

AI and other Technologies for a Sustainable Development

Mapping the Italian CSOs' Practices

By:

Marianna Lunardini

Clarisa Elena Nelu

Benedetta Pescetto

Scientific coordination by:

Prof. Michele Nicoletti

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Introduction

This paper has the aim to analyse the role of Artificial Intelligence (AI) and digital technologies for the development cooperation realised by Italian Civil Society Organisations (CSOs), under the shape of a SWOT analysis. It is part of a broader project¹, funded by Compagnia di San Paolo, about the impact that these new technologies will have on human rights when they are used to cooperate for a sustainable development. The project will be concluded in July 2024 with a final paper addressing the possibilities and risk of these technologies for human rights, when dealing with development aid. Technologies such as artificial intelligence, autonomous systems, digital tools, and big data have changed the world, and the process of discovery and adaptation to new scientific advancements is still ongoing. These emerging technologies present both risks and opportunities for the EU and partner countries, as highlighted by the SDG Agenda 2030, which promotes cooperation in the technological field for the development of low-income countries. The project explores how new technologies are being used within development assistance, especially in the wake of the COVID-19 pandemic.

An Overview of the Development Cooperation in Italy

Since the first phases of the Italian history after II World War, Italy has been involved in the global effort regarding development cooperation. However, it took a long time before the Italian authorities were able to understand and organize a coherent and harmonic policy regarding foreign aid, reflecting also the progressive evolution of Italian society too. In the seventies the firsts comprehensive regulations were approved by the Italian Parliaments, confirming the strong interest of Italy to participate in the multilateral and bilateral forms of development cooperation². After almost 50 years, Italy has now a structural law regulating the different aspects of the development aid and, most of all, creating an institution with the competence of coordinating and implementing Italy's development cooperation initiatives. AICS, the Italian Agency for Development Cooperation was created in fact by Law 125/2014 (General Discipline on International Cooperation for Development), which came into force on August 29, 2014. The governmental organisation operates under the Ministry of Foreign Affairs and International Cooperation (MAECI) and plays a crucial role in advancing Italy's commitment to sustainable development, poverty reduction, and humanitarian assistance worldwide. The 2014 discipline led the Italian aid policy to include the principles and orientations that emerged in the international community while, at the same time, reaffirming that the international cooperation for sustainable development, human rights, and peace is "an integral and qualifying part of Italy's foreign policy." The 2014 law - see Article 1, paragraphs 2 and 3 - resumed and systematized some of the areas of competence already assigned to cooperation by Law 49/87, considering humanitarian aid and development cooperation as objectives and purposes of Italian collaboration policy. The primary purpose of the law is to create an effective and inclusive system of collaboration among the various actors in cooperation. As part of this approach, stable consultation venues known as thematic tables have been established. These tables represent forums dedicated to specific areas or sectors of development cooperation and provide a space for interaction and dialogue among various stakeholders, including government representatives, civil society organisations, diaspora associations, local authorities, and other actors involved in international cooperation.

This law reformed the previous legal framework, seeking to align Italian policies with international ones and improve the effectiveness of development aid. However, still many aspects of the Law are

¹ See <https://www.cespi.it/en/ricerche/il-balzo-tecnologico-la-cooperazione-quali-sfide-i-diritti>

² P. Isernia, *La cooperazione allo sviluppo*, Il Mulino, Bologna, 1995.

yet to be fully implemented. In addition, from the point of view of civil society, Non-Governmental Organisations were faced with new procedures to maintain their eligibility and registration in the “Anagrafe Unica delle ONLUS”, raising concerns about the possible loss of status for some of them. A central point of discussion concerns funding: despite Italy's commitment to allocate 0.70% of Gross National Income (GNI) in Official Development Assistance (ODA) by 2030, it is still a long way from this target.³

Development cooperation is part of Italian foreign policy and is made by different type of activities related to the bilateral, multilateral, and multi-bilateral actions within the overall framework of a common effort to achieve global development⁴. Italy has in fact, together with the other members of the United Nations, decided to coordinate its efforts to achieve the goals of the Agenda 2030, the United Nations' Sustainable Development Agenda, for the year 2030. Italian civil society is at the heart of this process. Law 125/2014, Art. 26, states that “Italy promotes the participation in development cooperation of civil society organisations (CSOs) and other non-profit entities, based on the principle of subsidiarity.” This project considers primarily the following actors among those listed in art. 26: Non-governmental organisations (NGOs) and Non-profit organisations of social utility (ONLUS). Moreover, the Agenda 2030 recognizes the importance of the role of civil society as a fundamental actor within an inclusive and global partnership aimed at creating a sustainable long-term impact in partner countries. In this context, an important step was taken during the 5th National Diaspora Summit held on 10 February 2024, which marked the establishment of the Italian Coordination of Diasporas for International Cooperation (CIDCI), an important tool for representation and empowerment. CIDCI has the aim to support diaspora in being agents of development cooperation.⁵

According to the Development Assistance Committee (DAC), within the Organisation for Economic and Development Cooperation (OECD), a committee in which Italy is a founding member, preliminary data for 2023 paint a decrease of Italy's contribution to development cooperation. After surpassing 6 billion in 2022, our country's ODA has dropped to 5.56 billion. Even the temporary increase in the ODA/GNI ratio, which had reached 0.29% in 2021 and had for the first time in 2022 risen above 0.30%, has returned to decline to 0.27%.⁶ Despite the long presence in multilateral ODA, Italy, a country that has staunchly advocated for international cooperation and multilateralism⁷, between 2022 and 2023, has experienced a slight decline (-1.3%) even in the assistance through the multilateral channel. Nevertheless, the Triennial Program Document 2021-2023 confirms the intention to support an "efficient, effective, operational, integrated multilateralism responsive to the challenges of sustainable development," particularly focusing on agencies and operational programs in Italy to make the Roman hub⁸ a "hub of sustainability," with a strong focus on the sectors of

³ Cfr. Openopolis, *Cooperazione Italia 2020, obiettivo mancato* <https://www.openopolis.it/esercizi/un-altro-passo-indietro-per-la-cooperazione/>; Openopolis, *Il bilancio della cooperazione e gli obiettivi della campagna 0,70* <https://www.openopolis.it/il-bilancio-della-cooperazione-e-gli-obiettivi-della-campagna-070/>; Infocooperazione, *ONG o OSC? Aggiornato l'elenco delle organizzazioni riconosciute dall'Agenzia* <https://www.info-cooperazione.it/2018/08/ong-o-osc-aggiornato-lelenco-delle-organizzazioni-riconosciute-dallagenzia/>; Link2007, *Cooperazione internazionale per lo sviluppo : appunto sulla legge. 125/2014*, <https://link2007.org/wp-content/uploads/2023/05/Link-2007.-Appunto-attuazione-Legge-125.-Gennaio-2023.pdf>

⁴ M. Zupi, *L'Italia e la cooperazione multilaterale*, Osservatorio Politica Internazionale, Parlamento Italiano, 2018, dicembre.

⁵ <https://summitdiaspore.org/>

⁶ DAC, *ODA Levels in 2023 – preliminary data, Detailed summary note*, OECD, Paris, April 11, 2024, <https://www.oecd.org/dac/ODA-summary-2023.pdf>

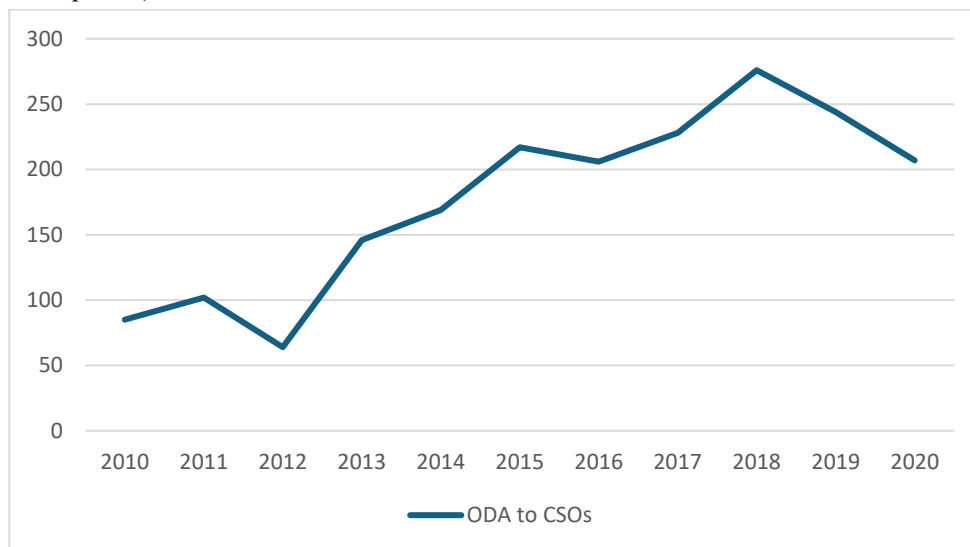
⁷ O. Stokke, *The UN and Development: From Aid to Cooperation*, Indiana University Press, 2009.

⁸ Italy hosts the third-largest UN multilateral development cooperation hub after New York and Geneva: Rome is home to the principal United Nations organizations dedicated to food security, agriculture, and sustainable development, collectively known as the Roman agro-food hub. These include the Food and Agriculture Organization (FAO), the World Food Programme (WFP), and the International Fund for Agricultural Development (IFAD). Although each organization

agriculture, actions to counteract the impact of the pandemic, and the safeguarding of cultural heritage⁹. In addition, among the main objectives of the development cooperation, Italy is focused on health, sustainable agriculture, access to clean water, sustainable energy, education, work dignity and gender equality. Multilateral cooperation is a fundamental pillar of Italy's international development policy. Historically, Italy has devoted a significant portion of its resources to this type of cooperation, far exceeding the average of other OECD donor countries, compared to other countries, Italy continues to invest heavily in multilateralism, demonstrating its commitment to collaborative solutions at the global level. This involvement is manifested by its collaboration with the three agencies of the Roman, around various issues such as food security and sustainable agriculture, where Italy has a traditional interest.

Focusing on the bilateral level, according to the OECD, in the decade from 2010 to 2020, the Italian ODA channelled to and through CSOs progressively increased showing a parallel increase in the participation of civil society to the international aid process. However, from 2018, the data show a significant reduction of resources, confirming that in the last two years around 15% is the percentage of bilateral aid to and through CSOs¹⁰.

Graphic 1: Italy's ODA channelled to and through CSOs, 2010-2020 (USD million, disbursements, constant 2020 prices)



Source: DAC Creditor Reporting System (OECD)

According to the OECD preliminary data, during the period spanning 2022 to 2023, there was a significant reduction of Italian ODA (-15.5%), due to lower disbursements in its bilateral aid¹¹.

In addition, spending on refugee accommodation in the Italian country increased by approximately 5.8%, amounting to nearly 1.490 billion euros¹². If we take a deeper look on the bilateral level, in general, the countries recognized as a priority for Italy are stated in the Triennial Program Document approved by the Council of Ministers, as stipulated by art. 12 of Law 125/2014. According to the last document 2021-2023 approved on 15 June 2022, the countries considered as priority are: Ethiopia,

has specific mandates and operates autonomously, they share the common goal of combating hunger and poverty, with a particular focus on rural development.

