

A misty, foggy forest scene with tall evergreen trees, likely spruce or fir, partially obscured by low-hanging white fog. The scene is captured in a wide-angle shot, creating a sense of depth and tranquility. The colors are muted, with various shades of green and brown for the trees and a soft white for the fog.

EMBL Materiality Assessment

Evaluation of the interviews

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Munich, September 2020

sustainable

Longlist Sustainability Issues EMBL

Category	Material Issue	Sub-Issue
Operational Greenhouse Gas Emissions & Climate Change	Operational Energy Consumption & Emissions	Energy use & mix Renewable energy sourcing/generation Facilities & IT Energy-efficient buildings Labs & Technology
	Mobility Emissions	Business travel Employee commuting Vehicle fleet Air pollution
Supply Chain & Procurement	Supplier Emissions & Environmental Impacts	Lab supplies & equipment Catering supplies Packaging & plastics Product carbon footprint of purchased goods
Employees & Research	Employee Behaviour	Knowledge & awareness Resource use Paper & office supplies Lab use Consumption & procurement choices
	Thought Leadership & Advocacy	Climate & environmental research Biodiversity Marine litter Knowledge transfer

Longlist Sustainability Issues EMBL

Category	Material Issue	Sub-Issue
Climate & Resources	Waste & Resource Efficiency	Operational & lab waste Hazardous waste Environmental toxicology Plastic pollution Circular Economy
	Water	Water use Effluents Contamination
	Sustainable Construction	Land use Sustainable materials Embodied carbon Sustainable technology/methods Climate adaptation Local ecosystems impacts (habitats & species)
Compliance & Transparency	Regulation & Standards	Carbon pricing Climate & environmental regulation Labels & management systems Code of Conduct Sustainable investment
	Performance & Transparency	Funder & other stakeholder requirements Environmental targets & KPIs Communications Risk Management Reporting

A horizontal band at the top of the slide shows a dense forest of evergreen trees shrouded in a thick, white fog or mist. The trees are dark green and brown, with the fog obscuring the lower parts of the forest. This band is repeated at the bottom of the slide.

Evaluation of the interviews

sustainable

Interviewees

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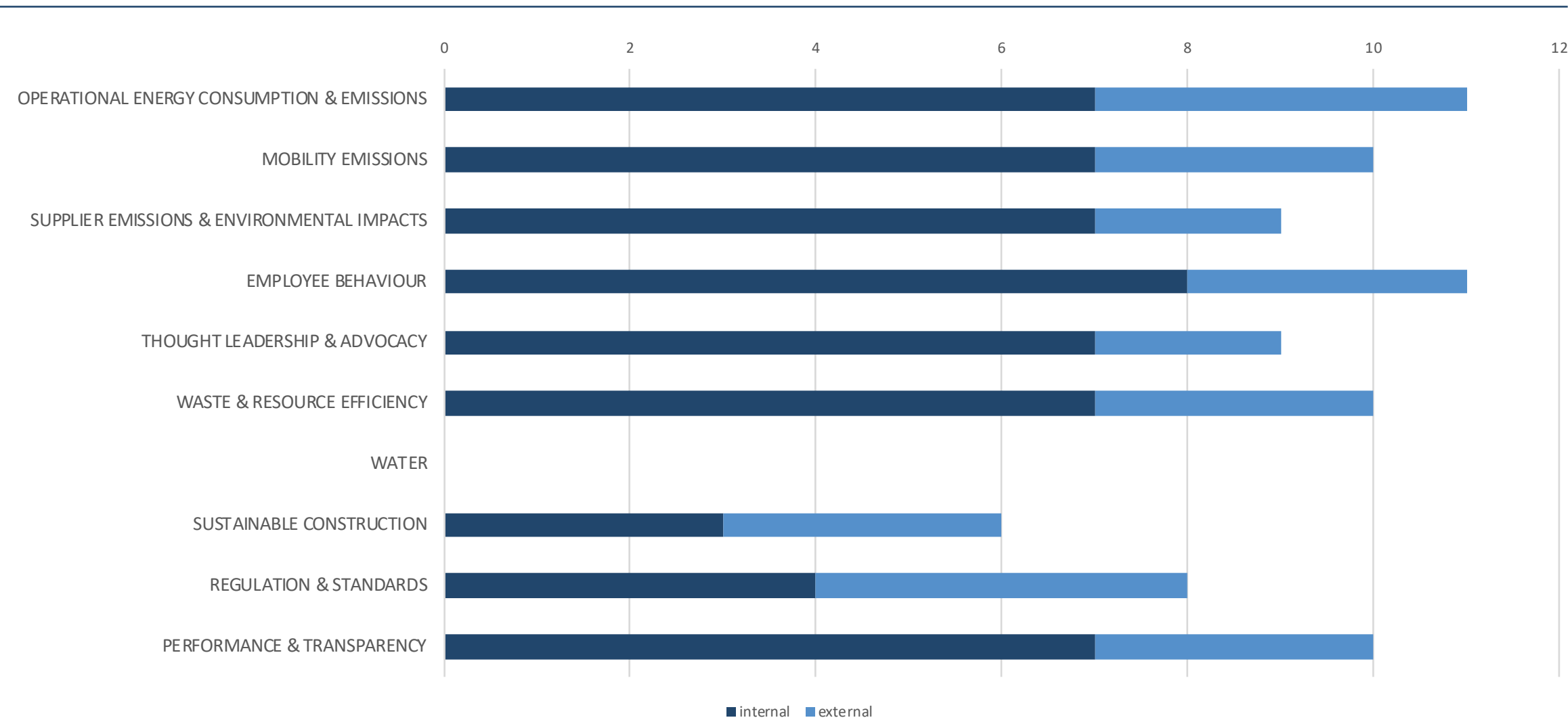
Internal

1. **Edith Heard** (Director General)
2. **Detlev Arendt** (Green EMBL)
3. **Mikhail Savitski** (Group Leader Representative)
4. **Alex Bateman** (Green EMBL)
5. **Rainer Menzl** (Facilities Management)
6. **Marta Rodriguez** (Research Technician)
7. **Matti Tiirakari** (COO)
8. **Sandra Correira and Manuel Carbaio** (Staff Association)

