

# GPD Response to Consultation on the first draft of UNESCO Recommendation on the Ethics of Neurotechnology

July 2024

## A. Definition and Scope

In this section, we would like you to tell us more about your views and perceptions regarding the definition of neurotechnology and scope of the [first draft of UNESCO's Recommendation](#).

1.a. The Draft Recommendation defines neurotechnology as “devices and procedures used to understand and/or influence, access, monitor, assess, emulate or modulate, the structure and function of the nervous systems of human beings and other animals” (para 2).

Do you agree with this definition?

Choose one of the following answers

Yes

No

No opinion

1.b. If you replied "no" to the previous question, please suggest alternative wording.

While we do not “disagree” with the definition of neurotech included in the draft Recommendation, we would like to propose two aspects for further consideration:

- (1) We would suggest consideration as to whether “devices and procedures” focus too heavily on the physical equipment and specific ways they are used. We would suggest that other terminology be considered such as “**tools, applications or methods**”, which might more comprehensively capture the physical devices and the range of techniques or procedures used.
- (2) We would suggest consideration as to whether data **collection or storage** should be added to the definition given the critical role data plays in the functioning of neurotech.

2.a. Is there an important aspect of neurotechnology that the scope (see II.2) does not capture?

Choose one of the following answers

Yes

No

No opinion

2.b. If you replied "yes" to the previous question, please explain:

We are pleased that the first sentence of the scope section sets out the effect that neurotechnologies may have on human rights in paragraph 11. However, we believe that it could be helpful to more explicitly cite the potential positive or negative impacts.

Recommendation: The use of neurotechnology may have fundamental impacts on human rights, **including both positive and negative**, by directly affecting the nervous system in aspects such as perception and motor or mental activities. We would also like to suggest that this sentence consider the **potential of interface with human decision-making**, as opposed to simply perception and motor or mental activities.

3.a. Do you think the scope is too broad?

Choose one of the following answers

Yes

No

No opinion

3.b. If you replied "yes" to the previous question, please explain why.

4.a. Do you think the way intersection of Artificial Intelligence (AI) and Neurotechnology is presented in the document encompasses well the speed and depth of developments in this field?

Choose one of the following answers

Yes

No

No opinion

4.b. If you replied "no" to the previous question, please suggest concrete wording:

We are pleased that the draft Recommendation highlights the development and convergence of neurotechnology with other technologies such as artificial intelligence, and believe that the specific references throughout the document are appropriate.

However, it could be helpful to more strongly establish the necessity of this Recommendation in the "scope" section due to the realities of neurotechnology itself before highlighting the necessity due to its convergence with other technologies such as AI in terms of speed and depth of developments.

Recommendation: "This Recommendation has been undertaken in light of the rapid development of neurotechnology **and the increasingly significant impacts it will have on individuals and societies as it is deployed. It has also been undertaken due to its** convergence with other technologies including spatial computing, XR and artificial intelligence."

5.a. Neural data is defined as " quantitative data about the structure, activity and function of the nervous system of a living organism. They encompass data relating to a nervous system's activity, including both direct measurements of neuronal structure, activity and/or function (e.g., neuronal firing or summed bioelectric signals from EEG) and indirect functional indicators (i.e., blood flow in fMRI and fNIRS). At the neurobiological level, neural data are the most direct correlates of mental states, as all cognitive and affective activity is primarily processed in the nervous system. Therefore, the prospect of decoding or modifying neural activity implies the possibility of decoding or modifying cognitive and affective processes" (para 7).

Do you agree with this definition?

Choose one of the following answers

Yes

No

No opinion

5.b. If you replied "no" to the previous question, please suggest alternative wording.

## B. Approach

In this section, we would like you to tell us more about your views and perceptions regarding the approach adopted in the [first draft of UNESCO's Recommendation](#).

6.a. Do you think that the ethical challenges (see III.3, pages 7-8) are adequately identified and described?

Choose one of the following answers

Yes

No

No opinion

6.b. If you replied "no" to the previous question, please explain:

We are concerned about the framing of ethical challenges and human rights, as set out in our response to the human-centred approach section". However, we believe that the ethical challenges (III.3) could also be modified.