⁹ Maeci, Documento di programmazione triennale 2021-2023.

¹⁰ OECD, *Aid for Civil Society Organisations Statistics based on DAC Members' reporting to the Creditor Reporting System database (CRS)*, 2019-2020, June 2022.

¹¹ OECD, *ODA Levels in 2023 – preliminary, data Detailed summary note Preliminary ODA levels in 2023*, April 2024.

¹² Focsiv, *Cooperazione allo sviluppo debole, quando ce ne sarebbe più bisogno*, May 3, 2024 <https://www.focsiv.it/cooperazione-allo-sviluppo-debole-quando-ce-ne-sarebbe-piu-bisogno/>

Kenya, Somalia, Sudan, Burkina Faso, Mali, Niger, Senegal, Mozambique, Egypt, Tunisia (Africa); Jordan, Iraq, Lebanon, Palestinian Territories (Middle East); Albania (Balkans); Cuba, El Salvador (Latin America); Afghanistan, Myanmar (Asia)¹³. In addition, the war between Ukraine and Russia, from the beginning of 2022, has brought an important change due to the need of assisting the refugees who fled from the on-going war. Italy has joined the effort: “Between 2021 and 2022, contributions from OECD DAC countries rose from 1.2 billion dollars to 18.5 billion dollars, while Italian contributions increased from 1.8 million dollars to 394 million dollars, making Ukraine the country that has received the largest share of Italian bilateral resources”¹⁴. This year as well, a significant portion consists of aid for Ukraine, which, according to preliminary data, amounts to 266.5 million dollars¹⁵, a figure that nevertheless already shows a decrease compared to the previous year.

Recommendations from the OECD and EU

OECD is one of the first organisations that has been tackling the issue of technology and AI for a while. The OECD AI Policy Observatory¹⁶ combines resources from across the OECD and its partners from all stakeholder groups. It facilitates dialogue and provides multidisciplinary, evidence-based policy analysis and data on AI’s areas of impact. It is a unique source of real-time information, analysis and dialogue designed to shape and share AI policies across the globe.

In May 2019, the OECD Principles on Artificial Intelligence have been adopted and they promote AI as innovative and trustworthy and that respects human rights and democratic values. It was the first intergovernmental standard on AI. The Recommendation aims to foster innovation and trust in AI by promoting the responsible stewardship of trustworthy AI while ensuring respect for human rights and democratic values. Complementing existing OECD standards in areas such as privacy, digital security risk management, and responsible business conduct, the Recommendation focuses on AI-specific issues and sets a standard that is implementable and sufficiently flexible to stand the test of time in this rapidly evolving field. The AI Principles focus on how governments and other actors can shape a human-centric approach to trustworthy AI. As an OECD legal instrument, the principles represent a common aspiration for its adhering countries. According to the document the values-based principles are:

1. Inclusive growth, sustainable development, and well-being

This principle recognises that guiding the development and use of AI toward prosperity and beneficial outcomes for people and the planet is a priority. Trustworthy AI can play an important role in advancing inclusive growth, sustainable development and well-being and global development objectives.

2. Human-centred values and fairness

AI should be developed consistent with human-centred values, such as fundamental freedoms, equality, fairness, rule of law, social justice, data protection and privacy, as well as consumer rights and commercial fairness.

3. Transparency and explainability

The focus is first on disclosing when AI is being used (in a prediction, recommendation, or decision, or that the user is interacting directly with an AI-powered agent, such as a chatbot). Further it means

¹³ <https://www.aics.gov.it/paes/paes-prioritari/>

¹⁴ Openpolis, Chiari e scuri della cooperazione italiana, February 15, 2024.

¹⁵ DAC, *ODA Levels in 2023 – preliminary data, Detailed summary note*, OECD, Paris, April 11, 2024, <https://www.oecd.org/dac/ODA-summary-2023.pdf>

¹⁶ <https://oecd.ai/en/ai-principles>

enabling people to understand how an AI system is developed, trained, operates, and deployed in the relevant application domain.

4. Robustness, security, and safety

Addressing the safety and security challenges of complex AI systems is critical to fostering trust in AI. In this context, robustness signifies the ability to withstand or overcome adverse conditions, including digital security risks. This principle further states that AI systems should not pose unreasonable safety risks including to physical security, in conditions of normal or foreseeable use or misuse throughout their lifecycle.

5. Accountability

The terms accountability, responsibility and liability are closely related yet different, and also carry different meanings across cultures and languages.

A few years ago, the OECD developed the Framework for the Classification of AI Systems, a user-friendly framework for policy makers, regulators, legislators, and others to characterise AI systems for specific projects and contexts. The framework links AI system characteristics with the OECD AI Principles (OECD, 2019), the first set of AI standards that governments pledged to incorporate into policy making and promote the innovative and trustworthy use of AI. The framework provides a baseline to:

1. *Promote a common understanding of AI*: Identify features of AI systems that matter most, to help governments and others tailor policies to specific AI applications and help identify or develop metrics to assess more subjective criteria
2. *Inform registries or inventories*: Help describe systems and their basic characteristics in inventories or registries of algorithms or automated decision systems
3. *Support sector-specific frameworks*: Provide the basis for more detailed application or domain specific catalogues of criteria, in sectors such as healthcare or in finance
4. *Support risk assessment*: Provide the basis for related work to develop a risk assessment framework to help with de-risking and mitigation and to develop a common framework for reporting about AI incidents that facilitates global consistency and interoperability in incident reporting
5. *Support risk management*: Help inform related work on mitigation, compliance and enforcement along the AI system lifecycle, including as it pertains to corporate governance

The key dimension's structure AI system characteristics and interactions are the following:

1. *People and Planet* - This considers the potential of applied AI systems to promote human-centric, trustworthy AI that benefits people and planet
2. *Economic context* - This describes the economic and sectoral environment in which an applied AI system is implemented
3. *Data and input* - This describes the data and/or expert input with which an AI model builds a representation of the environment
4. *AI Model* - This is a computational representation of all or part of the external environment of an AI system
5. *Task and Output* - This refers to the tasks the system performs, e.g. personalisation, recognition, forecasting or goal-driven optimisation; its outputs; and the resulting action(s) that influence the overall context

Having a look on the OECD website, several other publications, reports, books and articles, have been discovered which have a focus on AI, the implications of using AI and different fields where AI could be used such as combating climate change, regulatory sandboxes in AI, the effects of AI on working lives of women, employment, education, workplaces and many more. Around 40 articles we have analysed from the OECD websites, putting in three categories such as artificial intelligence in

general¹⁷, artificial intelligence used in development cooperation¹⁸ and artificial intelligence used in development cooperation by NGOs¹⁹.

In the European Union, there are some regulations for creating a safer online environment, starting with the GDPR. The General Data Protection Regulation (GDPR) is the toughest privacy and security law in the world. Though it was drafted and passed by the European Union (EU), it imposes obligations onto organisations anywhere, so long as they target or collect data related to people in the EU. The regulation was put into effect on May 25, 2018. The GDPR will levy harsh fines against those who violate its privacy and security standards, with penalties reaching into the tens of millions of euros. With the GDPR, Europe was signalling its firm stance on data privacy and security at a time when more people are entrusting their personal data with cloud services and breaches are a daily occurrence. The regulation itself is large, far-reaching, and fairly light on specifics, making GDPR compliance a daunting prospect, particularly for small and medium-sized enterprises (SMEs).

First important aspect is that if someone process the personal data of EU citizens or residents, or offer goods or services to such people, then the GDPR applies to the respective individual even if he/she is not in the EU. Second, the fines for violating the GDPR are very high. There are two tiers of penalties, which max out at €20 million or 4% of global revenue (whichever is higher), plus data subjects have the right to seek compensation for damages. The GDPR defines an array of legal terms at length. Below are some of the most important ones:

Personal data: Personal data is any information that relates to an individual who can be directly or indirectly identified. Names and email addresses are obviously personal data. Location information, ethnicity, gender, biometric data, religious beliefs, web cookies, and political opinions can also be personal data.

Data processing: Any action performed on data, whether automated or manual. The examples cited in the text include collecting, recording, organizing, structuring, storing, using, erasing... so basically anything.

Data subject: The person whose data is processed. These are your customers or site visitors.

Data controller: The person who decides why and how personal data will be processed. If you are an owner or employee in your organisation who handles data, this is you.

¹⁷ OECD, "OECD Framework for the Classification of AI Systems: a tool for effective AI policies", *OECD Digital Economy Papers*, No. 323, OECD Publishing, Paris, 2020. <https://doi.org/10.1787/cb6d9eca-en>. OECD (2019), "Scoping the OECD AI principles: Deliberations of the Expert Group on Artificial Intelligence at the OECD (AIGO)", *OECD Digital Economy Papers*, No. 291, OECD Publishing, Paris, <https://doi.org/10.1787/d62f618a-en>. OECD, *Artificial Intelligence in Society*, OECD Publishing, Paris, 2019. <https://doi.org/10.1787/eedfee77-en>. OECD, "Regulatory sandboxes in artificial intelligence", *OECD Digital Economy Papers*, No. 356, OECD Publishing, Paris, 2023. <https://doi.org/10.1787/8f80a0e6-en>.

¹⁸ OECD, "A blueprint for building national compute capacity for artificial intelligence", *OECD Digital Economy Papers*, No. 350, OECD Publishing, Paris, 2023. <https://doi.org/10.1787/876367e3-en>; Baruffaldi, S., et al., "Identifying and measuring developments in artificial intelligence: Making the impossible possible", *OECD Science, Technology and Industry Working Papers*, No. 2020/05, OECD Publishing, Paris, 2020. <https://doi.org/10.1787/5f65ff7e-en>; OECD, "Harnessing the power of AI and emerging technologies: Background paper for the CDEP Ministerial meeting", *OECD Digital Economy Papers*, No. 340, OECD Publishing, Paris, 2020. <https://doi.org/10.1787/f94df8ec-en>; Sally Radwan and Samar Sobeih, "Egypt's AI strategy is more about development than AI", *OECD*, 2021. <https://oecd.ai/en/wonk/egypt-ai-strategy>; Andreas Hartl, et al., "Germany's human-centred approach to AI is inclusive, evidence-based and capacity-building", *OECD*, 2021. <https://oecd.ai/en/wonk/germany-takes-an-inclusive-and-evidence-based-approach-for-capacity-building-and-a-human-centred-use-of-ai>; Cristina Akemi Shimoda Uechi and Thiago Guimarães Moraes, "Brazil's path to responsible AI", *OECD*, 2023. <https://oecd.ai/en/wonk/brazils-path-to-responsible-ai>

¹⁹ OECD, "Artificial Intelligence Suitability Toolkit for Nonprofits", *OECD Policy Observatory*, 2022. <https://oecd.ai/en/catalogue/tools/artificial-intelligence-%28ai%29-suitability-toolkit-for-nonprofits>

Data processor: A third party that processes personal data on behalf of a data controller. The GDPR has special rules for these individuals and organisations. They could include cloud servers like Tresorit or email service providers like Proton Mail.

In 2021, the European Commission announced the launch of the EU AI Act, which was adopted by the EU institutions in December 2023. The EU AI Act is expected to become the world's first comprehensive legal framework for artificial intelligence. Often referred to as the “Brussels Effect”, the EU AI Act is seen as a changing game for the regulation of artificial intelligence, as the EU General Data Protection Regulation was for the regulation of data protection a few years ago.