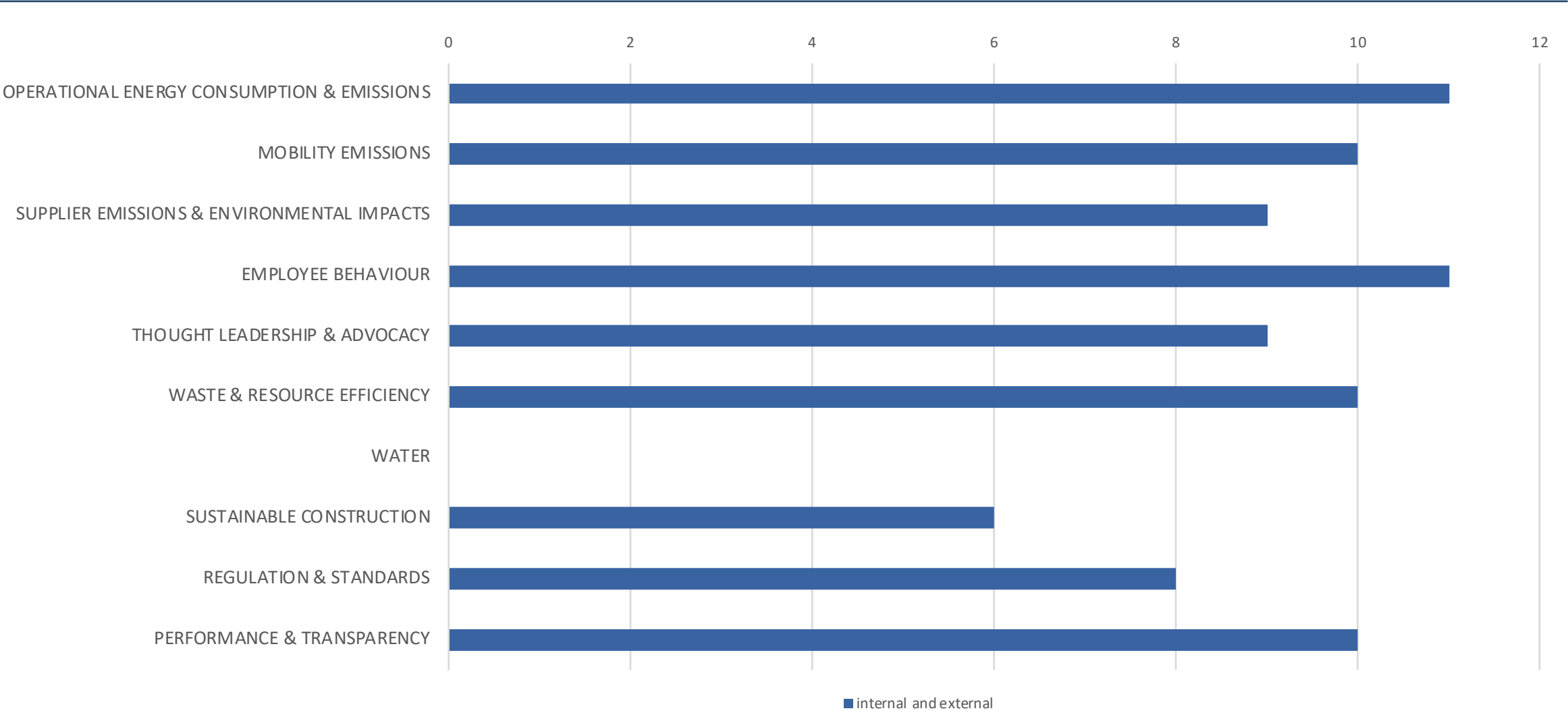
External

1. **Rajnika Hirani** (Crick Institute)
2. **Ralf Bermich** (Stadt Heidelberg)
3. **Connie Hanbury & Stephen Holmes** (UKRI)
4. **Dr. Barbara Ohnesorge** (BMBF)

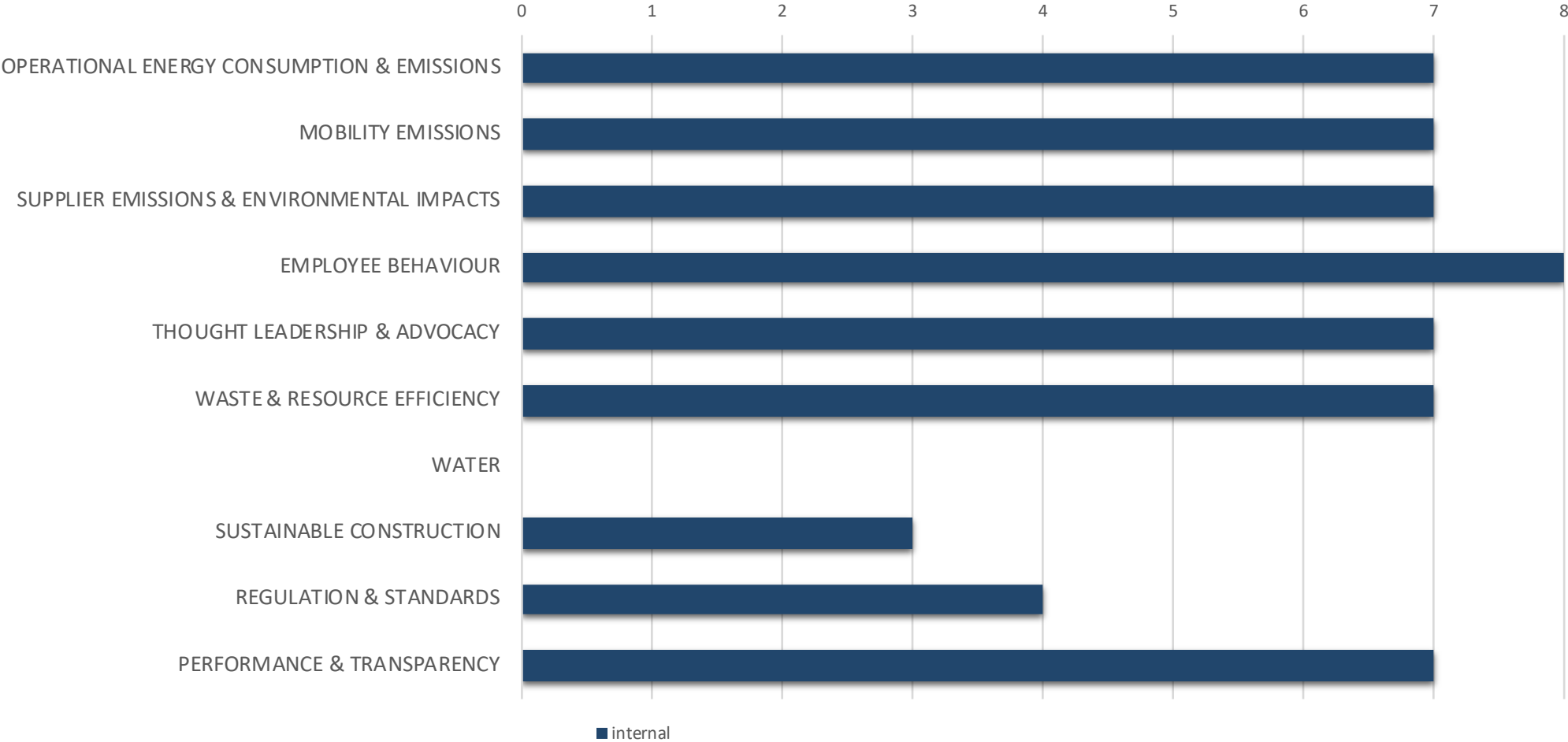
Top Sustainability Issues: Internal & External Interviews combined



