

Social Sustainability Assessment for Policy Support

A Life Cycle Approach to Understanding and Managing Social Risk
Attributable to Production and Consumption in the EU-27

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Who has contributed ...

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What I want to talk about ...

- Context
- Purpose
- Methods
- Results
- Conclusions



Context

- **Sustainability** is a key concept in EC policy
- EC policy documents call for **use of policy** to leverage improved social sustainability, e.g. through fairer trade
- **Social risks** and economic/political risks are interrelated and mutually reinforcing
- **Conflict minerals** have been highlighted
- JRC is to provide research for **policy support**, i.e. relevant for current Juncker-objectives



Purpose

- Develop/apply a **policy-support method** for assessing the distribution of social risk associated with EU trade
- Assess **relevance** of a life cycle approach in this context
- Demonstrate utility for **Integrated Sustainability Assessment**
- Individual **products** are outside the remit



Method

- Combine two “Big Data” sources
 - Eurostat ComEx trade data (initial focus on imports)
 - country/sector-specific social indicator data (Social Hotspots Database - SHDB)
 - with GTAP-model
- Assess magnitude and distribution of apparent risk using two approaches
 - Country/sector-of-origin approach
 - Life cycle approach



Method: Mapping EU-27 Imports to SHDB Indicator Data



HS06 Data
(7395 classifications)



