

## Article

# The Impact of AI in Sustainable Development Goal Implementation: A Delphi Study

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**Abstract:** Artificial intelligence emerges as a powerful catalyst poised to reshape the global sustainability landscape by facilitating the attainment of Sustainable Development Goals (SDGs). This comprehensive Delphi study meticulously probes the insights of domain experts, shedding light on the strategic utilization of AI to advance these critical sustainability objectives. Employing rigorous statistical techniques, encompassing measures of central tendency and interquartile deviation, this research scrutinizes consensus dynamics among experts and elucidates potential variations in their viewpoints. The findings resoundingly convey experts' collective positive perspective regarding AI's pivotal role in propelling the SDGs forward. Through two iterative rounds of extensive discussions, a compelling consensus crystallizes—AI indeed exerts an overall positive impact, exemplified by a robust mean score of 78.8%. Intriguingly, distinct SDGs manifest varied propensities toward AI intervention, with Goals 6, 7, 8, 9, 11, 13, 14, and 15 basking in the radiance of highly positive impacts. Goals 1, 2, 3, 4, 5, 10, and 12 exhibit positive impact scores, indicating a juncture ripe for positive advancements. Meanwhile, Goal 16 and Goal 17 languish with neutral scores, signifying a juncture demanding nuanced deliberations about AI's impact on peace, justice, and strong institutions as well as on partnerships for the goals, respectively. This paper underscores AI as a formidable instrument poised to address humanity's most pressing challenges while harmonizing seamlessly with the overarching SDG objectives. It gracefully dovetails into established practices across pivotal domains such as health, education, and resilient infrastructures, amplifying the collective global endeavor to navigate the path toward a more sustainable future.

**Keywords:** artificial intelligence; Sustainable Development Goals; Delphi study; global sustainability; consensus



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## 1. Introduction

This study begins by highlighting the Sustainable Development Goals (SDGs) as a global imperative, then examines AI as a key driver for achieving these goals. It explores AI's advancements and its dual impact on SDG progress, concluding with the importance of ethical AI practices and international collaboration for sustainable development.

The United Nations' Sustainable Development Goals delineate a global imperative to confront and mitigate the most urgent social, economic, and environmental dilemmas that threaten our world's equilibrium by the year 2030 [1]. These goals are not just aspirations; they are a blueprint for collective action, demanding innovative approaches and transformative technologies to drive progress. This era is witnessing the convergence of such transformative technology—AI—with the SDGs, heralding an unparalleled prospect to

tackle intricate barriers that obstruct the path toward realizing sustainable development [2]. Amidst this ambitious global agenda, artificial intelligence, typified by its prowess in mimicking human cognitive functions, has undergone a significant renaissance in recent epochs. This resurgence, propelled by seminal innovations in machine learning, natural language processing, computer vision, and robotics, has catalyzed transformative shifts across diverse sectors and redefined societal paradigms [3]. This renaissance in AI technology positions it as a potent ally in achieving the SDGs. Standing at the intersection of cutting-edge technology and global sustainability, the ability of AI to sift through colossal data sets, discern intricate patterns, and extract actionable insights has been demonstrated as a pivotal mechanism in unlocking novel avenues for sustainable growth [4]. By amplifying human faculties, AI equips policymakers with empirical insights to craft targeted policies and interventions aligned with specific SDG objectives. Moreover, AI-infused analytics furnishes the means to gauge progress with precision, pinpoint deficiencies, and fine-tune strategies dynamically, thereby amplifying the efficacy of developmental endeavors [5]. This technological prowess transforms AI into a powerful tool for both monitoring and advancing the SDGs.

Within the SDGs' framework, AI unfolds a spectrum of diverse solutions encompassing all 17 goals [6]. Ranging from poverty alleviation and healthcare enhancement to climate change mitigation and gender parity, AI methodologies harbor the potential to redress prevailing challenges and instigate pioneering solutions [7]. In essence, AI can be a double-edged sword, capable of both enabling and impeding the realization of SDGs, thereby underscoring the significance of an inclusive and rights-based approach to digital transformation [8]. The United Nations Development Programme (UNDP) has underscored the pivotal importance of evaluating countries' readiness for the adoption of AI and the establishment of robust data governance frameworks to facilitate the responsible deployment of AI in support of the SDGs [9]. International agreements and frameworks provide invaluable guidance on ensuring the ethical development of AI, particularly within the context of advanced nations [10]. These agreements serve as the bedrock upon which the ethical integration of AI technologies is promoted [11]. Assessing readiness for AI adoption and fostering the responsible development of AI stand as pivotal steps in the effective incorporation of AI into sustainable development endeavors [12]. Ref. [7] provides relevant evidence suggesting that AI may act as an enabler across 134 targets (79%) encompassing all SDGs, primarily through technological advancements that can potentially overcome existing limitations. However, it is important to acknowledge that 59 targets (35%), distributed across all SDGs, may experience adverse consequences stemming from AI development [7]. The SDGs are classified into three overarching categories, corresponding to the pillars of sustainable development, namely Society, Economy, and Environment [13]. After numerous studies on the impact of AI on sustainability, many firms infuse AI into developing their products to improve their SD practices [14]. Nevertheless, it is essential to note that studies supporting AI as an enabler or inhibitor for SDGs were conducted within controlled environments, rendering it challenging to extrapolate these findings to real-world scenarios [7].

Given the ever-evolving societal, environmental, and economic dynamics, maintaining a dynamic feedback loop with AI remains imperative [15]. Collaborative efforts and ongoing impact assessments are critical to maximizing the benefits of AI while aligning with the SDGs. Nations at the forefront of AI adoption demonstrate their potential to foster economic growth and improve livelihoods, thus signaling the importance of actively embracing AI technologies [16]. For the 17 goals, starting with SDG 1, No Poverty, AI holds promise in identifying impoverished areas and tailoring interventions. However, it is a dual-edged sword as concerns about potential job losses due to automation arise. Striking a balance between economic advancement and social well-being becomes imperative [7]. Moving to SDG 2, Zero Hunger, AI's ability to enhance agricultural productivity through precision farming is valuable. Yet, applying it effectively in resource-limited regions presents notable challenges. To truly address hunger, AI-driven solutions must reach

those who need them the most [7,17]. In the realm of SDG 3, Good Health and Well-being, AI's role in advancing disease diagnoses and treatment holds immense potential. However, it must navigate privacy concerns associated with patient data. Balancing technological advancement with ethical considerations is crucial in this context [7,17]. SDG 4, Quality Education for all, sees promise in personalized learning with AI [18]. But it also raises concerns about exacerbating inequality if access remains uneven. Ensuring equitable access to educational AI tools is pivotal in achieving this goal [7,18]. In the context of SDG 5, Gender Equality, AI's capacity to identify and rectify biases within systems is valuable. Yet, management is crucial to avoid perpetuating existing societal biases. To promote gender equality effectively, AI must be a tool for empowerment and not discrimination [19]. SDG 6, Clean Water and Sanitation, benefits from AI in predicting water shortages and managing resources. However, challenges related to costs and data limitations may hinder widespread implementation. Addressing these challenges is essential to ensure access to clean water for all [20]. SDG 7, Affordable and Clean Energy, sees AI's role in enhancing energy efficiency as commendable. However, the energy-intensive nature of large-scale AI systems necessitates attention. Striking a balance between energy efficiency and environmental impact is critical [21,22]. Regarding SDG 8, Decent Work and Economic Growth, AI's potential to drive economic growth through new industries is noteworthy [23]. Nevertheless, addressing job displacement due to automation is essential. Supporting workforce transitions is vital in this journey toward equitable economic prosperity [16]. In the context of SDG 9, Industry, Innovation, and Infrastructure, AI's contributions to innovation and productivity are valuable [24]. However, careful consideration is necessary to prevent potential job displacement in certain sectors. Innovation must be coupled with strategies for inclusive growth [7,16,24].