Recommendation: We recommend the inclusion of other elements to provide a more comprehensive overview of ethical challenges in neurotechnology. For example, dual-use dilemmas and the potential for neurotechnology to have neither purely civilian or purely military uses, which can pose challenges for governance.

7.a. This Recommendation adopts a human centered approach (see III.2). Is it adequately reflected in the draft document?

Choose one of the following answers

Yes

No

No opinion

7.b. If you replied "no" to the previous question, please explain:

The section on "Ethics of Neurotechnology: a human-centred approach" III.2 is in need of revision because it sets out ethical challenges and ethical principles, which are in fact human rights obligations – for example, para 25 referring to freedom of thought (ICCPR Art 18). We recommend that this section be revised to better distinguish between ethical principles and human rights. It would be helpful to include an introduction or some other paragraph which sets out the difference of these terms, their relationship, and how both interact in the context of the Recommendation.

We do not find that the last sentence of this section – "Furthermore, it should be based on the promotion and protection of human rights" is sufficient to distinguish between these terms, and might cause further confusion for the reader without additional language and context.

Recommendation: We recommend that the approach section (III.2) **more clearly distinguish between ethical considerations and human rights**, particularly when referring to specific principles or rights. However, on a more macro level, we recommend that the need for a human rights approach, and the relationship between ethics and human rights, be unpacked in both the preamble, and later in the value of human rights. This approach was undertaken with respect to the UNESCO Recommendation on the Ethics of Artificial Intelligence and the WHO guidance on Ethics & Governance of Artificial Intelligence for Health, which could be emulated here with success.

## C. Values and principles

In this section, we would like you to tell us more about your views and perceptions regarding the values and principles adopted in the [first draft of UNESCO's Recommendation](#).

8.a. Would you endorse the values identified in the document (pages 8-12)?

Choose one of the following answers

Yes

No

No opinion

8.b. If you replied "no" to the previous question, please explain:

While we endorse many of the values adopted in the first draft, and are pleased that the first value included is "respect, protection and promotion of human rights fundamental freedoms and human dignity", we believe that this value and the following are not sufficiently grounded in a right-based approach or provided a coherent approach to the overall values of the Recommendation. Please see below our recommendations in terms of structure and content.

1.1. "Respect, protection and promotion of human rights fundamental freedoms and human dignity"

Recommendation: We welcome the central elements of this value and text included in the first two paragraphs (35 & 36). However, we believe that paragraph 36 could be strengthened through the inclusion of specific international human rights instruments such as the UDHR, ICCPR, and ICESCR. It might also be beneficial to make reference to specific rights within these frameworks most relevant for neurotechnology, such as the right to privacy (ICCPR Art 17), freedom of thought and conscience (Art 18), etc.

We are pleased that paragraph 37 approaches 'neurorights' and/or cognitive liberty with a degree of caution and how it stresses that such concepts should "be contextualised within the context of existing human rights to further strengthen, not diminish, the international human rights framework." However, we do not believe that the final sentence in this paragraph adequately captures the risk of right inflation. We suggest the last sentence of paragraph 37 read as follows:

*"This contextualisation within the context of existing human rights is imperative as there is no clear consensus regarding the normative boundaries and terminology of neurorights. Any efforts or assessments must be undertaken in a deliberative process that is grounded in conceptual clarity, rigorous doctrinal analysis and democratic consensus to avoid rights inflation and the dilution of existing protections".*

1.2. "Promoting human health and wellbeing"

Recommendation: This value on promoting human health and well being closely aligns with existing human rights, including but not limited to the right to an adequate standard of living, and the right of everyone to the enjoyment of the highest attainable

standard of physical and mental health (ICESCR Art 11 & 12). We therefore suggest that this value, which is quite short, is lifted into the value of human rights, or at minimum, makes explicit references to such rights and the human rights framework.

### 1.3. “Enjoying the benefits of scientific–technological progress and its applications”

Recommendation: This value on enjoyment of the benefits of scientific–technological progress and its applications closely aligns with existing human rights, including the right of everyone to enjoy the benefits of scientific progress and its applications (ICESCR Art 15), as well as other economic, cultural and social rights. We therefore suggest that this value, which is quite short, is lifted into the value of human rights, or at minimum, makes explicit references to such rights and the human rights framework.

