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# THE ROLE OF EXTENDED SUSTAINABILITY CRITERIA IN CERTIFYING GREEN HYDROGEN PRODUCTION IN UKRAINE

17.02.2026 | 2<sup>nd</sup> Online workshop as part of the “German-Ukrainian Research Cooperation on the Certification of Green Hydrogen” (GerUCCHy) | Hamburg Institut and Institute of Renewable Energy at the National Academy of Sciences of Ukraine (IRE)

## WORKSHOP AGENDA

Time	Agenda
9:30	Introduction of the German-Ukrainian Research Cooperation on the Certification of Green Hydrogen   Dr. Alexandra Styles (HIR)
9:45	Analysis of existing international sustainability criteria for green hydrogen   Timo Hoelzmann (HIR)
10:00	Polling questions and discussion: identifying the most relevant criteria for the Ukrainian context   Timo Hoelzmann (HIR)
10:30	Conclusion of the workshop



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# INTRODUCTION OF THE GERMAN-UKRAINIAN RESEARCH COOPERATION ON THE CERTIFICATION OF GREEN HYDROGEN

17.02.2026 | Dr. Alexandra Styles | Workshop: The role of extended sustainability  
criteria in certifying green hydrogen production in Ukraine



# ABOUT THE PROJECT

- The “**German-Ukrainian Research Cooperation on the Certification of Green Hydrogen (GerUCCHy)**” aims to provide science-based support for the development of a verification system for green hydrogen in Ukraine.
  - A cross-border, **internationally compatible hydrogen origin verification system** is an important link in the supply chain for certified green hydrogen between Ukraine and Germany and other EU countries
  - The project aims to build up the **necessary expertise** for the development and operation of such a system
- **Project duration:** June 2024 – May 2026
- **More information:** <https://www.hamburg-institut.com/en/services/guarantees-of-origin/research-cooperation-gerucchy/>

- The **research cooperation** is a partnership between two highly specialized, application-oriented research institutions:
  - **HIR Hamburg Institut Research gGmbH**
  - **Institute of Renewable Energy at the National Academy of Sciences of Ukraine (IRE)**
- Funding Agency: **Federal Ministry of Research, Technology and Space (BMFTR)** within the framework of the guideline for funding international projects on the topic of green hydrogen (Funding code: 01DK24007)



With funding from the:



## BACKGROUND

- **EU demand for imported renewable hydrogen** is forecast to be high, especially for hard to electrify sectors, such as heavy industry, aviation, and maritime transport
- EU regulation sets **rules for green hydrogen**:
  - RED II/III: targets for renewable fuels of non-biological origin (RFNBO) in industry and transport
  - EU Emissions Trading System and Carbon Border Adjustment Mechanism (CBAM): renewable hydrogen is considered to have zero emissions
  - Detailed RFNBO criteria regarding renewable character of electricity inputs and required greenhouse gas (GHG) reductions
  - Climate accounting standards for companies as complementary demand drivers on voluntary markets
- **Ukraine's green hydrogen opportunity:**
  - Potential to become a key trading partner for Europe
  - Current challenge: energy sector severely damaged by Russia's invasion, threatening energy security
  - Focus on renewable energy and green technologies as a strategic response
  - European demand and investment critical for developing Ukraine's green hydrogen economy
- Developing green hydrogen trade between Ukraine and Europe requires the **establishment of an internationally recognized verification and certification system:**
  - Crucial to ensuring the environmental integrity of hydrogen, supporting market development, and facilitating trade

# PROJECT CONTENT

Basics of tracking approaches for renewable energy and hydrogen

Stocktaking of regulatory and market development of renewable energy and hydrogen in Ukraine, identification of main stakeholders

Analysis of the current electricity tracking system in Ukraine and adjustment needs for the certification of green hydrogen

Recommendations for designing a tracking system for renewable hydrogen in Ukraine

Examination of extended sustainability criteria for renewable hydrogen in Ukraine

## Deliverables and milestones

- Report on certification basics and status quo of the Ukrainian renewable energy and hydrogen sector ([available online](#))
- Report on design prerequisites for a hydrogen certification system, including recommendations for a further development of the electricity tracking system
- Interviews and surveys with stakeholders in Ukraine and Germany/EU
- Exchange with stakeholders to disseminate and discuss project results
- Publications and presentations at specialized conferences