Moving to SDG 10, Reduced Inequalities, AI's ability to identify patterns of inequality holds significance [25]. Yet, managing its implementation cautiously is imperative to prevent the exacerbation of the digital divide [26]. Bridging the gap between AI haves and have-nots is a key challenge [27]. SDG 11, Sustainable Cities and Communities, benefits from AI's optimization of urban planning and management [28]. Nonetheless, challenges in resource-poor settings may limit its full potential. Tailoring AI solutions to suit diverse urban contexts is vital in building sustainable communities [29]. While AI enables more efficient resource utilization for SDG 12, Responsible Consumption and Production, concerns exist about its potential contribution to increased consumption and waste [25]. Striking a balance between efficiency gains and responsible consumption is essential [30]. In SDG 13, Climate Action, AI's capacity to model and predict climate change impacts aligns well. Still, careful consideration must be given to its energy usage. Developing energy-efficient AI solutions is crucial in the fight against climate change [31]. SDG 14, Life Below Water, finds AI's role in monitoring marine pollution and aiding conservation efforts [25]. However, practical implementation and data collection remain challenging. Overcoming these obstacles is pivotal in protecting our oceans and marine ecosystems [25,32]. Similarly, SDG 15, Life on Land, benefits from AI's role in monitoring deforestation and supporting conservation efforts [33]. Yet, data limitations may affect its effectiveness. Enhancing data collection and analysis capabilities is essential for preserving terrestrial ecosystems [32,33]. For SDG 16, Peace, Justice, and Strong Institutions, AI's assistance in conflict prediction and justice delivery holds value [34]. Nevertheless, ensuring its responsible use in surveillance and privacy is essential. Safeguarding human rights and ethical AI deployment must go hand in hand [35]. Finally, in SDG 17, Partnerships for the Goals, AI's potential to enhance collaboration through data sharing and analyses is valuable [36]. However, addressing unequal access to AI technology is crucial to prevent the exacerbation of inequalities. Building inclusive partnerships is fundamental to achieving shared global objectives [37].

In each SDG, AI presents opportunities and challenges, reminding us of the need for responsible and equitable AI deployment in our journey toward a sustainable and prosperous future [38]. The establishment of a coherent policy framework is pivotal in promoting the adoption of AI to support the SDGs. Such a framework should encompass data governance,

capacity-building, and a robust regulatory structure tailored to local norms. This research aims to dissect the symbiotic relationship between AI and the SDGs, exploring both the promises and pitfalls of this transformative partnership. Recommendations are proffered to policymakers, stakeholders, and practitioners to harness AI’s potential in steering sustainable development. By judiciously embracing AI, while adhering to principles of inclusivity, equity, and sustainability, countries can traverse the intricacies of the contemporary epoch and forge a thriving and inclusive future for all.

### 2. Materials and Methods

A qualitative perspective was employed as the philosophical stand for this study, given its exploratory nature. The Delphi technique was specifically adopted for this study. This approach encompasses the identification of the research problem, followed by the selection of an expert panel and briefing of the experts about the process. According to previous research, the Delphi method is a qualitative methodological approach aimed at achieving consensus among a group of experts on a particular subject [39,40]. For this study, the Delphi technique was applied through two rounds of data collection: the exploratory phase of brainstorming, and the validation and consensus phase of redefining and prioritizing suggested ideas. These were followed by qualitative and quantitative analyses at the end of the first and second rounds. The process culminated in the interpretation of insights and presentation of results, outlining a convergence of opinions from the panel of experts [41]. The adoption of AI for SDG targets and goals is deliberated on, respectively. Once a good consensus has been reached, an overall perspective of the experts is given for the complete potential contribution of AI to the SDGs. The conceptual framework (as shown in Figure 1) shows how this study would be carried out.

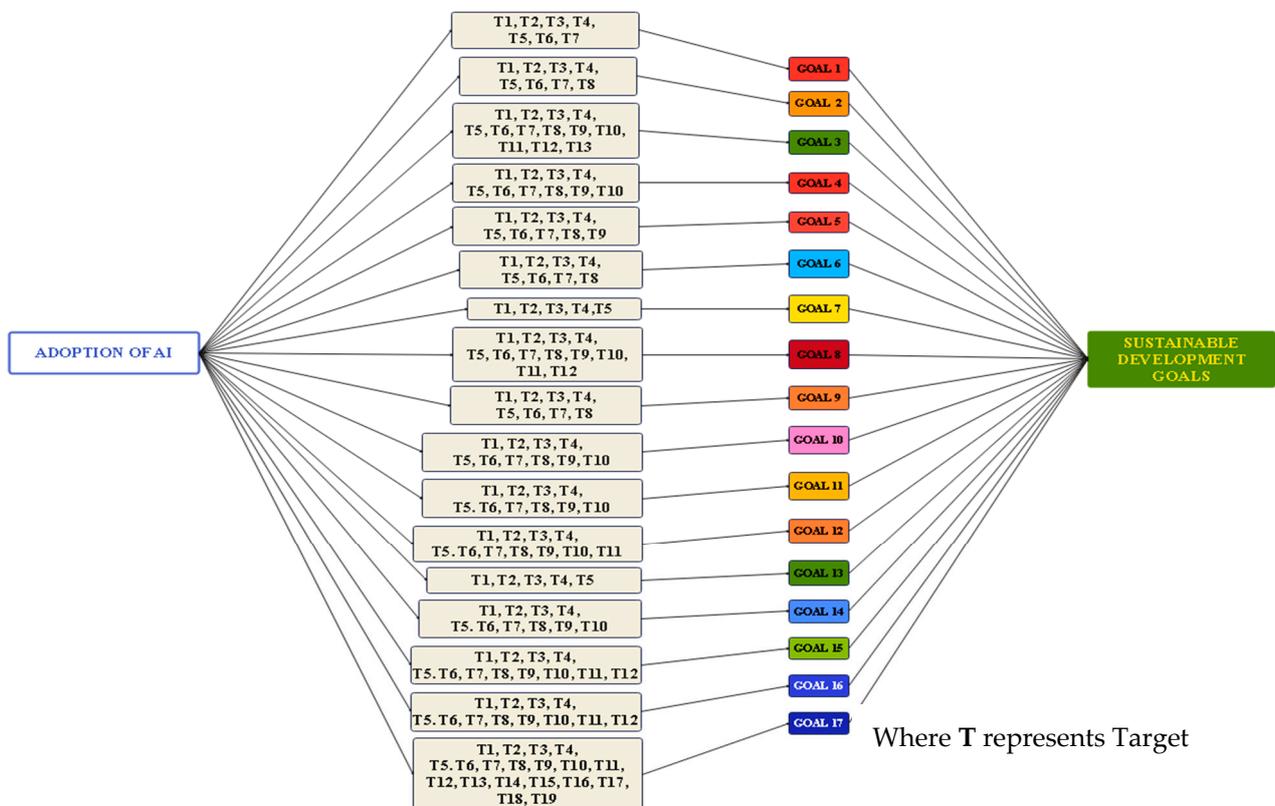


Figure 1. The conceptual framework for this study.

The figure above shows the framework for this study. A target (in the diagram) is a specific objective that defines measurable outcomes necessary to achieve the SDGs set by the United Nations for global development by 2030 [13]. The targets in the diagram

are represented by “T” with a number indicating the number of targets within a goal. For example, “T1” under goal one is Target 1.1, which is the eradication of extreme poverty for all people everywhere, currently measured as people living on less than USD 1.25 a day, by 2030. Another example is “T6” under goal one as Target 1.a (after Target 1.5), which is to ensure the significant mobilization of resources from a variety of sources, including through enhanced development cooperation, to provide adequate and predictable means for developing countries, in particular least-developed countries, to implement programs and policies to end poverty in all its dimensions (refer to the global goals link in Appendix A for all goals and their corresponding targets).

### 2.1. Selection of Delphi Experts

The assembly of the expert panel for the Delphi study on the impact of AI on achieving the SDGs underwent a meticulously crafted process, adhering to a systematic sequential sampling approach designed to ensure a comprehensive and scientific exploration of the subject matter. The selection criteria, deeply anchored in the qualifications and experience of professionals within the sustainability and SDGs’ sphere, emphasized not only their expertise but also their insights into the future implications of AI. This process of selecting experts for the Delphi panel, characterized by its flexibility and adaptability to this study’s specific research objectives [42], diligently evaluated expertise based on years of engagement in sustainability practices and a self-assessed understanding of the SDGs. A fundamental prerequisite for selection included a foundational knowledge of AI and its applications, ensuring that participants were well equipped to contribute substantively to this study. The impartial selection of participants was paramount, given this study’s emphasis on exploring forthcoming global advancements in AI and sustainability [40,43].