The AI Act is constructed on three approaches, each of them defining a different type of AI risk system that the regulation should cover. The first approach is the unacceptable AI systems which are prohibited completely by Article 5, such as the AI systems that deploy harmful manipulative 'subliminal techniques', AI systems that exploit specific vulnerable groups, AI systems used by public authorities, or on their behalf, for social scoring purposes and the last one being the 'real-time' remote biometric identification systems in publicly available places for the scope of law enforcement, except in a limited number of circumstances.

The second approach, and the most controversial one, was the high-risk AI systems which are allowed but subject to stricter obligations and could be divided into two categories. First, it focuses on those added-in products that are already subject to third-party examination under the legislation and serve division as safety components for said products, such as medical devices or toys. The second category focuses on AI systems that are not included in other products such as biometric identification and categorisation of natural persons, management and operation of critical infrastructure, education and professional training, employment, worker supervision and access to self-employment, access to and enjoyment of necessary private services and public services and benefits, law enforcement, migration, asylum and border control governance, and administration of justice and democratic processes.

The third approach is the low or minimal risk and it includes the rest of the concerns which do not represent the previous risks, primarily including transparency requirements that allow users to make informed decisions about them.

On March 13, 2024, the European Parliament formally adopted the EU Artificial Intelligence Act with a large majority of 523-46 votes in favour of the legislation. The AI Act is the world's first horizontal and standalone law governing AI, and a landmark piece of legislation for the EU.

In 2021, the Committee of Ministers of the Council of Europe approved the creation of a Committee on Artificial Intelligence (CAI) assigned with developing legal tools on the development, format, and application of AI systems based on the Council’ standards on human rights, the rule of law, democracy, and conducive to innovation. The purpose is to guarantee that, AI systems obey with human rights, respect the functioning of democracy, and observe the rule of law, regardless of whether these activities are undertaken by public or private actors. The Convention on AI has a comprehensive approach to ensure that the use of artificial intelligence does not interfere with any of the principles or fundamental rights developed in the ECHR such as the Principle of Non-discrimination (Article 3), Principle of Equality and Anti-discrimination (Article 12), Principle of Privacy and Personal Data Protection (Article 13), Principle of Accountability, Responsibility and Legal Liability (Article 14) or the Principle of Safety (Article 16).

The AI Convention is supposed to complement the EU AI Act and other regulatory initiatives that might develop in the future. The EU AI Act focuses on the marketing of products using AI within the EU internal market, while the AI Convention aims to protect the fundamental rights of people affected by AI systems. The EU AI Act will be directly implemented upon the EU Member States, while the AI Convention is principle-based and will establish legally binding individual human rights, which will apply to the States, EU Member States, and non-EU Member States, that decide to ratify and sign the AI Convention in the future.

Methodology

Identifying the reference sample

After reviewing the international and national literature available, regarding the subjects of Italian development cooperation, Italian civil society organisations and their use of digital tools, the recommendations made by different actors (such as international organisations and civil society networks), the Research Team decided to focus firstly its work on the analysis of the normative aspects related to the regulation of Artificial Intelligence. The European debate around the EU AI Act and the debate within the Council of Europe have been the subject of a desk-research study, that took place from July to October 2023. During the analysis, the Research Team decided to consider specifically the involvement of civil society organisations and their observations regarding the entire process of negotiation.

From October 2023 to February 2024, the Research Team initiated a new phase of the project focusing on the practical implications of utilizing AI and new technologies in development cooperation by Civil Society Organisations (CSOs). The aim was to gauge the prevalence of AI or digital technology adoption among civil society organisations engaged in development aid activities. Whether the adoption was limited or widespread, the Research Team was particularly interested in discerning the rationale behind organisations' choices. Furthermore, the project sought to evaluate the organisations' general awareness of these technologies, including their comprehension of the associated risks, opportunities, and impact on human rights. Internally, CSOs may be reflecting on their use of new technologies. They might be considering specific strategies or engaging in an ongoing process to understand the reasons for and methods of integrating these new tools into their activities.

According to the results of the project “The Role of ICT in Achieving SDGs in Countries with Low Digital Infrastructure”²⁰ (Turin University for MAECI), the Information and Communication Technologies (ICT) are basically not very commonly used among the CSOs in Italy. In fact, Italian NGOs while demonstrating a positive perception of the role of ICTs in development processes, still make relatively modest use of them. According to the study, **96.2% of them use ICTs, with social media being the most widely used tool (96%), followed by mobile apps (40%). Only 32% use data visualization tools, and none of the respondents use technologies such as for instance machine learning or AI.** The majority of them do not have formal strategies on the issue and a good part of the CSOs who have participated in the Turin University’s research seemed to be not fully aware of the concept of digital development.

These results are interesting and, together with the ISTAT report about the digital literacy of the Italian non-profit institutions²¹, showed the limited involvement of new technologies in the activities of Italian CSOs, specifically for those who are committed to assistance and foreign aid- The Research Team decided to utilize these results and expand the research further, recognizing the importance of comprehending not only the usage, or lack thereof, but also the underlying reasons or potential obstacles influencing the current state of affairs. Consequently, direct engagement with experts and representatives of CSOs was deemed essential. We conducted several interviews with experts in new technologies, AI, and human rights from different Civil Society Organisations, universities, and private entities.

During these interviews, we had the opportunity to discuss some of the challenges posed by these new technologies and perhaps the barriers that CSOs must overcome when deciding to incorporate them into their projects. According to them, there is significant potential in utilizing AI; however, the

²⁰ Turin University, *The Role of ICT for the Achievement of SDGs in Countries with Low Digital Infrastructure From barriers to breakthroughs: unveiling the complexities and opportunities of ICTs for sustainable development*, MAECI, 2023, October.

²¹ ISTAT, *Censimento permanente delle istituzioni non profit. I primi risultati*, 2023, May.

development of these technologies is only occurring in certain parts of the world, leading to gaps and a lack of understanding from various perspectives. Identifying the reference sample served as a foundational step in understanding the current practices and potential impact of AI and new technologies in development cooperation undertaken by Italian CSOs.

Classifying the Reference Sample

Intervention areas

Identifying the reference sample for a project on AI and new technologies in development cooperation by Italian CSOs involved carefully selecting representative organisations: Italian CSOs engaged in development cooperation activities serve as the primary reference sample. The CSOs were selected on the base of different elements, regarding the sectors and regions where they have projects: only those who have on-going projects in the so-called Global South were selected. Moreover, the CSOs were chosen on the basis of the different size, scope, and focus areas, trying to maintain a balanced representation and to reflect the landscape of Italian CSOs involved in development cooperation.

We have, thus, conducted a desk-research to understand the on-going activities related to the use of AI or different technologies that could have interested the project as an on-going practice to examine. Several international and Italian websites have been analysed in order to collect the data such as OECD, European Parliament/Commission, Info Cooperazione, AICS, Cariplo, Compagnia di San Paolo, UNESCO, regional and local authorities etc... We have selected Italian CSOs, experts, international organisations, national authorities, universities and small/medium companies dedicated to provide specific services²². Among those contacted, we have had 35 interviews and, within the total, 19 with CSOs:

Table 1: List of the CSOs interviewed

CSOs	Area of Interest
Action Aid	Women: free from violence, citizen participation, inclusive citizenship, poverty in Italy. In Africa, America, Asia, Oceania, and Europe.
ALA Milano Onlus	Health protection, social inclusion, fight against discrimination in Cameron.
Amici di Angal Onlus	Health Care in Uganda. Alongside the support of an hospital, the association takes care of supporting the local population in their needs.
Associazione ASPEm	Interculture, rights, health, agriculture and economic development in Latin America, Africa, and Italy.
COOPI	Water and sanitation, environment and disaster risk reduction, education in emergency, nutrition security, protection, and food security.
Doctors Without Borders Italy	Health, emergency contexts, humanitarian aid. In Africa, America, Asia, Oceania, and Europe.
DREAM - Sant' Egidio	DREAM is a health programme. A collaboration between Sant'Egidio and the DREAM Foundation.
Focsiv Ets	Rural development, economic development, health, education, female empowerment, integration, environmental protection, and access to water.
Greenpeace Italy	Environment: sea, forest, climate, food and agriculture, pollution, nuclear energy.
Informativi senza frontiere	Dissemination of knowledge, IT for disabilities and IT for emerging countries.

²² A complete list is provided as an annex.

New Life for Children	Education and childhood, health, and nutrition, fight against poverty and development cooperation. In Brazil, Congo DR, Kenya, Nepal, and in Italy.
Oxfam Italy	Poverty, Development, Social Injustice, Social Inclusion Emergency. In Africa, America, Asia, Oceania, and Europe.
Progetto Mondo	Sustainable Development, Justice, Migration and Global Education. In Europe, Latin America, Africa, and the Middle East.
Puntosud	Youth empowerment, education, diversity, disability, social protection, civil society's participation.
Save the Children Italy	Health and nutrition, education, poverty, protection of minors and rights, migration, emergency.
Servizio Civile Internazionale Onlus	An international network to promote voluntary activities and camps on the topics of peace and disarmament, conscientious objection, human rights and international solidarity, sustainable lifestyles, social inclusion, and active citizenship.
Soleterre Onlus	Health care, workers' rights, education, social and political participation in Latin America, Africa, and Europe (such as Ukraine, Morocco, Ivory Coast, Uganda, El Salvador).
SOS Village dei Bambini	Child Protection in several countries. Areas of intervention: Protection and Hospitality, Autonomy, Family support, Emergency response, Migrants and Education and Health.
Terres des Hommes	Mother and children health, children and young people on the move and access to justice for children and young people.

Geographic representation is crucial in selecting Italian CSOs involved in different regions all over the world to capture a comprehensive picture of their use of AI and new technologies. The reference sample considers the varying levels and sizes of Italian CSOs. The table below categorizes the surveyed organizations based on their annual turnover in 2022. The CSOs are classified into three categories: the top 10 by funding level, medium-large, and small.

The CSOs in the top 10 are those with the highest revenue volume in 2022, exceeding EUR 40 million. Medium/large-sized CSOs are those with an income of between EUR 1 and 15 million, while small CSOs are those with a turnover of less than EUR 1 million.

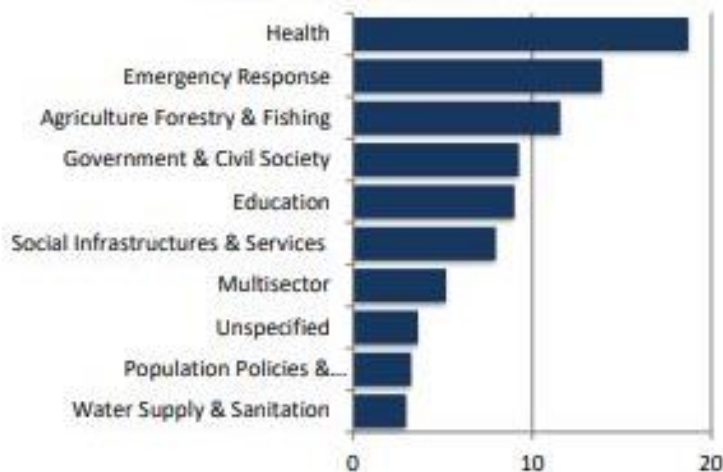
CSOs per size	
Top ten	4
Large/Medium	10
Small	5

Another important aspect for classifying the reference sample is the repartition per intervention areas, categorizing Italian CSOs based on their primary focus sectors. Key intervention areas may include health, education, agriculture, water and sanitation, gender equality, and environmental sustainability. Each NGO in the reference sample is assigned to one or more intervention areas based on the predominant themes of their development projects.