Alternatively (or potentially in addition to the previous recommendation), we believe this value could be replaced with one on “Equity” or have equity added in the title, as both paragraphs 45 and 46 speak to the issue of equity, access and benefits.

Paragraph 47 addresses impact assessments and would be better placed in the responsibility and accountability value. A value on equity should stress the importance of the ability of everyone to benefit from the value created by neurotechnology, and should ensure benefits

### 1.7. “Solidarity”

Recommendation: We are unconvinced that “solidarity” requires a standalone value as currently formulated, and believe that the first sentence of this value could be lifted into the first value on human rights, whereas the second sentence should be lifted to the preamble or approach sections.

### 1.8. “Sustainability, Responsibility, Accountability, Responsivity”

Recommendation: We do not believe that this value is sufficiently coherent or grounded in a human rights approach. While the first few paragraphs speak to sustainability, the areas of focus in paragraph 67 address a range of topics, which are linked to sustainability to an extent, but are more high–level and cross cutting. This appears to be a missed opportunity to underscore the importance of oversight and accountability for any violations of human rights.

One option to address this issue is to have a dedicated value on sustainability, which could be strengthened through reference to the Sustainable Development Goals (SDGs). Another standalone value would be one that touches upon accountability, and in this value we would recommend that the right to an effective remedy (ICCPR Art 2(3)) be cited as accountability and this right is closely intertwined under international law. Additionally, if responsibility is to be included, we recommend that it be further defined, and its relationship with accountability is set out. We are unconvinced of the necessity of including responsivity.

9.a. Is there a value that is missing?

Choose one of the following answers

Yes

No

No opinion

9.b. If you replied "yes" to the previous question, please provide concrete language.

10.a. Would you endorse the principles identified in the document (p. 12-14)?

Choose one of the following answers

Yes

No

No opinion

10.b. If you replied "no" to the previous question, please explain:

#### Framing of Ethical Principles & Human Rights

The "Ethical Principles and Human Rights" section fails to effectively distinguish between ethical principles and specific human rights. This is apparent even in the headings. For example, while it is apparent that "trustworthiness" is an ethical principle, the heading of "self-determination and freedom of thought" fails to establish that the first element of "self-determination" is in fact an ethical principle, whereas "freedom of thought" on its face is a human right.

Recommendation: A potential solution would be to include an introduction to the section which explains the inclusion of different concepts in more granular detail, which should be done in the approach section as well. This could also be accomplished through providing additional language on the headings themselves (e.g., "the ethical principle of self-determination").

Moreover, the content within each sub-section should clearly indicate when it is making reference to an ethical principle, which may be more subjective and can vary across cultures, communities and contexts, vs a specific human rights under the international human rights framework.

#### Feedback on Specific Principles

2.1. "Benefice, Proportionality and Do No Harm"

Recommendation: This section would benefit from additional clarity on what is meant

by benefice – what kind and to whom this applies, or ideally its removal.

We also recommend the removal of “balance” within this section as it does not provide necessary clarity nor is it a widely recognised principle under international human rights law. The principles of legitimacy and proportionality already account for the weighing of interests under international law, and should be cited within the text.

We also recommend that the “do no harm” principle be unpacked with respect to this section, as it is not clear how this principle can be applied in the context of neurotechnologies beyond an abstract manner. While it might have a specific meaning in the health sector, we do not believe it translates well without further explanation.

## 2.2. “Self-determination and Freedom of Thought”

Recommendation: As noted above, we recommend that freedom of thought is explicitly mentioned as a human right if that is indeed the case, as well as clearly specifying self-determination as a principle not a right. We would also suggest revisiting the term “secured” in the first sentence as this language potential deviates from the requirements to respect, protect and promote human rights.

## 2.3. “Mental Privacy and the Protection of Neural Data”

Recommendation: We appreciate the rationale for setting out this principle with a more neurotech-specific approach, and that the body of this principle describes how mental privacy is essential to the protection of human dignity, and that mental functions have particularly ethical, societal and human rights significance.