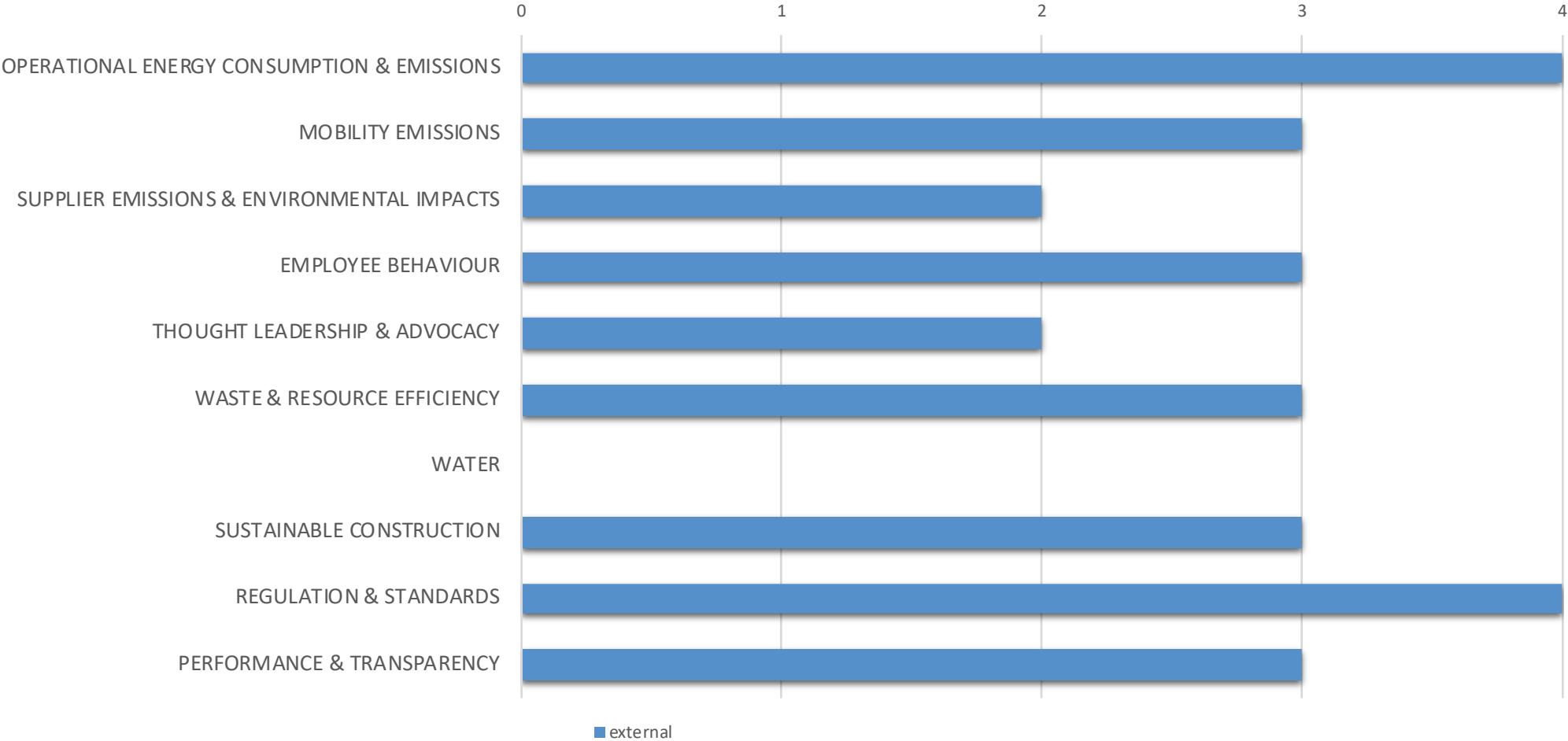
Top Sustainability Issues: Internal & External Interviews combined



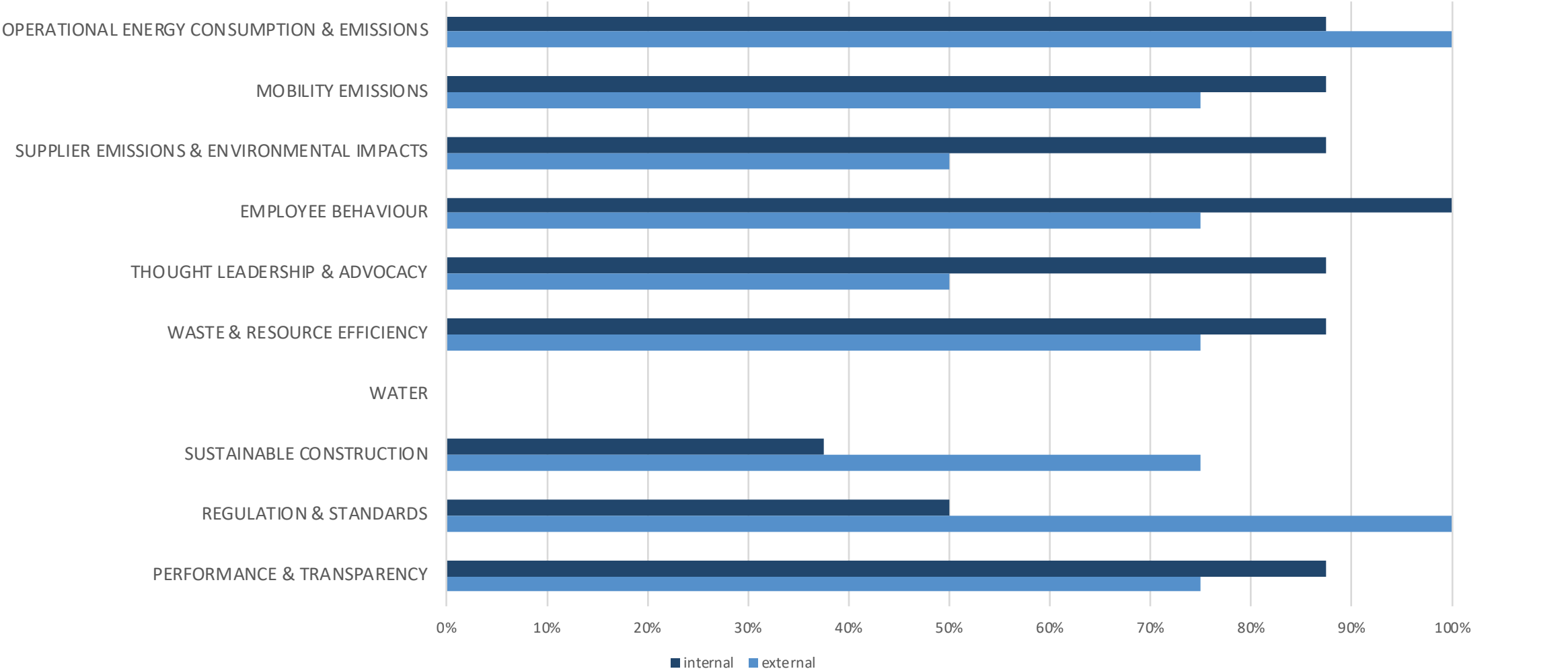
Top Sustainability Issues: Internal Interviews



