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Draft Recommendation on the Ethics of Artificial Intelligence**

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**DRAFT TEXT OF THE RECOMMENDATION ON THE ETHICS OF ARTIFICIAL
INTELLIGENCE WITH TRACK-CHANGES
(PARAGRAPHS 26-134; OUTCOME OF THE INTERSESSIONAL CONSULTATIONS)**

This document contains the part of the draft Recommendation on the Ethics of Artificial Intelligence (AI) considered during the Intersessional Consultations (from 1 to 4 June; 7 to 11 June; and 16 to 18 June 2021): paragraphs 26 to 134.

The text is presented in track-changes, which indicate accepted amendments with the Member States that proposed them.

Proportionality and do no harm

26. The choice to use AI systems and which AI method to use should be justified in the following ways: (a) The AI method chosen should be desirable to achieve a given legitimate aim; (b) The AI method chosen should not infringe upon the foundational values captured in this document; (c) The AI method should be appropriate to the context and should be based on rigorous scientific foundations. In scenarios that involve life and death decisions, final human determination should apply.

[Paragraph 26: accepted]

26. The choice to use AI systems and which AI method to use should be justified in the following ways: (a) The AI method chosen should be [UK] appropriate desirable [Germany] and proportional to achieve a given legitimate aim; (b) The AI method chosen should not infringe upon the foundational values captured in this document [UK], in particular, its use must not violate or abuse human rights; (c) The AI method should be appropriate to the context and should be based on rigorous scientific foundations. [Canada] In scenarios where decisions are understood to have an impact that is irreversible or difficult to reverse or [Iran] may involve life and death decisions, final human determination should apply. [Germany and Italy] In particular, AI systems should not be used for social scoring or mass surveillance purposes.

Safety and security

27. Unwanted harms (safety risks) should be avoided and vulnerabilities to attacks (security risks) should be addressed throughout the life cycle of AI systems to ensure human, environmental and ecosystem safety and security. Safe and secure AI will be enabled by the development of sustainable, privacy-protective data access frameworks that foster better training and validation of AI models utilizing quality data.

[Paragraph 27: accepted]

27. Unwanted harms (safety risks), [UK] as well as [Iran] vulnerabilities to attack (security risks) should be avoided and should be addressed, [Costa Rica] prevented [Iran] and eliminated throughout the life cycle of AI systems to ensure human, environmental and ecosystem safety and security. Safe and secure AI will be enabled by the development of sustainable, privacy-protective data access frameworks that foster better training and validation of AI models utilizing quality data.

Fairness and non-discrimination

28. AI actors should promote social justice, by safeguarding fairness and non-discrimination of any kind in compliance with international law. Fairness implies sharing benefits of AI technologies at local, national and international levels, while taking into consideration the specific needs of different age groups, cultural systems, different language groups, persons with disabilities, girls and women, and disadvantaged, marginalized and vulnerable populations. At the local level, it is a matter of working to give communities access to AI systems in the languages of their choice and respecting different cultures. At the national level, governments are obliged to demonstrate equity between rural and urban areas, and among all persons without distinction as to sex, gender, language, religion, political or other opinion, national, ethnic, indigenous or social origin, sexual orientation and gender identity, property, birth, disability, age or other status, in terms of access to and participation in the AI system life cycle. At the international level, the most technologically advanced countries have a responsibility of solidarity with the least advanced to ensure that the benefits of AI technologies are shared such that access to and participation in the AI system life cycle for the latter contributes to a fairer world order with regard to information, communication, culture, education, research, and socio-economic and political stability.

[Paragraph 28: accepted]

28. AI actors should promote social justice, [Germany] and safeguarding fairness and non-discrimination of any kind in compliance with international law. [UK] This implies an inclusive approach to ensuring the sharing benefits of AI technologies are available and accessible to all taking into consideration the specific needs of different age groups, cultural systems, different language groups, persons with disabilities, girls and women, and disadvantaged, marginalized and vulnerable people or people in vulnerable situations. [UK] Member States should work to promote inclusive ~~At the local level, it is a matter of working to give communities~~ access for all, [St Lucia] including local communities, to AI systems with locally relevant content and services, [Belgium] and with respect for multilingualism, and cultural [Venezuela] diversity ~~in the languages of their choice and respecting different cultures.~~ [UK] Member States should work to tackle digital divides, including rural-urban divides, and ensure inclusive access to and participation in the development of AI. At the national level, [Canada] governments Member States are obliged to [Brazil] should promote equity between rural and urban areas, and among all persons ~~without distinction as to sex, gender, language, religion, political or other opinion, national, ethnic, indigenous or social origin, sexual orientation and gender identity, property, birth, disability, age or other status, in terms of access to and participation in the AI system life cycle.~~ [April proposal] regardless of race, colour, descent, gender, age, language, religion, political opinion, national origin, ethnic origin, social origin, economic or social condition of birth, or disability and any other grounds in terms of access to and participation in the AI system life cycle. At the international level, the most technologically advanced countries have a responsibility of solidarity with the least advanced to ensure that the benefits of AI technologies are shared such that access to and participation in the AI system life cycle for the latter contributes to a fairer world order with regard to information, communication, culture, education, research, and socio-economic and political stability.

29. AI actors should make all efforts to minimize and avoid reinforcing or perpetuating inappropriate socio-technical biases

based on prejudice, throughout the life cycle of the AI system to ensure fairness of such systems. Effective remedy should be available against unfair algorithmic determination and discrimination.

[Paragraph 29: accepted]

29. AI actors should make all [Singapore] reasonable efforts to minimize and avoid reinforcing or perpetuating [UK] inappropriate [Canada] discriminatory or biased applications and outcomes [UK] socio-technical biases based on prejudice, throughout the life cycle of the AI system to ensure fairness of such systems. Effective remedy should be available against [Latvia] discrimination and [UK] biased ~~unfair~~ algorithmic determination.

30. Furthermore, discrimination, digital and knowledge divides, and global inequalities need to be addressed throughout an AI system life cycle, including in terms of access to technology, data, connectivity, knowledge and skills, and meaningful participation of the affected communities, such that every person is treated equitably.

[Paragraph 30: accepted]

30. Furthermore, [UK] discrimination, digital and knowledge divides within and between countries, ~~and global inequalities~~ need to be addressed throughout an AI system life cycle, including in terms of access and quality of access to technology, data in accordance with relevant national, regional and international legal frameworks, as well as in terms of connectivity, knowledge and skills, and meaningful participation of the affected communities, such that every person is treated equitably.

Sustainability

[Paragraph 31: accepted]

31. The development of sustainable societies relies on the achievement of a complex set of objectives on a continuum of human, social, cultural, economic and environmental dimensions. The advent of AI technologies can either benefit

sustainability objectives or hinder their realization, depending on how they are applied across countries with varying levels of development. The continuous assessment of the human, social, cultural, economic and environmental impact of AI technologies should therefore be carried out with full cognizance of the implications of AI technologies for sustainability as a set of constantly evolving goals across a range of dimensions, such as currently identified in the United Nations Sustainable Development Goals (SDGs).

[Germany] Right to Privacy, and Data Protection

32. Privacy, a right essential to the protection of human dignity, human autonomy and human agency, must be respected, protected and promoted throughout the life cycle of AI systems. It is important that data for AI systems is being collected, used, shared, archived and deleted in ways that are consistent with the values and principles set forth in this Recommendation, while respecting relevant national, regional and international legal frameworks.

[Paragraph 32: accepted]

32. Privacy, a right essential to the protection of human dignity, human autonomy and human agency, must be respected, protected and promoted throughout the life cycle of AI systems. It is important that data for AI systems is being collected, used, shared, archived and deleted in ways that are consistent with [Germany] international law and in line with the values and principles set forth in this Recommendation, while respecting relevant national, regional and international legal frameworks.

33. Adequate data protection frameworks and governance mechanisms should be established in a multi-stakeholder approach at national or supranational level, protected by judicial systems, and ensured throughout the life cycle of AI systems. This protection framework and any related mechanisms concern the collection, control over, and use of data and exercise of their rights by data subjects, with explicit and informed consent, and of the right for individuals to have personal data erased, except

for certain circumstances in compliance with international law, ensuring a legitimate aim and a valid legal basis for the processing of personal data as well as for the identification, and de- and re-identification of data, transparency, appropriate safeguards for sensitive data, and effective independent oversight.

[Paragraph 33: accepted]

33. Adequate data protection frameworks and governance mechanisms should be established in a multi-stakeholder approach at national or [\[Mexico\] international supranational](#) level, protected by judicial systems, and ensured throughout the life cycle of AI systems. [\[Singapore\] This Data protection frameworks and any related mechanisms should take reference from international data protection principles and standards concerning the collection, control over, and use and disclosure of personal data and exercise of their rights by data subjects , with explicit and informed consent, and of the right for individuals to have personal data erased, except for certain circumstances in compliance with international law, while](#) ensuring a legitimate aim and a valid legal basis for the processing of personal data [\[UK\] including informed consent. as well as for the identification, and de- and re-identification of data, transparency, appropriate safeguards for sensitive data, and effective independent oversight.](#)

34. Algorithmic systems require thorough privacy impact assessments which also include societal and ethical considerations of their use and an innovative use of the privacy by design approach.

[Paragraph 34: accepted]

34. Algorithmic systems require [\[Brazil\] thorough adequate](#) privacy impact assessments which also include societal and ethical considerations of their use and an innovative use of the privacy by design approach. [\[Canada\] AI actors need to ensure that they are accountable for the design and implementation of](#)

AI systems in such a way as to ensure that personal information is protected throughout the lifecycle of the AI system.

Human oversight and determination

35. It must always be possible to attribute ethical and legal responsibility for any stage of the life cycle of AI systems, as well as in cases of remedy related to AI systems, to physical persons or to existing legal entities. Human oversight refers thus not only to individual human oversight, but to inclusive public oversight, as appropriate.