On the other hand, we believe that not framing this principle as “the right to privacy and data protection” has resulted in a missed opportunity to specify the significance to the right to privacy and the role of data protection. We would strongly encourage that these be added into the text to provide a more holistic and precise view of the issue and the current gap.

## 2.4. “Trustworthiness”

Recommendation: This principle appears to address a wide range of considerations, under the banner of trustworthiness such as transparency, oversight and accountability. If this principle is to be retained, it should more clearly specify how trustworthiness can be achieved. Trustworthy technology is not merely the result of technical design, it is critically the result of participatory processes, transparency and accountability that provides legitimacy to the technical deployment and its goals. It is therefore a result, and thus this principle should provide additional detail on how it should be achieved in practice.

## 2.5. “Fairness and Non-Discrimination”

Recommendation: We recommend that non-discrimination be clarified as either a



principle or the obligation under international law. Alternatively, as presented in the AI Recommendation, text could be added such as "... any kind of compliance with international law".

It might also be helpful to tease out how this principle is linked to prohibited grounds such as race, colour, etc. and why this is particularly relevant for neurotechnology, which is an essential means of protecting individuals from discriminatory treatment and ensuring equality.

Finally, we recommend that fairness be critiqued as this term, similarly to trustworthiness, is actually a result. We suggest that this principle instead address equality and non-discrimination.

## 2.6. "Epistemic and Global Justice"

Recommendation: This section makes a number of references to public awareness, education, capacity-building, learning and community engagement. We therefore recommend that the title be revised to better capture these central elements. The terms "epistemic" and "global justice" should be reconsidered if not clearly defined and linked with the relevant text.

## 2.7. "Interests of the Child and Protection of Future Generations"

Recommendation: This principle should make explicit reference to the rights of the child and the UN Convention on the Rights of the Child. We also suggest that this section incorporate some of the language included within the Committee on the Rights of the Child -General Comment No. 25 (2021) on children's rights in relation to the digital environment.

11.a. Is there a principle that is missing?

Choose one of the following answers

Yes

No

No opinion

11.b. If you replied "yes" to the previous question, please provide concrete language.

We strongly believe there should be a principle (or even value) on multi stakeholder collaboration. This is because the participation of different stakeholders in the design, development and use of neurotechnologies, as well as their governance, is necessary for inclusive and rights-respecting approaches.

12.a. Do you think that the challenges raised by neurotechnology are adequately addressed by the human-rights framework?

Choose one of the following answers

Yes

No

No opinion

12.b. If you replied "no" to the previous question, please explain why and provide concrete suggestions if something is missing.

While we responded yes to this question, we would like to provide a rationale.

We believe that the challenges raised by neurotechnology can be adequately addressed by the human rights framework. We have seen how the international human rights law framework can successfully adapt to address the unique challenges posed by other emerging technologies, and believe there is significant value in grounding this Recommendation in a rights-based approach.

The benefit of this approach is that the international human rights law framework is universal and internationally agreed upon, with existing mechanisms for accountability and flexibility to address new issues. While other frameworks may further assist with these challenges, the human-rights framework should be the primary focus.

As we have seen with artificial intelligence, there are going to be challenges that exist when applying the international human rights law framework to neurotechnology. This is due to both the complexity and novelty of such technologies, as well as the fact that the international human rights protections and obligations are often broadly worded, making them difficult to interpret and apply in the context of these new technologies. Such challenges have spurred particular groups of entities to propose alternative approaches to AI governance, as they are also with neurotechnology, including those grounded purely in ethics, which can be useful as complement but detrimental if they are regarded as a substitute for a human rights approach. This is because there is a risk of undermining the applicability of existing international human rights law framework, which has a level of normative value, geopolitical recognition and status that any alternative approach would unlikely match. There is also a risk that ethical approaches may suggest that the international human rights framework is inappropriate or insufficient, presenting an opportunity for the development of standards that are weaker in their consensus level or even inconsistent with the existing human rights framework.

#### **D. Areas of policy actions/recommendations**

In this section, we would like you to tell us more about your views and perceptions regarding the proposed areas of policy action and recommendations addressed in the [first draft of UNESCO's Recommendation](#).