Top Sustainability Issues: External Interviews



Top Sustainability Issues: Internal & External Interviews



EMBL's influence & positive impacts

Operational Emissions & Energy

- **Reduce energy use in labs** (e.g. equipment efficiency & use, SMART tech, guidelines for experiments)
- **Optimise energy efficiency in buildings** (SMART Tech, insulation, etc.)
- **Source green energy** (PVs, solar, green energy/electricity)

Waste/Resource Efficiency & Suppliers

- **Influence suppliers & choose sustainable products** (e.g. packaging, circular products, non-hazardous chemicals)
- **Reduce material use in labs** (e.g. plastic bottles, tips, chemicals, etc.)
- **Offices & canteen** (plastics, paper, food, etc.)
- **Conferences** (catering, plastics, etc.)

Mobility Emissions

- **Encourage/incentivise sustainable mobility** (e.g. commuting, business travel, employee travel home)
- **Provide guidelines/policies for business travel** (in person vs. virtual meetings)
- **Virtual conferences** (mix with in person events)

EMBL's influence & positive impacts

Employee Behaviour

- **Raise awareness** (campaigns, events, workshops)
- **Motivate & incentivise** (communications, campaigns, etc.)
- **Train staff** (e.g. sustainable use of equipment/tech, experiments)

Thought Leadership Climate & Environment

- **Science & communications** (e.g. provide facts & publications to support advocacy & campaigning, marine litter, biodiversity, climate)
- **Enable climate and environmental science** (e.g. new five-year programme: provision of data, infrastructure, technology/tools, support services and training)

Leadership & Advocacy

- **Influence research direction at EU-level** (e.g. lobby for opening of funding streams in certain topic areas)
- **Act as a role model for other institutes** (e.g. show how to embed sustainability into operations)
- **Training** (e.g. sustainability programme part of onboarding for EMBL staff)

Organisational Impacts for EMBL

Reputation & Credibility

- Public expectation:
 - engaging in environmental science **you cannot disregard your own environmental impacts**
 - Scientists are expected to **contribute knowledge and facts** in the fight against climate change
- Employees, particularly new generations, want to see **purpose & action on sustainability**

Funding & Collaboration

- Funders are starting to **integrate at sustainability criteria into grant applications**
- Sustainability will be a **factor for collaborations** with other research institutes
- **New funding streams** are emerging in the areas of climate and environment

Costs

- Short-term investments **reduce costs in the long-term**
- Sustainability can lead to savings and **free up funding for science**
- **Climate adaptation** is becoming more expensive the longer you wait
- **Retro-fitting** is more expensive than integrating sustainability from the start

Stakeholders and their expectations

Employees

- Organisational reputation and purpose matters
- Sustainability a big concern for staff
- Action on climate is expected (especially with young talent)

Scientific community

- Sustainability impacts will become a factor when considering partnerships with other research institutes

Funders (e.g. Wellcome Trust, UKRI)

- Increasing importance of sustainability aspects for funders
- Management of social and environmental issues and impacts to be considered increasingly in funding applications

Political Actors (Stadt Heidelberg)

- Collaboration and support for climate change programmes and targets
- Reduction of organisational emissions
- Act as a role model

Future Issues for EMBL

Sustainable construction

- E.g. use of sustainable materials (product carbon footprint)

Climate adaptation

- Developing sustainable solutions that manage impacts of global warming on buildings (e.g. heat insulation, cooling systems)

Methodology for assessment

- **Stakeholder interest:** The level of interest of EMBL stakeholders in the issue.
Evaluated based on:
 - Impacts on stakeholder decision making (0-5)
 - Level of stakeholder activity on issue (0-5)
- **Organisational impact:** The degree of the impact on EMBL as an organisation
Evaluated based on:
 - Financial impact (0-5)
 - Reputational impact (0-5)
- **Issue impact:** The magnitude of impacts on the issue. Evaluated based on:
 - Scale (gravity) of EMBL impacts on the issue (0-5)
 - Scope (extent) of EMBL impacts (0-5)

EMBL's stakeholders

Employees and future
employees

Scientific community

Funders

Corporate Partner
Programme

Regulators and
governments

Suppliers

Civil Society

Influencers, including
media and NGOS

Stakeholder Interest

Impacts on stakeholder decision making (0-5) towards EMBL

- **0 – None**
- **1 – Limited:** Stakeholder decision-making relating to EMBL is not or barely influenced by their perception of this issue. Issue not routinely considered by stakeholders.
- **2 – Minor:** Some activity on issue but not focused on EMBL/sector.
- **3 – Moderate:** Stakeholder decision-making relating to EMBL is moderately influenced by their perception of this issue. Stakeholders take some recent interest in issue with direct relevance to (but less explicit focus on) EMBL as evidenced by some campaigning activity/reports on this issue (e.g. may be subsidiary focus of campaigns);
- **4 – Significant:** Issue considered in the context of science institutes with interest in EMBL's approach and performance.
- **5 – Major:** Issue identified by stakeholders as materially important for EMBL to manage. Stakeholder decision-making relating to EMBL is significantly influenced by their perception of this issue.

Level of stakeholder activity on issue (0-5) globally on issue (not necessarily directly in relation to EMBL)

0 – None

1 – Limited: Stakeholders demonstrate little/no interest in issue, as evidenced by minor focus in dialogue or lack of campaigns/reports on this issue.

2 – Minor: Local or single-issue stakeholder attention on this issue. Little collaboration around issue. Issue sees some limited coverage in campaigns and reports.

3 – Moderate: There is a moderate volume of stakeholder interest in this issue. Action on/attention to this Issue largely led by individual organisations; policy announcements and regulation have some effect on how the issue is managed by companies.

4 – Significant: Credible, focused stakeholder activity, including collaboration, but at a more modest scale (in comparison to 5), e.g. more regional focus

5 – Major: Stakeholders take recent and significant interest in the issue on a global scale as evidenced by: targeted outputs/campaigns/reports on this issue; coordination and collaboration on this issue with other stakeholders; policy announcements, legislation or regulation from government bodies that substantively shape how the issue is managed by companies; global and local stakeholders.