According to DAC-OECD, there are ten sub-sectors of intervention for bilateral ODA channelled through CSOs. In the 2019-2020, Health, Emergency Response, Agriculture Forestry & Fishing, Government & Civil Society, Education, Social Infrastructures & Services were the main areas of focus in terms of bilateral ODA and CSOs. Taking into consideration the

formal nature of the CSOs, DAC has enlightened that in 2019-2020, the majority of the bilateral ODA channelled through CSOs were assigned to Donor country-based CSOs rather than International CSOs (74 USD million in 2020 for instance compared to 28 for the latter)²³.

Graphic 2: Top ten sub-sector for bilateral ODA channelled through CSOs, 2019-2020.



Source: CRS (Creditor Reporting System) Aid Activity Database at <http://stats.oecd.org/qwids>

By classifying the reference sample per intervention areas, the Research Team can analyse the distribution of AI and new technology utilization across different sectors of development cooperation undertaken by Italian CSOs. However, each CSO can have more than one area of intervention depending to the projects implemented.

CSOs per intervention areas	
Health	10
Education	8
Agriculture	6
Migration	5

Types of technologies considered

The project has the aim to analyse not only AI but also other types of technologies, for the aim to broaden the perspective on the evolution of digital tools in the CSOs' practices. Classifying the encountered practices per types of technologies considered involves identifying the diverse range of technological tools utilized by Italian CSOs in their development projects. The Research Team decided to extent partially the research and considered also relevant on-going activities within some of the international organisations, such as UN Agencies, in order to reflect the complexity of the current process.

The considered technologies may include different types of Information and Communication Technologies (ICTs), artificial intelligence (AI), machine learning algorithms, data analytics platforms, and predictive modelling software. The Research Team has considered firstly the ICTs, taking as a definition the UNESCO's one: "ICT is defined as a diverse set of technological tools and resources used to transmit, store, create, share, or exchange information. These technological tools and resources include computers, the Internet (websites, blogs and emails), live broadcasting

²³ OECD, *Aid for Civil Society Organisations*, op. cit., p.5.

technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices) and telephony (fixed or mobile, satellite, vision/video-conferencing, etc.).”²⁴ Additionally, CSOs may employ geographic information systems (GIS), remote sensing technologies, and satellite imagery for data collection and spatial analysis, moreover, biometric identification systems, blockchain technology, and digital payment solutions are emerging tools that offer innovative approaches to address development challenges.

Regarding the AI the definitions are more complex and different taking into consideration, as noted by Russel and Norvig²⁵, two aspects: from one side AI requires a certain fidelity to human performance and to other side it is expected to act rationally. Following this distribution, over the time, different descriptions were given, for instance AI is “The exciting new effort to make computers think ... machines with minds, in the full and literal sense.” (Haugeland, 1985) but also “The study of mental faculties through the use of computational models.”(Charniak and McDermott, 1985)²⁶. According to the European Parliament, which has recently worked intensely to achieve the approval of an EU Act to regulate the phenomenon, AI is defined as “the ability of a machine to display human-like capabilities such as reasoning, learning, planning, and creativity. AI enables technical systems to perceive their environment, deal with what they perceive, solve problems, and act to achieve a specific goal. The computer receives data - already prepared or gathered through its own sensors such as a camera - processes it, and responds. AI systems are capable of adapting their behavior to a certain degree by analysing the effects of previous actions and working autonomously.”²⁷ New technologies, digital technologies, and AI play a crucial role in modern computing and digital innovation, but they differ in terms of functionality, level of autonomy, and goal. Digital technologies encompass a wide range of technologies that exploit digital data and computational capabilities, while AI specifically focuses on emulating human-like cognitive capabilities to perform tasks autonomously and adaptively. According to Floridi, the evolution of AI has slightly changed the way we perceive it, particularly in relation to the domain of applications implemented. In fact, “Old AI was primarily symbolic and could be interpreted as a branch of mathematical logic, but the new AI is mostly connectionist and can be interpreted as a branch of statistics. The main battleground of AI is no longer logical deduction, but statistical inference and correlation.”²⁸

Regarding AI, there are different ways to understand it, it depends evidently on a case-by-case analysis of the specific system created. In general 4 types of AI could be envisaged: the hardwired/ specific system, that assist humans in making decisions or taking actions, but does not learn from the interactions; the automation idea, so an AI that assists with an automation of manual and cognitive tasks, both routine and non-routine; the augmented intelligence that augment human decision making and continuously learn from their interactions with humans and the environment; lastly, the autonomous intelligence that can adapt to different situations and can act autonomously without human assistance²⁹. The last two are the so-called adaptive systems.

Still a legal definition of AI is still not confirmed at the global level³⁰. However, to synthesize the different AI-derived technologies considered:

²⁴ UIS. *Guide to measuring information and communication technologies (ICT) in education*. Montreal: UIS. 2009.

²⁵ S. Russell, P. Norvig, *Artificial Intelligence. A Modern Approach*, Third Ed., 2010, p. 2.

²⁶ Both cited by S. Russell, P. Norvig, *Artificial Intelligence, op. cit.*, p. 3.

²⁷ <https://www.europarl.europa.eu/topics/en/article/20200827STO85804/what-is-artificial-intelligence-and-how-is-it-used>

²⁸ L. Floridi, *The Ethics of Artificial Intelligence*, OUP Oxford, 2023, p.5

²⁹ PwC, *The macroeconomic impact of artificial intelligence*, 2018, February, p. 6.

³⁰ L. Floridi, *On the Brussels-Washington Consensus About the Legal Definition of Artificial Intelligence* (December 3, 2023). Philosophy & Technology, 2023, Available at SSRN: <https://ssrn.com/abstract=4652136> or <http://dx.doi.org/10.2139/ssrn.4652136>

- Deep learning application: systems that utilize neural networks with multiple layers to analyse and interpret data, such as image recognition, natural language processing, and speech recognition.
- Machine learning models: These encompass a broader range of algorithms beyond deep learning, including decision trees, support vector machines, and clustering algorithms, which are trained on data to make predictions or decisions without being explicitly programmed and with minimal human intervention.
- Autonomous systems: These are systems that can make decisions or take actions without direct human intervention, such as autonomous vehicles, drones, and robots, often enabled by AI technologies.
- Predictive analytics: AI algorithms are used to analyse historical data and make predictions about future outcomes, such as in finance, healthcare, and marketing.
- Generative AI technologies: uses machine learning algorithms to generate contents. It can produce new text, images, video, or audio clips. Technically, this type of AI learns patterns from training data and generates new, unique outputs with the same statistical properties.

Limits

The Research Team encountered several challenges during the initial phase of the research, primarily revolving around defining the scope of technologies to be considered and understanding the current practices among Italian CSOs. This task was complicated by variations in the size, awareness, and international network of these organisations. The rapid evolution of technologies presents a continuous challenge in tracing the latest advancements and integrating them into development cooperation practices. In addition, another significant challenge arises from the complex and evolving nature of artificial intelligence, which makes it difficult to precisely define and categorize. This complexity can lead to ambiguity in analysis and classification. During the desk-research phase, limitations arose regarding the availability of open-source content. Not all Italian CSOs have comprehensive and detailed information on technological and digital aspects readily accessible online. Furthermore, the interviewees may not fully be aware of the various applications of technologies due to their diverse and numerous uses across internal and external activities. Lastly, but indeed a crucial element, the researchers have considered the fact that technology and access to internet are not available in the nowadays to every individual at the global level, this aspect poses an inner challenge to fully evaluate the concrete use of new technologies for international cooperation, especially in the relation with low-income countries.

Preliminary Results of the Mapping

After the first phase of the project, made by desk research and interviews this section highlights the main findings of the use or not use of technologies by CSOs, related to the development cooperation sector. For a more logical description, we have chosen to define the findings by dividing the section in a sort of hypothetical debate between two different visions: those who are using the emerging technologies and those who are not. The division is purely theoretical given the fact that each CSO has a complex and articulated vision, depending on the different ideas and projects, currently implemented. Nevertheless, the researchers are certain that this division helps understand the importance of the different arguments around the relevant issue.

Who is using the technologies: why?

For a few months we had the chance to extend our research and have the opportunity to interviewed some of the main Italian CSOs in order to better understand the level of the use of technologies in their development projects, and also at the level of their daily work.

The idea to use a form of new technology, including AI, is attractive for many CSOs that are interested in increasing their capacity and efficiency to achieve a sustainable development and to address the different goals of the SDG Agenda 2030³¹. The perception is that while the challenges and crisis have augmented in the last years, the response from the civil society needs to be more rapid and precise in understanding the different needs of the beneficiaries. AI, for instance, with the possibility to manage large sets of data, is considered a possible tool for several types of activities: needs assessment, a better programming, agile response to humanitarian crisis, enhancing disaster risk reduction, better mapping of the vulnerabilities. As already tried in different situations, AI could “process vast amounts of data rapidly, integrating this with local knowledge to produce maps that are not only detailed but also contextually relevant. This approach revolutionises how information is gathered and used in planning and response, making it a vital tool in disaster preparedness and response”³². AI is also considered a crucial tool in predicting the needs of beneficiaries regarding food security trends, climate-related disasters, migration flows, and other current challenges. In several projects subject to interviews, specific software or other applications have been predominantly used to broaden the impact of activities across various territories and enhance long-term sustainability. However, only a limited number of CSOs' projects are utilizing AI tools. In fact, beside the great interest, even the allure of AI, it is clear that to use AI in practice requires certain elements: AI “is a large multi-faceted technology that cannot live alone, but is enabled and empowered by other important information technologies such as IoT (distributed embedded devices and sensors), computing infrastructures (cloud, HPC), new communication protocols (5G), new IT paradigms such as blockchain and future solutions, such as quantum computing.”³³ For example, within the education sector, AI is tested and used by some organisations to support education for children. Save the Children has implemented a generative AI tool intended to help children but also adults (teachers, child protection professionals and public officials) to respond effectively in emergencies or in a normal scenario. It's called “Ask Save the Children” and uses machine learning “to analyse vast amounts of child protection resources and generate immediate, context-specific advice for those who need it, whenever they need it”³⁴. This use of AI is still in the initial phases and it is frequently combined with use of other digital tools that are implemented to facilitate the accessibility of certain services, such as education. For instance, the leveraging the widespread use of telephones in low-income countries has been incorporated into several projects to disseminate education and training. In some cases, AI tools are involved to make content more accessible through online platforms. CSOs involved in these efforts were mindful of tangible obstacles like the lack of devices, internet access, or electricity, which necessitated careful selection of beneficiaries. In other cases, digital tools – without the use of AI - were utilized to customize activities to fit the local context or to improve the accessibility of educational content for vulnerable audiences, such as individuals who are deaf or blind.