13.a. Is the policy area section well structured?

Choose one of the following answers

Yes

No

No opinion

13.b. If you replied "no" to the previous question, please provide concrete suggestions.

The policy areas in question lack a coherent structure for several reasons beyond the mere categorisation and volume of areas and subareas. These reasons can be summarised as follows:

1. **Selection Criteria Ambiguity:** There is a lack of transparency regarding the criteria used to select certain policy areas and use cases. This raises questions about the relevance and necessity of these areas
2. **Relevance to Values and Principles:** Some policy areas, such as intellectual property, appear to be disconnected from the core values and principles that the policy framework aims to operationalise. This disconnection creates confusion about their inclusion and their role.
3. **Overlap and Redundancy:** The presence of overlapping policy areas, especially those involving private sector activities like commercial nudging, economic and investment incentives, and consumer commercial products, leads to redundancy and is less actionable. This overlap complicates the implementation process and dilutes the focus of the policies.
4. **Inconsistency in Policy Focus:** The inclusion of a standalone policy area on health, alongside separate policies on neural and cognitive biometric data and clinical trials, creates inconsistencies. These areas, while related to health, are treated separately without clear justification, leading to fragmentation (such as V.4, V.5, V.10, V.11, V.12) .
5. **Lack of Cohesion:** The overall structure lacks cohesion, making it difficult to understand how different policy areas interrelate and contribute to the overarching goals. This disjointed approach hampers the effectiveness of the policy framework and undermines its strategic intent.

Recommendation: Addressing these issues requires a more transparent and logical approach to selecting and structuring policy areas, ensuring that each area is clearly tied to the core values and principles, and that overlaps and redundancies are minimised to enhance coherence and operational effectiveness.

We recommend revising the following policy areas as such:

- Gender Diversity & Groups in Vulnerable Situations (with existing subtitles)
- Health & Data Policy (including Research, Trials and Data Handling)
- Environment & Sustainability
- Public Awareness & Stakeholder Engagement
- Educational Applications
- Labour Applications

- Consumer Products & Commercial Practices
- Economy & Innovation (including Intellectual Property, Investment Incentives and Government Investment)
- Safety and Cybersecurity

14.a. Are the policy areas adequately described?

Choose one of the following answers

Yes

No

No opinion

14.b. If you replied "no" to the previous question, please provide concrete suggestions.

Please see our answer to 13.b for more information and concrete suggestions.

15.a. Are the policies and recommendations described in Section V in line with the values and principles of Section IV?

Choose one of the following answers

Yes

No

No opinion

15.b. If you replied "no" to the previous question, please explain why.

Please see our answer to 13.b for more information and concrete suggestions.

16.a. Would you consider that the policies and recommendations in the document properly address the need for equal access to the technological developments both inside the country, as well as between countries?

Choose one of the following answers

Yes

No

No opinion

16.b. If you replied "no" to the previous question, please provide concrete suggestions.

N/A

17.a. Is there anything in this section with which you would fully disagree?

Choose one of the following answers

Yes

No

No opinion

17.b. If you replied "yes" to the previous question, please explain what part and why.

As noted in our response to question 13.b, we believe there are entire policy areas that are in need of removal and disagree with their inclusion.

18.a. Are there important aspects or applications of neurotechnology not covered?

Choose one of the following answers

Yes

No

No opinion

18.b. If you replied "yes" to the the previous question, please specify:

As noted in our answers above, the Recommendation fails to address the issue of dual-use technologies or in the military context. There is only a brief reference to "neuroweapons" in para 230.

We believe that it would be beneficial to more comprehensively address the potential use of neurotechnologies in the context of law enforcement and the judiciary, and do not believe that the brief references in paras 230-232 are sufficient.

We recommend other high-risk sectors, including immigration and border control, or counter-terrorism, be considered or at minimum made reference to in order to highlight their risks and incompatibility with international human rights law.

19.a. Are all relevant actors identified in the draft text?

Choose one of the following answers

Yes

No

No opinion

19.b. If you replied "no" to the previous question, please specify which should be added or removed:

20.a. Are the identified policies and recommendations adequate to promote diversity and non-discrimination?