Organisational Impact

Financial impact (0-5)

0 – None

1 – Limited (insignificant financial consequences)

2 – Minor (minor financial impacts on areas of the organization)

3 – Moderate (notable impacts on areas of the organization)

4 – Significant (important impact on organizational budget, e.g. >4 million Euros/short term impact)

5 – Major (substantial impact on organizational budget, e.g. >10 million Euros/long term impact)

Financial Impacts include:

Funding

- Improved access to funding (research and facilities)
- New funding streams (facilities, etc.)
- Access to grants in new research areas

Costs

- Supplies & logistics (labs, offices)
- Utility consumption (energy, water)
- Waste management
- Compliance
- Employee recruitment/ retention/engagement

Reputational impact (0-5)

0 – None

1 – Limited (Local attention, little impact)

2 – Minor (Regional attention, little impact)

3 – Moderate (Regional attention, major impact)

4 – Significant (Global attention, low impact/impact within sector)

5 – Major (Global attention, high impact/impact beyond sector)

Reputational Impacts include:

- Change in external reputation/perceptions
- Change in perception by funders/partners
- Change in perception by (future) employees
- Change in perception/relationships with other stakeholders
- Change to competitive differentiation

Issue Impact

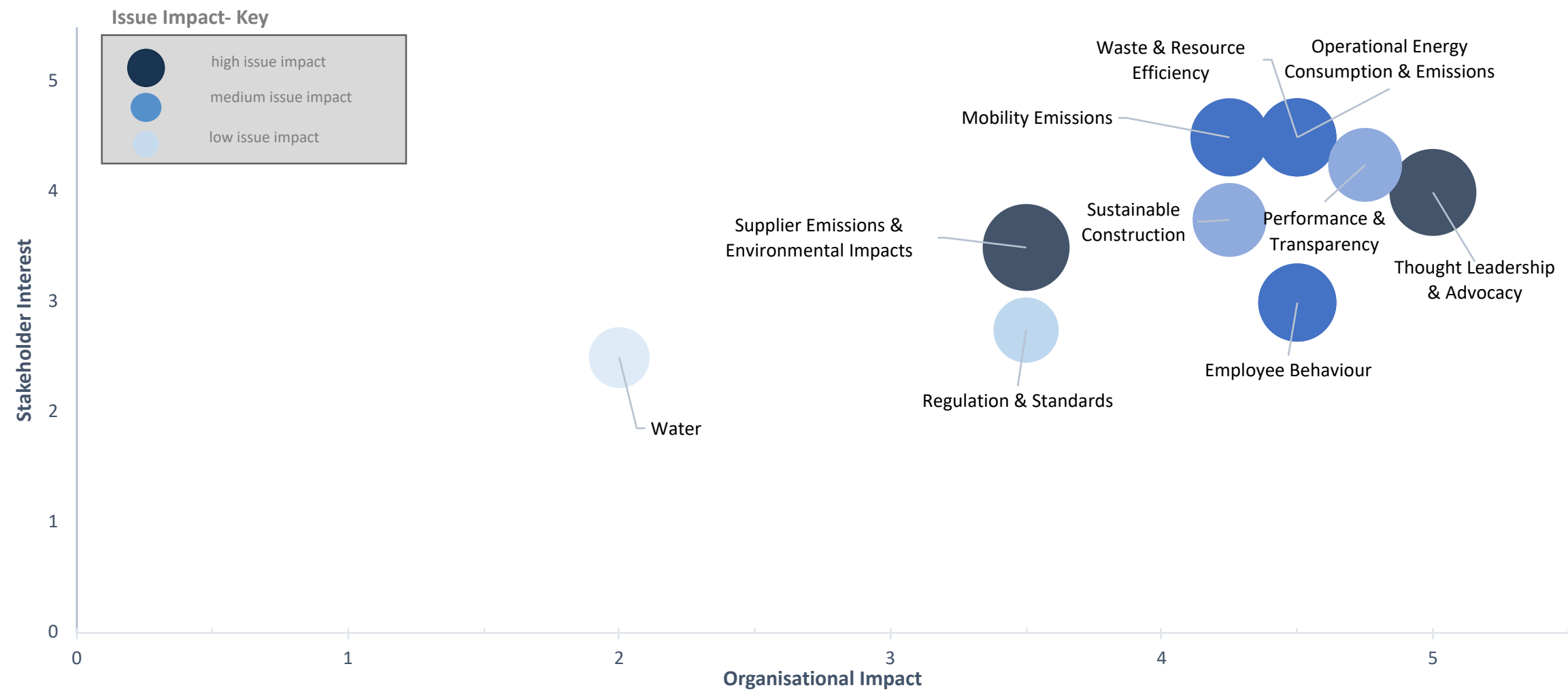
Scale of EMBL impacts on the issue (0-5)

- 0 – None
- **1 – Limited:** Minor impact (changes to environment merely detectable/hard to evidence)
- **2 – Minor:** Environmental impact minor (e.g. on local issue)/short-term
- **3 – Moderate:** Medium environmental impact (e.g. influence on national/regional issue), short- to mid-term
- **4 – Significant:** Important environmental impact (e.g. long-term contribution to the management of pressing global sustainability issues)
- **5 – Major:** Major environmental impact (e.g. long-term, impacts on ecosystem/significant influence on issue/contribution of solutions towards the issue)

Scope of EMBL impacts (0-5)

- 0 – None
- 1 – **Limited** e.g. site/campus level
- 2 – **Minor** e.g. local/community level
- 3 – **Moderate** e.g. national level
- 4 – **Significant** e.g. regional (e.g. EU)
- 5 – **Major** e.g. global

EMBL's Materiality Matrix



Operational Energy Consumption & Emissions

Sub-Issues	Stakeholder Interest	Organisational Impact	Issue Impact			
<ul style="list-style-type: none">• Energy use & mix• Renewable energy sourcing/generation• Facilities & IT• Energy-efficient buildings• Labs & Technology	<p>Operational energy consumption and CO₂ emissions are closely linked to the issue of climate change which is high on global political, NGO, media and civil society agendas (e.g. Fridays for Future, Extinction Rebellion, Divestment, EU and regional/national climate laws, city level climate action).</p> <p>As an intergovernmental life-sciences institute EMBL is expected to manage its climate impacts and to contribute to/support climate science. Employees also see this as critical. Funders and partners are now starting to consider organisational carbon footprints in their decisions about partnering or allocating research grants (e.g. Wellcome Trust, UKRI). Political actors at regional (e.g. federal government of Baden-Württemberg) and city level (e.g. Stadt Heidelberg) are already engaging EMBL on the issue of emissions reduction and expecting positive contributions to their climate programmes. In the near future EU- level and national climate policies will likely increasingly influence political decision-making (e.g. about government funding).</p> <p>Stakeholders identified energy-efficiency of equipment and buildings as well as management of energy use in labs and facilities and the transition to renewable energy sources as key issues.</p>	<p>Managing/reducing its energy use will help EMBL meet pressing (e.g. employees and civil society) and rapidly evolving (funders and governments) stakeholder expectations on climate action and sustainability. This will secure and enhance EMBL’s reputation and credibility as an international, leading life science organisation. Given that sustainability is in its infancy within the scientific community, EMBL has an opportunity to develop leadership/establish itself as a role model in the area.</p> <p>EMBL’s external funding comprised 20.8% of the organisational budget in 2019; 41.5 % was contributed by member states. Meeting emerging funder requirements on sustainability will help EMBL secure important funding streams and it might further enhance its competitive advantage.</p> <p>33% of EMBL’s expenditure is due to operating costs. Reducing operational energy consumption will result in immediate and significant cost savings. Investments, e.g. in energy efficient technology, will be paid back in the mid- to long-term, e.g. through reduced energy bills and compliance costs (e.g. carbon pricing and refurbishment).</p>	<p>Within EMBL’s operations energy consumption presents an opportunity to significantly reduce the organisational carbon footprint.</p> <p>At EMBL particularly energy intensive activities include the running of labs 365 days a year, 24/7 (lighting, heating, ventilation, freezers, fridges and other equipment) as well as the use of highly specialised energy-intensive equipment.</p> <p>Across its sites EMBL can reduce energy consumption through behaviour change (e.g. switching equipment off when not in use), optimising the management of labs and facilities (e.g. switch off technology at off-peak times in labs, ventilation, room temperature, correct use of freezers, etc.) and use of energy efficient technology (e.g. lighting, equipment). Through generation or sourcing of renewables EMBL can also further reduce its carbon emissions from energy use.</p> <p>Raising awareness, influencing employee behaviour and managing energy use at EMBL can also contribute to changes in practices at other research institutes. E.g. when scientists move on from EMBL and take their knowledge and habits to their new place of work.</p>			
Assessment:	Decision-making: 4	Activity-level: 5	Financial: 5	Reputational: 4	Scale: 4	Scope: 5
Total:	4,5		4,5		4,5	