# TAKEAWAYS FOR CERTIFICATION OF GREEN HYDROGEN IN UKRAINE FROM THE 1<sup>ST</sup> WORKSHOP

## Status of the hydrogen economy in Ukraine

- Ukraine's hydrogen economy is still in its **infancy** (significantly shaped by the broader challenges currently facing the country)
- Ukraine possesses several **key aspects** to become a future **exporter of hydrogen** to the EU: energy partnerships with the EU, existing gas pipeline and storage infrastructure, high renewable energy potential, sufficient freshwater availability
- Development is held back by a number of **unresolved issues**, such as: absence of guaranteed offtakers, lack of state support, high risk perception by investors, missing regulatory framework, uncertainties regarding the existing gas network, hydrogen projects in occupied territories, uncertain future domestic hydrogen demand
- Progress is experiencing **significant delays**, overall **timeline** for large-scale hydrogen deployment remains **uncertain**

## Status of certification of electricity and hydrogen

- Significant progress on setting up **GO registry for renewable electricity**, becoming an **AIB member** and **applicant of the EECS Electricity Scheme**
- Timeline for becoming a full active member of the AIB's Electricity Scheme is still unclear
- Way forward for certification of electricity and hydrogen:
  - Further integration of the electricity GO system into the national disclosure and support framework
  - Full **alignment** of certification framework for hydrogen **with the EU requirements** (Guarantees of Origin for disclosure/Proofs of Sustainability for target accounting)
  - Prioritization of **access to the Union Database (UDB)** in cooperation with voluntary certification schemes, followed by the build-up of a national hydrogen registry to support domestic target accounting and disclosure



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# ANALYSIS OF EXISTING INTERNATIONAL SUSTAINABILITY CRITERIA FOR GREEN HYDROGEN

17.02.2026 | Timo Hoelzmann | Workshop: The role of extended sustainability criteria  
in certifying green hydrogen production in Ukraine



# EU-REGULATION AND THE ROLE OF EXTENDED SUSTAINABILITY CRITERIA



## EU regulation sets binding sustainability requirements for green hydrogen:

- Focus on renewable/low-carbon origin
- GHG emissions thresholds

→ EU compliance is essential for Ukraine to access the European market



## Voluntary certification systems and standard initiatives go beyond EU requirements and formulate broader sustainability requirements

- Broader criteria foster positive outcomes such as reduced ecological footprints, improved social welfare, and strengthened local economies
- By voluntarily implementing such broader standards, producers can demonstrate a commitment to holistic sustainability

The following compilation of existing extended sustainability criteria is based on a comparative assessment of different certification systems, sustainability standards and market mechanisms:

- **„ISCC 202 Sustainability Requirements“** issued by ISCC
- **„TÜV SÜD Standard CMS 70 Production of Green Hydrogen and Hydrogen Derivates“** issued by TÜV SÜD
- **„TN-H2 001 Criteria Catalogue for testing the production, transport and storage properties of hydrogen, hydrogen derivates and industrial gases“** issued by TÜV NORD CERT
- **„RSB Principles & Criteria“** issued by the Roundtable on Sustainable Biomaterials Association (RSB)
- **„Green Hydrogen Standard 2.0“** issued by the Green Hydrogen Organisation (GH2)
- **„Annex 9.1a Additional Sustainability Requirements“** as a part of a Hydrogen Purchase Agreement within the H2Global mechanism implemented by the H2Global Foundation and Hintco

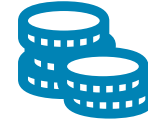
## CENTRAL CATEGORIES OF EXTENDED SUSTAINABILITY CRITERIA



**Environmental Aspects**



**Social Aspects**



**Economic Aspects**



**Governance Aspects**

## ENVIRONMENTAL ASPECTS



### Biodiversity:

- Exclude areas with high biodiversity value, significant carbon stocks, or peatland characteristics from fuel production and development of industrial facilities
- Maintain healthy ecosystems: protection of endangered species and preservation of their habitats (through ecological corridors and buffer zones)

### Water use:

- Protection of water as a natural resource
- Sustainable water management: safeguarding water quality and maintenance of water bodies
- Water withdrawals from surface and groundwater sources must remain within natural recharge rates; desalination activities shall avoid adverse effects on resources
- Avoid the extraction of fossil and drinking water resources (especially in water-stressed regions)
- Potential impacts on surrounding vegetation and aquatic ecosystems, management of wastewater as well as water rights of affected communities must be considered carefully