To achieve a fair and scientific selection process of experts, it was essential to have a clear, well-defined set of criteria. This included assessing potential panel members’ academic qualifications in sustainability-related fields, professional experience, established knowledge of sustainability practices, and active engagement in relevant sectors or academia [44]. This rigorous selection process aimed at assembling a diverse and competent group of professionals from various regions—including the United States, the United Kingdom, Singapore, Ghana, and South Africa—and was pivotal in cultivating a panel capable of providing a rich, multidimensional perspective on AI’s role in advancing the SDGs. The recruitment process, involving the distribution of invitations to 32 potential experts, with 15 expressing interest and ultimately 12 participating fully in this study, was conducted with attention on ensuring a broad representation of views and expertise. The selection process, aligning with established practices in Delphi methodology [44,45], enabled the formation of a panel that not only possessed deep insights into sustainability and AI but also represented a wide array of industries, further enriching this study’s findings. The careful curation of the expert panel, through a transparent and objective selection process, underscores this study’s commitment to scientific validity and reliability. The detailed criteria and systematic approach to expert recruitment ensure a balanced exploration of AI’s impact on the SDGs. Combined with the diversity and depth of expertise among the panelists, this approach contributes to an insightful analysis.

### 2.2. Delphi Cycles

The Delphi methodology, employed in this study to explore artificial intelligence’s (AI) role in achieving SDGs, is characterized by a structured, iterative process of panel consultations, designed to converge on expert consensus through multiple cycles. Historically, the effectiveness of a Delphi study hinges on the requisite number of cycles, with this investigation, reaching consensus after two planned cycles, each extending over a month [46]. This duration was deliberately chosen to provide panelists with sufficient time to offer in-depth contributions to the Delphi investigation. In the initial cycle, the research instrument was developed by integrating the relevant literature specific to AI’s contributions to the SDGs, ensuring a foundation grounded in current academic and practical understanding of the

subject. The instrument for the subsequent cycle was then refined based on the insights and feedback obtained from experts during the first round, embodying the collective intelligence and foresight of the panel. This adaptive process allowed for the evolution of the questionnaire, making it a dynamic tool reflective of the panel's growing insights.

Given the emergent and transformative nature of AI in the context of the SDGs, an open-ended question format was adopted, encouraging participants to articulate forward-thinking and innovative ideas freely. This approach facilitated the generation of a rich data set, which was analyzed using a qualitative thematic methodology, laying the groundwork for the iterative refinement of the research instrument in subsequent Delphi rounds. Throughout each cycle, expert perspectives were analyzed in detail, revealing a spectrum of consensus and divergence on various aspects of AI's impact on the SDGs. The second cycle introduced a more structured questionnaire, enabling panelists to reflect on and evaluate the collective outcomes synthesized from the initial round's discussions. The responses from this cycle were then subjected to a thorough analysis to confirm the emergence of consensus on the key topics under investigation. This iterative process, emblematic of the Delphi methodology, ensures that this study's conclusions are robust, reflective of expert consensus, and grounded in a comprehensive understanding of AI's potential and challenges in advancing the SDGs. The Table 1 below shows the demographic of experts which participated in the study.

**Table 1.** Background Information of Experts.

Demographic Designation	Number of Experts	Percentage
<b>Academic qualifications</b>		
Bachelor's degree	2	16.67%
Master's degree	6	50.00%
Doctor of philosophy	4	33.33%
Total	12	100%
<b>Area of specialization</b>		
Environmental sustainability and conservation, biodiversity, and climate action	3	25.00%
Urban planning and infrastructure	4	33.33%
Agriculture, health, and food security	2	16.67%
AI developers/scientists/enthusiasts	2	16.67%
AI data science and analytics	1	8.33%
Total	12	100%
<b>Years of experience</b>		
1–5 years	2	16.67%
6–10 years	7	58.33%
11–15 years	2	16.67%
Over 15 years	1	8.33%
Total	12	100%
<b>Employment agency</b>		
Academia	6	50.00%
Government agency	2	16.67%
NGO/international bodies/CSO	2	16.67%
Consultancy	1	8.33%
Private organization	1	8.33%
Total	12	100%

### 2.3. Achieving Consensus

Achieving consensus within a Delphi study, particularly when navigating a wide array of expert opinions on complex topics like the role of AI in advancing the SDGs, presents a challenge. The path to reaching consensus among panelists is not prescriptively outlined across Delphi studies, reflecting the dynamic and context-specific nature of this research approach. The concept of consensus, as highlighted by [47,48], is often viewed as a collective alignment or agreement that emerges from the panelists' shared insights, encapsulating a mutual understanding or acknowledgment of commonalities within the diverse perspectives offered throughout the Delphi rounds. Historically, various statistical metrics have been employed to gauge consensus within the Delphi methodology. For instance, ref. [49] advocates for the use of mean item scores and standard deviation as indicators of consensus, positing that a narrowing of standard deviation across successive rounds typically signals a convergence towards collective agreement. Similarly, other scholars have incorporated the interquartile deviation (IQD) as a measure to assess consensus, adding another layer of analytical depth to the Delphi process [39,44].

In this study, a methodical application of IQD alongside mean item scores and standard deviation was utilized to determine consensus across Delphi rounds. The IQD metric calculates the spread between the 75th percentile (Q3) and the 25th percentile (Q1), indicating the central tendency dispersion among panelist responses. According to Aigbavboa [50], a lower IQD suggests a closer alignment of panelist perspectives, signifying a strong consensus. Conversely, a higher IQD reflects greater variability in opinions, indicating weaker consensus. The operationalization of these criteria for consensus assessment in the current study is detailed in Table 2, delineating specific thresholds for weak, good, and strong consensus based on IQD values. This structured approach to evaluating consensus ensures a detailed and comprehensive analysis of panelist agreement levels. Such a methodology not only bolsters the validity and credibility of this study's findings but also enriches the interpretive value of the insights gathered from the expert panel, providing a solid foundation for conclusions drawn regarding AI's impact on the SDGs.

**Table 2.** Criteria for Assessing Consensus.

Status of Consensus	Interquartile Deviation (IQD)
Weak consensus	$\geq 2.1 \leq 3$
Good consensus	$\geq 1.1 \leq 2$
Strong consensus	$\geq 0.0 \leq 1$

### 2.4. Determining Reliability and Validity of the Delphi Process

Ensuring the reliability and validity of the Delphi process is paramount for the integrity of its outcomes, particularly when exploring complex subjects like the intersections of AI with the SDGs. Reliability, as [51] delineates, refers to the consistency of a methodology in producing stable results under the same conditions. This notion becomes particularly evident within Delphi studies, categorized under qualitative research, where outcomes are heavily reliant on the subjective insights and perspectives of panelists [52]. The qualitative nature of Delphi studies, drawing upon the intuitive understanding and expert knowledge regarding AI's contributions to the SDGs, introduces complexities in asserting reliability and validity. To address these challenges, a clear delineation of the Delphi process and its objectives was provided to the panelists, underscoring the importance of transparency in research communication. This study ensured that the objectives were comprehensively communicated to the participating AI and SDG experts.

This clarity was facilitated through detailed presentations of the targets and goals across all 17 SDGs, accompanied by potential applications and uses of AI within these contexts. Furthermore, experts were provided with a thorough guide on navigating the Delphi questionnaire, enhancing their understanding of this study's scope and methodology. The selection of experts is critical to the validity of the Delphi process. According to [44], the

expert selection phase functions as a crucial measure of validity within a Delphi study. Therefore, care was taken in the selection phase to ensure that participants were not only knowledgeable about AI and the SDGs but also represented a wide range of perspectives relevant to this study's aims. This approach to expert selection aimed to encompass a diverse array of insights, thereby enriching this study's data set and contributing to its overall validity. These measures collectively aimed to ensure that the insights generated from the Delphi study are both dependable and reflective of a broad, expert consensus on the role of AI in advancing the SDGs, providing a solid foundation for this study's conclusions.

### 3. Results

#### 3.1. Delphi Round One Result

The initial round of the Delphi study gathered responses from the expert panel on the impact of AI on achieving the SDGs. There was an opportunity for the inclusion of measures not initially captured in the survey by the experts. This study utilized a ten-point Likert scale, spanning from highly negative impact to highly positive impact. A summary of the results (showing the goals and the first three targets) of the first round of the Delphi study is presented in Table 3 (see Appendix B.1 for the full table). This table showcases the findings of the mean, median, standard deviation, and IQD. The validity and reliability of the research instrument were ascertained using the Cronbach alpha test. This yielded a value of 0.96 for the targets, 0.89 for the goals, and 0.898 for the total contribution of AI, which suggests commendable validity and reliability of the research instrument for the Delphi study, as the value tends towards 1.00. The mean and median scores ranged between 8 and 10 for highly positive impact, 6 and 7.99 for positive impact, 5 and 5.99 for neutral impact, 3 and 4.99 for negative impact, and 1 and 2.99 for highly negative impact.