[Paragraph 35: accepted]

35. [Switzerland] ~~It must~~ Member States should ensure that it is always ~~be~~ possible to attribute ethical and legal responsibility for any stage of the life cycle of AI systems, as well as in cases of remedy related to AI systems, to physical persons or to existing legal entities. Human oversight refers thus not only to individual human oversight, but to inclusive public oversight, as appropriate.

36. It may be the case that sometimes humans would choose to rely on AI systems for reasons of efficacy, but the decision to cede control in limited contexts remains that of humans, as humans can resort to AI systems in decision-making and acting, but an AI system can never replace ultimate human responsibility and accountability.

[Paragraph 36: accepted]

36. It may be the case that sometimes humans would choose to rely on AI systems for reasons of efficacy, but the decision to cede control in limited contexts remains that of humans, as humans can resort to AI systems in decision-making and acting, but an AI system can never replace ultimate human responsibility and accountability. [St Lucia] As a rule, [Brazil] life and death decisions should not be ceded to AI systems.

Transparency and explainability

37. The transparency and explainability of AI systems are often essential preconditions to ensure the respect, protection and promotion of human rights, fundamental freedoms, and ethical principles. Transparency is necessary for relevant national and international liability legislation to work effectively.

[Paragraph 37: accepted]

37. The transparency and explainability of AI systems are often essential preconditions to ensure the respect, protection and promotion of human rights, fundamental freedoms, and ethical principles. Transparency is necessary for relevant national and international liability [Canada] regimes legislation to work effectively. [Germany] A lack of transparency could also undermine the possibility of effectively challenging decisions based on outcomes produced by AI systems and may thereby infringe the right to a fair trial and effective remedy, and limits the areas in which these systems can be legally used.

38. While efforts need to be made to increase transparency and explainability of AI systems throughout their life cycle to support democratic governance, the level of transparency and explainability should always be appropriate to the context, as some trade-offs may exist between transparency and explainability and other principles such as privacy, safety and security. People have the right to be aware when a decision is being made on the basis of AI algorithms, and in those circumstances require or request explanatory information from private sector companies or public sector institutions.

[Paragraph 38: accepted]

38. While efforts need to be made to increase transparency and explainability of AI systems [Mexico] including those [Iran] with extra-territorial impact throughout their life cycle to support democratic governance, the level of transparency and explainability should always be appropriate to the context [Canada] and impact, as there may be a need to balance some trade-offs may exist between transparency and explainability and other principles such as privacy, safety

and security. People [Netherlands] should be [St Lucia] fully informed when ~~have the right to be aware when~~ a decision is informed by or is [Venezuela] made on the basis of AI algorithms, including when it affects their safety or human rights, and in those circumstances ~~require or [Canada] should have the opportunity to~~ request explanatory information [UK] ~~from private sector companies~~ from the relevant AI actor or public sector institutions. [Canada] In addition, individuals should be able to access the reasons for a decision affecting their rights and freedoms, and have the option of making submissions to a designated staff member of the private sector company or public sector institution able to review and correct the decision. [UK] AI actors should inform users when [Bulgaria] a product or service is provided directly or with the assistance of AI systems [St Lucia] in a proper and [Belgium] timely manner.

39. From a socio-technical lens, greater transparency contributes to more peaceful, just, democratic and inclusive societies. It allows for public scrutiny that can decrease corruption and discrimination, and can also help detect and prevent negative impacts on human rights. Transparency aims at providing appropriate information to the respective addressees to enable their understanding and foster trust. Specific to the AI system, transparency can enable people to understand how each stage of an AI system is put in place, appropriate to the context and sensitivity of the AI system. It may also include insight into factors that impact a specific prediction or decision, and whether or not appropriate assurances (such as safety or fairness measures) are in place. In cases where serious adverse human rights impacts are foreseen, transparency may also require the sharing of code or datasets.

[Paragraph 39: accepted]

39. From a socio-technical lens, greater transparency contributes to more peaceful, just, democratic and inclusive societies. It allows for public scrutiny that can decrease corruption and discrimination, and can also help detect and prevent negative impacts on human rights. Transparency aims at

providing appropriate information to the respective addressees to enable their understanding and foster trust. Specific to the AI system, transparency can enable people to understand how each stage of an AI system is put in place, appropriate to the context and sensitivity of the AI system. It may also include insight into factors that impact a specific prediction or decision, and whether or not appropriate assurances (such as safety or fairness measures) are in place. In cases [St Lucia] where of serious threats of adverse human rights impacts ~~are foreseen~~, transparency may also require the sharing of code or datasets.

40. Explainability refers to making intelligible and providing insight into the outcome of AI systems. The explainability of AI systems also refers to the understandability of the input, output and the functioning of each algorithmic building block and how it contributes to the outcome of the systems. Thus, explainability is closely related to transparency, as outcomes and sub-processes leading to outcomes should aim to be understandable and traceable, appropriate to the use context. AI actors should commit to ensuring that the algorithms developed are explainable.

[Paragraph 40: accepted]

40. Explainability refers to making intelligible and providing insight into the outcome of AI systems. The explainability of AI systems also refers to the understandability of the input, output and the functioning of each algorithmic building block and how it contributes to the outcome of the systems. Thus, explainability is closely related to transparency, as outcomes and sub-processes leading to outcomes should aim to be understandable and traceable, appropriate to the [Canada] use context. AI actors should commit to ensuring that the algorithms developed are explainable. [Canada] In the case of AI applications that impact the end user in a way that is not temporary, easily reversible, or otherwise low risk it should be ensured that the meaningful explanation is provided with any decision that resulted in the

action taken in order for the outcome to be considered transparent.

[Paragraph 41: accepted]

41. Transparency and explainability relate closely to adequate responsibility and accountability measures, as well as to the trustworthiness of AI systems.

Responsibility and accountability

42. AI actors must respect, protect and promote human rights and fundamental freedoms, and should promote the protection of the environment and ecosystems, assuming ethical and legal responsibility in accordance with existent national and international law, in particular Member States' human rights obligations, and ethical guidance throughout the life cycle of AI systems. The ethical responsibility and liability for the decisions and actions based in any way on an AI system should always ultimately be attributable to AI actors.

[Paragraph 42: accepted]

42. AI actors [St Lucia] and Member States [Australia] must should respect, protect and promote human rights and fundamental freedoms, and should [UK] also promote the protection of the environment and ecosystems, assuming [Germany] their respective ethical and legal responsibility, in accordance with [Canada] existent national and international law, in particular Member States' human rights obligations, and ethical guidance throughout the life cycle of AI systems [UK], including with respect to AI actors within its effective territory and control. The ethical responsibility and liability for the decisions and actions based in any way on an AI system should always ultimately be attributable to AI actors [Canada] corresponding to their role in the life cycle of the AI system.

[Paragraph 43: accepted]

43. Appropriate oversight, impact assessment, audit, and due diligence mechanisms, including whistle-blowers protection, should be developed to ensure accountability for AI systems and their impact throughout their life cycle. Both technical and institutional designs should ensure auditability and traceability of (the working of) AI systems in particular to address any conflicts with human rights norms and standards and threats to environmental and ecosystem well-being.

Awareness and literacy

[Paragraph 44: accepted]

44. Public awareness and understanding of AI technologies and the value of data should be promoted through open and accessible education, civic engagement, digital skills and AI ethics training, media and information literacy and training led jointly by governments, intergovernmental organizations, civil society, academia, the media, community leaders and the private sector, and considering the existing linguistic, social and cultural diversity, to ensure effective public participation so that all members of society can take informed decisions about their use of AI systems and be protected from undue influence.

[Paragraph 45: accepted]

45. Learning about the impact of AI systems should include learning about, through and for human rights and fundamental freedoms, meaning that the approach and understanding of AI systems should be grounded by their impact on human rights and access to rights, as well as on the environment and ecosystems.

Multi-stakeholder and adaptive governance and collaboration

46. International law and national sovereignty must be respected in the use of data. Data sovereignty means that States, complying with international law, regulate the data generated within or passing through their territories, and take measures towards effective regulation of data, including data protection,

based on respect for the right to privacy and other human rights norms and standards.

[Paragraph 46: accepted]

46. International law and national sovereignty must be respected in the use of data. [\[Brazil\] Data sovereignty](#) That means that States, complying with international law, [can](#) regulate the data generated within or passing through their territories, and take measures towards effective regulation of data, including data protection, based on respect for the right to privacy [in accordance with international law](#) and other human rights norms and standards.

47. Participation of different stakeholders throughout the AI system life cycle is necessary for inclusive AI governance, sharing of benefits of AI, and fair technological advancement and its contribution to development goals. Stakeholders include but are not limited to governments, intergovernmental organizations, the technical community, civil society, researchers and academia, media, education, policy-makers, private sector companies, human rights institutions and equality bodies, anti-discrimination monitoring bodies, and groups for youth and children. The adoption of open standards and interoperability to facilitate collaboration must be in place. Measures should be adopted to take into account shifts in technologies, the emergence of new groups of stakeholders, and to allow for meaningful intervention by marginalized groups, communities and individuals.

[Paragraph 47: accepted]

47. Participation of different stakeholders throughout the AI system life cycle is necessary for inclusive [\[UK\] approaches to](#) AI governance, [enabling the sharing of benefits to be shared by all, and to contribute to and fair technological advancement and its contribution to sustainable](#) development [goals](#). Stakeholders include but are not limited to governments, intergovernmental

organizations, the technical community, civil society, researchers and academia, media, education, policy-makers, private sector companies, human rights institutions and equality bodies, anti-discrimination monitoring bodies, and groups for youth and children. The adoption of open standards and interoperability to facilitate collaboration [Singapore] must~~should~~ be in place. Measures should be adopted to take into account shifts in technologies, the emergence of new groups of stakeholders, and to allow for meaningful [UK] participation~~intervention~~ by marginalized groups, communities and individuals. and, [St Lucia] where relevant, [Canada] in the case of Indigenous Peoples, respect for the self-governance of their data.

