

# Green Net Domestic Product

Edward B. Barbier

# The Changing Wealth of Nations

Stefanie Onder

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The presentation reflects the personal opinion of the authors and not necessarily that of the German Council of Economic Experts.

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“Now is the time to **correct a glaring blind spot** in how we measure economic prosperity and progress.

When profits come at the expense of people and our planet, we are left with an **incomplete picture of the true cost of economic growth.**”

UN Secretary-General António Guterres (Our Common Agenda, 2021)

# Why is it important to look beyond GDP?

GDP insufficiently accounts for well-being and sustainability



- **GDP level** measures domestic production of goods and services in a country

- **What is missing?**



- **Well-being:** Inequality, wealth, ecosystem




- **Sustainability:** “When we destroy a forest / overfish, we are creating GDP.” (António Guterres, 2022) → value of environment?



- **GDP growth accompanied by severe environmental degradation** because external effects not or not sufficiently included

- 1) External effects have no price tag yet
- 2a) Price tag is not correctly measured
- 2b) Price tag is not sufficiently considered by politicians



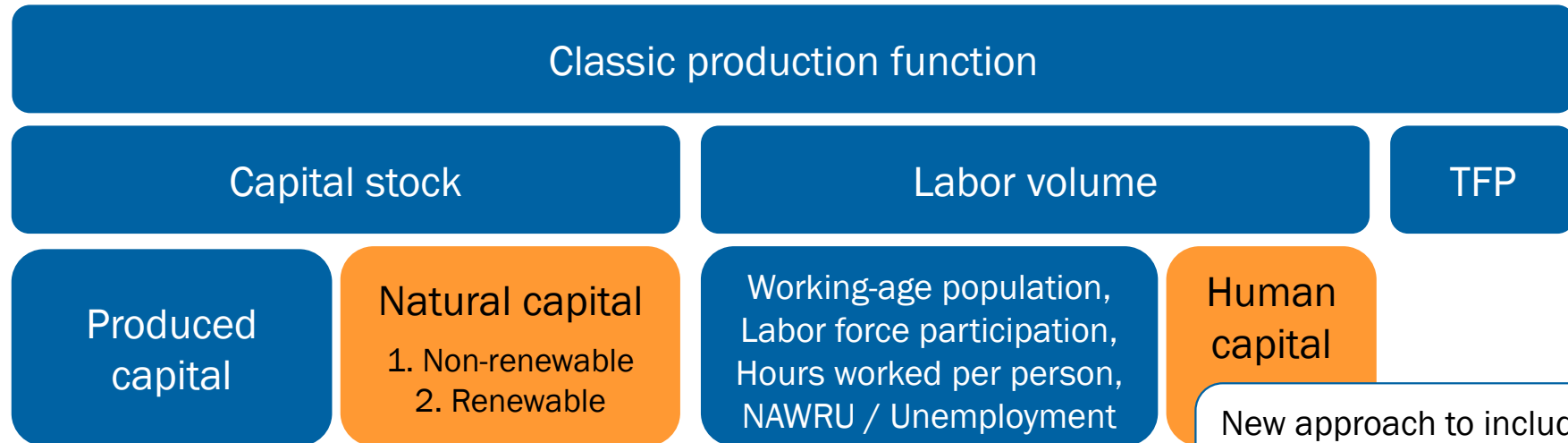
Contribution  
of this session

# Create a comprehensive wealth measure

Need to measure natural and human capital precisely – measurement must be possible



- The **missing parts** from a production function perspective



New approach to include HC in potential output estimation in GCEE Annual Report 2023, Chapter 2



- **How it should be measured**

- **Stefanie:** Precise, actionable, theory based, empirically robust
- **Edward:** ANDP – inclusion of ecological capital however difficult
- **?** Do we have **revisions to wealth measures?** → Revision database?

# The wealth database of the World Bank

Findings and potential research avenues in a nutshell



## ↘ **Cumulative real wealth growth since 1995 has been positive**

- ↘ But much lower than cumulative GDP growth
- ↘ And heterogeneous across regions and assets
- ? Very interesting to analyze wealth development if country is fragile or with low law stability (Acemoglu et al., 2001)



## ↘ **Renewable capital per capita decreased tremendously,** non-renewable capital only in some regions

- ↘ Unexpected development (at least from my point of view)
- ? Uncover the reasons behind this?
- ? Policy implications?

# Extend ANDP by ecological capital?

WDI as basis for ANDP calculation – difficult to extend by wealth data



## ↘ **Ecological capital difficult to value**

- ↘ Partly non-marketed
- ↘ Risk premium on irreversible damage potential
- ↘ How to **revalue natural capital** if ecosystem is converted to other land use?
- ? Price tag on ecosystem?



## ↘ **Account for ecological capital losses is possible**

- ↘ **Edward**: Mangrove loss in Thailand
- ? Can we also **measure the potential ecological capital loss**?

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