**Table 3.** Results of Round One of the Delphi Study.

Goal/Targets (T)	Median	Mean	SD	IQD
<b>Goal 1</b>	<b>8.00</b>	<b>8.00</b>	<b>0.70</b>	<b>1.000</b>
T1	8.04	8.00	0.65	1.000
T2	6.67	6.67	0.49	0.500
T3	5.42	5.42	0.48	0.750
<b>Goal 2</b>	<b>7.17</b>	<b>7.00</b>	<b>0.85</b>	<b>1.200</b>
T1	8.00	8.21	0.63	1.000
T2	7.00	6.67	0.49	0.375
T3	5.50	5.42	0.48	0.375
<b>Goal 3</b>	<b>8.00</b>	<b>8.00</b>	<b>0.70</b>	<b>1.000</b>
T1	8.50	8.46	0.50	0.750
T2	7.00	6.71	0.47	1.000
T3	5.00	5.04	0.52	0.500
<b>Goal 4</b>	<b>6.67</b>	<b>7.00</b>	<b>0.57</b>	<b>0.750</b>
T1	8.50	8.46	0.50	0.375
T2	7.00	6.71	0.47	0.625
T3	5.00	5.04	0.52	0.750
<b>Goal 5</b>	<b>7.08</b>	<b>7.00</b>	<b>0.64</b>	<b>1.000</b>
T1	8.00	7.92	0.35	0.375
T2	5.75	5.75	0.42	0.375
T3	4.50	4.42	0.48	0.500

Table 3. Cont.

Goal/Targets (T)	Median	Mean	SD	IQD
<b>Goal 6</b>	<b>6.00</b>	<b>6.00</b>	<b>0.75</b>	<b>1.000</b>
T1	8.00	7.92	0.35	0.500
T2	5.75	5.75	0.42	0.500
T3	4.50	4.42	0.48	0.500
<b>Goal 7</b>	<b>7.83</b>	<b>8.00</b>	<b>0.78</b>	<b>1.250</b>
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	0.500
<b>Goal 8</b>	<b>7.42</b>	<b>7.00</b>	<b>0.57</b>	<b>1.000</b>
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	0.500
<b>Goal 9</b>	<b>8.17</b>	<b>8.00</b>	<b>0.79</b>	<b>1.000</b>
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	0.500
T3	5.50	5.42	0.42	0.500
<b>Goal 10</b>	<b>6.75</b>	<b>7.00</b>	<b>0.58</b>	<b>0.750</b>
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	1.000
<b>Goal 11</b>	<b>7.42</b>	<b>7.50</b>	<b>0.63</b>	<b>1.000</b>
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	1.000
<b>Goal 12</b>	<b>7.42</b>	<b>7.50</b>	<b>0.64</b>	<b>1.000</b>
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	1.000
<b>Goal 13</b>	<b>6.42</b>	<b>6.50</b>	<b>0.50</b>	<b>0.750</b>
T1	7.00	7.00	0.35	1.000
T2	7.50	7.67	0.42	0.500
T3	8.50	8.67	0.42	1.000
<b>Goal 14</b>	<b>6.75</b>	<b>6.50</b>	<b>0.56</b>	<b>0.750</b>
T1	7.00	7.00	0.35	1.000
T2	7.50	7.67	0.42	0.500
T3	8.50	8.67	0.42	1.000
<b>Goal 15</b>	<b>7.83</b>	<b>8.00</b>	<b>0.62</b>	<b>1.000</b>
T1	7.00	7.00	0.35	0.500
T2	7.50	7.67	0.42	0.500
T3	8.50	8.67	0.42	1.000

Table 3. Cont.

Goal/Targets (T)	Median	Mean	SD	IQD
<b>Goal 16</b>	<b>8.00</b>	<b>8.00</b>	<b>0.58</b>	<b>1.000</b>
T1	7.00	7.00	0.35	0.500
T2	7.50	7.67	0.42	0.500
T3	8.50	8.67	0.42	0.000
<b>Goal 17</b>	<b>7.75</b>	<b>8.00</b>	<b>0.50</b>	<b>1.000</b>
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	0.500
T3	5.50	5.42	0.42	1.000
<b>Cronbach alpha:</b>	<b>Goal: 0.89</b>		<b>Target: 0.96</b>	
<b>Total goal contribution</b>	<b>Mean</b>	<b>Median</b>	<b>SD</b>	
<b>All goal contributions</b>	7.28	7.25	0.50	
<b>Cronbach alpha:</b>	0.898			

(See Appendix B.1 for the full table).

The mean scores and median scores assist in discovering the central tendency of the respondents. Hence, for the goal and target scores, which contained outliers from the views of the respondents, both the mean and median were used to determine the complete outlook of the perspectives of the respondents. In the context of AI's impact on achieving the SDGs, the experts identified four goals with a highly positive impact of AI (very high score of the means: 8.00–10.00) goals. These include Goals 1, 3, 9, and 16. The lowest scores were within the neutral range, which included Goals 6, 10, 13, and 14. In the first round of the Delphi study, there was a strong consensus reached among the experts. The IQD results from the findings indicate that they were within the range of 0.3 and 1.5. However, due to some varying views and feedback, a second discussion was required to ensure a higher consensus. This study underscored the importance of understanding the influence of AI on each of the targets of the 17 goals and emphasized the need for continued dialogue and research in this domain.

### 3.2. Delphi Round Two Result

Table 4 presents the summary findings from the second round of the Delphi study involving the experts who participated in the initial round (Table 4 contains the goals and the first three targets; see Appendix B.2 for the full table). After a careful deliberation of the responses to the first results, a second round of this study was conducted. This ensured a higher consensus of the expert views and perspectives.

The findings revealed that AI has a positive impact on the achievement of all 17 SDGs. Given the scale provided in Table 2, all 17 goals achieved good consensus (IQD values ranging from 0.01 to 1.0, based on the expert opinions in the Delphi study). Regarding AI's impact on achieving the SDGs, the experts identified eight goals with a highly positive impact of AI (very high score of the means: 8.00–10.00) goals. These include Goals 6, 7, 8, 9, 11, 13, 14, and 15. The lowest scores were within the neutral range, which included Goals 16 and 17, respectively. The validity and reliability test for the research instrument further confirmed the robustness of the findings with an alpha value of 0.97 for the targets, 0.91 for the goals, and 0.94 indicating good reliability. The results according to Table 4 above underscores the positive impact of AI in achieving the SDGs at the goal and target level, emphasizing the need for the development of a comprehensive approach when integrating AI strategies with Sustainable Development Goals.

**Table 4.** Results of Round Two of the Delphi Study.

<b>Goal/Targets (T)</b>	<b>Median</b>	<b>Mean</b>	<b>SD</b>	<b>IQD</b>
<b>Goal 1</b>	<b>7.05</b>	<b>7.00</b>	<b>0.32</b>	<b>0.600</b>
T1	6.98	6.90	0.29	0.550
T2	7.02	7.02	0.28	0.530
T3	6.99	6.95	0.31	0.570
<b>Goal 2</b>	<b>7.05</b>	<b>7.00</b>	<b>0.20</b>	<b>0.400</b>
T1	7.05	7.04	0.22	0.410
T2	7.05	7.02	0.20	0.380
T3	7.05	7.02	0.20	0.375
<b>Goal 3</b>	<b>7.04</b>	<b>7.00</b>	<b>0.21</b>	<b>0.350</b>
T1	6.96	6.95	0.28	0.520
T2	6.97	6.95	0.26	0.500
T3	6.98	6.90	0.28	0.530
<b>Goal 4</b>	<b>7.05</b>	<b>7.00</b>	<b>0.20</b>	<b>0.400</b>
T1	7.01	7.00	0.29	0.530
T2	7.02	7.00	0.28	0.520
T3	7.00	6.99	0.29	0.530
<b>Goal 5</b>	<b>7.00</b>	<b>6.98</b>	<b>0.15</b>	<b>0.150</b>
T1	7.01	7.00	0.19	0.350
T2	7.00	7.00	0.14	0.305
T3	7.00	7.00	0.12	0.290
<b>Goal 6</b>	<b>8.65</b>	<b>8.65</b>	<b>0.15</b>	<b>0.200</b>
T1	8.61	8.60	0.16	0.250
T2	8.70	8.69	0.12	0.150
T3	8.63	8.60	0.13	0.200
<b>Goal 7</b>	<b>8.92</b>	<b>8.90</b>	<b>0.16</b>	<b>0.200</b>
T1	8.86	8.80	0.20	0.200
T2	8.90	8.89	0.15	0.200
T3	8.90	8.90	0.14	0.175
<b>Goal 8</b>	<b>8.93</b>	<b>8.90</b>	<b>0.15</b>	<b>0.200</b>
T1	8.75	8.75	0.12	0.150
T2	8.75	8.75	0.11	0.150
T3	8.77	8.75	0.10	0.150
<b>Goal 9</b>	<b>8.95</b>	<b>8.93</b>	<b>0.18</b>	<b>0.225</b>
T1	8.80	8.78	0.20	0.250
T2	8.80	8.77	0.18	0.200
T3	8.80	8.79	0.17	0.200
<b>Goal 10</b>	<b>7.06</b>	<b>7.05</b>	<b>0.10</b>	<b>0.150</b>
T1	7.00	6.98	0.21	0.275
T2	6.95	6.95	0.9	0.225
T3	6.95	6.95	0.17	0.225

Table 4. Cont.