IV. AREAS OF POLICY ACTION

48. The policy actions described in the following policy areas operationalize the values and principles set out in this Recommendation. The main action is for Member States to put in place effective policy frameworks or mechanisms and to ensure that other stakeholders, such as private sector companies, academic and research institutions, and civil society, adhere to them by, among other actions, assisting all stakeholders to develop ethical impact assessment and due diligence tools. The process for developing such policies or mechanisms should be inclusive of all stakeholders and should take into account the circumstances and priorities of each Member State. UNESCO can be a partner and support Member States in the development as well as monitoring and evaluation of policy mechanisms.

[Paragraph 48: accepted]

48. The policy actions described in the following policy areas operationalize the values and principles set out in this Recommendation. The main action is for Member States to put in place effective [Germany] measures, including for example policy frameworks or mechanisms, and to ensure that other stakeholders, such as private sector companies, academic and

research institutions, and civil society adhere to them by, among other actions, [Canada] assisting encouraging all stakeholders to develop human rights, rule of law, democracy, and ethical impact assessment and due diligence tools in line with guidance including the UN Guiding Principles on Business and Human Rights. The process for developing such policies or mechanisms should be inclusive of all stakeholders and should take into account the circumstances and priorities of each Member State. UNESCO can be a partner and support Member States in the development as well as monitoring and evaluation of policy mechanisms.

49. UNESCO recognizes that Member States will be at different stages of readiness to implement this Recommendation, in terms of scientific, technological, economic, educational, legal, regulatory, infrastructural, societal, cultural and other dimensions. It is noted that “readiness” here is a dynamic status. In order to enable the effective implementation of this Recommendation, UNESCO will therefore: (1) develop a readiness assessment methodology to assist Member States in identifying their status at specific moments of their readiness trajectory along a continuum of dimensions; and (2) ensure support for Member States in terms of developing a globally accepted methodology for Ethical Impact Assessment (EIA) of AI technologies, sharing of best practices, assessment guidelines and other mechanisms and analytical work.

[Paragraph 49: accepted]

49. UNESCO recognizes that Member States will be at different stages of readiness to implement this Recommendation, in terms of scientific, technological, economic, educational, legal, regulatory, infrastructural, societal, cultural and other dimensions. It is noted that “readiness” here is a dynamic status. In order to enable the effective implementation of this Recommendation, UNESCO will therefore: (1) develop a readiness assessment methodology to assist [Venezuela]

interested Member States in identifying their status at specific moments of their readiness trajectory along a continuum of dimensions; and (2) ensure support for interested Member States in terms of developing a [UK] UNESCO globally accepted methodology for Ethical Impact Assessment (EIA) of AI technologies, sharing of best practices, assessment guidelines and other mechanisms and analytical work.

POLICY AREA 1: ETHICAL IMPACT ASSESSMENT

50. Member States should introduce frameworks for impact assessments to identify and assess benefits, concerns and risks of AI systems, as well as risk prevention, mitigation and monitoring measures. The ethical impact assessment should identify impacts on human rights and fundamental freedoms, in particular but not limited to the rights of vulnerable groups, labour rights, the environment and ecosystems, and ethical and social implications, facilitate citizen participation in line with the values and principles set forth in this Recommendation.

[Paragraph 50: accepted]

50. Member States should introduce frameworks for impact assessments [UK], such as [Brazil] ethical impact assessment to identify and assess benefits, concerns and risks of AI systems, as well as [UK]appropriate risk prevention, mitigation and monitoring measures [Brazil], among other assurance mechanisms. [UK] Such~~The ethical~~ impact assessments should identify impacts on human rights and fundamental freedoms, in particular but not limited to the rights of [UK] marginalized and vulnerable people or people in vulnerable situations groups, labour rights, the environment and ecosystems, and ethical and social implications, facilitate citizen participation in line with the values and principles set forth in this Recommendation.

51. Member States and private sector companies should develop due diligence and oversight mechanisms to identify, prevent, mitigate and account for how they address the impact of

AI systems on the respect for human rights, rule of law and inclusive societies. Member States should also be able to assess the socio-economic impact of AI systems on poverty and ensure that the gap between people living in wealth and poverty, as well as the digital divide among and within countries are not increased with the massive adoption of AI technologies at present and in the future. In order to do this, in particular, enforceable transparency protocols should be implemented, corresponding to the right of access to information, including information of public interest held by private entities.

[Paragraph 51: accepted]

51. Member States and private sector companies should develop due diligence and oversight mechanisms to identify, prevent, mitigate and account for how they address the impact of AI systems on the respect for human rights, rule of law and inclusive societies. Member States should also be able to assess the socio-economic impact of AI systems on poverty and ensure that the gap between people living in wealth and poverty, as well as the digital divide among and within countries are not increased with the massive adoption of AI technologies at present and in the future. In order to do this, in particular, enforceable transparency protocols should be implemented, corresponding to the [Canada] right of access to information, including information of public interest held by private entities. [Germany] Member States, private sector companies [Canada] and civil society [Germany] should investigate the sociological and psychological effects of AI-based recommendations on humans in their decision-making autonomy. [Brazil] AI systems identified as potential risks to human rights should be [France] broadly tested [Poland] by AI actors [Brazil], including in real-world conditions if needed, as part of the Ethical Impact Assessment, before releasing them in the market.

[Paragraph 52: accepted]

52. Member States and business enterprises should implement appropriate measures to monitor all phases of an AI system life cycle, including the functioning of algorithms used for

decision-making, the data, as well as AI actors involved in the process, especially in public services and where direct end-user interaction is needed, as part of ethical impact assessment. Member States' human rights law obligations should form part of the ethical aspects of AI system assessments.

[Paragraph 53: accepted]

53. Governments should adopt a regulatory framework that sets out a procedure, particularly for public authorities, to carry out ethical impact assessments on AI systems to predict consequences, mitigate risks, avoid harmful consequences, facilitate citizen participation and address societal challenges. The assessment should also establish appropriate oversight mechanisms, including auditability, traceability and explainability which enable the assessment of algorithms, data and design processes, as well as include external review of AI systems. Ethical impact assessments should be transparent and open to the public, where appropriate. Such assessments should also be multidisciplinary, multi-stakeholder, multicultural, pluralistic and inclusive. The public authorities should be required to monitor the AI systems implemented and/or deployed by those authorities by introducing appropriate mechanisms and tools.

POLICY AREA 2: ETHICAL GOVERNANCE AND STEWARDSHIP

[Paragraph 54: accepted]

54. Member States should ensure that AI governance mechanisms are inclusive, transparent, multidisciplinary, multilateral (this includes the possibility of mitigation and redress of harm across borders), and multi-stakeholder. In particular, governance should include aspects of anticipation, and effective protection, monitoring of impact, enforcement and redress.

55. Member States should ensure that harms caused through AI systems are investigated and redressed, by enacting strong enforcement mechanisms and remedial actions, to make certain

that human rights and fundamental freedoms and the rule of law are respected in the digital world and in the physical world. Such mechanisms and actions should include remediation mechanisms provided by private and public sector companies. The auditability and traceability of AI systems should be promoted to this end. In addition, Member States should strengthen their institutional capacities to deliver on this duty of care and should collaborate with researchers and other stakeholders to investigate, prevent and mitigate any potentially malicious uses of AI systems.

[Paragraph 55: accepted]

55. Member States should ensure that harms caused through AI systems are investigated and redressed, by enacting strong enforcement mechanisms and remedial actions, to make certain that human rights and fundamental freedoms and the rule of law are respected in the digital world and in the physical world. Such mechanisms and actions should include remediation mechanisms provided by private and public sector companies. The auditability and traceability of AI systems should be promoted to this end. In addition, Member States should strengthen their institutional capacities to deliver on this [\[Canada\] duty of care commitment](#) and should collaborate with researchers and other stakeholders to investigate, prevent and mitigate any potentially malicious uses of AI systems.

56. Member States are encouraged to develop national and regional AI strategies and to consider forms of soft governance such as a certification mechanism for AI systems and the mutual recognition of their certification, according to the sensitivity of the application domain and expected impact on human lives, the environment and ecosystems, and other ethical considerations set forth in this Recommendation. Such a mechanism might include different levels of audit of systems, data, and adherence to ethical guidelines and to procedural requirements in view of ethical aspects. At the same time, such a mechanism should not

hinder innovation or disadvantage small and medium enterprises or start-ups as a result of excessive administrative burden. These mechanisms should also include a regular monitoring component to ensure system robustness and continued integrity and adherence to ethical guidelines over the entire life cycle of the AI system, requiring re-certification if necessary.

[Paragraph 56: accepted]

56. Member States are encouraged to develop national and regional AI strategies and to consider forms of soft governance such as a certification mechanism for AI systems and the mutual recognition of their certification, according to the sensitivity of the application domain and expected impact on [UK] human lives human rights, the environment and ecosystems, and other ethical considerations set forth in this Recommendation. Such a mechanism might include different levels of audit of systems, data, and adherence to ethical guidelines and to procedural requirements in view of ethical aspects. At the same time, such a mechanism should not hinder innovation or disadvantage small and medium enterprises or start-ups, [Germany] civil society as well as research and science organizations as a result of excessive administrative burden. These mechanisms should also include a regular monitoring component to ensure system robustness and continued integrity and adherence to ethical guidelines over the entire life cycle of the AI system, requiring re-certification if necessary.

57. Member States and public authority should be required to carry out transparent self-assessment of existing and proposed AI systems, which in particular, should include the assessment whether the adoption of AI is appropriate and, if so, should include further assessment to determine what the appropriate method is, as well as assessment as to whether such adoption would result in violations or abuses of Member States' human rights law obligations, and if this is the case, prohibit its use.

[Paragraph 57: accepted]

57. Member States and public authority [UK] should ~~be required to~~ carry out transparent self-assessment of existing and proposed AI systems, which in particular, should include the assessment whether the adoption of AI is appropriate and, if so, should include further assessment to determine what the appropriate method is, as well as assessment as to whether such adoption would result in violations or abuses of Member States' human rights law obligations, and if this is the case, prohibit its use.