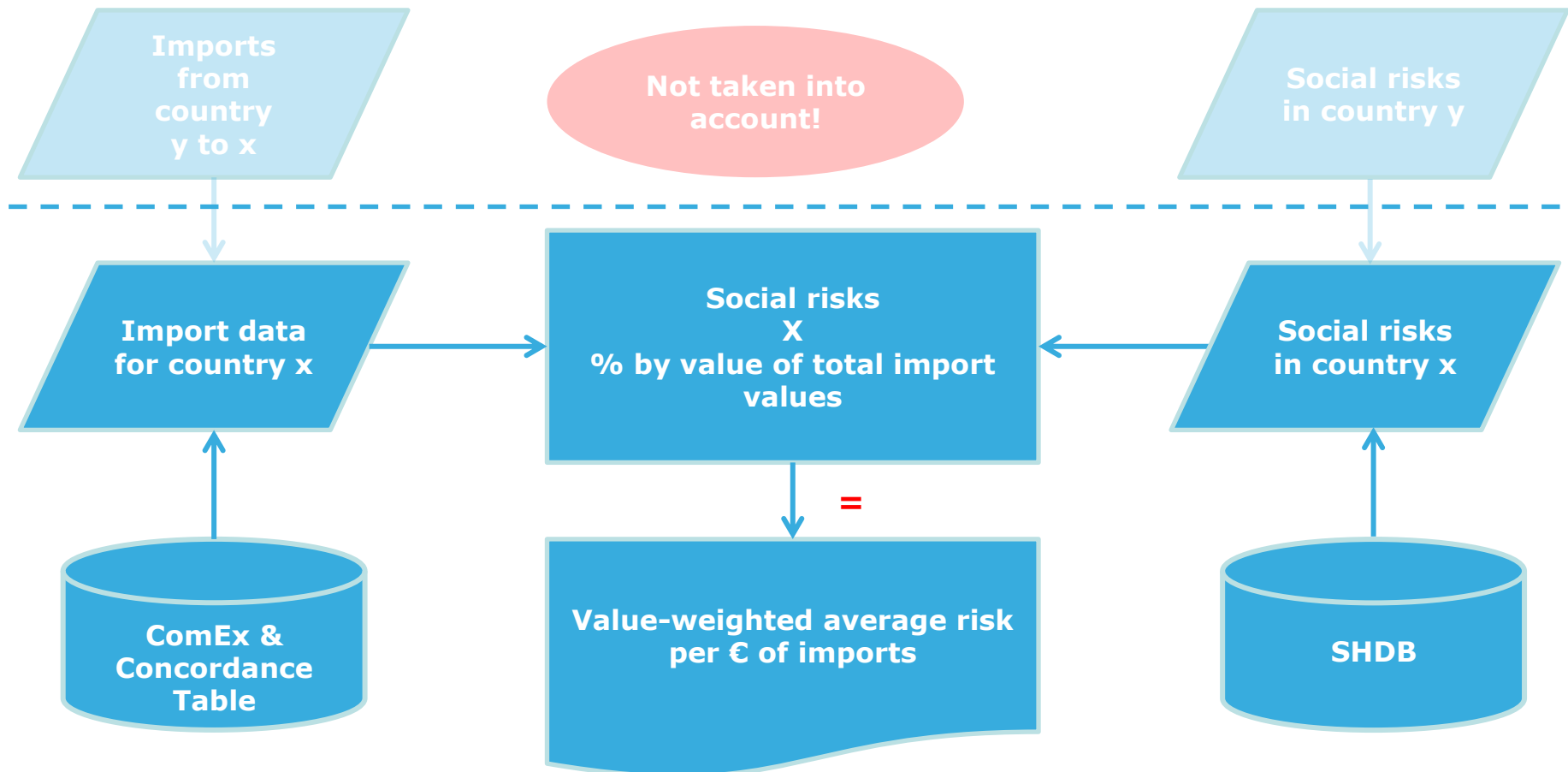
Concordance Table



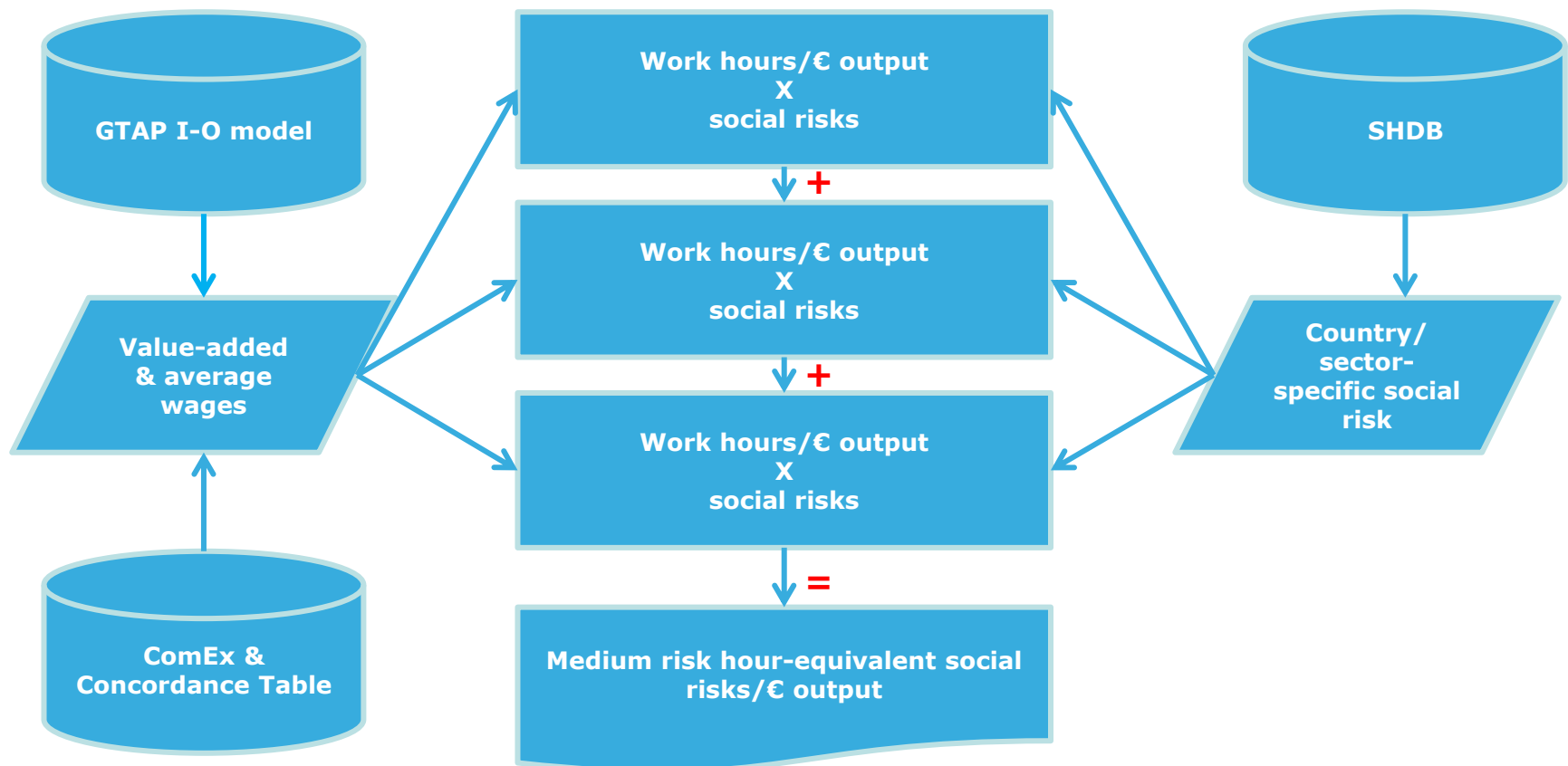
43 of 57 sectors

- 88.4% of imports by value from extra-territorial trading partners
- 95.5% of imports by value from intra-territorial trading partners
- 92.8% of overall imports by value (EU-27 2010)

Method: Country of Origin Analysis



Method: Life Cycle Method



Method: “Medium risk hour-equivalents”

- Is the common unit used to express the occurrence of supply chain risk
 - Number of work hours in the supply chain for which a **specific risk** exists
 - “**medium**” reflects a weighting between risk levels (low, medium, high, very high) as defined in SHDB
 - **Analogous to “CO2-equivalent” emissions** in GHG accounting



Method: **Example Gender Equity**

Gender Equity (GE)	GE mrh eq		
Overall Risk of Gender Inequality in country, HR	5	GE mrh eq / work hours	
Overall Risk of Gender Inequality in country, LR	0.01	GE mrh eq / work hours	
Overall Risk of Gender Inequality in country, MR	1	GE mrh eq / work hours	
Overall Risk of Gender Inequality in country, URL	0.1	GE mrh eq / work hours	
Overall Risk of Gender Inequality in country, VHR	10	GE mrh eq / work hours	