Mobility Emissions

Sub-Issues	Stakeholder Interest	Organisational Impact	Issue Impact			
<ul style="list-style-type: none">• Business travel• Employee commuting• Vehicle fleet• Air pollution	<p>Stakeholders view EMBL’S travel activities, including international business travel, employee commuting and travel home to international destinations, as a key source of organisational carbon emissions. Overall mobility features highly on the global sustainability agenda as it is a key source of global emissions and air pollution. Numerous initiatives and reports promote reduction of (air) travel and use of sustainable mobility modes as well as development of new sustainable mobility options.</p> <p>Employees have identified travel as a key area for action in the context of carbon emissions and climate. Funders are also looking at travel as a cause of carbon emissions. E.g. the Wellcome Trust is already asking research applicants about offsetting travel emissions. This forms part of a wider move to to review the environmental impacts of research projects the organisation is funding. UKRI has also announced plans in that direction and other funders are expected to follow. In the context of EU- and national climate policies the management of mobility emissions at EMBL will be of interest as part of the overall organisational carbon footprint.</p>	<p>With stakeholders focusing on mobility as a key sustainability issue globally and also for EMBL specifically, management of this topic will influence the organisational reputation and credibility in relation to its sustainability efforts.</p> <p>As with the issue of energy consumption, there is scope to develop leadership within the scientific community.</p> <p>Reducing travel can decrease costs for EMBL. E.g. during lockdown over a period of two months travel costs decreased significantly. However, use of sustainable alternatives to air travel (e.g. trains) as well as development of sustainable mobility at EMBL (e.g. investment in e-mobility) will also require some short-term investments.</p> <p>Ensuring that sustainable travel approaches effectively reduce EMBL carbon emissions while not impeding scientific advancement (e.g. through attendance at important conferences and maintaining important networks) will be paramount.</p>	<p>Business travel and commuting are a key source of EMBL’s carbon emissions (e.g. 17% of EBI footprint). As such, reducing travel activity and/or prioritising sustainable modes of travel will effectively tackle a good part of EMBL’s carbon impacts.</p> <p>Working from home and switching from cars to public transport, (e-)bikes or walking will reduce emissions from commuting.</p> <p>Opting for a mix of virtual meetings and conferences as well as choosing trains over planes (e.g. within Europe/between sites) will significantly reduce the carbon footprint from mobility.</p> <p>EMBL can influence other research institutes, by sharing best practice and helping establish positive behaviours within the scientific community.</p>			
Assessment:	Decision-making: 4	Activity-level: 5	Financial: 4,5	Reputational: 4	Scale: 4	Scope: 5
Total:	4,5		4,25			4,5

Supplier Emissions & Environmental Impacts

Supply Chain & Procurement

Sub-Issues	Stakeholder Interest		Organisational Impact		Issue Impact	
<ul style="list-style-type: none">• Lab supplies & equipment• Catering supplies• Packaging & plastics• Product carbon footprint of purchased goods	<p>Employees and other research institutes identified supply chain and procurement as important areas for EMBL’s environmental impacts. Selecting suppliers who are pro-actively managing their environmental impacts will help EMBL reduce waste (incl. packaging) and emissions.</p> <p>Political and non-political actors currently have a strong focus on impacts of packaging and plastics. Many campaigns, reports (e.g. by Ellen McArthur Foundation) and also legislation are issued in this area (e.g. EU Circular Economy and Plastics Action Plan). Sustainability impacts in the supply chain are also an important topic for campaigning organisations.</p>		<p>Managing environmental supply chain impacts and developing a sustainable procurement approach will further contribute to EMBL’s reputation and credibility particularly with employees and the scientific community.</p> <p>Currently, the majority of lab material suppliers lack systematic or mature sustainability approaches, e.g. on recycling and recyclability of packaging and materials. EMBL can take leadership on this issue within the scientific community and strengthen relationships with partners by collaborating on solutions.</p> <p>Sustainable procurement is also known to result in cost savings, e.g. due to less waste of materials and products (such as chemicals), reduced costs for waste disposal (e.g. packaging), cheaper re-fills, etc.</p>		<p>EMBL can leverage its position as a leading research institution to influence suppliers’ sustainability practices and their offer for the scientific community (e.g. ask for circular products with reduced environmental impacts, recycling schemes, etc.).</p> <p>Collaboration with other players in the scientific community and beyond will enhance the scope of EMBL’s influence and impacts. This could result in positive changes for the whole sector supply chain with its global reach.</p> <p>Catering and general office supplies provide further opportunities for reducing environmental impacts through procurement choices (e.g. less packaging, food miles, use of plastics, etc.)</p> <p>Developing a sustainable procurement strategy, guidelines and trainings for employees, will highlight key opportunities to enhance sustainability in procurement and direct organisational efforts towards high impacts.</p>	
Assessment:	Decision-making: 3,5	Activity-level: 3,5	Financial: 3	Reputational: 4	Scale: 5	Scope: 5
Total:	3,5		3,5		5	