Goal/Targets (T)	Median	Mean	SD	IQD
<b>Goal 11</b>	<b>8.97</b>	<b>8.95</b>	<b>0.15</b>	<b>0.225</b>
T1	8.60	8.60	0.23	0.300
T2	8.60	8.60	0.22	0.250
T3	8.70	8.70	0.18	0.200
<b>Goal 12</b>	<b>7.10</b>	<b>7.07</b>	<b>0.09</b>	<b>0.150</b>
T1	6.96	6.95	0.14	0.200
T2	6.92	6.90	0.13	0.225
T3	6.93	6.90	0.13	0.175
<b>Goal 13</b>	<b>8.82</b>	<b>8.82</b>	<b>0.01</b>	<b>0.010</b>
T1	8.83	8.80	0.18	0.225
T2	8.82	8.80	0.15	0.200
T3	8.82	8.80	0.16	0.200
<b>Goal 14</b>	<b>8.88</b>	<b>8.87</b>	<b>0.10</b>	<b>0.200</b>
T1	8.73	8.70	0.20	0.250
T2	8.69	8.60	0.20	0.225
T3	8.72	8.70	0.17	0.200
<b>Goal 15</b>	<b>8.93</b>	<b>8.90</b>	<b>0.16</b>	<b>0.200</b>
T1	8.65	8.65	0.15	0.200
T2	8.60	8.58	0.12	0.175
T3	8.61	8.60	0.13	0.200
<b>Goal 16</b>	<b>5.45</b>	<b>5.45</b>	<b>0.10</b>	<b>0.150</b>
T1	5.42	5.40	0.09	0.150
T2	5.42	5.40	0.09	0.150
T3	5.41	5.40	0.08	0.150
<b>Goal 17</b>	<b>5.53</b>	<b>5.50</b>	<b>0.07</b>	<b>0.200</b>
T1	5.50	5.50	0.08	0.200
T2	5.40	5.40	0.10	0.200
T3	5.55	5.53	0.09	0.200
<b>Cronbach alpha:</b>	<b>Goal: 0.91</b>		<b>Target: 0.97</b>	
<b>Total goal contribution</b>	<b>Mean</b>	<b>Median</b>	<b>SD</b>	
<b>All goal contributions</b>	7.88	7.95	0.22	
<b>Cronbach alpha:</b>	0.94			

(See Appendix B.2 for the full table).

#### 4. Discussion

AI is recognized for its transformative potential across a myriad of domains. Its influence on the United Nations' Sustainable Development Goals is essential for both maximizing its benefits and addressing inherent challenges. Grounded in the Delphi approach, this study captures the expert consensus on the implications of AI for the SDGs. Through a Likert scale, this study delineates impacts, ranging from "highly positive impact" (8–10) to "highly negative impact" (1–2.99). The subsequent analysis thoroughly presents the median, mean, standard deviation (SD), and interquartile deviation (IQD) for each goal. This starts with Goal 1, which focuses on eradicating poverty globally. The sentiment

towards this goal has a positive impact, with a median score of 7.05 and a mean of 7. This aligns with the belief that AI can transform our approach to combating poverty, from using AI in precision agriculture to improve food security to leveraging predictive analytics to identify regions vulnerable to economic challenges. The standard deviation of 0.32 and interquartile deviation of 0.6 indicate that while there is a consensus for a positive impact of AI's role, experts are aware of its limitations and potential pitfalls.

For example, AI can optimize resource allocation, but relying too heavily on AI without human discretion may lead to unforeseen challenges [53]. Looking at specific targets within Goal 1, Target 1.1 (T1) shows that AI can play a significant role in ensuring equitable access to economic resources, with median and mean scores of 6.98 and 6.9, respectively [54]. This suggests that AI can greatly improve resource distribution, making essentials accessible to marginalized sectors. Similarly, Target 1.2 (T2), with scores of 7.02 for both the median and mean, indicates AI's potential to strengthen the resilience of economically vulnerable populations, particularly in anticipating natural or economic adversities. Target 1.3 (T3) scores of 6.99 and 6.95 for the median and mean, respectively, highlight AI's potential to enhance resource mobilization for anti-poverty strategies [7,53,54]. Overall, the data for Goal 1 demonstrate that AI can have a significant positive impact on poverty eradication, but there must be equity and fairness in its deployment. The experts' insights suggest that AI's applications, from precision agriculture to predictive analytics, have the potential to revolutionize how resources are distributed and how vulnerable populations are supported. For instance, the use of AI to enhance food security and to identify regions at risk of economic hardship was seen as a promising approach to tackling poverty at its roots. However, alongside these optimistic views, respondents also expressed concerns about the possible downsides of relying too heavily on AI solutions. They pointed out that without careful oversight, the deployment of AI might inadvertently widen existing social and economic gaps or lead to resource misallocation. Particularly in the context of Goal 1, there was a thorough discussion around ensuring that AI aids in making essential resources accessible to those in the margins, without sidelining human judgment and local knowledge.

Moving on to Goal 2, "No Hunger" and promoting sustainable agriculture, the data show a positive impact and emphasize the transformative potential of AI in sustainable development. This goal aims not only to feed the global population but to do so sustainably and efficiently. Examining the specific targets, Target 2.1 (T1) suggests that AI can play an instrumental role in guaranteeing access to nutritious food. Experts highlighted AI's capacity to streamline food supply chains and reduce waste, thereby making nutritious food more accessible. Yet, they also underscored the importance of not undermining traditional agricultural practices or increasing smallholder farmers' dependency on technology beyond their control or understanding. The expert panel emphasized the transformative role of AI in sustainable agriculture, particularly within the contexts of Target 2.2 (T2) and Target 2.3 (T3) of SDG 2. They agreed that AI-enhanced precision agriculture is a key advancement for optimizing resource use, achieving high yields with minimal environmental impact, and increasing the efficiency and sustainability of agricultural practices [55]. Moreover, the discussion on Target 2.3 revealed AI's potential to simplify local market dynamics, providing producers with valuable insights into demand and helping align production more closely with consumption [16,55]. This application of AI is viewed as crucial for developing a more efficient, responsive agricultural sector informed by real-time data.

The panel's insights further reveal artificial intelligence's (AI) positive influence on achieving Goal 3, aimed at ensuring health and well-being for all, with AI's application in diagnostics and predictive algorithms marking significant strides in global health. These technologies enable early intervention by healthcare professionals, notably improving maternal health outcomes and enhancing the precision in detecting and treating substance misuse, thereby offering more personalized and effective treatments [56]. In addressing Goal 3's Target 3.3, experts discussed AI's role in reducing traffic-related fatalities through its integration into urban planning and traffic management systems. AI's capability to

optimize mobility and decrease accidents underscores its potential to save lives through smarter city planning. The dialogue then transitioned to Goal 4, which focuses on inclusive and equitable quality education. The panel agreed on AI's power to personalize learning experiences, ensuring that education adapts to the unique needs of each learner and aligns with the evolving demands of the job market, thus equipping students with relevant skills [57–59]. For Goal 5, centered on gender equality and the empowerment of women and girls, experts highlighted AI's utility in identifying and mitigating discrimination, promoting equality through data analyses, and aiding in the proactive detection of harmful practices. This is seen as pivotal in fostering equitable representation in leadership and rectifying gender biases within organizations [60]. Finally, the discussion around Goal 6, dedicated to water and sanitation, emphasized AI's critical role in enhancing the sector's sustainability. The consensus on AI's impact, reflected by a mean score of 8.65, illustrates its effectiveness in wastewater treatment and in preserving water ecosystems, with AI technologies ensuring the cleanliness of water sources and the efficient repurposing of waste [61,62]. This broad spectrum of AI applications across various SDGs showcases its transformative potential, urging a balanced and ethical approach to harness AI's benefits while mitigating its risks. Furthermore, AI's role in the preservation and restoration of water-related ecosystems underscores its comprehensive capabilities in contributing to sustainable water and sanitation management [61,62].