# ENVIRONMENTAL ASPECTS



## Protection of soil and air:

- Maintain and enhance soil fertility through responsible fertilizer use, appropriate plant protection measures, and the selection of suitable species and varieties (to prevent long-term soil degradation)
- Production processes shall prevent contribution to air pollution
- Avoid combustion of waste or land clearing to create new production areas

## Energy efficiency and waste management:

- Environmentally responsible management of emitted gases, residual heat, water-desalination-related waste streams, and other secondary outputs and residues
- Repurpose residual outputs in other processes and integrate them into circular economic systems (wherever possible)
- Ensure efficient use of electricity and promote energy efficiency or other decarbonization options

## SOCIAL ASPECTS



### Labor standards and rights:

- Prohibition of all forms of forced labor and child labor
- Adequate working conditions: fair contractual arrangements, accurate recording of working hours, and compliance with minimum wage requirements
- Ensure health and safety of employees
- Allow workers to organize associations, engage in collective bargaining, and raise grievances

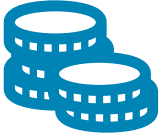
### Land use rights:

- Identify and recognize formal and informal land-use rights to ensure legitimacy of land utilization and to clarify ownership structures
- Exclude involuntary displacement along the entire value chain
- Resettlement shall be accompanied by improvements in living standards and shall ensure participation of affected populations

### Further human rights:

- General protection of human rights includes ensuring non-discrimination, food security, access to education, and provision of basic services

## ECONOMIC ASPECTS



### Economic viability and good management practices:

- Conduct systematic analysis of economic viability, as well as impact and risk assessments
- Implement operational procedures that ensure long-term economic resilience
- Transparent and consultative management procedures

### Local economic development:

- Improve social and economic conditions within impacted communities and stakeholder groups to strengthen local value creation
- Safeguard and advance living conditions, public health, and asset protection
- Ensure active inclusion of local actors and their knowledge

## GOVERNANCE ASPECTS



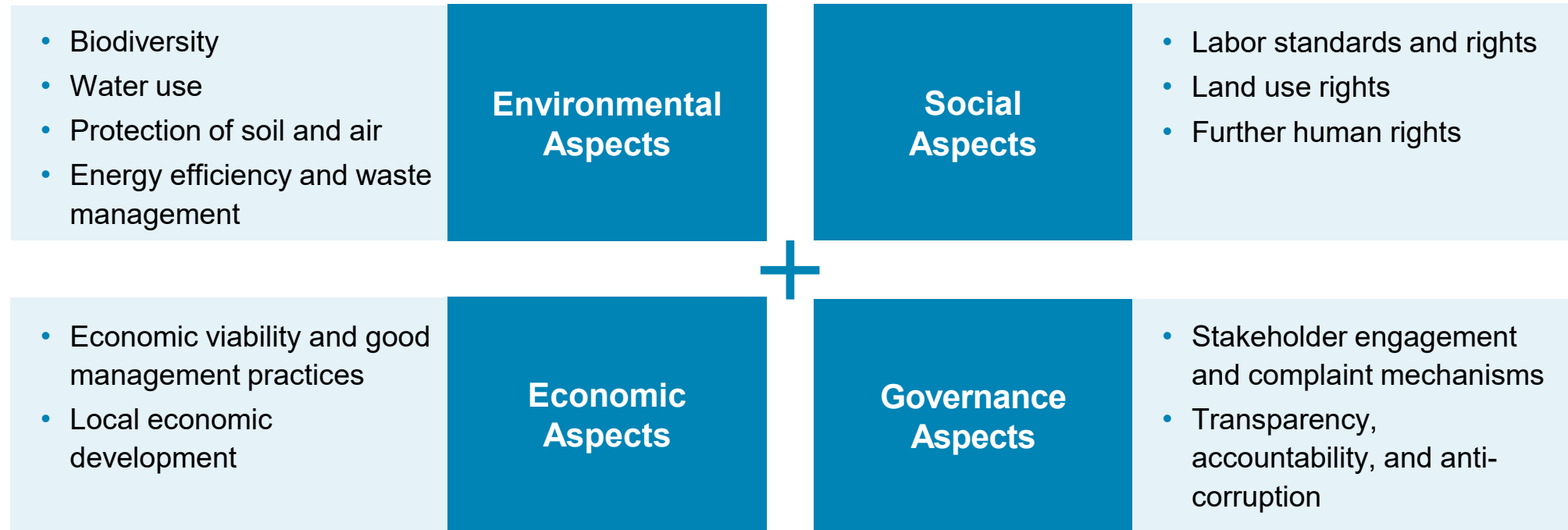
### Stakeholder engagement and complaint mechanisms:

- Actively involve affected stakeholders (local communities, NGOs, investors) through consultations and decision-making processes; emphasize inclusion of minorities and women
- Provide easily accessible grievance mechanisms for stakeholders to raise concerns directly with the relevant authorities

### Transparency, accountability, and anti-corruption:

- Provide all stakeholder-relevant information in a clear and publicly accessible way (such as information on organizational structures, ownership arrangements, contractual foundations, and financial matters)
- Ensure corporate accountability by complying with applicable laws, regulatory frameworks, and established standards of conduct
- Maintain robust anti-corruption standards by preventing all forms of bribery, conflict of interest, and fraudulent behavior

# OVERVIEW OF EXISTING EXTENDED SUSTAINABILITY CRITERIA



**Central question: Which of these extended sustainability criteria should be prioritized when setting up a certification system for green hydrogen in Ukraine?**



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# POLLING QUESTIONS AND DISCUSSION: IDENTIFYING THE MOST RELEVANT CRITERIA FOR THE UKRAINIAN CONTEXT

17.02.2026 | Timo Hoelzmann | Workshop: The role of extended sustainability criteria  
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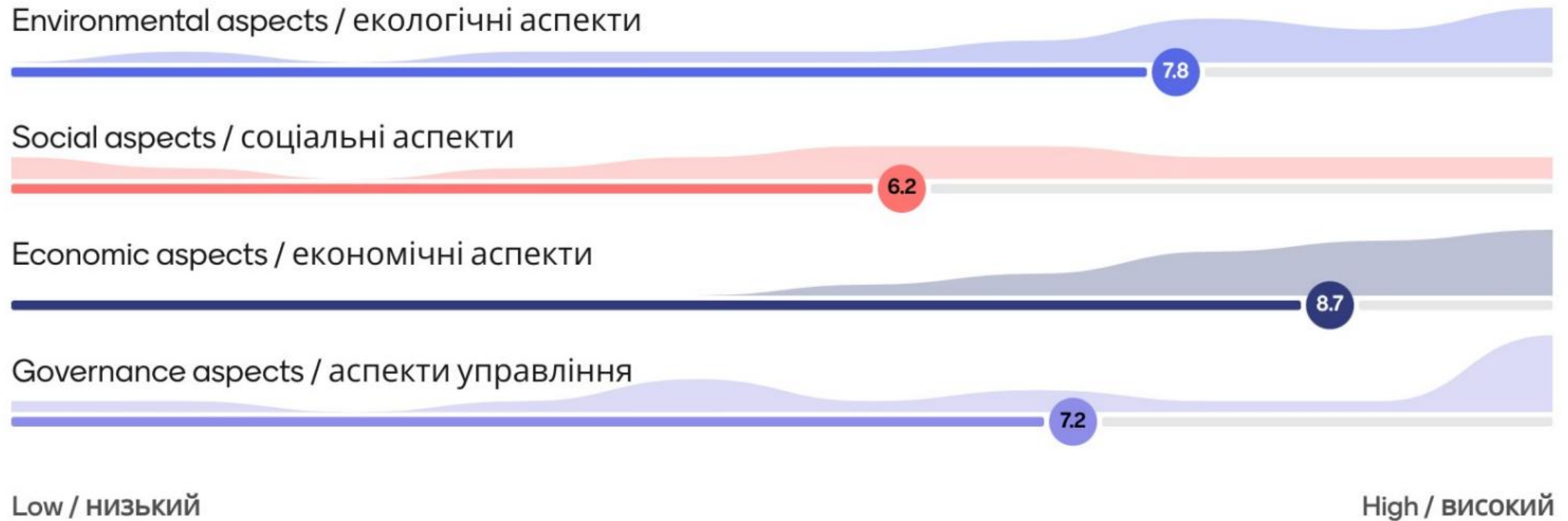
## WE WANT TO KNOW YOUR OPINION!