Employee Behaviour

Sub-Issues	Stakeholder Interest		Organisational Impact		Issue Impact	
<ul style="list-style-type: none">• Knowledge & awareness• Resource use• Paper & office supplies• Lab use• Consumption & procurement choices	<p>In interviews with internal and external stakeholders employee behaviour has been named as a key factor for EMBL’s environmental performance. Employee travel and procurement choices, their use of facilities and behaviour in labs can increase or decrease resource use and resulting emissions, waste, etc.</p> <p>Stakeholders expect EMBL to incentivise positive behaviour (e.g. subsidies for public transport/e-bikes), to pro-actively influence travel and procurement choices (e.g. policies/guidelines) and to promote sustainable behaviour through training and awareness raising (e.g. on use of labs and materials).</p>		<p>Employee behaviour has a substantial impact on EMBL’s sustainability performance. E.g. its energy use, mobility emissions as well as levels of waste, resource use and supplier emissions. As such Employee behaviour influences EMBL’s credibility and reputation in relation to sustainability.</p> <p>Through changes in employee behaviour, e.g. in labs, and regarding travel, EMBL can make substantial savings long-term.</p>		<p>EMBL can substantially influence employee behaviour through policies, guidelines, trainings, campaigns, communications, etc. Positive behaviour will in turn significantly impact organisational impacts on the environment (e.g. emissions, waste, resource use).</p> <p>With employees frequently moving to other research institutes internationally, EMBL can influence scientist behaviour beyond its own institute, globally.</p>	
Assessment:	Decision-making: 3	Activity-level: 3	Financial: 5	Reputational: 4	Scale: 4	Scope: 5
Total:	3		4,5		4,5	

Thought Leadership & Advocacy

Employees & Research

Sub-Issues	Stakeholder Interest	Organisational Impact	Issue Impact			
<ul style="list-style-type: none">• Climate & environmental research• Biodiversity• Marine litter• Knowledge transfer	<p>EMBL is a leader in the field of life sciences and molecular biology . The institute is known for basic research and pioneering technology, tools and data management as well as providing world-class training. In this way EMBL is seen to be supporting the advancement of science, e.g. famously in the area of human health (cancer research).</p> <p>With climate change and the state of our environment (planetary health) becoming a matter of urgency, internal and external stakeholders are expecting EMBL to apply its expertise in this area and to positively contribute to the agenda.</p> <p>Funders want to channel their grants towards projects with positive contributions towards climate and environment (e.g. Wellcome Trust, UKRI). New funding streams are also opening up in these areas.</p> <p>Civli society and NGOs are broadly expecting scientists to contribute knowledge that will drive climate action and help find solutions to environmental challenges.</p> <p>Political actors, including EU member states, issuing climate regulation are also looking to science to advance their agenda.</p>	<p>Enabling climate and environmental science through basic research (e.g. through the new research programme on planetary biodiversity) as well as through engagement in new research areas (e.g. environmental research initiative) EMBL will establish its reputation and credibility in areas critical to its stakeholders.</p> <p>On the other hand, conducting research in areas which are perceived as driving negative environmental impacts (e.g. pesticides, monocrops), could harm EMBL’s reputation.</p> <p>Ensuring EMBL’s research is relevant to societal needs ensures continued funding or/and new funding streams.</p> <p>The establishment of new research fields (e.g. planetary biology) can also provide a competitive advantage for EMBL.</p>	<p>Choosing to engage in planetary biology and environmental research, EMBL can contribute uniquely towards tackling the climate and biodiversity crises.</p> <p>Its expertise can enable other scientists in their own research and influence/empower policy makers, business and civil society.</p>			
Assessment:	Decision-making: 4	Activity-level: 4	Financial: 5	Reputational: 5	Scale: 5	Scope: 5
Total:	4		5			5

Waste & Resource Efficiency

Sub-Issues	Stakeholder Interest	Organisational Impact	Issue Impact			
<ul style="list-style-type: none">Operational & lab wasteHazardous wasteEnvironmental toxicologyPlastic pollutionCircular Economy	<p>EMBL’s operations, particularly its labs, produce significant volumes of hazardous and non-hazardous waste, including from single-use plastics.</p> <p>With recent and rapidly growing attention to plastic waste and resource efficiency/the circular economy, (reduce, re-use, recycle) stakeholders view waste and resources as key environmental issues for EMBL.</p> <p>Employees at EMBL want to reduce consumption of non-recyclable materials through behaviour change and also adoption of alternative, more sustainable lab products (sustainable materials, less environmental impact).</p> <p>Other research institutes are highlighting the need for development of new viable solutions, e.g. alternative materials to plastic and management of contaminated waste.</p> <p>Policy makers are setting ambitious targets/guidelines in the areas of Circular Economy and Plastics (e.g. EU Circular Economy Package, EU Taxonomy) and they are interested in organisational approaches advancing these agendas.</p>	<p>Reducing organisational waste and aiming for a circular economy approach will have a positive effect on EMBL’s reputation and credibility with internal and external stakeholders.</p> <p>The development of innovative solutions, e.g. for the management of contaminated waste, could establish EMBL as a leader in its sector.</p> <p>Reducing volumes of waste and resource use saves costs for waste management and purchasing of materials/products.</p> <p>The development of new solutions will also require some investments short-term.</p>	<p>Through effective management and reduction of waste streams, EMBL will not only have an impact on (plastic) pollution but also climate. Less waste and resource use also translate into reduced greenhouse gas emissions over the lifecycle of products (e.g. from production, transport, etc.)</p> <p>Developing effective approaches and new solutions, EMBL can also influence waste management and resource use within its sector, e.g. by sharing best practice/collaborating.</p>			
Assessment:	Decision-making: 4	Activity-level: 5	Financial: 5	Reputational: 4	Scale: 5	Scope: 4
Total:	4,5	4,5	4,5	4,5	4,5	4,5

Sub-Issues	Stakeholder Interest		Organisational Impact		Issue Impact	
<ul style="list-style-type: none">Water useEffluentsContamination	EMBL’s operations are not water intensive and water management is highly regulated in countries of operation. As such the issue is currently not of high interest to stakeholders.		Water efficiency can result in some cost savings. These will be less notable however, as water is not critical in EMBL’s operations. Issues with waste-water management could result in reputational damage at local level. However, due to high regulation and management standards, this is highly unlikely.		EMBL can contribute to water quality and efficiency by strictly and consistently managing waste water and implementing water efficiency programmes at sites. As regulation on effluents varies internationally, there is scope to establish high standards for the management of effluents across sites.	
Assessment:	Decision-making: 2	Activity-level: 3	Financial: 2	Reputational: 2	Scale: 3	Scope: 4
Total:	2,5		2		3,5	