The notion is that AI itself is not the sole challenging element that CSOs are considering, or at least, it is not the only one. This implies that organisations are encountering a critical moment where the integration of specific technologies, driven by external or internal factors, is necessary, or at the very least, is seen as potentially beneficial to their activities. Depending on the sector of their activities, the challenges vary. For instance, in the health sector, implementing specific software aimed at improving healthcare in hospitals faced obstacles due to the long-term maintenance requirements, such as

³¹ CISV, AIA, Università Aldo Moro, ONG 2,0, *L'Intelligenza artificiale per lo sviluppo sostenibile*, MAECI, 2021.

³² See Monica Nthiga (HOT)'s intervention for VOICE, *Artificial intelligence: disruption or opportunity for humanitarian aid?*, Brussels, 20 November 2023.

³³ Comitato di Gestione del CINI Lab AIIS, *AI for future Italy*, CINI, 2020, p. 14.

³⁴ Save the Children, *Harnessing artificial intelligence for child protection: an ethical roadmap?*, 2024, February.

ensuring adequate electricity and resources to sustain optimal functionality. Alternatively, some CSOs have explored the dissemination of digital collaboration platforms among doctors from donor to recipient countries, facilitating telemedicine.

In healthcare, various ideas leveraging technology have been realized. For example, an AI-powered application reinforced the importance of vaccination through automated calls to beneficiaries, while another application in Italy supported pregnant women, particularly migrants, with their specific needs³⁵. Additionally, applications like ThinkMD for medical support, utilizing AI components, are at early stages but hold promise for assisting in project impact, saving time, and enhancing efficiency³⁶.

Although many of these systems do not currently utilize AI, they encounter challenges related to internet accessibility, privacy, and the secure sharing of personal data. These technologies are deemed critical in combating social injustice and discrimination but require concerted efforts to bridge the digital divide, ensuring equitable access to technology for all, including elderly individuals. In the labour sector, digital inclusion of low-income workers poses a significant challenge, particularly in regions with limited internet access. Developing open-source and offline-accessible tools becomes imperative in such contexts. Regarding internet access challenges, during interviews, the Research Team discovered MOPA, a platform in Mozambique facilitating trash registration and solutions for waste reduction. Due to internet limitations, citizens transmit alerts via SMS, contributing to environmental improvement and enhancing safety in urban areas³⁷. CSOs focused on vulnerable groups, such as children and young people, are cautious about technology risks, including AI. While these tools can raise awareness among children about their workings, some interviewees prefer to test AI solutions in specific cases before widespread deployment to ensure safety and security.

Other organisations believe that ICT, digital tools, and AI solutions can enhance understanding of needs and facilitate better integration of third-country nationals, among other benefits. According to these experts, “recent advancements in information and communication technology (ICT) and services digitization represent an opportunity to enable (im)migrants to better grasp the complexity of the context in which they are inserted”³⁸, several projects funded by the EU are mapped in this paper.

However, a common use among CSOs is based in the daily work with international partners and with the needs related to communication. Due to their work in different regions in Africa, Asia, and Latin America, all of the CSOs are using tools provided by the big tech (Google and Microsoft majorly) to share documents, to work remotely, or different application to keep the interaction with the participants and supporting the colleagues that are working on the field (even WhatsApp for instance). A lot of them are using at the basic level AI technologies such as ChatGPT for translating and interpreting, supporting in this way the connection and work with different people in different countries. Another aspect, brought out by large organisations, especially those who benefit from an international network, is the use of specific software or other similar tools to monitor and evaluate in a more comprehensive manner all their activities, in different countries and with several projects going on at the same time. For instance, one of them has built a central program for coordinating and managing its own projects, taking data from its data base from 20 years ago.

From the interviews, it can be noticed an interest from the NGOs in using the emerging technologies and find out more about the use of AI and its implications in the development cooperation projects. A lot of the CSOs are internally debating how to gradually include digital tools in their projects, some of them organising for instance working groups and basic training about AI, to have a better awareness

³⁵ <https://www.ufficiostampa.provincia.tn.it/Comunicati/Nasce-MuM-Up-per-essere-piu-vicini-alle-mamme-da-smartphone>

³⁶ <https://savethechildreninvestments.org.au/ventures/thinkmd/>

³⁷ <https://www.mopa.co.mz/en/#services>

³⁸ M. Karimi , G. Costa, G. Concilio, *Innovative ICT Based Solutions and (Im)migrants Integration*, MDPI, 2022; M. Karimi , G. Costa, G. Concilio, M. Vitaller del Olmo, O. Kehagia, *Co-Designing with Migrants' Easier Access to Public Services: A Technological Perspective*, MDPI, 2022.

about these topics, but not ready yet to apply the respective concepts in their projects. As the technology is still in a phase of insecurities and challenges at some levels, the NGOs express their interest in being more supported and trained about the use and applications of AI/new technologies.

Who is not using the technologies: why?

During interviews conducted with several CSOs of various sizes, it was found that only a small number of them do not integrate some form of technology into their development cooperation projects. However, the underlying reasons for this choice are significant and represent complex challenges to be addressed. Some CSOs have limited use of technology in general, often confined to internal communication or essential functions. In addition to these applications, many continue to rely on manual processes. This approach is usually necessary because of the characteristics of the areas in which they operate, with a limited availability of Internet connections combined with a limited capacity of local governments to invest in technology. According to ITU³⁹, the UN Agency for Information and Communication Technology, approximately 67% of the world's population, or 5.36 billion people, is online: "Internet use remains tightly linked to the level of a country's development. In 2020, nine out of ten people in high-income countries used the Internet. In 2023, the share edged up to 93 per cent, getting closer to universality. In low-income countries, 27 per cent of the population uses the Internet, up from 24 per cent in 2022. This 66-percentage point gap reflects the width of the digital divide between high-income and low-income countries and regions." The UN Agency has confirmed that getting online is an expensive matter that is not yet affordable for many in low- and lower-middle-income economies⁴⁰. The difficulty associated with a poor Internet connection is a common problem for many NGOs, regardless of size. The availability of electricity is another element, too. The global electricity access rate was calculated at 91% in 2020 by the UN, defining 733 million persons in the world without electricity, mostly in rural areas of sub-Saharan Africa⁴¹.

During the interviews, several CSOs pointed out the problem of low uptake of digital skills, especially related to AI and the so-called disruptive technologies. Despite rapid change and an increasingly digitised world, some CSOs lack the experience needed to adopt such technologies on the ground. The combination of limited internet connectivity and low diffusion of digital skills in developing countries poses significant challenges to implementing and delivering projects that include using cutting-edge technologies.

According to the interviews, limited financial resources are one of the main obstacles many organisations face when adopting and implementing new technologies and AI. This financial constraint can have several implications and challenges. Even if an organisation wishes to develop in-house technology solutions to meet its specific needs, lack of financial resources can hinder the ability to hire or train qualified personnel to implement such projects. Without adequate financial resources, organisations may be forced to turn to outside vendors to develop customised solutions, further increasing costs and associated challenges. A common concern for small CSOs is precisely limited financial resources, which could lead to the risk of inequalities in access to digital innovation. This digital divide can have on the long-term negative consequences on the equity and effectiveness of services provided, exacerbating differences in the capacity of the small organisations to take advantage of the possibilities related to the use of new tools to improve their own work. It also adds to the fear of an increase in the internal competition among the CSOs, a mechanism that will favour large multi-purpose CSOs, especially with an international network to support them, best equipped

³⁹ ITU, *Facts and Figures 2023*, UN, 2023.

⁴⁰ ITU, *Global potential of Internet remains largely untapped, says UN agency for digital technology*, UN, 2022.

⁴¹ UN, *The Sustainable Development Goals Report 2022*, UN, 2022, July, p. 41.

to absorb the cost of new programs and procedures⁴². Even if an organisation succeeds in overcoming initial challenges and adopting new technologies and AI, the ongoing maintenance and updating of these solutions may require ongoing financial resources over time that go beyond the project's logical structure. Lack of sufficient funds for maintenance and upgrades can undermine the long-term sustainability of technology initiatives, making it challenging to ensure that they continue to provide meaningful benefits over time. In some countries where CSOs operate, there is a growing demand for innovation, driven by the emerging needs of local communities and the ever-changing challenges they face. This demand may arise from the necessity to address new social, environmental, or economic issues or from the opportunity to enhance the effectiveness of existing interventions. However, despite this increasing demand for innovation, CSOs often encounter a significant obstacle deriving from the project logic behind the realization of development cooperation. In addition, this constraint can be attributed to other factors, including tight deadlines imposed by funders or partners, short funding cycles, or the urgent need to respond to humanitarian emergencies or local crises.

While technologies could potentially expedite response times, organisations recognise the importance of collaboration with the private sector, especially in the initial stages. It is widely acknowledged that new technologies, such as AI, have garnered significant interest and investment from various companies over the past few decades. This engagement between the private and non-profit sectors has been progressively growing, facilitated by the former's access to capital and technology⁴³. The relationship with the private sector is at the centre, not only of the global and European debates around the need to regulate AI in an ethical and inclusive way⁴⁴, but more specifically on the civil society's debate on the respect of human rights when using these technologies. In addition, the process of including technologies in the development cooperation sector, such as AI, implies a great use of datafication of several personal and sensible information of people that in other sectors has already been the object of important discussion and criticism among several experts and CSOs. From migration⁴⁵ to humanitarian aid,⁴⁶ from social services to border control⁴⁷ in many areas, the use of technologies has brought CSOs to ask for more transparency and accountability by public authorities and the private sector involved in the testing and spreading of this innovation.

Furthermore, the relationship between these new technologies, created mainly in the high-income countries by a restricted group of companies, and their use in low and middle-income countries has led many aid experts to carefully evaluate the implications of a possible unbalanced equilibrium between the providers and the users. Technologies could prove themselves not inclusive, even just in terms of their non-adaptability to the local context of a specific country, the bias, and the inner discrimination in their structure and categories created in another part of the world.

Furthermore, the lack of awareness by the users, transparency in the use of personal data from several entities and for different purposes could have the effect of spreading injustices and violations of human rights. As analysed by several authors, in every area of human life, the uncaredful use of technologies, such as digital platforms, social networks, telephones, applications and different forms of automated decision-making, could lead not to an improvement of human life but to a reaffirmation

⁴² See for a broader perspective on privatization: M. Abramovitz, J. Zelnick, Privatization in the Human Services: Implications for Direct Practice, in *Clinical Social Work Journal*, v. 43, June 2015.

⁴³ Y. Hasenfeld, E. E. Garrow, Nonprofit human-service organisations, social rights, and advocacy in a neoliberal welfare state, in *Social Service Review*, 86(2), 2012, pp. 295–322.

⁴⁴ Forus International, Manifesto for Ethical AI.

⁴⁵ L. Carrer, R. Coluccini, *Tecnologie per il controllo delle frontiere in Italia identificazione, riconoscimento facciale e finanziamenti europei*, HERMES, 2023.

⁴⁶ G. Coppi, *Mapping humanitarian tech. Exposing protection gaps in digital transformation programmes*, 2024, February.