Within the context of Goal 6 on water and sanitation, experts underscored artificial intelligence's (AI) pivotal role in both optimizing wastewater management and preserving water-related ecosystems. Their opinions reflect a consensus on AI's comprehensive capabilities in enhancing sustainable water management, aligning with the observed scores and underscoring the potential of AI to contribute significantly to this area [61,62]. Regarding Goal 7, focused on ensuring access to affordable and sustainable energy, the panel's insights and the high median and mean scores reveal a strong belief in AI's transformative impact in the energy sector. Experts highlighted AI's efficacy in augmenting renewable energy sources, optimizing energy usage through smart grids, and providing predictive maintenance and energy storage solutions, thereby affirming AI's critical role in achieving sustainable energy access [63,64]. For Goal 8, which aims at sustainable economic growth and employment, the alignment between the experts' views and the respective scores (mean and median scores of 8.9 and 8.93) emphasizes AI's capabilities in forecasting job market trends, detecting forced labor, and ensuring workplace safety. The panel posited that AI is instrumental in propelling inclusive and sustainable economic advancement, echoing the quantitative findings [65].

In discussions on Goal 9, regarding resilient infrastructure, sustainable industrialization, and innovation, experts shared that AI's transformative capacity is key to revolutionizing construction processes and streamlining industrial operations. The mean score of 8.93 illustrates the panel's agreement on AI as a fundamental tool for fostering a resilient, sustainable, and inclusive future through innovation [7,66]. In addressing the reduction in inequalities (Goal 10), expert opinions resonated with the scores, particularly highlighting AI-driven financial tools (Target 10.1) for their potential in economic interventions. The experts concurred that AI has a significant role in analyzing financial trends and targeting interventions, thereby contributing to the reduction in economic disparities, and fostering inclusivity, thus substantiating the quantitative data presented [67]. For Targets 10.2 (T2) and 10.3 (T3), experts elaborated on AI's vital monitoring capabilities that ensure policies are equitable and unbiased, and its significant role in managing global migration with policies that are both responsive and humane, illustrating AI's potential to make policy formulation more inclusive and equitable [68]. This reflects the understanding surrounding AI's capacity to enhance policy effectiveness and fairness in critical areas of social governance.

In the dialogue around Goal 11, the consensus on AI's role in urban development was palpable. Experts pointed out AI's impact on urban planning (Target 11.1), where AI technologies optimize space for equitable housing solutions, demonstrating AI's ability to

contribute to more inclusive and sustainable cities [69]. Similarly, AI's application in traffic management (Target 11.2) and disaster management (Target 11.3) was highlighted for its potential to improve city living conditions by ensuring smoother traffic flow and enabling preemptive measures against disasters, thereby enhancing urban resilience [69]. Discussion on Goal 12 emphasized AI's support for sustainable consumption and production patterns. AI's optimization of resource extraction and utilization (Target 12.1), waste pattern prediction, and recycling process refinement (Target 12.2) were identified as key areas where AI contributes to more sustainable management practices. Additionally, AI-driven insights assist businesses in adopting sustainable strategies (Target 12.3), promoting a culture of responsible consumption [6,70]. In addressing Goal 13 on climate change, the consensus among experts highlights AI's transformative role, acknowledging its predictive capabilities and real-time monitoring as vital for developing adaptive strategies and orchestrating effective global responses, thus enhancing climate resilience [71,72]. However, alongside the acknowledged mean score of 8.87, they also expressed concerns about the risks of overreliance on AI, such as data privacy breaches and potential misinterpretations of climatic data.

For Goal 14 on marine conservation, discussions reflected strong confidence in AI's potential to maintain marine health and sustainability, supported by a mean score of 8.87. Experts praised AI for its efficiency in tracking pollution and facilitating sustainable fishing practices, crucial for preserving marine biodiversity and promoting the sustainable use of marine resources [32,73]. Yet, they also cautioned against unintended ecological impacts and the overlooking of community insights due to an overdependence on AI solutions in marine conservation efforts. For Goal 15, addressing terrestrial conservation, the consensus among experts, reflected in a mean score of 8.9 and a median of 8.93, showcased a highly favorable perception of AI's role in this critical area. They pinpointed AI's prowess in utilizing satellite imagery for the surveillance of unlawful activities such as logging, alongside its capacity to bolster reforestation projects and combat desertification. Such applications of AI are deemed pivotal in promoting the health of terrestrial ecosystems [32,74]. Turning to Goal 16, centered on peace, justice, and strong institutions, the response was more reserved, as evidenced by a mean score of 5.45. This score embodies a balanced assessment of AI's capabilities, recognizing its utility in crime detection and prevention. Nonetheless, experts also raised concerns regarding the potential drawbacks of undue dependence on AI and the risks posed by algorithmic biases, which could potentially impair the principles of justice and equity [75,76]. The need for transparency in AI applications and the importance of utilizing impartial AI technologies in governance structures were underscored, highlighting the complex implications of AI's integration into this sphere.

Regarding Goal 17, dedicated to bolstering global partnerships for sustainable development, a neutral mean score of 5.5 was observed, reflecting a measured appraisal of AI's contributions. The expert panel acknowledged AI's capacity to enhance international cooperation and streamline resource management and commercial transactions. However, they advocated for a strategic approach to AI's deployment, emphasizing that it should augment, not replace, human initiatives [36,77]. This viewpoint articulates a cautiously positive perspective on employing AI to strengthen global partnerships, stressing the significance of achieving a symbiotic relationship between technological advancements and human endeavors. The SDGs encapsulate a global ambition to address pervasive challenges, with AI emerging as a crucial lever in this quest. Expert consensus recognizes AI's capability to drive substantial progress in health (SDG3), education (SDG4), and the creation of resilient infrastructures (SDG9), highlighting its transformative potential [7,37]. In exploring the role of AI in achieving the SDGs, this study acknowledges the transformative potential of AI across various domains while also considering the complexities associated with its integration. Risks such as automation potentially exacerbating unemployment and deepening poverty in the technology and automotive sectors have been identified [16,78]. Concurrently, insights from the World Economic Forum and PwC underline AI's crucial contributions to advancing Industry 4.0, particularly in industrial research, development

innovation, sustainable infrastructure development, and the enhancement in IoT-enabled infrastructure efficiency [79,80]. This alignment with Goal 11 highlights AI's significant utility in fostering sustainable urban and community development, presenting a landscape of AI's potential to drive progress across the SDGs. To enrich the discussion further, experts explored the synergies and potential trade-offs between AI impacts across various SDGs. For example, AI's role in enhancing precision agriculture (Goal 2: Zero Hunger) directly contributes to food security while also supporting Goal 13: Climate Action by optimizing resource use and reducing waste.

Similarly, AI's impact on improving access to quality education (Goal 4) is intricately linked to fostering innovation and economic growth (Goal 8), preparing individuals with the skills required for the future job market, including those in the AI and sustainability sectors. However, alongside these positive contributions, the revised discussion also critically examines the challenges highlighted by experts. Ethical considerations in AI deployment and the imperative to ensure AI technologies are inclusive and do not exacerbate existing inequalities (Goals 5 and 10) are emphasized. This holistic perspective underscores the importance of a balanced and ethical approach to AI integration across all SDGs, acknowledging that advancements in one area may influence outcomes in others. The dialogue among experts culminates in a call for a delicate approach to AI's integration within the SDGs' framework, advocating for strategies that are sustainable, inclusive, and equitable. Concerns regarding the potential for an unregulated deployment of AI to widen the digital divide underscore the need for ethical deployment practices. In their conclusive assessment, respondents reached a consensus indicating a predominantly positive impact of AI on achieving the SDGs, with an average impact score of 7.88 out of 10. Such consensus aligns with analyses positing AI as an enabler of most SDGs, facilitating advancements in approximately 79% of them [7]. This collective evaluation by experts presents a balanced examination of AI's capabilities and limitations, urging a careful application of AI technologies. These insights underscore the necessity of responsibly exploiting AI's potential to ensure that its integration into efforts to achieve the SDGs contributes to a sustainable and inclusive future for all.