Sustainable Construction

Sub-Issues	Stakeholder Interest		Organisational Impact		Issue Impact	
<ul style="list-style-type: none">• Land use• Sustainable materials• Embodied carbon• Sustainable technology/methods• Climate adaptation• Local ecosystems impacts (habitats & species)	<p>Buildings and infrastructure contain the most carbon intense materials in our economy and are locked into buildings for many years to come (embodied carbon). Political efforts to curb carbon emissions are therefore increasingly targeting the construction and infrastructure sectors (e.g. EU Green Deal, Circular Economy Package and EU Taxonomy). Reducing ,embodied carbon’ through the use of sustainable/recycled materials and climate adaptation through innovative design and structure as well as ventilation and cooling systems are some of the key topics on this agenda. Sustainable land use, construction methods and longevity are other important aspects.</p> <p>Standards and regulations in this area are continuously rising. E.g. Stadt Heidelberg is starting to engage with the topics of embodied carbon and climate adaptation. National governments, aka EMBL funders, are also likely to consider environmental construction impacts in the near future when awarding funding for new buildings.</p> <p>Some research Institutes are already managing construction impacts (e.g. lean construction, emissions, biodiversity impacts, etc.), and they are looking for examples of best practice from others.</p>		<p>The issue of sustainable construction is gathering momentum and is growing in importance for EMBL’s stakeholders. Overall innovative and sustainable building development is of interest to the public and the media, e.g. being celebrated through numerous awards and press coverage (at least locally).</p> <p>At times, sustainable construction methods and materials might require higher investments short-term. However, long-term, they provide numerous savings. E.g. retrofitting is generally regarded as more expensive. In view of rising standards and regulations, integrating sustainability considerations into construction projects, compliance and retro-fitting costs can be avoided. Considering climate adaptation today, will also reduce/avoid costs in the future, e.g. for cooling systems and energy costs. Finally, the use of quality sustainable materials and design will ensure new buildings remain fit for purpose long term, saving repair and refurbishment costs.</p>		<p>Sustainable construction has long-term positive impacts on carbon, biodiversity and resources (e.g. water, virgin materials, energy, etc). E.g. the choice of sustainable materials can substantially reduce the embodied carbon in buildings and alleviate pressure on precious resources and biodiversity long-term.</p> <p>Setting high standards for sustainability in its construction projects, EMBL can serve as a role model far beyond its sector, e.g. by innovating and sharing best practice.</p>	
Assessment:	Decision-making: 3	Activity-level: 4	Financial: 5	Reputational: 3,5	Scale: 4,5	Scope: 4
Total:	3,5		4,25		4,25	

Regulation & Standards

Sub-Issues	Stakeholder Interest		Organisational Impact		Issue Impact	
<ul style="list-style-type: none">• Carbon pricing• Climate regulation• Environmental regulation• Labels & management standards• Code of Conduct• Sustainable investment	<p>Internationally governments have committed to action on climate change through the Paris Agreement. Regionally and nationally EU-member states are setting targets (e.g. EU net-zero 2050) and implementing regulation (e.g. EU Green Deal, German carbon price) to reduce carbon emissions.</p> <p>With EMBL, non-compliance or lobbying against climate regulation are not a concern.</p> <p>Non-political actors view current regulation as insufficient to tackle the environmental issues. Beyond regulation, internationally recognised labels and management systems can help establish standards. Research institutes are looking for sector specific labels e.g. to certify sustainability of chemicals and lab materials. Standards on resource use in labs would also benefit the sector.</p> <p>EMBL employees are considering standards for organisational conduct and decision-making. E.g. should EMBL disengage from research projects potentially damaging environmental health (e.g. development of pesticides or monocropping);and should the organisation divest from pension funds with links to fossil fuels?</p>		<p>EMBL is expected to endorse and comply with current and emerging environmental & climate regulation. As such regulation is not an issue stakeholders have on their agenda in relation to EMBL. Only non-compliance (which is highly unlikely) would impact the organisational reputation. Exceeding regulation or helping develop sustainability standards for the sector, however, could help position EMBL as a leader.</p> <p>Compliance with emerging climate regulation might have noticeable impacts on EMBL’s finances: e.g. higher energy costs due to carbon pricing and refurbishment costs to enhance energy efficiency in buildings. However, energy efficiency measures will also result in reduced operational costs long term.</p> <p>HSE regulation can also result in increased resource use and costs (e.g. EU regulation on lab ventilation).</p> <p>Deciding to disengage from profitable research projects which might be seen as incompatible with EMBL’s environmental standards, might result in loss of income short-term. However, opportunities opening up in the areas of environmental health and climate could fill the gap.</p>		<p>Current levels of regulation, particularly in the area of climate, are not regarded as sufficient to adequately address environmental issues.</p> <p>Being an inter-governmental organisation, receiving funding from EU-member states, EMBL’s ability to advocate for stronger regulation is limited. Organisational decisions which might conflict political positions in some member states (e.g. divestment or disengagement from high-profile research areas) are also very sensitive.</p> <p>However, EMBL can work with its peers and suppliers to develop sustainability standards for lab materials, lab management, etc.</p>	
Assessment:	Decision-making: 2,5	Activity-level: 3	Financial: 4	Reputational: 3	Scale: 3,5	Scope: 4
Total:	2,75		3,5		3,75	

Performance & Transparency

Compliance & Transparency

Sub-Issues	Stakeholder Interest		Organisational Impact		Issue Impact	
<ul style="list-style-type: none">• Funder & other stakeholder requirements• Environmental targets & KPIs• Communications• Risk Management• Reporting	<p>With climate and biodiversity issues on top of global agendas, EMBL’s internal and external stakeholders are increasingly interested in the organisation’s environmental impacts and its performance on environmental issues.</p> <p>EMBL’s employees have expressed a keen interest in further addressing environmental impacts and enhancing actions at EMBL.</p> <p>The EU and its member states as well as regional and city governments are looking for support from all actors of society to realise their climate strategies and targets. EMBL has already been engaged on climate action by the Stadt Heidelberg and the State of Badem-Württemberg. National and EU actors are also likely to consider EMBL’s performance on the environment in their future decision-making.</p> <p>Big public funders are already starting to integrate sustainability criteria into grant applications. Research institutes also want to consider sustainability performance of collaborating institutions.</p> <p>Corporate partners pursuing ambitious sustainability strategies (e.g. HeidelbergCement, Zeiss) might also review EMBL’s performance.</p>	<p>Establishing transparency , i.e. reporting, on EMBL’s sustainability activities and performance will be key to securing credibility and reputation with internal and external stakeholders.</p> <p>Clear and ambitious targets and KPIs (incl. science-based climate targets) can position EMBL as a sustainability leader within the sector. Implementing internationally recognised environmental management and reporting standards will provide further assurance regarding EMBL’s performance.</p> <p>Pioneering sustainability within its sector might even result in reputational benefits beyond the scientific community.</p> <p>With funders (incl. EU member states) increasingly looking at sustainability impacts in grant applications, performance and transparency will play a role in securing future budgets. EMBL’s sustainability performance might also positively influence relations with (new) corporate partners</p> <p>Reporting will also address EMBL’s current and future employees’ expectations: informing them of the organisational sustainability approach, activities and progress.</p>	<p>A relevant and ambitious environmental strategy, including SMART targets and KPIs, will ensure EMBL is focusing its resources on issues most material to the organisation and contributing adequately to the global sustainability agenda.</p> <p>Publishing a sustainability report will give valuable insights into EMBL’s approach and performance. This can inspire and drive progress with other research institutes globally.</p>			
Assessment:	Decision-making: 4,5	Activity-level: 4	Financial: 5	Reputational: 4,5	Scale: 4	Scope: 4,5
Total:	4,25		4,75		4,25	

APPENDIX

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