[Paragraph 58: accepted]

58. Member States should encourage public entities, private sector companies and civil society organizations to involve different stakeholders in their AI governance and to consider adding the role of an independent AI Ethics Officer or some other mechanism to oversee ethical impact assessment, auditing and continuous monitoring efforts and ensure ethical guidance of AI systems. Member States, private sector companies and civil society organizations, with the support of UNESCO, are encouraged to create a network of independent AI Ethics Officers to give support to this process at national, regional and international levels.

59. Member States should foster the development of, and access to, a digital ecosystem for ethical development of AI systems at the national level, including to address gaps in access to the AI system life cycle, while encouraging international collaboration. Such an ecosystem includes in particular digital technologies and infrastructure, and mechanisms for sharing AI knowledge, as appropriate.

[Paragraph 59: accepted]

59. Member States should foster the development of, and access to, a digital ecosystem for ethical [UK] and inclusive development of AI systems at the national level, including to address gaps in access to the AI system life cycle, while [Iran]

contributing to encouraging international collaboration. Such an ecosystem includes in particular digital technologies and infrastructure, and mechanisms for sharing AI knowledge, as appropriate.

[Paragraph 60: accepted]

60. Member States should establish mechanisms, in collaboration with international organizations, transnational corporations, academic institutions and civil society, to ensure the active participation of all Member States, especially LMICs, in particular LDCs, LLDCs and SIDS, in international discussions concerning AI governance. This can be through the provision of funds, ensuring equal regional participation, or any other mechanisms. Furthermore, in order to ensure the inclusiveness of AI fora, Member States should facilitate the travel of AI actors in and out of their territory, especially from LMICs, in particular LDCs, LLDCs and SIDS, for the purpose of participating in these fora.

[Paragraph 61: accepted]

61. Amendments to existing or elaboration of new national legislation addressing AI systems must comply with Member States' human rights law obligations and promote human rights and fundamental freedoms throughout the AI system life cycle. Promotion thereof should also take the form of governance initiatives, good exemplars of collaborative practices regarding AI systems, and national and international technical and methodological guidelines as AI technologies advance. Diverse sectors, including the private sector, in their practices regarding AI systems must respect, protect and promote human rights and fundamental freedoms using existing and new instruments in combination with this Recommendation.

62. Member States that acquire AI systems for human rights sensitive use cases, such as law enforcement, welfare, employment, health care and the independent judiciary system

should provide mechanisms to monitor the social and economic impact of such systems by appropriate oversight authorities, including independent data protection authorities, sectoral oversight, and public bodies responsible for oversight.

[Paragraph 62: accepted]

62. Member States that acquire AI systems for human rights sensitive use cases, such as law enforcement, welfare, employment, [Bulgaria] media and information providers, health care and the independent judiciary system should provide mechanisms to monitor the social and economic impact of such systems by appropriate oversight authorities, including independent data protection authorities, sectoral oversight, and public bodies responsible for oversight.

63. Member States should enhance the capacity of the judiciary to make decisions related to AI systems as per the rule of law and in line with international law and standards, including in the use of AI systems in their deliberations, while ensuring that the principle of human oversight is upheld.

[Paragraph 63: accepted]

63. Member States should enhance the capacity of the judiciary to make decisions related to AI systems as per the rule of law and in line with international law and standards, including in the use of AI systems in their deliberations, while ensuring that the principle of human oversight is upheld. [Germany] In case AI systems are used by the judiciary, sufficient safeguards are needed to guarantee inter alia the protection of fundamental human rights, the rule of law, judicial independence as well as the principle of human oversight and to ensure a trustworthy, public-interest-oriented and human-centric development and use of AI systems in the judiciary.

64. Member States should ensure that governments and multilateral organizations play a leading role in ensuring the safety and security of AI systems. Specifically, Member States,

international organizations and other relevant bodies should develop international standards that describe measurable, testable levels of safety and transparency, so that systems can be objectively assessed and levels of compliance determined. Furthermore, Member States and business enterprises should continuously support strategic research on potential safety and security risks of AI technologies and should encourage research into transparency and explainability, inclusion and literacy by putting additional funding into those areas for different domains and at different levels, such as technical and natural language.

[Paragraph 64: accepted]

64. Member States should ensure that governments and multilateral organizations play a leading role in ensuring the safety and security of AI systems, [\[Germany\] with multi-stakeholder participation](#). Specifically, Member States, international organizations and other relevant bodies should develop international standards that describe measurable, testable levels of safety and transparency, so that systems can be objectively assessed and levels of compliance determined. Furthermore, Member States and business enterprises should continuously support strategic research on potential safety and security risks of AI technologies and should encourage research into transparency and explainability, inclusion and literacy by putting additional funding into those areas for different domains and at different levels, such as technical and natural language.

[Paragraph 65: accepted]

65. Member States should implement policies to ensure that the actions of AI actors are consistent with international human rights law, standards and principles throughout the life cycle of AI systems, while taking into full consideration the current cultural and social diversities including local customs and religious traditions, with due regard to the precedence and universality of human rights.

66. Member States should put in place mechanisms to require AI actors to disclose and combat any kind of stereotyping in the outcomes of AI systems and data, whether by design or by negligence, and to ensure that training data sets for AI systems do not foster cultural, economic or social inequalities, prejudice, the spreading of disinformation and misinformation or the dissemination of anti-democratic ideas, and disruption of freedom of expression and right to information. Particular attention should be given to regions where the data are scarce.

[Paragraph 66: accepted]

66. Member States should put in place mechanisms to require AI actors to disclose and combat any kind of stereotyping in the outcomes of AI systems and data, whether by design or by negligence, and to ensure that training data sets for AI systems do not foster cultural, economic or social inequalities, prejudice, the spreading of disinformation and misinformation ~~[Austria] or the dissemination of anti-democratic ideas~~, and disruption of freedom of expression and ~~[Germany] right~~ access to information. Particular attention should be given to regions where the data are scarce.

[Paragraph 67: accepted]

67. Member States should implement policies to promote and increase diversity and inclusiveness that reflect their populations in AI development teams and training datasets, and to ensure equal access to AI technologies and their benefits, particularly for marginalized groups, both from rural and urban zones.

68. Member States should develop, review and adapt, as appropriate, regulatory frameworks to achieve accountability and responsibility for the content and outcomes of AI systems at the different phases of their life cycle. Member States should introduce liability frameworks or clarify the interpretation of existing frameworks to ensure the attribution of accountability for the outcomes and the functioning of AI systems. Furthermore, when developing regulatory frameworks, Member States should,

in particular, take into account that ultimate responsibility and accountability must always lie with natural or legal persons and that AI systems should not be given legal personality themselves. To ensure this, such regulatory frameworks should be consistent with the principle of human oversight and establish a comprehensive approach focused on the actors and the technological processes involved across the different stages of the AI system life cycle.

[Paragraph 68: accepted]

68. Member States should develop, review and adapt, as appropriate, regulatory frameworks to achieve accountability and responsibility for the content and outcomes of AI systems at the different phases of their life cycle. Member States should [\[Germany\]](#), where necessary, introduce liability frameworks or clarify the interpretation of existing frameworks to ensure the attribution of accountability for the outcomes and the functioning of AI systems. Furthermore, when developing regulatory frameworks, Member States should, in particular, take into account that ultimate responsibility and accountability must always lie with natural or legal persons and that AI systems should not be given legal personality themselves. To ensure this, such regulatory frameworks should be consistent with the principle of human oversight and establish a comprehensive approach focused on [\[Singapore\]](#) ~~AI the~~ actors and the technological processes involved across the different stages of the AI system life cycle.

[Paragraph 69: accepted]

69. In order to establish norms where these do not exist, or to adapt existing legal frameworks, Member States should involve all AI actors (including, but not limited to, researchers, representatives of civil society and law enforcement, insurers, investors, manufacturers, engineers, lawyers, and users). The norms can mature into best practices, laws and regulations. Member States are further encouraged to use mechanisms such as policy prototypes and regulatory sandboxes to accelerate the

development of laws, regulations and policies, including regular reviews thereof, in line with the rapid development of new technologies and ensure that laws and regulations can be tested in a safe environment before being officially adopted. Member States should support local governments in the development of local policies, regulations, and laws in line with national and international legal frameworks.

[Paragraph 70: accepted]

70. Member States should set clear requirements for AI system transparency and explainability so as to help ensure the trustworthiness of the full AI system life cycle. Such requirements should involve the design and implementation of impact mechanisms that take into consideration the nature of application domain, intended use, target audience and feasibility of each particular AI system.

POLICY AREA 3: DATA POLICY

[Paragraph 71: accepted]

71. Member States should work to develop data governance strategies that ensure the continual evaluation of the quality of training data for AI systems including the adequacy of the data collection and selection processes, proper security and data protection measures, as well as feedback mechanisms to learn from mistakes and share best practices among all AI actors.

72. Member States should put in place appropriate safeguards to recognize and protect individuals' fundamental right to privacy, including addressing concerns such as surveillance. Member States should, among others, adopt or enforce legislative frameworks that provide appropriate protection, compliant with international law. Member States should strongly encourage all AI actors, including business enterprises, to follow existing international standards and in particular to carry out privacy impact assessments, as part of ethical impact assessments, which take into account the wider socio-economic impact of the intended data processing and to apply privacy by design in their

systems. Privacy should be respected, protected and promoted throughout the life cycle of AI systems.

[Paragraph 72: accepted]

72. Member States should put in place appropriate safeguards to [Singapore] recognize and protect individuals' fundamental the right to privacy in accordance with international law, including addressing concerns such as surveillance. Member States should, among others, adopt or enforce legislative frameworks that provide appropriate protection, compliant with international law. Member States should strongly encourage all AI actors, including business enterprises, to follow existing international standards and in particular to carry out adequate privacy impact assessments, as part of ethical impact assessments, which take into account the wider socio-economic impact of the intended data processing and to apply privacy by design in their systems. Privacy should be respected, protected and promoted throughout the life cycle of AI systems.