Data Source: SHDB

Method: Externalization Ratios

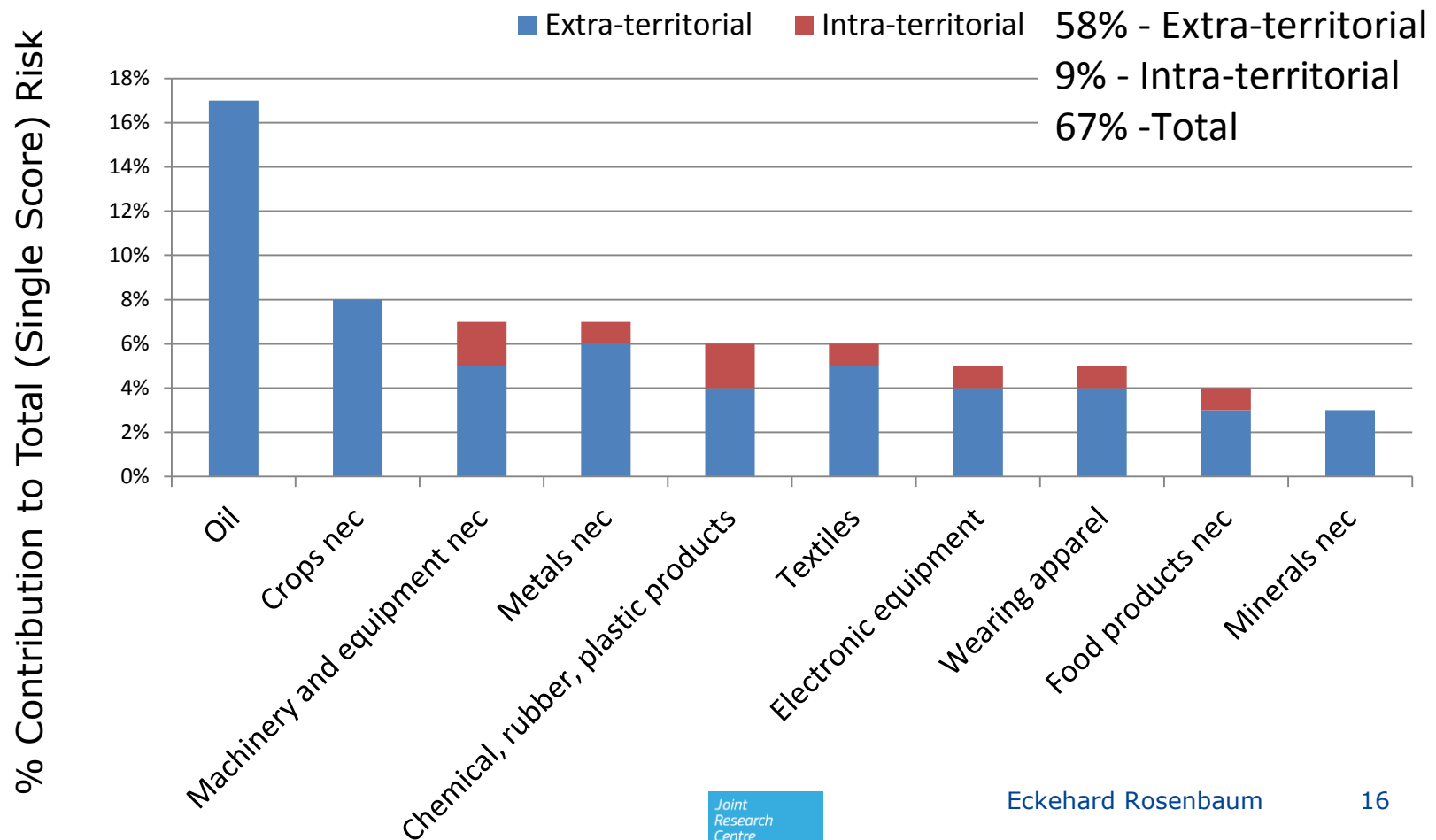
- **Ratio of risk** associated with the production of imported commodities outside of territorial boundaries to that which occurs within the EU-27
- For **LCA-based** approach and **Country-of-Origin** approach



Results:

