWh of peat can be harvested from 1 ha

Production site about 1 650 ha can fuel such CHP

Energy productivity of 1 ha forest is about 300 MWh

Alternative way of thinking

During a 30 year period,
60 000 ha of forest is need
for fueling 25 MW CHP ...

... or 1 750 ha of peatland

Ratio 1 : 34

Alternative way of thinking

SAMPLE 2 – Horticulture

1 m³ of peat in natural condition can produce little less than about 1 m³ of milled peat

1 m³ of milled peat allows to grow on 3 – 4 m²

Average thickness of peat in deposits in Baltic countries is about 3,5 meters

Alternative way of thinking

Peat usage allows to compensate the loss of arable land by allowing soilless cultivation

PS.

Annual peat accumulation rate is 1 mm

Annual soil accumulation is 33 times slower, only 0,03 mm!



Ratio 1 : 9

Conclusion

Conclusion

Which is more responsible (peat)land management – full rewetting or responsible economical management?

Perhaps it is possible to produce peat and still be environmental friendly?

Thank you!