73. Member States should ensure that individuals retain rights over their personal data and are protected by a framework, which notably foresees transparency, appropriate safeguards for the processing of sensitive data, appropriate level of data security, effective and meaningful accountability schemes and mechanisms, the full enjoyment of the data subjects' rights, in particular the right to access and the right to erasure of their personal data in AI systems, except for certain circumstances in compliance with international law , an appropriate level of protection in full compliance with data protection legislation where data are being used for commercial purposes such as enabling micro-targeted advertising, transferred cross-border, and an effective independent oversight as part of a data governance mechanism which keeps individuals in control of their personal data respects data sovereignty and fosters the benefits of a free flow of information internationally, including access to data.

[Paragraph 73: accepted]

73. Member States should ensure that individuals retain rights over their personal data and are protected by a framework, which notably foresees transparency, appropriate safeguards for the processing of sensitive data, appropriate level of data [\[Japan\] securityprotection](#), effective and meaningful accountability schemes and mechanisms, the full enjoyment of the data subjects' rights, [\[Canada\] and the ability to access and erase in particular the right to access and the right to erasure](#) of their personal data in AI systems, except for certain circumstances in compliance with international law, an appropriate level of protection in full compliance with data protection legislation where data are being used for commercial purposes such as enabling micro-targeted advertising, transferred cross-border, and an effective independent oversight as part of a data governance mechanism which keeps individuals in control of their personal data [\[Canada, Japan, UK\] respects data sovereignty](#) and fosters the benefits of a free flow of information internationally, including access to data.

74. Member States should establish their data policies or equivalent frameworks, or reinforce existing ones, to ensure full security for personal data and sensitive data, which if disclosed, may cause exceptional damage, injury or hardship to individuals. Examples include data relating to offences, criminal proceedings and convictions, and related security measures; biometric and genetic data; personal data relating to sex, gender, language, religion, political or other opinion, national, ethnic, indigenous or social origin, sexual orientation and gender identity, property, birth, disability, age or other status.

[Paragraph 74: accepted]

74. Member States should establish their data policies or equivalent frameworks, or reinforce existing ones, to ensure full security for personal data and sensitive data, which if disclosed, may cause exceptional damage, injury or hardship to individuals. Examples include data relating to offences, criminal proceedings and convictions, and related security measures; biometric [\[Mexico\]](#), and genetic [and health](#) data; personal data [\[UK\] such](#)

as that relating to [accepted text from §28] race, colour, descent, gender, age, language, religion, political opinion, national origin, ethnic origin, social origin, economic or social condition of birth, or disability and any other [Germany] status characteristics.

[Paragraph 75: accepted]

75. Member States should promote open data. In this regard, Member States should consider reviewing their policies and regulatory frameworks, including on access to information and open government to reflect AI-specific requirements and promoting mechanisms, such as open repositories for publicly-funded or publicly-held data and source code and data trusts, to support the safe, fair, legal and ethical sharing of data, among others.

[Paragraph 76: accepted]

76. Member States should promote and facilitate the use of quality and robust datasets for training, development and use of AI systems, and exercise vigilance in overseeing their collection and use. This could, if possible and feasible, include investing in the creation of gold standard datasets, including open and trustworthy datasets, which are diverse, constructed on a valid legal basis, including consent of data subjects, when required by law. Standards for annotating datasets should be encouraged, including disaggregating data on gender and other bases, so it can easily be determined how a dataset is gathered and what properties it has.

[Paragraph 77: accepted]

77. Member States, as also suggested in the report of the UNSG's High-level Panel on Digital Cooperation, with the support of the United Nations and UNESCO, should adopt a Digital Commons approach to data where appropriate, increase interoperability of tools and datasets and interfaces of systems hosting data, and encourage private sector companies to share the data they collect with all stakeholders as appropriate for research, innovation or public benefits. They should also promote

public and private efforts to create collaborative platforms to share quality data in trusted and secured data spaces.

POLICY AREA 4: DEVELOPMENT AND INTERNATIONAL COOPERATION

[Paragraph 78: accepted]

78. Member States and transnational corporations should prioritize AI ethics by including discussions of AI-related ethical issues into relevant international, intergovernmental and multi-stakeholder fora.

[Paragraph 79: accepted]

79. Member States should ensure that the use of AI in areas of development such as education, science, culture, communication and information, health care, agriculture/food supply, environment, natural resource and infrastructure management, economic planning and growth, and others, adheres to the values and principles set forth in this Recommendation.

[Paragraph 80: accepted]

80. Member States should work through international organizations to provide platforms for international cooperation on AI for development, including by contributing expertise, funding, data, domain knowledge, infrastructure, and facilitating multi-stakeholder collaboration to tackle challenging development problems, especially for LMICs, in particular LDCs, LLDCs and SIDS.

[Paragraph 81: accepted]

81. Member States should work to promote international collaboration on AI research and innovation, including research and innovation centres and networks that promote greater participation and leadership of researchers from LMICs and other regions, including LDCs, LLDCs and SIDS.

[Paragraph 82: accepted]

82. Member States should promote AI ethics research by engaging international organizations and research institutions, as well as transnational corporations, that can be a basis for the ethical use of AI systems by public and private entities, including research into the applicability of specific ethical frameworks in specific cultures and contexts, and the possibilities to develop technologically feasible solutions in line with these frameworks.

[Paragraph 83: accepted]

83. Member States should encourage international cooperation and collaboration in the field of AI to bridge geo-technological lines. Technological exchanges/consultations should take place between Member States and their populations, between the public and private sectors, and between and among the most and least technologically advanced countries in full respect of international law.

POLICY AREA 5: ENVIRONMENT AND ECOSYSTEMS

[Paragraph 84: accepted]

84. Member States and business enterprises should assess the direct and indirect environmental impact throughout the AI system life cycle, including but not limited to, its carbon footprint, energy consumption, and the environmental impact of raw material extraction for supporting the manufacturing of AI technologies, and reduce the environmental impact of AI systems and data infrastructures. Member States should ensure compliance of all AI actors with environmental law, policies, and practices.

[Paragraph 85: accepted]

85. Member States should introduce incentives, when needed and appropriate, to ensure the development and adoption of rights-based and ethical AI-powered solutions for disaster risk resilience; the monitoring, protection and regeneration of the environment and ecosystems; and the preservation of the planet.

These AI systems should involve the participation of local and indigenous communities throughout the life cycle of AI systems and should support circular economy type approaches and sustainable consumption and production patterns. Some examples include using AI systems, when needed and appropriate, to:

- (a) Support the protection, monitoring, and management of natural resources.
- (b) Support the prediction, prevention, control, and mitigation of climate-related problems.
- (c) Support a more efficient and sustainable food ecosystem.
- (d) Support the acceleration of access to and mass adoption of sustainable energy.
- (e) Enable and promote the mainstreaming of sustainable infrastructure, sustainable business models, and sustainable finance for sustainable development.
- (f) Detect pollutants or predict levels of pollution and thus help relevant stakeholders identify, plan and put in place targeted interventions to prevent and reduce pollution and exposure.

86. When choosing AI methods, given the data-intensive or resource-intensive character of some of them and the respective impact on the environment, Member States should ensure that AI actors, in line with the principle of proportionality, favour data, energy and resource-efficient AI methods. Requirements should be developed to ensure that appropriate evidence is available showing that an AI application will have the intended effect, or that safeguards accompanying an AI application can support the justification. If this cannot be done, the precautionary principle must be favoured, which consists in renouncing the use of AI.

[Paragraph 86: accepted]

86. When choosing AI methods, given the [\[Finland\]](#) [potential](#) data-intensive or resource-intensive character of some of them and the respective impact on the environment, Member States should ensure that AI actors, in line with the principle of proportionality, favour data, energy and resource-efficient AI methods. Requirements should be developed to ensure that appropriate evidence is available showing that an AI application will have the intended effect, or that safeguards accompanying an AI application can support the justification. If this cannot be done, the precautionary principle must be favoured, [\[Singapore\]](#) ~~which consists in renouncing the use of AI~~ [and in instances where there are \[Latvia, Austria\] disproportionate negative impacts on the environment, AI should not be used.](#)

POLICY AREA 6: GENDER

87. Member States should ensure that digital technologies and artificial intelligence fully contribute to achieving gender equality; and must ensure that the human rights and fundamental freedoms of girls and women, including their safety and integrity are not violated at any stage of the AI system life cycle. Moreover, Ethical Impact Assessment should include a transversal gender perspective.

[Paragraph 87: accepted]

87. Member States should ensure that [\[UK\]](#) [the potential for](#) digital technologies and artificial intelligence ~~fully to~~ [contribute to achieving gender equality](#) [is fully maximised](#); and must ensure that the human rights and fundamental freedoms of girls and women, ~~and including~~ their safety and integrity are not violated at any stage of the AI system life cycle. Moreover, Ethical Impact Assessment should include a transversal gender perspective.

[Paragraph 88: accepted]

88. Member States should have dedicated funds from their public budgets linked to financing gender-responsive schemes, ensure that national digital policies include a gender action plan,

and develop relevant policies, e.g. on labour education, targeted at supporting girls and women to make sure girls and women are not left out of the digital economy powered by AI. Special investment in providing targeted programmes and gender-specific language, to increase the opportunities of participation of girls and women in science, technology, engineering, and mathematics (STEM), including information and communication technologies (ICT) disciplines, preparedness, employability, equal career development and professional growth of girls and women should be considered and implemented.

[Paragraph 89: accepted]

89. Member States should ensure that the potential of AI systems to advance the achievement of gender equality is realized. They should ensure that these technologies do not exacerbate the already wide gender gaps existing in several fields in the analogue world, and instead to eliminate those gaps. This includes the gender wage gap; the representation in certain professions and activities gap; the lack of representation at the top management positions, boards of directors, or research teams in the AI field; the education gap; digital/AI access, adoption, usage and affordability gap; the unequal distribution of unpaid work and of the caring responsibilities in our societies.

[Paragraph 90: accepted]

90. Member States should ensure that gender stereotyping, and discriminatory biases are not translated into the AI systems, and instead identify and proactively redress these. Efforts are necessary to avoid the compounding negative effect of technological divides in achieving gender equality and avoiding violence such as harassment, bullying or trafficking of girls and women, and under-represented groups, including in the online domain.