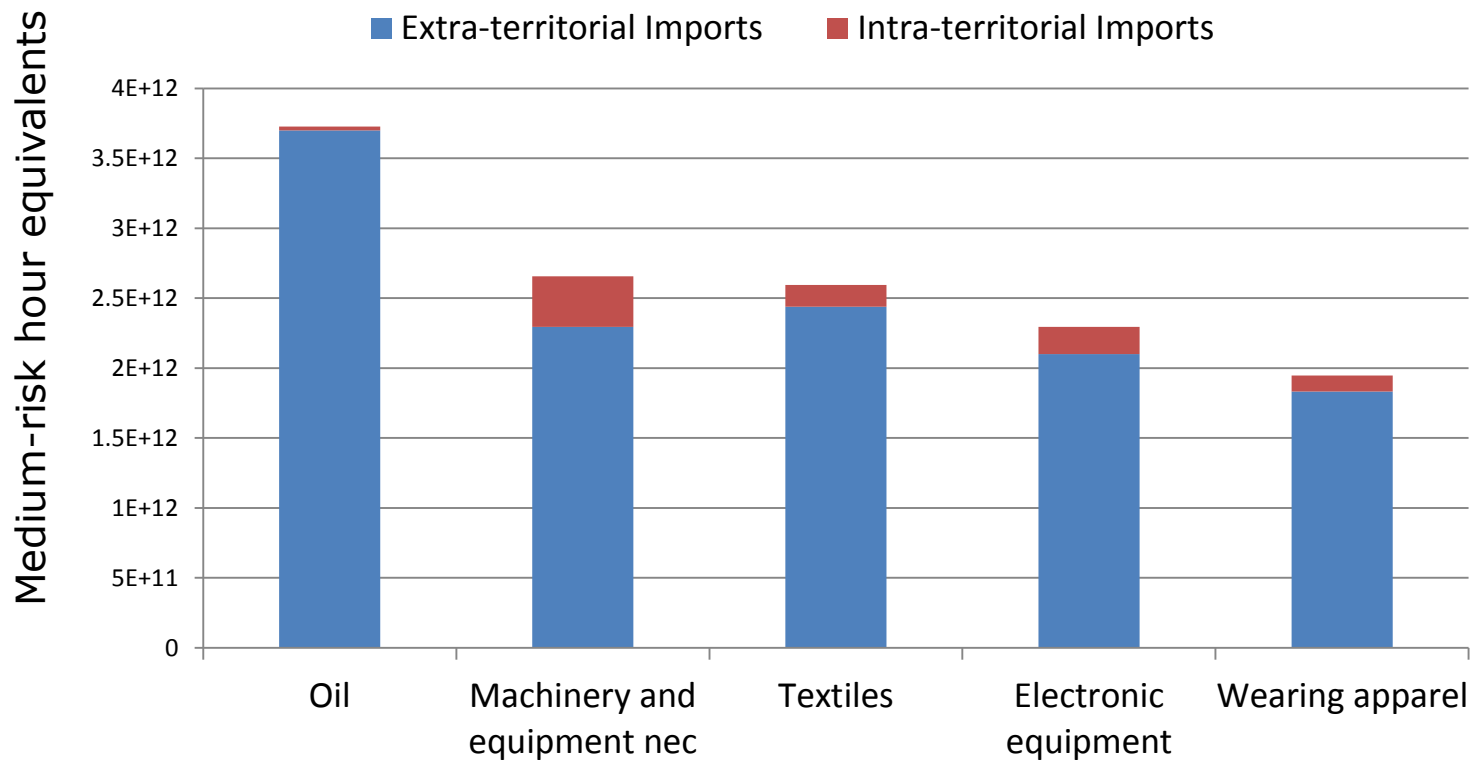
- **Comparing** Country-of-Origin and Life Cycle-Based Analyses
- **Majority of risk** associated with extra-territorial imports
 - almost 100% for the country-of-origin analysis and 83% for the life cycle-based analysis).
 - Extra-territorial imports contribute only 36.5% of overall imports by value
- Two approaches provide **different “signals”** with respect to distribution of risk between sectors and between countries of origin
 - **intra-territorial imports** contribute from 9% for risk of Child Labour to 20% for risk of Injuries and Fatalities **in the life cycle-based** analysis (versus almost 0 for C-o-O analysis)