- We will use the polling tool „**Mentimeter**“ to allow you to assess **which criteria should have priority** in the context of setting up a certification system for green hydrogen in Ukraine from your point of view
- **Polling procedure:**
  - First question: rating the **relevance** of the four main categories (environmental, social, economic and governmental aspects) of extended sustainability criteria
  - Following questions: rating the **relevance** of the criteria within the four main categories
- Two aspects should be considered when assessing the **relevance in the context of Ukraine:**
  - (1) Which criteria are **generally of higher importance** in the Ukrainian context and should therefore be given priority?
  - (2) Which of the criteria should be given **particular consideration when setting up a certification system for green hydrogen**? For which criteria are other regulatory mechanisms more suitable?

# Results of the polling questions

For the Ukrainian context / для українського контексту

1. Please rate the relevance of the main categories of sustainability criteria / Оцініть актуальність основних категорій критеріїв сталого розвитку



For the Ukrainian context / для українського контексту

2. Please rate the relevance of the criteria regarding economic aspects / Оцініть актуальність критеріїв щодо економічних аспектів

Economic viability and good management practices / Економічна життєздатність та належні практики управління

8.4

Local economic development / Місцевий економічний розвиток/

8.6

Low / низький

High / високий

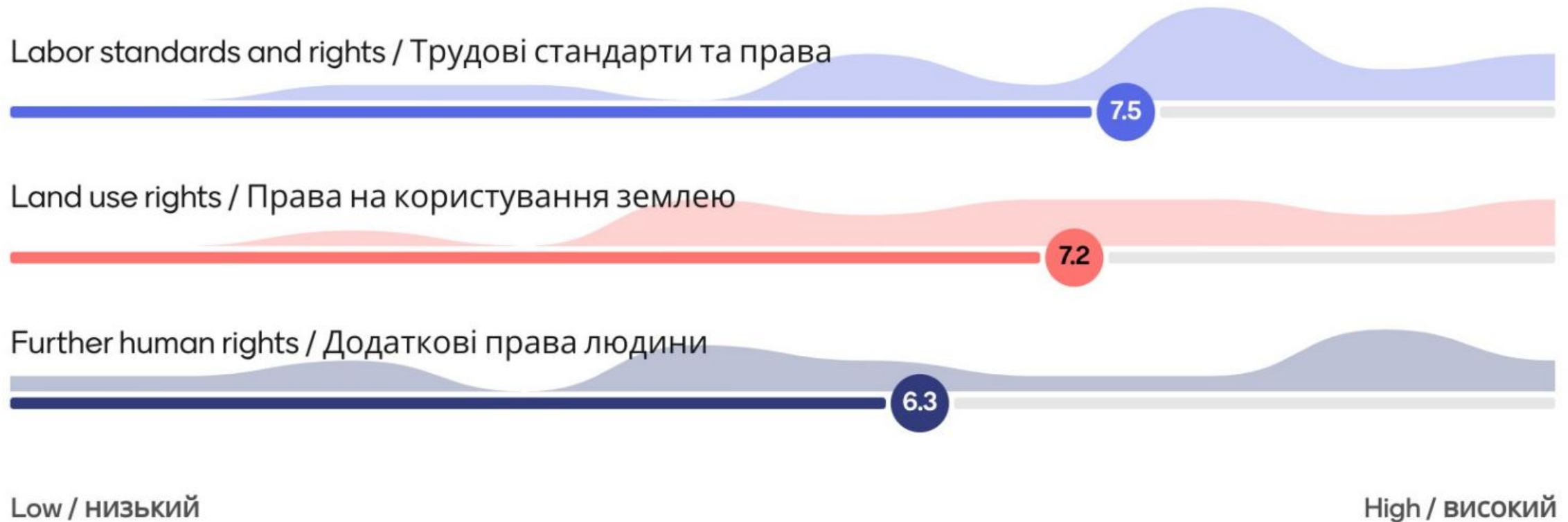
For the Ukrainian context / для українського контексту

### 3. Please rate the relevance of the criteria regarding environmental aspects / Оцініть актуальність критеріїв щодо екологічних аспектів



For the Ukrainian context / для українського контексту

4. Please rate the relevance of the criteria regarding social aspects / Оцініть актуальність критеріїв щодо соціальних аспектів