[Paragraph 91: accepted]

91. Member States should encourage female entrepreneurship, participation and engagement in all stages of an AI system life cycle by offering and promoting economic, regulatory incentives, among other incentives and support schemes, as well as policies that aim at a balanced gender participation in AI research in academia, gender representation on digital/AI companies top management positions, boards of directors, or research teams. Member States should ensure public funds (on innovation, research and technologies) are channelled to inclusive programmes and companies, with clear gender representation, and that private funds are encouraged through affirmative action principles. Policies on harassment-free environments should be developed and enforced together with the encouragement of the transfer of best practices on how to promote diversity throughout the AI system life cycle.

[Paragraph 92: accepted]

92. Member States should promote gender diversity in AI research in academia and industry by offering incentives to girls and women to enter the field, putting in place mechanisms to fight gender stereotyping and harassment within the AI research community, and encouraging academic and private entities to share best practices on how to enhance gender diversity.

[Paragraph 93: accepted]

93. UNESCO can help form a repository of best practices for incentivizing the participation of girls, women and under-represented groups in all stages of the AI system life cycle.

POLICY AREA 7: CULTURE

[Paragraph 94: accepted]

94. Member States are encouraged to incorporate AI systems where appropriate in the preservation, enrichment, understanding, promotion, management and accessibility of tangible, documentary and intangible cultural heritage, including

endangered languages as well as indigenous languages and knowledges , for example by introducing or updating educational programmes related to the application of AI systems in these areas where appropriate and ensuring a participatory approach, targeted at institutions and the public.

[Paragraph 95: accepted]

95. Member States are encouraged to examine and address the cultural impact of AI systems, especially Natural Language Processing applications such as automated translation and voice assistants on the nuances of human language and expression. Such assessments should provide input for the design and implementation of strategies that maximize the benefits from these systems by bridging cultural gaps and increasing human understanding, as well as negative implications such as the reduction of use, which could lead to the disappearance of endangered languages, local dialects, and tonal and cultural variations associated with human language and expression.

96. Member States should promote AI education and digital training for artists and creative professionals to assess the suitability of AI technologies for use in their profession, and contribute to the design and implementation of suitable AI technologies, as AI technologies are being used to create, produce, distribute and broadcast a variety of cultural goods and services, bearing in mind the importance of preserving cultural heritage, diversity and artistic freedom.

[Paragraph 96: accepted]

96. Member States should promote AI education and digital training for artists and creative professionals to assess the suitability of AI technologies for use in their profession, and contribute to the design and implementation of suitable AI technologies, as AI technologies are being used to create, produce, distribute [Canada], and broadcast and consume a variety of cultural goods and services, bearing in mind the

importance of preserving cultural heritage, diversity and artistic freedom.

[Paragraph 97: accepted]

97. Member States should promote awareness and evaluation of AI tools among local cultural industries and small and medium enterprises working in the field of culture, to avoid the risk of concentration in the cultural market.

98. Member States should engage large technology companies and other stakeholders to promote a diverse supply and plural access to cultural expressions, and in particular to ensure that algorithmic recommendation enhances the visibility and discoverability of local content.

[Paragraph 98: accepted]

98. Member States should engage [\[Canada\]](#) ~~large~~ technology companies and other stakeholders to promote a diverse supply and plural access to cultural expressions, and in particular to ensure that algorithmic recommendation enhances the visibility and discoverability of local content.

99. Member States should foster new research at the intersection between AI and intellectual property, for example to determine whether there are compelling public policy reasons to protect with IP rights the works created by means of AI technologies.

[Paragraph 99: accepted]

99. Member States should foster new research at the intersection between AI and intellectual property [\[Bangladesh\]](#) (IP), for example to determine whether [\[Germany\]](#) ~~or how~~ ~~to there are compelling public policy reasons to~~ protect with IP rights the works created by means of AI technologies. [\[Canada\]](#) Member states should also assess how AI technologies are impacting the rights or interests of IP owners whose works are used to research, develop, train, or implement AI applications.

100. Member States should encourage museums, galleries, libraries and archives at the national level to develop and use AI systems to highlight their collections, strengthen their databases and grant access to them for their users.

[Paragraph 100: accepted]

100. Member States should encourage museums, galleries, libraries and archives at the national level to ~~[Kuwait] develop and use AI systems to highlight their collections, strengthen enhance their libraries, databases, and knowledge base, while also providing and grant access to them for~~ their users.

POLICY AREA 8: EDUCATION AND RESEARCH

101. Member States should work with international organizations, educational institutions, private and non-governmental entities to provide adequate AI literacy education to the public on all levels in all countries in order to empower people and reduce the digital divide and digital access inequalities resulting from the wide adoption of AI systems.

[Paragraph 101: accepted]

101. Member States should work with international organizations, educational institutions, private and non-governmental entities to provide adequate AI literacy education to the public on all levels in all countries in order to empower people and reduce the digital ~~[UK] divide~~s and digital access inequalities resulting from the wide adoption of AI systems.

[Paragraph 102: accepted]

102. Member States should promote the acquisition of “prerequisite skills” for AI education, such as basic literacy, numeracy, coding and digital skills, and media and information literacy, as well as critical and creative thinking, teamwork, communication, socio-emotional, and AI ethics skills, especially in countries and in regions/areas within countries where there are notable gaps in the education of these skills.

[Paragraph 103: accepted]

103. Member States should promote general awareness programmes about AI developments, including on data and the opportunities and challenges brought about by AI technologies, the impact of AI systems on human rights and their implications, including children's rights. These programmes should be accessible to non-technical as well as technical groups.

104. Member States should encourage research initiatives on the responsible use of AI technologies in teaching, teacher training and e-learning among other topics, in a way that enhances opportunities and mitigates the challenges and risks involved in this area. The initiatives should be accompanied by an adequate assessment of the quality of education and of impact on students and teachers of the use of AI technologies. Member States should also ensure that AI technologies empower students and teachers and enhance their experience, bearing in mind that relational and social aspects and the value of traditional forms of education are vital in the teacher-student and student-student relationships, and should be considered when discussing the adoption of AI technologies in education. AI systems used in learning should be subject to strict requirements when it comes to the monitoring, the assessment of abilities or the prediction of the learners' behaviours. The data handed over to acquire knowledge, collected during the learner's interactions with the AI system must not be subject to misuse, misappropriation or criminal exploitation. Data should not be considered as marketable goods.

[Paragraph 104: accepted]

104. Member States should encourage research initiatives on the responsible [Costa Rica] and ethical use of AI technologies in teaching, teacher training [Kuwait], and e-learning, among other issues to topics, in a way that enhances opportunities and mitigates the challenges and risks involved in this area. The

initiatives should be accompanied by an adequate assessment of the quality of education and ~~of~~ impact on students and teachers of the use of AI technologies. Member States should also ensure that AI technologies empower students and teachers and enhance their experience, bearing in mind that relational and social aspects and the value of traditional forms of education are vital in the teacher-student and student-student relationships, and should be considered when discussing the adoption of AI technologies in education. AI systems used in learning should be subject to strict requirements when it comes to the monitoring, the assessment of abilities, or the prediction of the learners' behaviours. [Bulgaria] AI should support the learning process without reducing cognitive abilities and without extracting sensitive information [Russia], in compliance with relevant personal data protection standards. The data handed over to acquire knowledge [Kuwait], collected during the learner's interactions with the AI system, must not be subject to misuse, misappropriation or criminal exploitation [Germany], including for commercial purposes. [Germany, Singapore, UK] ~~Data should not be considered as marketable goods.~~

105. Member States should promote the participation of girls and women, diverse ethnicities and cultures, persons with disabilities, vulnerable groups, minorities and marginalized populations , and all persons not enjoying the full benefits of digital inclusion, in AI education programmes at all levels, as well as the monitoring and sharing of best practices in this regard with other Member States.

[Paragraph 105: accepted]

105. Member States should promote the participation [UK] and leadership of girls and women, diverse ethnicities and cultures, persons with disabilities, [accepted text from §28] marginalised and vulnerable people or people in vulnerable situations-groups, minorities ~~and marginalized populations~~, and all persons not enjoying the full benefits of digital inclusion, in AI education

programmes at all levels, as well as the monitoring and sharing of best practices in this regard with other Member States.

[Paragraph 106: accepted]

106. Member States should develop, in accordance with their national education programmes and traditions, AI ethics curricula for all levels, and promote cross-collaboration between AI technical skills education and humanistic, ethical and social aspects of AI education. Online courses and digital resources of AI ethics education should be developed in local languages, including indigenous languages, and take into account the diversity of environments, especially ensuring accessibility of formats for persons with disabilities.

107. Member States should promote AI ethics research either through investing in such research or by creating incentives for the public and private sectors to invest in this area. Member States should also publicly promote the best-practices of and cooperate with researchers and companies who develop AI in an ethical manner.

[Paragraph 107: accepted]

107. Member States should promote [Singapore] and support AI [Germany] research, notably AI ethics research [Singapore], including [UK]for example either through investing in such research or by creating incentives for the public and private sectors to invest in this area, [Germany] recognizing that research contributes significantly to the further development and improvement of AI technologies with a view [Singapore] to promoting [Germany] international law and the values and principles set forth in this Recommendation. Member States should also publicly promote the best-practices of and cooperate with researchers and companies who develop AI in an ethical manner.

[Paragraph 108: accepted]

108. Member States should ensure that AI researchers are trained in research ethics and require them to include ethical considerations in their designs, products and publications, especially in the analyses of the datasets they use, how they are annotated and the quality and the scope of the results with possible applications .

109. Member States should encourage private sector companies to facilitate the access of scientific community to their data for research, especially in LMICs, in particular LDCs, LLDCs and SIDS. This access should conform to privacy and data protection standards.

[Paragraph 109: accepted]

109. Member States should encourage private sector companies to facilitate the access of scientific community to their data for research, especially in LMICs, in particular LDCs, LLDCs and SIDS. This access should conform to [\[UK\] relevant](#) privacy and data protection standards.