Results – LC: Top 10 sectors, all imports

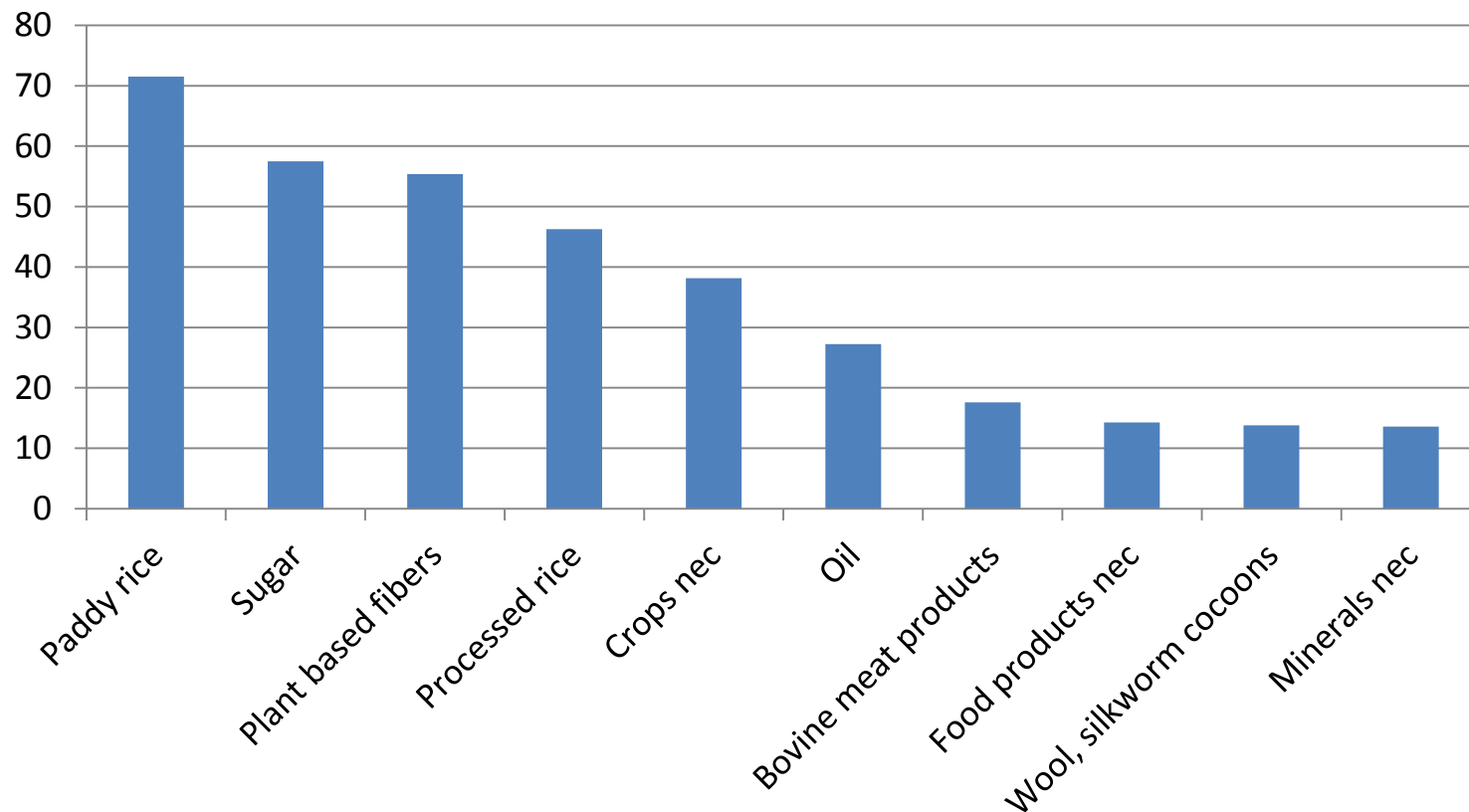


Results – LC: Priority areas vary across social themes ...

- Example: Labour Rights and Decent Work (total imports)