## 5. Conclusions

This research aimed to elucidate the complex role of AI in supporting the SDGs. By employing a Delphi methodology, this study engaged a panel of distinguished experts to assess AI's diverse impacts across various sectors, juxtaposing its extensive benefits against the inherent challenges within the context of sustainable development. The meticulous evaluation utilized a Likert scale to quantify impacts from "highly positive impact" to "highly negative impact," yielding a detailed understanding of AI's contributions and implications for the SDGs. The analysis revealed AI's significant transformative potential, particularly evident in efforts to eradicate global poverty (Goal 1) and enhance marine conservation (Goal 14). Conversely, a more nuanced view emerged on its role in promoting peaceful and inclusive societies (Goal 16), underscoring the necessity for a strategic, balanced, and ethical approach to integrating AI with sustainability efforts. Derived metrics, including the median, mean, standard deviation (SD), and interquartile deviation (IQD), highlighted a consensus among experts on AI's critical role in advancing toward the SDGs, especially noted in urban design, traffic optimization, and disaster response. These areas align with scholarly contributions that emphasize technology's pivotal role in sustainable urban development [69].

Consequently, this investigation underscores the dual nature of AI's impact on sustainable development, advocating for the formulation of policies, strategies, and frameworks that harness AI's capabilities responsibly. The imperative for ethical considerations and a commitment to the well-being of all stakeholders is paramount in leveraging AI to address the challenges posed by the SDGs. In understanding these insights, the conclusion of this study presents a comprehensive summary of AI's instrumental role in achieving the SDGs. It becomes evident that AI, when employed strategically and ethically, emerges as a

formidable ally in the quest for sustainability. However, the integration of AI in efforts to achieve a sustainable and inclusive future necessitates a commitment to strategic foresight and ethical principles, ensuring that technological advancements serve as catalysts for positive change across all SDG domains. Therefore, this study advocates for an integrated approach to AI implementation, one that harmonizes technological advancements with the foundational values and objectives of the SDGs. This research calls for collaboration among policymakers, practitioners, and technologists to develop a framework that prioritizes ethical deployment and maximizes AI's potential for sustainable development, thereby reinforcing AI's role as a pivotal tool in the global pursuit of sustainability.

#### *Limitations and Implications for Future Research*

In the spirit of scholarly precision, it is crucial to recognize the limitations of this study, which subsequently highlights avenues for further research. This study's exploration into the impacts of AI on the SDGs could be enhanced through a more exhaustive and systematic assessment of the relevant literature. Consequently, future investigations should embark on a deeper exploration of the determinants through a comprehensive literature review. The organization of determinants could be optimized by categorizing them into three primary AI dimensions, technological, ethical, and societal, thereby more accurately reflecting the dynamic landscape of AI research. Future studies could benefit from the application of a principal component analysis, based on these categories, to offer a more quantitative viewpoint on AI's contributions to the SDGs. In this study, a diverse group of experts was assembled, effectively limiting biases and gathering varied insights on the impact of artificial intelligence on sustainable development. Despite these strengths, the range of perspectives remained somewhat restricted by the participant count. It is recognized that an expansion in the array of viewpoints could enhance the depth of future research. Thus, it is recommended for subsequent studies to not only preserve the diversity of expertise but also to augment the number of experts involved. An increase in participant numbers is anticipated to enrich the consensus process, further solidify the study's validity, and ensure a comprehensive exploration of artificial intelligence's role in achieving the SDGs. Such an approach is poised to elevate the empirical rigor and make a significant contribution to the field. While the present study emphasized consensus through the interquartile deviation (IQD) method, the incorporation of other statistical techniques, such as the coefficient of variation (CV), could provide a more definitive consensus. A comparative study of the efficacy of both CV and IQD methods within a Delphi framework, specifically focusing on AI and the SDGs, would be invaluable in enhancing the understanding of Delphi methodologies. Furthermore, future research should consider the conversion of the identified determinants into indicators, thereby facilitating the development of models that predict the impact of AI on SDG outcomes. These determinants could also serve as the foundation for a policy framework dedicated to AI's role in achieving the SDGs. In practical terms, such a framework would be crucial for nations aiming to align their AI strategies with sustainable development objectives, a task of utmost importance in navigating the complex challenges of the contemporary era, with AI positioned as a key catalyst for change and progress.

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**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Available on request from the corresponding author.

**Conflicts of Interest:** The authors declare no conflict of interest.

### Appendix A

Link for all SDG goals and targets: <https://www.globalgoals.org/goals/> (accessed on 1 August 2023).

### Appendix B

Full table results:

#### Appendix B.1

Complete Results for Delphi Study Round One

Goal/Targets (T)	Median	Mean	SD	IQD
Goal 1	8.00	8.00	0.70	1.000
T1	8.04	8.00	0.65	1.000
T2	6.67	6.67	0.49	0.500
T3	5.42	5.42	0.48	0.750
T4	6.67	6.67	0.49	0.500
T5	8.67	8.67	0.58	1.000
T6	4.42	4.42	0.48	0.500
T7	2.92	2.92	0.49	0.500
Goal 2	7.17	7.00	0.85	1.200
T1	8.00	8.21	0.63	1.000
T2	7.00	6.67	0.49	0.375
T3	5.50	5.42	0.48	0.375
T4	7.00	7.08	0.47	0.500
T5	8.50	8.58	0.58	1.000
T6	4.50	4.42	0.48	0.250
T7	3.00	2.92	0.49	0.125
T8	7.50	7.67	0.48	0.375
Goal 3	8.00	8.00	0.70	1.000
T1	8.50	8.46	0.50	0.750
T2	7.00	6.71	0.47	1.000
T3	5.00	5.04	0.52	0.500
T4	7.00	6.96	0.48	0.500
T5	7.75	7.79	0.49	1.250
T6	4.00	3.96	0.52	1.000
T7	3.00	2.96	0.48	1.000
T8	7.00	6.79	0.24	0.500
T9	7.75	7.67	0.48	1.000
T10	7.00	6.67	0.49	1.500
T11	5.75	5.67	0.49	1.000
T12	4.75	4.67	0.49	1.500
T13	7.75	7.67	0.48	0.500

Goal/Targets (T)	Median	Mean	SD	IQD
Goal 4	6.67	7.00	0.57	0.750
T1	8.50	8.46	0.50	0.375
T2	7.00	6.71	0.47	0.625
T3	5.00	5.04	0.52	0.750
T4	7.00	6.96	0.48	0.375
T5	7.75	7.79	0.49	0.500
T6	4.00	3.96	0.52	1.250
T7	3.00	2.96	0.48	0.750
T8	7.00	6.79	0.24	0.500
T9	7.75	7.67	0.48	0.500
T10	7.00	6.67	0.49	0.500
Goal 5	7.08	7.00	0.64	1.000
T1	8.00	7.92	0.35	0.375
T2	5.75	5.75	0.42	0.375
T3	4.50	4.42	0.48	0.500
T4	6.00	6.08	0.57	0.500
T5	7.00	6.92	0.48	0.500
T6	3.00	3.08	0.48	0.500
T7	2.00	2.08	0.42	0.500
T8	5.75	5.75	0.25	0.500
T9	6.75	6.67	0.48	0.500
Goal 6	6.00	6.00	0.75	1.000
T1	8.00	7.92	0.35	0.500
T2	5.75	5.75	0.42	0.500
T3	4.50	4.42	0.48	0.500
T4	6.00	6.08	0.57	0.500
T5	7.00	6.92	0.48	0.500
T6	3.00	3.08	0.48	0.500
T7	2.00	2.08	0.42	0.500
T8	5.75	5.75	0.25	0.500
Goal 7	7.83	8.00	0.78	1.250
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	0.500
T4	7.00	7.00	0.35	1.000
T5	7.50	7.50	0.42	1.000
Goal 8	7.42	7.00	0.57	1.000
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	0.500