110. To ensure a critical evaluation of AI research and proper monitoring of potential misuses or adverse effects, Member States should ensure that any future developments with regards to AI technologies should be based on rigorous and independent scientific research, and promote interdisciplinary AI research by including disciplines other than science, technology, engineering, and mathematics (STEM), such as cultural studies, education, ethics, international relations, law, linguistics, philosophy, and political science, sociology and psychology.

[Paragraph 110: accepted]

110. To ensure a critical evaluation of AI research and proper monitoring of potential misuses or adverse effects, Member States should ensure that any future developments with regards to AI technologies should be based on rigorous and independent scientific research, and promote interdisciplinary AI research by including disciplines other than science, technology, engineering,

and mathematics (STEM), such as cultural studies, education, ethics, international relations, law, linguistics, philosophy, [Russia] and political science, sociology and psychology.

[Paragraph 111: accepted]

111. Recognizing that AI technologies present great opportunities to help advance scientific knowledge and practice, especially in traditionally model-driven disciplines, Member States should encourage scientific communities to be aware of the benefits, limits and risks of their use; this includes attempting to ensure that conclusions drawn from data-driven approaches, models and treatments are robust and sound. Furthermore, Member States should welcome and support the role of the scientific community in contributing to policy, and in cultivating awareness of the strengths and weaknesses of AI technologies.

POLICY AREA 9: COMMUNICATION AND INFORMATION

112. Member States should use AI systems to improve access to information and knowledge. This can include support to researchers, academia and developers to enhance freedom of expression and access to information, and increased proactive disclosure of official data and information.

[Paragraph 112: accepted]

112. Member States should use AI systems to improve access to information and knowledge. This can include support to researchers, academia [Germany], journalists and the general public and developers to enhance freedom of expression, [Tunisia, Austria] academic and scientific freedoms, and access to information, and increased proactive disclosure of official data and information.

113. Member States should ensure freedom of expression and access to information with regard to automated content generation, moderation and curation. Appropriate frameworks, including regulation, should enable transparency of online

communication and information operators and choice for users concerning personalised content feeds, as well as processes for prompt notification to the users on the reasons for removal or other treatment of content, and appeal mechanisms that allow users to seek redress.

[Paragraph 113: accepted]

113. Member States should ensure [Poland] that AI actors [UK, France] ensure respect and promote freedom of expression ~~and as well as~~ access to information with regard to automated content generation, moderation and curation. Appropriate frameworks, including regulation, should enable transparency of online communication and information operators and [UK] ensure users have access to a diversity of viewpoints ~~choice for users concerning personalised content feeds~~, as well as processes for prompt notification to the users on the reasons for removal or other treatment of content, and appeal mechanisms that allow users to seek redress.

114. Member States should invest in digital and media and information literacy skills, to strengthen critical thinking and competencies needed to understand the use and implication of AI systems, in order to mitigate and counter disinformation, misinformation and hate speech.

[Paragraph 114: accepted]

114. Member States should invest in [Germany] and [Russia] promote digital and media and information literacy skills, to strengthen critical thinking and competencies needed to understand the use and implication of AI systems, in order to mitigate and counter disinformation, misinformation and hate speech. [Italy] A better understanding and evaluation of both the positive and potentially harmful effects of recommender systems should be part of [Brazil] those efforts.

[Paragraph 115: accepted]

115. Member States should create enabling environments for media to have the rights and resources to effectively report on the benefits and harms of AI systems, and also encourage media to make ethical use of AI systems in their operations.

POLICY AREA 10: ECONOMY AND LABOUR

[Paragraph 116: accepted]

116. Member States should assess and address the impact of AI systems on labour markets and its implications for education requirements, in all countries and with special emphasis on countries where the economy is labour-intensive. This can include the introduction of a wider range of “core” and interdisciplinary skills at all education levels to provide current workers and new generations a fair chance of finding jobs in a rapidly changing market and to ensure their awareness of the ethical aspects of AI systems. Skills such as “learning how to learn”, communication, critical thinking, teamwork, empathy, and the ability to transfer one’s knowledge across domains, should be taught alongside specialist, technical skills, as well as low-skilled tasks. Being transparent about what skills are in demand and updating curricula around these are key.

117. Member States should support collaboration agreements among governments, academic institutions, industry, workers’ organizations and civil society to bridge the gap of skillset requirements to align training programmes and strategies with the implications of the future of work and the needs of industry, including small and medium enterprises. Project-based teaching and learning approaches for AI should be promoted, allowing for partnerships between private sector companies, universities and research centres.

[Paragraph 117: accepted]

117. Member States should support collaboration agreements among governments, academic institutions, [Netherlands] vocational education and training [Brazil] institutions, industry,

workers' organizations and civil society to bridge the gap of skillset requirements to align training programmes and strategies with the implications of the future of work and the needs of industry, including small and medium enterprises. Project-based teaching and learning approaches for AI should be promoted, allowing for partnerships between [Costa Rica] public institutions, private sector companies, universities and research centres.

118. Member States should work with private sector companies, civil society organizations and other stakeholders, including workers and unions to ensure a fair transition for at-risk employees. This includes putting in place upskilling and reskilling programmes, finding effective mechanisms of retaining employees during those transition periods, and exploring “safety net” programmes for those who cannot be retrained. Member States should develop and implement programmes to research and address the challenges identified that could include upskilling and reskilling, enhanced social protection, proactive industry policies and interventions, tax benefits, new taxations forms, among others. Tax regimes and other relevant regulations should be carefully examined and changed if needed to counteract the consequences of unemployment caused by AI-based automation.

[Paragraph 118: accepted]

118. Member States should work with private sector companies, civil society organizations and other stakeholders, including workers and unions to ensure a fair transition for at-risk employees. This includes putting in place upskilling and reskilling programmes, finding effective mechanisms of retaining employees during those transition periods, and exploring “safety net” programmes for those who cannot be retrained. Member States should develop and implement programmes to research and address the challenges identified that could include upskilling and reskilling, enhanced social protection, proactive industry policies and interventions, tax benefits, new taxations

forms, among others. [Singapore] Member States should ensure that there is sufficient public funding to support these programmes. [Brazil] Relevant regulations, [UK] such as Tax regimes, and other relevant regulations should be carefully examined and changed if needed to counteract the consequences of unemployment caused by AI-based automation.

[Paragraph 119: accepted]

119. Member States should encourage and support researchers to analyse the impact of AI systems on the local labour environment in order to anticipate future trends and challenges. These studies should have an interdisciplinary approach and investigate the impact of AI systems on economic, social and geographic sectors, as well as on human-robot interactions and human-human relationships, in order to advise on reskilling and redeployment best practices.

120. Member States should devise mechanisms, such as competition and consumer protection rules, at national, regional and international levels, to prevent the monopolization of AI systems throughout their life cycle and the resulting inequalities, whether these are data, research, technology, market or other monopolies. Member States should assess relevant markets, and regulate and intervene if such monopolies exist, taking into account that, due to a lack of infrastructure, human capacity and regulations, LMICs, in particular LDCs, LLDCs and SIDS are more exposed and vulnerable to exploitation by large technology companies.

[Paragraph 120: accepted]

120. Member States should [Finland] take appropriate steps to ensure competitive markets and consumer protection, considering possible measures [Poland] and mechanisms [Finland] devise mechanisms, such as competition and consumer protection rules, at national, regional and

international levels, to prevent ~~the monopolization of~~ abuse of dominant market positions including by monopolies in relation to AI systems throughout their life cycle ~~and the resulting inequalities~~, whether these are data, research, technology, market ~~or other monopolies~~. Member States should prevent the resulting inequalities, assess relevant markets, and promote competitive markets. ~~regulate and intervene if such monopolies exist, taking into account that, d~~ Due consideration should be given to a lack of infrastructure, human capacity and regulations, LMICs, in particular LDCs, LLDCs and SIDS are more exposed and vulnerable to ~~exploitation by large technology companies the possibility of abuses of market dominance, as a result of a lack of infrastructure, human capacity, and regulations, among other factors~~. [UK, Singapore] AI actors developing AI systems in countries which have established [Mexico] or [Belgium] adopted [UK, Singapore] ethical standards on AI, should respect these standards when exporting these products, [Latvia] developing [UK, Singapore] or applying their AI systems in countries where such standards may not exist, [Singapore] while respecting [accepted text from §18] applicable international law and domestic legislation, standards and practices [Brazil] of these countries.

POLICY AREA 11: HEALTH AND SOCIAL WELL-BEING

[Paragraph 121: accepted]

121. Member States should endeavour to employ effective AI systems for improving human health and protecting the right to life, including mitigating disease outbreaks, while building and maintaining international solidarity to tackle global health risks and uncertainties, and ensure that their deployment of AI systems in health care be consistent with international law and their human rights law obligations. Member States should ensure that actors involved in health care AI systems take into consideration the importance of a patient's relationships with their family and with health care staff.

122. Member States should regulate the development and deployment of AI systems related to health in general and mental health in particular, paying due attention to children and youth, and ensure that AI technologies are safe, effective, efficient, scientifically and medically sound. Moreover, in the related area of digital health interventions, Member States are strongly encouraged to actively involve patients and their representatives in all relevant steps of the development of the system.

[Paragraph 122: accepted]

122. Member States should [Germany]-regulate ensure that the development and deployment of AI systems related to health in general and mental health in particular, paying due attention to children and youth is regulated to the effect that they are safe, effective, efficient, scientifically and medically sound proven and enable evidence-based innovation and medical progress. Moreover, in the related area of digital health interventions, Member States are strongly encouraged to actively involve patients and their representatives in all relevant steps of the development of the system.