Results – LC: Externalization ratios



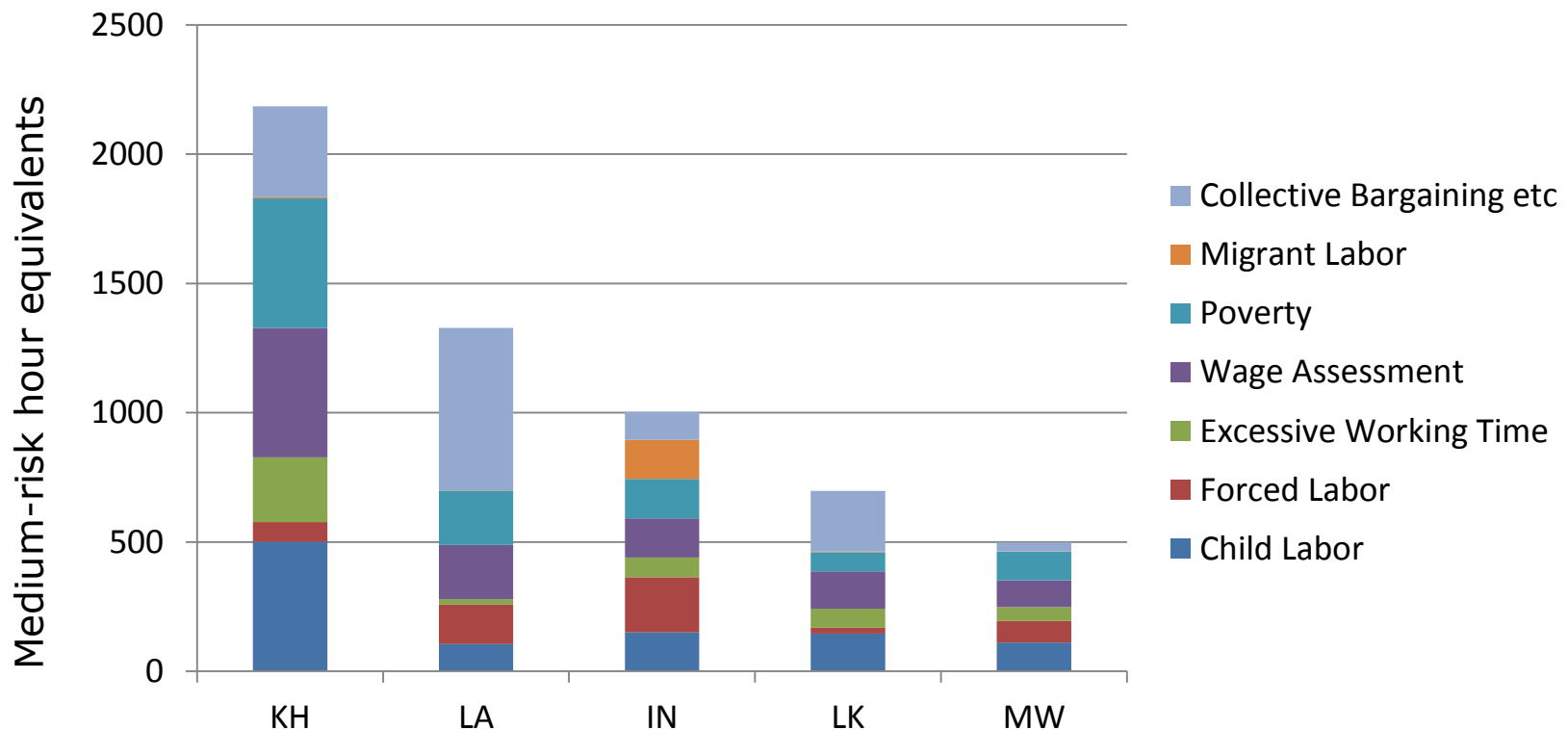
Results – LC:

- This level of analysis tells us ...
 - **Relative importance** of extra- versus intra-territorial imports
 - What **sectors** to focus on
 - For overall, single score risk, per thematic area, or per social theme
- On **two bases**
 - Total trade value
 - Per euro spent



Results – LC:

- Labour rights and decent work risks per euro spent on extra-territorial imports of paddy rice (mhr-e)



Results – LC: **This analysis tells us ...**

- What trading partners are **most important** for specific or aggregate social risk (in total or per euro spent)
- **Results differ** by sector and thematic area/social theme



Conclusions: **Some caveats**

- Use of **working hours** as a metric for risk
 - Uncertainty in allocating **working hours**
 - Uncertain in allocating **risks** to working hours
- **Information** on social risks
 - Comprehensiveness of data
 - Reliability of data
- Cultural & social **perspectives** on social risks/trade-offs
 - Child work as **alternative** to no work/no food
- Not suitable for comparing **products**

Conclusions

- Methodology applied in this “proof of concept” analysis appears useful for **policy support** applications at EU-scale
- **Complement** to life cycle-based environmental and economic sustainability indicator methods
- The full report can be found here:
<http://publications.jrc.ec.europa.eu>
- Our **website**: <http://sa.jrc.ec.europa.eu>
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