Choose one of the following answers

Yes

No

No opinion

20.b. If you replied "no" to the previous question, please provide concrete suggestions.

N/A

21.a. Do the proposed policies and recommendations adequately address the gender perspective?

Choose one of the following answers

Yes

No

No opinion

21.b. If you replied "no" to the previous question, please provide concrete suggestions.

We do not believe that the proposed policies and recommendations adequately address the gender perspective. Most of the operative recommendations are very high-level and appear to simply reinforce existing obligations of states with respect to gender, equality and non-discrimination under international law. This is particularly true for paras 114, 115, and 116, which reiterate obligations that states have under international human rights law regardless of the technology involved.

We welcome that the recommendations in paragraphs 117 and 118 provide more concrete actions for member states to take up with respect to gender, but we still find that these funding policies and initiatives are still not grounded in an approach that supports the promotion of human rights, nor are they entirely ambitious.

Recommendation 1: We suggest that the language used for the first area of policy action on specific receptors and use cases be revised to "Gender Diversity & Groups in Vulnerable Situations", and that the text within the particular sub-sections be revised to not create further marginalisation. Specifically we recommend that "gender minorities" be removed and replaced with terms such as "gender and sexual diversity".

Recommendation 2: Paragraphs 114-118 should go beyond promoting guidelines, policies and inclusive research and development, and also promote public awareness on the importance of gender equity in neurotechnology, as well as more targeted capacity programmes for the public and private sector. Member states should also go beyond funding and supporting initiatives that simply promote education and

employment by establishing partnerships with academia, and public-private collaboration. However, what is perhaps most needed is a commitment by states to monitor and evaluate the impact of their activities. While paragraph 116 mentions robust mechanisms for reporting and addressing incidents of harassment, evaluation should be taking place on a continuous basis that regularly assesses the effectiveness of all relevant policies and programmes, and makes adjustments based on findings.

22.a. Do you think that the way the technologies are developing would have a differentiated impact depending on gender?

Choose one of the following answers

Yes

No

No opinion

22.b. If yes, is this adequately addressed in the recommendations proposed in this document?

We do not believe that neurotechnology development and the differentiated impact depending on gender is adequately addressed in the recommendations. As noted in our response to question 21.b, the recommendations must be more aspirational.

The reasoning behind our comments is because neurotechnology development will have differentiated impacts due to a variety of biological, social and psychological factors, which combined with societal and economic factors may have negative consequences for those of particular genders. This requires an intersectional perspective and concerted effort at all stages of technology development, and action by a range of stakeholders.

23.a. Do the proposed policies and recommendations on neurotechnology contribute to the protection of vulnerable populations?

Choose one of the following answers

Yes

No

No opinion

23.b. If you replied "no" to the previous question, please provide concrete suggestions.

The term "vulnerable populations" is in need of revision.

Recommendation 1: We suggest that the language used for the first area of policy action on specific receptors and use cases be revised to "Gender Diversity & Groups

in Vulnerable Situations”, and that the text within the particular sub-sections and throughout be revised to not create further marginalisation. Specifically we recommend that “vulnerable populations” be changed to “**people or groups in vulnerable situations**”. This is because the concept of vulnerable populations of groups implies a disempowerment charge, as this is an intrinsic issue, rather than a consequence of the current social order.

Secondly, we believe that the existing policies and recommendations for protecting populations in vulnerable situations are inadequate. Not only are the policies and recommendations insufficiently robust, but the document fails to adequately recognise and address the needs of these groups, particularly those of diverse sexual orientations and non-binary gender identities. In fact, sexual orientation is only mentioned once throughout the entire draft Recommendation. This oversight is unacceptable and reflects a misunderstanding of the intersectional nature of discrimination and vulnerability.

Recommendation 2: The Recommendation must be revised to include a strong, explicit focus on the unique challenges faced by LGBTQIA+ persons. Historically and presently, LGBTQIA+ communities face significant persecution and discrimination, which deeply impact their mental health and socio-economic opportunities. These factors must be front and centre in any comprehensive approach to neurotechnology policy.