⁴⁷ EuroMed Rights, *The (human) cost of Artificial Intelligence and Surveillance technology in migration*, 2023, July.

of social discrimination and abuses⁴⁸. Frequently, these new technologies, and of course, AI in this sense has a major role, are used to support quick and efficient decision-making in emergency situations of great need among vulnerable people. However, as pointed out by UN Agencies such as UNESCO, new technologies and clearly AI could support different forms of bias. In UNESCO research related to Large Language Models (LLMs), such as Open AI's GPT-2, Chat GPT, Meta's Llama 2, mostly open-source foundational models, these tools were able to reinforce gender discriminations, frequently generating sexist and misogynistic contents⁴⁹. Thus, the ethical dilemma of using AI, for instance, is at the heart of CSOs when thinking about the possibilities of "experimenting with new, largely untested technologies in volatile environments where the stakes are high and include life-and-death decisions"⁵⁰. The same importance is the issue of the digital labour market, related to the training and improvement of AI, indeed a matter concerning the North-South relationship. In fact, not only the problem of true ownership by the Global South is critical when we think about an emerging technology due to the economic factors enlightened above, but also the implementation of them is problematic. When thinking about datafication, CSOs are also concerned by the effects on the labour market: the need for individuals to work for the digital platforms and the fact that frequently, these workers come from low-income countries. As defined by other experts: "Automation is not going to happen without the contribution of underpaid, micro paid, and unpaid workers. This means that our systems will never be "fully" automated. They will always require some level of human intervention."⁵¹

From the interviews conducted, it can be observed that the number of Italian NGOs not using new technologies is relatively small. However, regardless of the adoption or non-adoption of such technologies, the problems and obstacles encountered for practical use in development cooperation are strikingly similar among the different testimonies:

- Limited access to internet, devices, or electricity in the area of intervention.
- Limited financial resources: Adoption of new technologies has a cost and requires investments in hardware, software, and staff training.
- Need for more transparency, accountability, and ownership as a core element in the relationship between Global North and Global South
- Fear of lacking inclusiveness or improving discriminations among the beneficiaries
- Lack of technical knowledge: Some CSOs may not have trained human resources with the technical skills needed
- Preference for traditional approaches.
- Normative barriers in a specific country.
- Sustainability: Implementing and maintaining new technologies may require significant upfront investment and ongoing maintenance, upgrading, and staff training costs. The environmental impact is also a concern.
- Human rights: The implementation of new technologies must consider and respect human rights, ensuring that the use of technology does not lead to violations of privacy, freedom of expression, and other fundamental rights.

⁴⁸ G. Iazzolino, N. Stremmlau, AI for social good and the corporate capture of global development, in *Information Technology for Development*, 15 Feb 2024, p. 1-18

⁴⁹ IRC AI, *Challenging Systematic Prejudices: an investigation into Gender Bias in LLMs*, UNESCO, 2024.

⁵⁰ See Sarah Spencer intervention in VOICE, *Artificial intelligence: disruption or opportunity for humanitarian aid?*, Bruxelles, 20 November 2023.

⁵¹ A. A. Casilli, Waiting for robots: the ever-elusive myth of automation and the global exploitation of digital labor, in *Sociologias*, Porto Alegre, ano 23, n. 57, mai-ago 2021, p. 129

Use of Technologies per Areas of Intervention

In the following sector the Research Team will list and describe the ongoing activities implemented by CSOs in the field of new technologies according to the criteria mentioned in the methodology mentioned above. The structure of the paragraph follows the different areas of interest that each project is supporting with an initial description of some internal practices organised within a specific organisation.

Internal management

Several CSOs are currently in the process of understanding how to use new and emerging technologies in their own activities, especially the ones related to AI and other disruptive tools. During the interviews, the shared idea was that after the pandemic each organisation started a process – each one in a different way -of digitalization. Many experts agreed that the difficult times of the COVID-19 implied the necessity for the organisation to understand how to maintain their internal work and their projects too. The use of software for online meeting, applications to share documents, online platform to work with international partners has increased since 2020 and become a common way to concretely and daily implement the activities. Beside this use of several instruments provided by the so-called GAFAM, the five largest tech companies (Google, Apple, Facebook, Amazon, Microsoft), CSOs are also understanding how to include, or not, the use of AI derived tools. Some of them have organised internal groups to discuss, within the same organisation, the issue. Others have already defined their interest in this new technology such as for instance Greenpeace Italy. This organisation, thanks also to the international network where it pertains to, is working on an official document, a sort of guidelines for using AI in their activities. In addition, Greenpeace Italy after revolutionising its internal organisation from a digital perspective, has incorporated the use of financial, HR and Electronic Customer Relationship Management (eCRM) platforms. The latter refers to the technology platform adopted by companies to oversee interactions with customers through various digital channels, including e-mail, social media, websites, and mobile applications.

Other organisations decided to use some sort of technology to monitor and evaluate more efficiently their different activities, related to several projects all over the world. For instance, Soleterre Onlus has developed an internal monitoring and evaluation system to assess the effectiveness of its strategies. Recently, these strategies have been formalised through an Internal Logical Framework, but the process is still largely manual. This ongoing process is also supported by the collaboration with small/medium companies, providing precise services to tackle the digital needs. In this case, different companies have supported the different needs of the CSOs who have required the use of IT tools to implement a platform for data collection and analysis. For instance, DINO software allows the creation of defined forms based on the existing data structure, facilitating data collection through webapps or mobile devices. Furthermore, other organisations utilise a centralised program to streamline the coordination and management of their projects, drawing upon data spanning several decades stored in their database, such as COOPI. Lastly, the Data Hub project initiative, by Save the Children, stems from the need to revolutionise the method of disseminating data and findings presented in the annual research report concerning challenges faced by children and adolescents, which annually leads to the creation of the Atlas of Childhood at Risk. The concept of a "Data Hub" takes the form of the creation of a virtual space that is always up-to-date, where data from the Atlas and contributions provided by institutions, research centres and other sources can be accessed interactively through an Operational Dashboard on ArcGIS Online. Rigorous analysis and processing have transformed the data into a versatile "feature layer," ensuring their adaptability and availability in multiple downloadable formats for users of the Data Hub. This platform empowers users to

dynamically map, interrogate, and download data regarding the status of childhood and adolescence both within Italy and across the globe.⁵²

Health

Project	Country	Partners	Technologies involved	Description	SDGs involved
Open Hospital 2004-ongoing	Italy, Greece, Afghanistan, Nepal, Burma, Ethiopia, Sudan, South Sudan, Kenya, Tanzania, Angola, Democratic Republic of Congo, Madagascar	Informatiici senza frontiere	Software open source, EMR/HIS software platform	Open Hospital is a free and open-source software developed to provide a sustainable tool for managing hospitals, health centres and facilities. With Open Hospital you can keep track of patient data, visits, admissions, medications, and laboratory results to support the daily activities of hospital staff.	3 – Good health and well being
Ecografie Mobili 2021-2022	Kenya	Amici del Mondo – World friends Onlus, Health-E-Net	Mobile ultrasound system, Application	Creation of a mobile ultrasound system made possible by 'combined use of portable ultrasound machines and a specially developed ultrasound image sharing app.	3 – Good health and well being
Quality data for quality services. 2021-2022	Uganda (Gulu)	Fondazione Piero e Lucille Corti Onlus, St. Mary's hospital lacor	Software, Database Management Systems	The project aims to improve the collection, aggregation, and analysis of data, related to Results-Based Financing (RBF) projects underway at St. Mary's Hospital Lacor, through a digital system.	3 – Good health and well being
Improving health services at St. Mary's Hospital Lacor through e-learning 2022-2023	Uganda (Gulu)	Fondazione Piero e Lucille Corti Onlus, Tech Care for All; St. Mary's Hospital Lacor; Techbridge	Site on the Medical Learning Hub (MLH), Development, (also offline version), Monitoring and evaluation systems	Creation of the St. Mary's Hospital site on the Medical Learning Hub (MLH), Development, testing and implementation of offline version, with the goal of improving the quality of health care by improving the health skills and knowledge of hospital staff and students.	3 – Good health and well being
Introdurre modelli educativi innovativi per il personale	Kenya (Tharaka and Meru)	Comunità di S. Egidio – ACAP, Ilara Health; DREAM	Platform, E-learning, social media	The aim is to meet the challenge of adequate training through an individualised training program, including online courses, access to a database, and the creation of	3 – Good health and well being

⁵² <https://gisaction.com/portfolio-items/data-hub-save-the-children/>

sanitario in Kenya 2022-2023		Kenya Trust; NeST Group AFRICA Ltd		thematic discussion forums on: hypertension, diabetes, and cervical cancer. Create new content for Ilara digital platform and Awareness-raising activities both through community health workers and through social media, local newspapers, and radio appearances.	
BISIL – Better Innovative Solutions and Informatic Leadership 2022-2023	Kenya	COL'OR NGO A, AfyaRekod; NeST Group AFRICA Ltd; Ursuline Sisters of Mary Immaculate	Data collection software	facilitate the collection of clinical data in digital format-through the use of easy-to-access technologies-in remote and rural Kenyan settings, in a systematic and structured manner, in order to reconstruct patients' medical histories and, at the same time, return aggregate data to enable system-wide analysis at the territorial and governmental levels.	3 – Good health and well being
Miglioramento della gestione dei servizi sanitari ospedalieri basati sulle evidenze in Uganda 2022-2023	Uganda (Oyam)	Fondazione Opera San Francesco Saverio – Medici con l'Africa CUAMM; Global Auto Systems Limited Uganda; The Innovation Village	Platform	the project aims to support the creation of a hospital management platform that can collect and organise patients' clinical and administrative data in a systematic and structured manner. NextGenHIMs platform.	3 – Good health and well being
Rafforzamento del sistema degli istituti di formazione del personale sanitario e supporto allo sviluppo della telemedicina 2023 - ongoing	Mozambique (Beira, Maputo)	AISPO, Medici con l'Africa (CUAMM), ACAP – S. Egidio	Platform, Telemedicine	A project that aims for a new telemedicine format, no longer Europe-to-Africa but Africa-to-Africa. By creating new software, inspired by GHtelemedicine, that forsinases teleconsultation and telemedicine operations, specifically for the local community.	3 – Good health and well being

Education

Project	Country	Partners	Technologies involved	Description	SDGs involved
ES.Maroc.Org 2018 – ongoing	Morocco (Rabat/Salé, Casablanca, Tangeri,	Soletterre, Fondazione PUNTO SUD, Associazione CMERES,	ZOOM Pro, Dropbox Pro, E-learning	An e-learning school aimed at local associations. The overall goal is to innovate and improve the local association training sector by scaling up a multi-country e-learning school that offers courses	8 – Decent work and Economic growth 10 – Reduced inequalities