For the Ukrainian context / для українського контексту

5. Please rate the relevance of the criteria regarding governance aspects / Оцініть актуальність критеріїв щодо аспектів управління

Stakeholder engagement and complaint mechanisms / Механізми взаємодії із зацікавленими сторонами та розгляду скарг



Transparency, accountability and anti-corruption / Прозорість, підзвітність та боротьба з корупцією

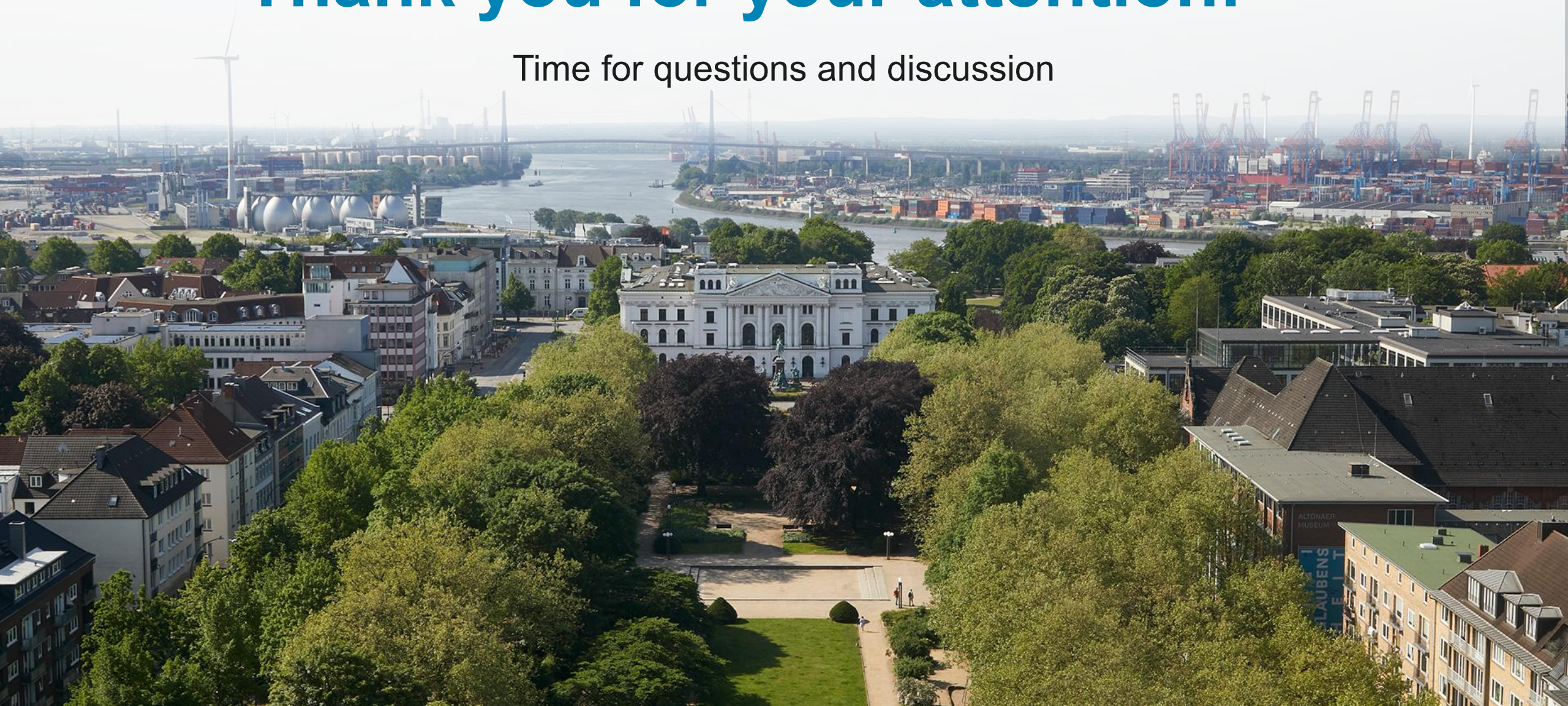


Low / низький

High / високий

# Thank you for your attention!

Time for questions and discussion



## YOUR CONTACTS – WE ARE LOOKING FORWARD TO FURTHER EXCHANGE



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