The glaring omission in addressing the risks, discrimination and socio-economic barriers experienced by LGBTQIA+ individuals needs to be rectified and unpacked in the policies and recommendations. Studies consistently show that these populations suffer from higher rates of depression, anxiety, and suicide compared to their heterosexual and cisgender counterparts, largely due to systemic discrimination and social stigma. Neurotechnology has the potential to alleviate some of these mental health burdens, but without targeted policies, these technologies may not reach those who need them most.

We also suggest that this document reflects the serious socio-economic barriers faced by LGBTQIA+ persons are substantial and often compounded by discriminatory legal frameworks. The lack of economic opportunities and legal protections globally can prevent these individuals from accessing and benefiting from neuro technological advancements. The Recommendation must call for policies that ensure equitable access to neurotechnology for all, regardless of sexual orientation or gender identity.

Finally, we believe that there is a critical need for language that safeguards against the misuse of neurotechnology in ways that could lead to further marginalisation or harm to these communities, such as unethical use of data or discriminatory practices in the application of these technologies. This could take place through an expansion of paragraph 230, and a robust recommendation which speaks to the coercive “rehabilitation” based on personal beliefs or thoughts, or immutable characteristics such as sexual orientation.

For example: Member States should establish clear prohibitions against the use of neurotechnology in contexts that violate individual and collective rights. Specifically,



neurotechnology should not be used for purposes such as non-consensual interrogation in law enforcement, development or deployment of neuroweapons, attempts at “moral enhancement” without consent, coercive “rehabilitation based on personal beliefs, thoughts, **or immutable characteristics such as sexual orientation**, or surveillance of mental states”.

24.a. Do the proposed policies and recommendations address neurodiversity adequately?

Choose one of the following answers

Yes

No

No opinion

24.b. If you replied "no" to the previous question, please provide concrete language.

We do not believe that the proposed policies and recommendations address neurodiversity adequately. The issue is not that there are no recommendations which speak to this, but that it is not clear enough. The draft Recommendation does not actually refer to “neurodiversity” or “neurodiverse” individuals. It only refers to “neuro-atypical” once in the labour section, “atypicality” with respect to children, and “autism” in the ethics section. There are also terms used such as mental health disabilities, or those with mental health conditions or special situations.

We suggest that neurodiversity is more explicitly included, perhaps with additional examples, more uniform language, or even clarifying what is meant by “neuro-atypical” or “atypicality” and whether this is considered the same as neurodiverse.

It would also be helpful to better link neurodiversity with relevant recommendations, particularly those relating to access as an enhancer, but also safeguards against forced treatment or coercive use. This is a cross-cutting issue that presents itself in several policy areas such as educational settings, labour, direct to consumer commercial products, and others.

25.a. Are the responsibilities of all relevant actors, including the private sector, properly reflected in the document?

Choose one of the following answers

Yes

No

No opinion

25.b. If you replied "no" to the previous question, please explain further:

We believe that the responsibilities of the private sector are not properly reflected, and recommend that the private sector's responsibilities with respect to human rights be made clear. This should be done through reference to the United Nations Guiding Principles on Business and Human Rights (UNGPs). This would in many ways reinforce the need for the private sector to take action with respect to commercial use of data and protection of privacy. It would also be helpful to link the private sector more closely with the concept of equity, and in leveraging the benefits of neurotechnology.

Additionally, we feel that more emphasis could be placed on the role of individuals with respect to the ways in which they themselves utilise neurotechnology, particularly in the case of consumer-facing products. Attention on the role of individuals could provide a more holistic perspective on the need for multi stakeholder efforts, and the realities and impacts of individual use, while recognising that human rights obligations fall on states and responsibilities on private companies.

26.a. Are the proposed recommendations ensuring accountability of the different actors throughout the lifecycle of the technology?

Choose one of the following answers

Yes

No

No opinion

26.b. If you replied "no" to the previous question, please explain why.

27.a. Is there any contradiction or tension between the legal framework of your country and the policies and recommendations proposed in the document?

Choose one of the following answers

Yes

No

No opinion

27.b. If you replied "yes" to the previous question, please provide specific examples.

28.a. Do you think the legal framework of your country is effectively addressing the challenges posed to human rights raised by neurotechnology?