	Beni Mellal)	Associazioni CEMS, Associazione EsSalam		aimed at strengthening soft skills, such as management skills, online and offline communication skills, and public relations skills.	17 – Partnerships for the goals
Fostering Communication and Cooperation between Non-State Actors (NSA) 2013 - 2017	Eswatini	PUNTO SUD, COSPE	Monitoring and Evaluation Systems, Web platform, E-learning, Google form, Google drive.	Education of Swazilan civil society organisations to improve their impact and effectiveness, through increasing the advocacy and communication effectiveness of civil society organisations (CSOs) and the effectiveness their capacities and skills in accessing and managing resources and data.	4 – Quality education 10 – Reduced inequalities 16 – Peace, Justice and strong institutions 17 – Partnerships for the goals
Piattaforma della società civile per l'inclusione sociale 2020-2023	Eswatini	PUNTO SUD, Coordination Assembly of NGOs (CANGO)	Platform, Monitoring System	Creation of a multi-stakeholder platform for social inclusion promoted by civil society organisations, Monitoring of activities carried out by the platform, Support for the creation and implementation of a financial support scheme	4 – Quality education 10 – Reduced inequalities 16 – Peace, Justice and strong institutions 17 – Partnerships for the goals
Odiare non è uno sport 2020	Italy	Informativi senza frontiere, DP, CeLIM, CISV, COMI, COPE, LVIA, Progetto Mondo MLAL, federazione sportiva CSEN, le agenzie formative FormaAzion e, SIT e SAA-School of management	Software, Database	Sport seems to have become, more and more, a double-edged sword. On the one hand, an extraordinary place of social inclusion and aggregation; on the other, a furnace of hate speech and gestures, which the digital dimension empowers and spreads exponentially. implementation of software to prevent hate speech and violence on social networks -database to teach how to prevent and deal with these phenomena	3 – Good health and well being 4 – Quality education 10 – Reduced inequalities
TECH4SEE 2017 - ongoing	Mozambique, Beira	Informativi senza frontiere	Virtual library, Windows and the Nvda system (non-visual desktop access)	The project was born with the desire to offer the young guests of the I.D.V. "Center for the Blind" in Beira (Mozambique) greater access to schooling and more job opportunities. Improve tools and skills for learning so that they can build an	3 – Good health and well being 4 – Quality education 10 – Reduced inequalities

				independent, complete and obstacle-free course of study.	
Limpamos Moçambique” 2019-2023	Mozambique, Beira and Nampula	PROGETTO MONDO, Centro Trasferimento Tecnologico della Fondazione Edmund Mach (TN), Dipartimento di Ingegneria Civile, Ambientale e Meccanica – UniTN MLAL Trentino Dolomiti Energia Holding spa	Platform	Education and promotion of the right of the citizens of Beira and Nampula to live in a healthy environment, supporting the vision of a prosperous, safe, healthy, entrepreneurial, attractive and beautiful city. Use of Platform MOPA to register the trash and find solutions to reduce it.	11 – Sustainable cities and communities 13 – climate action
Teachers Outreach 2023 ongoing	Brazil, Kenya, Rep. Dom. of Congo, Nepal, Italy	New Life for Children, fondazione Patrizio Poletti	Machine Learning Application	Using Synthesia (avatars teaching teachers) with the aim to support schools and educational projects located in low- and middle-income countries in improving their educational quality standards. provides for the creation of the essential conditions for child literacy and the abatement of school dropout, cultivating personal skills, and promoting the well-being of girls, boys, and boys.	4 – Quality education 10 – Reduced inequalities
1Planet4All: Empowering youth, living EU values, tackling climate change 2020-2023	UE	CESVI, PUNTO SUD, People in Need, Concern Worldwide, ACTED, Centre for Citizenship Education, Welthunger Hilfe, VIDA, Mondo, Suedwind, Ayuda en accion, Convergences, 11.11.11	Platform, E-learning	“Educazionedigitale.it” Platform used for online courses. Aimed at raising awareness and engaging young Europeans in 12 EU member states on climate change to achieve the Sustainable Development Goals and inspire their active engagement in concrete actions for safe, inclusive and "climate smart" communities. Educazionedigitale.it	2 – zero hunger 11 – Sustainable cities and communities 12 – responsible consumption and production 13 – climate action 15 – life on land
PICAPS 2018-2020	Burkina Faso	CAI, Gnucoop	Application, Deep Learning	“Chees2School” is an application which is used to Record students' school attendance with a simple photo or short video of the class.	4 – Quality education

				This is the development of an application that would allow counting of children and gender identification within a classroom, through the use of an inexpensive smartphone camera that can work even in the absence of an internet connection. Facial recognition is an artificial intelligence technique used in biometrics to identify or verify a person's identity from one or more images.	
InViis Lab 2023 - ongoing	Burkina Faso	Fondazione Aurora, InViis	Digital fabrication lab	InViis Lab is a MakerSpace that supports students, entrepreneurs and local companies in the technology and digital sector by providing state-of-the-art equipment to transform innovative ideas into prototypes to be presented to financiers. It also offers research and development services and vocational training courses to help young African innovators enter the job market.	3 – Good health and well being 8 – Decent work and Economic growth 10 – Reduced inequalities

Agriculture

Project	Country	Partners	Technologies involved	Description	SDGs involved
Agriculture 2.0 - promoting a hi-tech approach to agricultural development in Zimbabwe 2021-2023	Zimbabwe (Beitbridge, Bulilima, Mwenzei e Makoni district)	CESVI, iFarm Zimbabwe	Platform	“iFARM” platform is aimed at facilitating people-to-people dialogue, information sharing on market, pest forecasting, training on products, agronomic calendar, and possible crop-specific risks.	2 – zero hunger 8 – decent work and economic growth 12 – responsible consumption and production 13 – climate action
DIGIT-ALF - Digitization for Breeding in the Ferlo. 2021-2022	Senegal (Ferlo, Saint-Louis, Louga and Matam regions.)	CISV, ONG 2.0, ProSE	Application	The overall goal is to increase the contribution of the livestock sector to the food security of agro-pastoral communities through the dissemination of innovative technological service. “Hatsi Jari” is a digital tool aimed at ensuring the sustainability of animal-destined food stocks in order to increase the availability and accessibility of animal-destined consumer products for the population.	2 – zero hunger 17 – Partnerships for the goals

Una tecnologia innovativa al servizio di un modello agricolo sostenibile in Burkina Faso 2021-2022	Burkina faso (Loumbila municipality, Oubritenga province)	Fondazione ACRA, WiForAgri Primo Principio; Burkina Business Incubator	Application, Software	This project aims to offer the Burkinabe farmer a new farming strategy, a real challenge in a context based on traditional knowledge, set on innovative WiForAgri di Primo Principio's solution. It is used WiForAgri technology, software services and Training of personnel assigned to data collection and monitoring	12 – responsible consumption and production
CLIMA – CLimate Improved Model for Agriculture	Mozambique (Pebane and Mocubela districts, Zambezia province)	COSV, Dipartimento di Biologia Ambientale – Sapienza Università di Roma	Telephone alert system, Database, Predictive analytics	It aims to strengthen a previously developed model by adapting it to the rural reality of the Mozambican province of Zambezia with a dual functionality: to create a database of weather data and to increase the resilience of farmers in the target districts to extreme weather phenomena. Creation of a telephone alert system, Creation of a database for micro-insurance system activation, Installation of weather stations and coaching of 10 district service officers.	1 – no poverty 2 – zero hunger 13 – climate action 15 – life on land 17 – Partnerships for the goals
Innovative solutions for pig tracing 2021-2022	Kenya	Associazione Mani Tese, GenePlus Breeders Kenya Ltd; Sote Hub; Sote Information and Communication Technology Limited	automatic identification technology	Technology is introduced to monitor animal health and welfare based mainly, but not exclusively, on a solar ear tag (with RFID technology) to be attached to the individual pig that is able to collect a range of data that allows for better farm management. Ear tags allow for the unique identification of each pig on the farm, thus simplifying farm management and ensuring the origin of the meat to those who buy it.	12 – responsible consumption and production
Nutrire la città 2022 - ongoing	Burkina Faso (Ouagadougou)	Associazione Mani Tese, ACRA Gnucoop Etifor ITAL Watinoma e Association Watinoma Ke du Burkinabé Mairie di Ouagadougou	Application, E-commerce system	The project Feeding the City - Urban Agriculture and Healthy and Local Food Production for the Development of a Sustainable and Inclusive Agribusiness System, focuses on the central region and the capital city of Ouagadougou, where there is a need to address the population explosion and consequent food vulnerability. Technology is used for the creation of an e-commerce system to promote the marketing of local products and support for producers	2 – zero hunger 17 – Partnerships for the goals
Senegal Circolare	Senegal	Associazione Internazion	Application	“SenegApp Circulaire” is an app to collect and network circular economy best practices in the	1 – no poverty

		ale Volontari Laici (LVIA), Mercato Circolare Srl; I3P		Dakar and Thiès regions of Senegal.	12 – responsible consumption and production
Informed decision-making processes 2021 - 2022	Kenya	Associazione ActionAid internazionale Italia, TriM, ActionAid Kenya, I3P	Platform, Dashboard, E-learning	The project aims to support data collection in a systematic way and inform the decision-making of pastoral communities affected by climate shock and food insecurity, strengthening their adaptive capacities. Use of 3Map system (platform to collect, registration, analysis e sharing o data), dashboard for the agribusiness sector and Distance learning on the use of the 3Map system	12 – responsible consumption and production

Migration

Project	Country	Partners	Technologies involved	Description	SDGs involved
“Studiare Migrando” (2018)	Italy	ItaStra, CNR, UNICEF	Application, Mobile phones, E-learning	“Studiare Migrando” is an e-learning platform aimed at young migrants and refugees preparing for the final exam of the first cycle of education at schools or Adult Education Centers (CPIA).	4 – Quality education
Akelius platform (2019-on going)	Several EU countries (Italy included)	Akelius, UNICEF, ISMU	E-learning	A project for the dissemination and use of the Akelius platform for teaching Italian as a second language in primary and lower secondary schools, also as a tool to support Ukrainian minors.	4 – Quality education
EasyRights: Immigrate Services (2020-2023)	Austria, Denmark, Greece, Italy, Norway, Spain and UK.	EU Consortium with Italian partners	AI, application, text-based bot	The Agent is a text-based bot designed to help (im)migrants more easily access crucial services by cutting through public services bureaucracy to only extract the exact information and forms they need.	10.7 - Reduce inequalities (related to migration)
ITFlows (Migration Flow Prediction) (2020-2023)	EU	EU Consortium with Italian partners	The Small-Scale Model aims to predict the distribution of TCNs. The Large-Scale Model produces monthly predictions of asylum applications in the EU.	The purpose is to provide predictions and management solutions of migration flows in the EU in the phases of reception, relocation, settlement and integration of migration, according to a wide range of human factors and using multiple sources of information. These insights will be provided by an evidence-based ICT enabled solution (the EUMigraTool) and precise models.	17 - Partnership

MICADO (2020-2023)	Germany, Belgium, Italy, Spain and Austria	EU Consortium with Italian partners	Chatbot language interfaces, automatic translation services	ICT solutions to improve integration. Key technical innovations are chatbot language interfaces and automatic translation services for the migrants' cockpit, which facilitate access to integration services, communication with authorities, and data acquisition.	10.7 - Reduce inequalities (related to migration)
MIICT	EU	EU Consortium with Italian partners		To co-create improved ICT- enabled services with migrants, refugees, public sector services, NGOs (Non-Governmental- Organisations) and other interest group.	10.7 - Reduce inequalities (related to migration)
NADINE	EU	EU Consortium with Italian partners	Machine learning application, data banks, platform	Improving the use of big data and artificial intelligence to support migrant integration. The focus is to help TCNs in finding jobs.	10.7 - Reduce inequalities (related to migration)
REBUILD	EU	EU Consortium with Italian partners	Chatbot, Application	The main objective is to improve migrants and refugees' integration processes in Europe through the development of ICT-based solutions, aiming at enhancing the efficiency level in local authorities' service provision and the immigrants' quality of life.	10.7 - Reduce inequalities (related to migration)

SWOT Analysis

To conclude this report, a SWOT analysis will show the strengths, weaknesses, opportunities, and threats of using the new technologies/AI in development cooperation and the impact of these uses on the human rights. The goal is to assess whether these technologies can be beneficial and to identify potential challenges for human rights, that are explored in the final policy brief, based on the four workshops held from February to June 2024.