[Paragraph 123: accepted]

123. Member States should pay particular attention in regulating prediction, detection and treatment solutions for health care in AI applications by:

- (a) ensuring oversight to minimize and mitigate bias;
- (b) ensuring that the professional, the patient, caregiver or service user is included as a “domain expert” in the team in all relevant steps when developing the algorithms;
- (c) paying due attention to privacy because of the potential need of being constantly monitored;
- (c) paying due attention to privacy because of the potential need of being [Germany] medically constantly monitored

and ensuring that all relevant national and international data protection requirements are met;

- (d) ensuring effective mechanisms so that those whose data is being analysed are aware of and provide informed consent to the tracking and analysis of their data, without preventing access to health care;
- (d) ensuring effective mechanisms so that those whose [Canada] personal data is being analysed are aware of and provide informed consent to the [Germany] use tracking and analysis of their data, without preventing access to health care;
- (e) ensuring the human care and final decision of diagnosis and treatment are taken always by humans while acknowledging that AI systems can also assist in their work; and
- (f) ensuring, where necessary, the review of AI systems by an ethical research committee prior to clinical use.

[Paragraph 124: accepted]

124. Member States should establish research on the effects and regulation of potential harms to mental health related to AI systems, such as higher degrees of depression, anxiety, social isolation, developing addiction, trafficking and radicalization, misinformation, among others.

125. Member States should develop guidelines for human-robot interactions and their impact on human-human relationships, based on research and directed at the future development of robots, with special attention to the mental and physical health of human beings, especially regarding robots in health care and the care for older persons and persons with disabilities, and regarding educational robots, toy robots, chatbots, and companion robots for children and adults. Furthermore, assistance of AI technologies should be applied to increase the

safety and ergonomic use of robots, including in a human-robot working environment. A special attention should be paid to the possibility of using AI to manipulate and abuse human cognitive biases.

[Paragraph 125: accepted]

125. Member States should develop guidelines for human-robot interactions and their impact on human-human relationships, based on research and directed at the future development of robots, [UK] and with special attention to the mental and physical health of human beings especially regarding, Particular attention should be given to the use of robots in health care and the care for older persons and persons with disabilities, in education, and robots for use by children, and regarding educational robots, toy robots, chatbots, and companion robots for children and adults. Furthermore, assistance of AI technologies should be applied to increase the safety and ergonomic use of robots, including in a human-robot working environment. A special attention should be paid to the possibility of using AI to manipulate and abuse human cognitive biases.

126. Member States should ensure that human-robot interactions comply with the same values and principles that apply to any other AI systems, including human rights and fundamental freedoms, the promotion of diversity, and the protection of vulnerable groups.

[Paragraph 126: accepted]

126. Member States should ensure that human-robot interactions comply with the same values and principles that apply to any other AI systems, including human rights and fundamental freedoms, the promotion of diversity, and the protection of vulnerable ~~groups~~[accepted text from §28] people or people in vulnerable situations. [Tunisia] Ethical questions related to AI-powered [Kuwait] systems [Tunisia] for neurotechnologies and brain-computer interfaces should be

considered in order [UK] to preserve human dignity and autonomy.

127. Member States should ensure that users can easily identify whether they are interacting with a living being, or with an AI system imitating human or animal characteristics, and have the right to reject such interaction and demand human intervention.

[Paragraph 127: accepted]

127. Member States should ensure that users can easily identify whether they are interacting with a living being, or with an AI system imitating human or animal characteristics, and [Germany] can effectively refuse ~~have the right to reject~~ such interaction and [UK]demand request human intervention.

[Paragraph 128: accepted]

128. Member States should implement policies to raise awareness about the anthropomorphization of AI technologies and technologies that recognize and mimic human emotions, including in the language used to mention them, and assess the manifestations, ethical implications and possible limitations of such anthropomorphization in particular in the context of robot-human interaction and especially when children are involved.

[Paragraph 129: accepted]

129. Member States should encourage and promote collaborative research into the effects of long-term interaction of people with AI systems, paying particular attention to the psychological and cognitive impact that these systems can have on children and young people. This should be done using multiple norms, principles, protocols, disciplinary approaches, and assessment of the modification of behaviours and habits, as well as careful evaluation of the downstream cultural and societal impacts. Further, Member States should encourage research on the effect of AI technologies on health system performance and health outcomes.

[Paragraph 130: accepted]

130. Member States, as well as all stakeholders, should put in place mechanisms to meaningfully engage children and young people in conversations, debates, and decision-making with regards to the impact of AI systems on their lives and futures.

V. MONITORING AND EVALUATION**[Paragraph 131: accepted]**

131. Member States should, according to their specific conditions, governing structures and constitutional provisions, credibly and transparently monitor and evaluate policies, programmes and mechanisms related to ethics of AI using a combination of quantitative and qualitative approaches. In support to Member States, UNESCO can contribute by:

- (a) developing a globally accepted methodology for Ethical Impact Assessment (EIA) of AI technologies, including guidance for its implementation in all stages of the AI system life cycle, based on rigorous scientific research;
- (a) developing a [accepted text from §49] UNESCO globally accepted—methodology for Ethical Impact Assessment (EIA) of AI technologies [Brazil] based on rigorous scientific research [UK] and grounded in international human rights law, including—guidance for its implementation in all stages of the AI system life cycle, [Brazil]based on rigorous scientific research and capacity-building materials to support Member States' efforts to train [Mexico] government officials, [Brazil]policy-makers and other relevant AI actors on EIA's methodology;
- (b) developing a readiness assessment methodology to assist Member States in identifying their status at specific moments of their readiness trajectory along a continuum of dimensions;

- (b) developing a [accepted text from §49] UNESCO readiness assessment methodology to assist Member States in identifying their status at specific moments of their readiness trajectory along a continuum of dimensions;
- (c) developing a globally accepted methodology to evaluate *ex ante* and *ex post* the effectiveness and efficiency of the policies for AI ethics and incentives against defined objectives;
- (c) developing a [accepted text from §49] globally-accepted UNESCO methodology to evaluate *ex ante* and *ex post* the effectiveness and efficiency of the policies for AI ethics and incentives against defined objectives;
- (d) strengthening the research- and evidence-based analysis of and reporting on policies regarding AI ethics, such as the publication of a comparative index; and
- (d) strengthening the research- and evidence-based analysis of and reporting on policies regarding AI ethics; [Russia]-such as the publication of a comparative index; and
- (e) collecting and disseminating progress, innovations, research reports, scientific publications, data and statistics regarding policies for AI ethics, including through existing initiatives, to support sharing best practices and mutual learning, and to advance the implementation of this Recommendation.

132. Processes for monitoring and evaluation should ensure broad participation of relevant stakeholders, including, but not limited to, people of different sexual orientation and gender identity, people of different age groups, girls and women, persons with disabilities, disadvantaged, marginalized and vulnerable populations, indigenous communities, as well as people from diverse socio-economic backgrounds. Social, cultural, and

gender diversity must be ensured, with a view to improving learning processes and strengthening the connections between findings, decision-making, transparency and accountability for results.

[Paragraph 132: accepted]

132. Processes for monitoring and evaluation should ensure broad participation of ~~[UK]relevant all~~ stakeholders, including, but not limited to, ~~[accepted text from §28] vulnerable people or people in vulnerable situations [Russia]of different sexual orientation and gender identity, people of different age groups, girls and women, persons with disabilities, disadvantaged, marginalized and vulnerable populations, indigenous communities, as well as people from diverse socio-economic backgrounds.~~ Social, cultural, and gender diversity ~~[Singapore]must should~~ be ensured, with a view to improving learning processes and strengthening the connections between findings, decision-making, transparency and accountability for results.

133. In the interests of promoting best policies and practices related to ethics of AI, appropriate tools and indicators should be developed for assessing the effectiveness and efficiency thereof against agreed standards, priorities and targets, including specific targets for persons belonging to disadvantaged, marginalized and vulnerable populations, as well as the impact of AI systems at individual and societal levels. The monitoring and assessment of the impact of AI systems and related AI ethics policies and practices should be carried out continuously in a systematic way. This should be based on internationally agreed frameworks and involve evaluations of private and public institutions, providers and programmes, including self-evaluations, as well as tracer studies and the development of sets of indicators. Data collection and processing should be conducted in accordance with international law, national

legislation on data protection and data privacy and the values and principles outlined in this Recommendation.

[Paragraph 133: accepted, amendments highlighted in yellow, pending to be discussed]

133. In the interests of promoting best policies and practices related to ethics of AI, appropriate tools and indicators should be developed for assessing the effectiveness and efficiency thereof against agreed standards, priorities and targets, including specific targets for persons belonging to disadvantaged, marginalized [accepted text from §28]and—vulnerable populations, vulnerable people or people in vulnerable situations, as well as the impact of AI systems at individual and societal levels. The monitoring and assessment of the impact of AI systems and related AI ethics policies and practices should be carried out continuously in a systematic way [Australia] proportionate to the relevant risks [[Mongolia] through periodical conferences and emergency meetings]. This should be based on internationally agreed frameworks and involve evaluations of private and public institutions, providers and programmes, including self-evaluations, as well as tracer studies and the development of sets of indicators. Data collection and processing should be conducted in accordance with international law, national legislation on data protection and data privacy and the values and principles outlined in this Recommendation.

134. In particular, the possible mechanisms for monitoring and evaluation may include an ethics commission, AI ethics observatory, repository covering human rights-compliant and ethical development of AI systems, or contributions to existing initiatives by addressing adherence to ethical principles across UNESCO's areas of competence, an experience-sharing mechanism for Member States to seek feedback on each other's policies and initiatives, AI regulatory sandboxes, and an assessment guide for all AI actors to evaluate their adherence to policy recommendations mentioned in this document.

[Paragraph 134: accepted]

134. In particular, [Germany] Member States may wish to consider ~~the~~ possible mechanisms for monitoring and evaluation, such as ~~may include~~ an ethics commission, AI ethics observatory, repository covering human rights-compliant and ethical development of AI systems, or contributions to existing initiatives by addressing adherence to ethical principles across UNESCO's areas of competence, an experience-sharing mechanism [Russia, Germany] ~~for Member States to seek feedback on each other's policies and initiatives~~, AI regulatory sandboxes, and an assessment guide for all AI actors to evaluate their adherence to policy recommendations mentioned in this document.