Choose one of the following answers

Yes

No

No opinion

28.b. If you replied "no" to the previous question, please provide concrete suggestions on how to improve existing laws.

29.a. Does the Recommendation adequately reflect the need for international cooperation to address the technical gaps?

Choose one of the following answers

Yes

No

No opinion

29.b. If you replied "no" to the previous question, please explain further:

30.a. Are future developments of the technology sufficiently taken into consideration?

Choose one of the following answers

Yes

No

No opinion

30.b. If you replied "no" to the previous question, please explain further:

31.a. Are there any proposed recommendations that you would consider too restrictive?

Choose one of the following answers

Yes

No

No opinion

31.b. If you replied "yes" to the previous question, which one(s)? Please propose concrete rewording.

32.a. Are there any proposed recommendations that you would consider too permissive?

Choose one of the following answers

Yes

No

No opinion

32.b. If you replied "yes" to the previous question, which one(s)? Please propose concrete rewording.

### E. Implementation

In this section, we would like you to tell us more about your views and perceptions regarding the future implementation of UNESCO's Recommendation.

33. Would you have any specific suggestions on how these recommendations could be implemented and have impact on the ground? Please specify:

We believe that the implementation of this Recommendation, as well as the specific recommendations, will require significant efforts on behalf of UNESCO and others to have an impact on the ground. Implementation will require a multi-dimensional approach that includes clear guidelines, stakeholder engagement, and robust monitoring and evaluation. For example:

- The Development of Actionable Resources

Similarly to the Recommendation on the Ethics of Artificial Intelligence, this Recommendation will require the development of actionable resources to assist with implementation. Such resources should provide clear and detailed guidance on specific steps and measures to help stakeholders understand their responsibilities and successfully implement the framework. These resources could be developed to address the overall Recommendation, but it would be beneficial to have more granular guidance that speaks to the various areas of policy action or challenges, and should be grounded in a multistakeholder approach.

- Education and Capacity Building

The novelty and complexity of neurotechnology will require significant efforts to educate relevant stakeholders about the technology itself and the Recommendation, as well as dedicated training programmes for those charged with its implementation. While most of the recommendations contained in this document are directed towards member states, it would be helpful to target specific stakeholders (policymakers, the judiciary, etc.), as well as the private sector, civil society and those impacted by the

use of neurotechnologies in various settings.

Education and capacity building efforts should also consider the varying capacities and local realities of particular regions or countries. While the Recommendation aims to be a global instrument, it must also prove relevant for local contexts and therefore its implementation should consider specialised implementation plans, pilot projects, engagement with local leaders, and a flexible approach to empowerment.

- Stakeholder Engagement

The Recommendation itself stresses the need for multi-stakeholder, multidisciplinary and pluralistic dialogue. This is explicitly noted in the clinical trials section, where it specifies that “assessments should be multidisciplinary, multi-stakeholder, multicultural, pluralistic and inclusive.” We champion this approach and believe that it should underpin the overall implementation of the Recommendation as well.

### **Thank you for your participation!**

Thank you for participating in the Global Consultation for UNESCO's Recommendation on the Ethics of Neurotechnology. Your responses will support us in building a more robust and inclusive Recommendation!

If you have any additional comments, please provide them below:

We are very pleased to respond to this consultation on the first draft of a Recommendation on the Ethics of Neurotechnology.

We believe the first draft is a commendable starting point, but significant revisions are needed, particularly in better grounding the document in a human rights approach and the existing international human rights framework. This requires a clear distinction between existing human rights and ethical principles, and cautioning against the terminology of "neurorights," which lacks clear consensus regarding normative boundaries and terminology, and risks leading to rights inflation and the dilution of existing human rights protections.

It is crucial to consider the perspective of human rights experts, who have expressed significant reservations about neurorights and cast doubt on the purported protection gaps they aim to address, particularly when existing human rights can be interpreted in a progressive manner. Including a more diverse group of actors in this process would provide a more nuanced and comprehensive perspective.

We hope our recommendations prove useful and look forward to contributing towards the development of the Recommendation in the future. Please do not hesitate to reach out for further questions or to include us in ongoing efforts in the elaboration of this important initiative. Thank you in advance.