Strengths

AI and new technologies offer several strengths for development cooperation. They can significantly improve efficiency and productivity by automating routine tasks, thereby freeing up human resources for more complex activities. These technologies operate with remarkable speed, enabling quicker project implementation and providing consistent outputs without the risk of human error.

From our interviewed, we found out, that AI can assist in data analysis, capable of handling large datasets to identify trends, make predictions, and support decision-making processes. For some experts, this ability could improve the accuracy of interventions and help to forecast trends and potential issues, allowing for proactive measures. By recognising patterns and correlations that might be missed by human analysts, AI could contribute to a deeper understanding of development challenges.

Resource optimisation is another key strength. AI can enhance supply chain management, reduce waste, and ensure the timely delivery of goods. This optimisation ensures that resources are allocated where they are most needed, maximising their impact and potentially reducing operational costs. Additionally, AI fosters innovation, helping to develop creative solutions to complex development issues and accelerating research and development efforts.⁵³

These technologies can significantly enhance accessibility and inclusion, making essential services such as healthcare, education, and legal aid more available to marginalised and remote communities. For example, AI-driven telemedicine could bring medical consultations to underserved areas, improving their right to health. Additionally, AI tools for translation and accessibility can help non-native speakers and individuals with disabilities access crucial information and services, promoting equal opportunities, as mentioned by some of the interviewed. AI could facilitate greater citizen participation in governance and decision-making processes, as the AI-driven platforms are able to enable community members to voice their concerns and provide feedback on public services, promoting democratic participation and empowerment.⁵⁴ Personalised educational tools and resources powered by AI improve literacy and knowledge about rights, empowering individuals to advocate for themselves.

The capability of AI solutions is also something to take into consideration. These technologies can be deployed across multiple regions and can be adapted to different contexts and needs, making them versatile tools. Successful implementations can be scaled up to cover larger populations or additional regions, amplifying their benefits.

Weaknesses

However, the use of new technologies has its weaknesses. Access and equity are major concerns, as there is a digital divide between developed and developing regions. Many areas lack the necessary infrastructure, such as internet and electricity, to support the implementation of ICT or AI tools. Ensuring that marginalised groups benefit from these technologies can be challenging, potentially exacerbating existing inequalities.

Bias and discrimination are critical issues. AI systems trained on biased data can produce discriminatory outcomes, reinforcing existing social biases. Ensuring fairness in AI outcomes requires careful design, ongoing monitoring, and adjustments to the algorithms used. Connected to this challenge is also the issue of privacy. The extensive data collection required for AI can infringe on individuals' privacy rights. Ensuring the security of this data is crucial to prevent breaches and misuse. Additionally, obtaining informed consent from individuals whose data is used can be complex, raising ethical issues.⁵⁵ One of the fears, mentioned by many experts, is that these emerging and disruptive tools are often created for different purposes and are used by public authorities to strengthen national security and counteract perceived threats, such as migration in some cases.

Cost is another significant weakness. The initial investment required for developing and implementing AI solutions can be high, and ongoing maintenance costs can be substantial. Budget constraints might limit the ability to invest in AI, especially for smaller projects or organisations, as we discovered from the interviews.

Technical skills shortages are prevalent, particularly in developing regions where there is often a lack of personnel with the necessary expertise to effectively implement and maintain AI systems.

⁵³ M. Tarawneh and F. Alzyoud, "Innovating Project Management: AI Applications for Success Prediction and Resource Optimization", *ResearchGate*, Jun, 2024.

⁵⁴ R. Onufreiciuc, "Citizen participation in and through AI-enabled innovation", *Logos Universality Mentality Education Novelty: Law*, 12(1), 62-74, 2024.

⁵⁵ X. Ferrer, "Bias and Discrimination in AI: A Cross-Disciplinary Perspective", *Technology and Society IEEE*, August 2021, <https://technologyandsociety.org/bias-and-discrimination-in-ai-a-cross-disciplinary-perspective/>

Significant investment is required to train local staff, and long-term efforts are needed to build technical capacity and expertise.

Moreover, there is a lack of awareness among NGOs regarding the opportunities presented by new technologies. Many NGOs operate under a traditional mode of cooperation, which is not fully attuned to the potential benefits of integrating AI and ICT into their operations. This traditional approach limits their ability to innovate and leverage these technologies effectively. Furthermore, there is a notable lack of technical preparation among NGO staff and management. This gap in technical skills and awareness hampers their capacity to adopt and sustain AI solutions, necessitating comprehensive training and a shift in organizational culture to embrace technological advancements.

Opportunities

Despite these weaknesses, there are numerous opportunities. The emerging technology can enhance the monitoring and evaluation of development projects by providing real-time data and feedback, allowing for timely adjustments. This capability improves accountability and supports data-driven decision-making, leading to more effective interventions. There are also opportunities for collaboration and partnerships with tech companies, NGOs, and governments. Such partnerships can bring in expertise, resources, and support for implementing AI solutions on the ground, facilitating broader adoption and impact.⁵⁶

For example, AI could offer powerful tools to address global challenges. In public health, AI can predict disease outbreaks and manage health interventions more effectively.⁵⁷ In education, AI can provide personalised learning experiences, improving outcomes.⁵⁸ For environmental challenges, technology can be used for climate modelling and managing environmental impacts, contributing to sustainable development goals. All these opportunities could have a potential good impact on human rights and sustainable development, spreading a more horizontal cooperation between the so-called Global North and Global South.

Moreover, new technologies can empower local communities by providing access to critical information and services, aiding in capacity building, and creating new economic opportunities and jobs in developing regions. They can also reduce costs and achieve economies of scale, leading to greater economic efficiency in projects, including reduced environmental impact. This cost reduction is significant as it allows more resources to be allocated to other vital areas of development. The use of new technologies can also facilitate greater levels of interaction both between the Global North and Global South and with various stakeholders and communities. This enhanced interaction promotes greater empowerment and collaboration, ensuring that diverse voices are heard and included in the development process.

Additionally, the increased availability of data, coupled with lower costs to collect it, enhances monitoring and impact assessment capabilities. This is particularly crucial for observing phenomena in other countries and rural areas, where data collection has traditionally been challenging. The ability to gather and analyse extensive data sets supports more informed and effective interventions, ultimately leading to better outcomes for development projects.

Threats

However, several threats must be addressed. Ethical concerns are essential, as new technologies can be misused, leading to negative consequences for human rights. For instance, determining

⁵⁶ K. Potter, "Continuous Monitoring and Improvement: Implement continuous monitoring of AI models to detect and correct issues in real-time", *ResearchGate*, February 2024.

⁵⁷ D.B. Olawade, ET AL., "Using artificial intelligence to improve public health: a narrative review", *Front Public Health*. October 2023, 11:1196397. DOI: 10.3389/fpubh.2023.1196397.

⁵⁸ A. Harry, "Role of AI in Education", *Interdisciplinary Journal and Humanity*, vol. 2, March 2023,

accountability for AI decisions can be challenging, and a lack of transparency in AI systems can decrease trust and accountability. A relevant perceived threat among the experts from CSOs is that the use of these technologies requires a large amount of personal data to be shared with big tech companies and public authorities with still relevant concerns about the lack of an effective governance and transparency behind these collaborations.

Resistance to change is another significant threat. Stakeholders may resist AI adoption due to fear of job displacement or scepticism about its benefits. Cultural attitudes towards technology can also impact the acceptance and use of new technologies, and organisational interests can slow down the adoption of new technologies.⁵⁹

Regulatory challenges are complex, as navigating different regulatory requirements across countries can be costly and difficult. Compliance with data protection regulations is essential but can be challenging, and uncertainty in the regulatory environment can hinder AI adoption and innovation.⁶⁰

Security risks are also a major concern. Highly digitalised systems can be targets for cyberattacks, leading to data breaches and operational disruptions. Ensuring robust data protection measures is crucial to safeguard sensitive information and prevent exploitation of system vulnerabilities.⁶¹

Finally, unintended consequences of ICT or AI implementation must be carefully prevented. For instance, automation is perceived as a cause of job losses or labour exploitation in low-income countries, impacting livelihoods and causing social disruption. Rapid technological changes can create resistance, and poorly implemented technological solutions can have adverse effects on communities.

This SWOT analysis highlights the complex landscape of using AI and new technologies in development cooperation and the impact on human rights. While these technologies offer significant strengths and opportunities, there are also notable weaknesses and threats that must be carefully managed. By addressing these challenges, the project can maximise the positive impact of AI on human rights and development outcomes, ensuring that these powerful tools are used ethically and equitably.

⁵⁹ FutureWebAI, “The Challenges of AI Adoption: How to Overcome Resistance to Change”. *Medium*, June 2023, <https://medium.com/@futureaiweb/the-challenges-of-ai-adoption-how-to-overcome-resistance-to-change-ce36f7e272ac>

⁶⁰ C. Nelu, “AI as a Black Box for the Society”, *CeSPI*, March 2024.

⁶¹ R. Kaur, “Artificial intelligence for cybersecurity: Literature review and future research directions”, *Information Fusion*, September 2023.

Annex

A list of the individuals interviewed for the project: We would like to extend our sincere gratitude to those who generously shared their knowledge and reflections with us, inspiring our analysis of this fascinating topic.

Interviews	
Communication & Engagement Director	Greenpeace Italy
Policy Coordinator	FOCSIV ETS
Communications Coordinator	Forus International
Quality and Compliance Manager	Terres des Hommes
EU Policy Analyst	AccessNow
Project Officer	Associazione ASPeM
Professor	Università di Firenze
Advocacy & Policy Coordinator	Privacy Network – Università di Milano
Director	Infocooperazione
Head of Humanitarian Aid and Programmes Development Unit	Action Aid
Programme Manageri	AICS
Volunteer Coordinator	Servizio Civile Internazionale Onlus
Logistics & Procurement Manager	Red Cross International
PhD Candidate & Researcher	Pandora – Università di Bologna
External Relations Manager	Oxfam Italy
Programme Manager	Gnucoop
Senior Researcher	AccessNow
Senior Researcher	Fondazione Bruno Kessler
Digital Governance Coordinator	Forus International
Project Officer	Università di Trento
External Relations Manager	COOPI
Head of Innovation, Digital Technology & Data	Save the Children Italy
President	New Life for Children
Advocacy Coordinator	Forus International
Social Media Manager	Servizio Civile Internazionale Onlus
Head of Press Office	Doctors Without Borders
President	Informatici senza frontiere
Director	GhTelemedicine – DREAM
Head of Project Department	Puntosud
Engineering Geologist	EG Team
Project Coordinator	Università di Trento
Director	Terres des Hommes
Programme Manager	Gnucoop
Director	Amici di Angal Onlus

Institutional Partnership Development Manager	SOS Village dei Bambini
Research Fellow	CEPS
Project Officer	Progetto Mondo
President	ALA Milano Onlus
Monitoring and Evaluation Specialist	SOLETERRE ONLUS