Goal/Targets (T)	Median	Mean	SD	IQD
T4	7.00	7.00	0.35	1.000
T5	7.50	7.50	0.42	1.000
T6	4.00	4.00	0.35	1.000
T7	4.45	4.42	0.42	0.500
T8	6.00	6.00	0.35	1.000
T9	7.00	7.00	0.35	1.000
T10	7.50	7.50	0.42	1.000
T11	8.50	8.42	0.42	1.000
T12	8.00	8.00	0.35	1.000
Goal 9	8.17	8.00	0.79	1.000
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	0.500
T3	5.50	5.42	0.42	0.500
T4	7.00	7.00	0.35	0.500
T5	7.50	7.50	0.42	0.500
T6	4.00	4.00	0.35	0.500
T7	4.50	4.50	0.42	0.500
T8	6.00	6.00	0.35	0.500
Goal 10	6.75	7.00	0.58	0.750
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	1.000
T4	7.00	7.00	0.35	1.000
T5	7.50	7.50	0.42	1.000
T6	4.00	4.00	0.35	1.000
T7	4.50	4.42	0.42	1.000
T8	6.00	6.00	0.35	1.000
T9	7.00	7.00	0.35	1.000
T10	7.50	7.50	0.42	0.500
Goal 11	7.42	7.50	0.63	1.000
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	1.000
T4	7.00	7.00	0.35	1.000
T5	7.50	7.50	0.42	1.000
T6	4.00	4.00	0.35	1.000
T7	4.50	4.42	0.42	1.000
T8	6.00	6.00	0.35	1.000
T9	7.00	7.00	0.35	1.000
T10	7.50	7.50	0.42	0.500

Goal/Targets (T)	Median	Mean	SD	IQD
Goal 12	7.42	7.50	0.64	1.000
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	1.000
T3	5.50	5.42	0.42	1.000
T4	7.00	7.00	0.35	1.000
T5	7.50	7.50	0.42	1.000
T6	4.00	4.00	0.35	1.000
T7	4.50	4.42	0.42	1.000
T8	6.00	6.00	0.35	1.000
T9	7.00	7.00	0.35	1.000
T10	7.50	7.50	0.42	0.500
T11	8.50	8.42	0.42	1.000
Goal 13	6.42	6.50	0.50	0.750
T1	7.00	7.00	0.35	1.000
T2	7.50	7.67	0.42	0.500
T3	8.50	8.67	0.42	1.000
T4	7.00	7.00	0.42	1.000
T5	7.50	7.67	0.35	1.000
Goal 14	6.75	6.50	0.56	0.750
T1	7.00	7.00	0.35	1.000
T2	7.50	7.67	0.42	0.500
T3	8.50	8.67	0.42	1.000
T4	7.00	7.00	0.35	1.000
T5	7.50	7.67	0.42	1.000
T6	8.50	8.67	0.42	1.500
T7	7.50	7.67	0.42	1.000
T8	8.50	8.67	0.42	1.000
T9	7.50	7.67	0.42	1.000
T10	7.50	7.67	0.42	1.000
Goal 15	7.83	8.00	0.62	1.000
T1	7.00	7.00	0.35	0.500
T2	7.50	7.67	0.42	0.500
T3	8.50	8.67	0.42	1.000
T4	7.00	7.00	0.35	0.500
T5	7.50	7.67	0.42	0.500
T6	8.50	8.67	0.42	1.000
T7	7.50	7.67	0.42	0.500
T8	8.50	8.67	0.42	1.000
T9	7.50	7.67	0.42	0.500
T10	7.50	7.67	0.42	0.500

Goal/Targets (T)	Median	Mean	SD	IQD
T11	7.00	7.00	0.35	1.000
T12	8.00	8.00	0.35	1.000
Goal 16	8.00	8.00	0.58	1.000
T1	7.00	7.00	0.35	0.500
T2	7.50	7.67	0.42	0.500
T3	8.50	8.67	0.42	0.000
T4	7.00	7.00	0.35	0.500
T5	7.50	7.67	0.42	0.500
T6	8.50	8.67	0.42	0.000
T7	7.50	7.67	0.42	0.500
T8	8.50	8.67	0.42	0.500
T9	7.50	7.67	0.42	0.500
T10	7.50	7.67	0.42	0.500
T11	7.00	7.00	0.35	0.500
T12	8.00	8.00	0.35	0.000
Goal 17	7.75	8.00	0.50	1.000
T1	8.00	8.00	0.35	1.000
T2	6.50	6.42	0.42	0.500
T3	5.50	5.42	0.42	1.000
T4	7.00	7.00	0.35	0.500
T5	7.57	7.50	0.42	1.000
T6	7.00	7.08	0.42	0.500
T7	7.50	7.42	0.42	0.500
T8	8.50	8.42	0.42	1.000
T9	6.50	6.50	0.35	1.000
T10	7.50	7.42	0.42	0.500
T11	6.50	6.67	0.42	0.250
T12	7.50	7.67	0.42	0.250
T13	8.50	8.67	0.42	0.250
T14	7.00	7.00	0.35	0.250
T15	7.50	7.67	0.42	0.250
T16	8.50	8.67	0.42	0.250
T17	7.50	7.67	0.42	0.250
T18	8.50	8.67	0.42	0.250
T19	7.50	7.67	0.42	0.250
Cronbach alpha:	Goal: 0.89		Target: 0.96	
Total goal contribution	Mean	Median	SD	
All goal contributions	7.28	7.25	0.50	
Cronbach alpha:	0.898			

## Appendix B.2

## Complete Results for Delphi Study Round Two

Goal/Targets (T)	Median	Mean	SD	IQD
Goal 1	7.05	7.00	0.32	0.600
T1	6.98	6.90	0.29	0.550
T2	7.02	7.02	0.28	0.530
T3	6.99	6.95	0.31	0.570
T4	7.05	7.04	0.27	0.520
T5	6.98	6.95	0.29	0.550
T6	7.00	6.99	0.28	0.540
T7	7.01	7.00	0.29	0.560
Goal 2	7.05	7.00	0.20	0.400
T1	7.05	7.04	0.22	0.410
T2	7.05	7.02	0.20	0.380
T3	7.05	7.02	0.20	0.375
T4	7.05	7.03	0.21	0.390
T5	7.05	7.02	0.22	0.400
T6	7.05	7.03	0.23	0.420
T7	7.02	7.00	0.21	0.380
T8	7.05	7.03	0.21	0.390
Goal 3	7.04	7.00	0.21	0.350
T1	6.96	6.95	0.28	0.520
T2	6.97	6.95	0.26	0.500
T3	6.98	6.90	0.28	0.530
T4	6.97	6.90	0.29	0.550
T5	6.96	6.90	0.27	0.520
T6	6.94	6.90	0.26	0.500
T7	6.95	6.85	0.28	0.540
T8	7.00	6.79	0.24	0.500
T9	6.96	6.90	0.26	0.520
T10	7.02	7.00	0.29	0.520
T11	7.01	7.00	0.27	0.510
T12	7.05	7.00	0.28	0.530
T13	6.98	6.98	0.26	0.510
Goal 4	7.05	7.00	0.20	0.400
T1	7.01	7.00	0.29	0.530
T2	7.02	7.00	0.28	0.520
T3	7.00	6.99	0.29	0.530
T4	7.00	6.95	0.28	0.540
T5	7.00	6.99	0.27	0.530

Goal/Targets (T)	Median	Mean	SD	IQD
T6	6.98	6.95	0.26	0.510
T7	6.97	6.90	0.28	0.540
T8	7.01	7.00	0.29	0.550
T9	7.00	6.99	0.27	0.510
T10	6.98	6.95	0.26	0.520
Goal 5	7.00	6.98	0.15	0.150
T1	7.01	7.00	0.19	0.350
T2	7.00	7.00	0.14	0.305
T3	7.00	7.00	0.12	0.290
T4	7.00	7.00	0.13	0.300
T5	7.01	7.00	0.12	0.290
T6	7.00	7.00	0.43	0.300
T7	7.00	7.00	0.12	0.290
T8	7.00	7.00	0.12	0.290
T9	7.00	7.00	0.12	0.300
Goal 6	8.65	8.65	0.15	0.200
T1	8.61	8.60	0.16	0.250
T2	8.70	8.69	0.12	0.150
T3	8.63	8.60	0.13	0.200
T4	8.71	8.70	0.13	0.200
T5	8.71	8.70	0.12	0.150
T6	8.76	8.70	0.10	0.150
T7	8.75	8.74	0.12	0.150
T8	8.75	8.75	0.11	0.200
Goal 7	8.92	8.90	0.16	0.200
T1	8.86	8.80	0.20	0.200
T2	8.90	8.89	0.15	0.200
T3	8.90	8.90	0.14	0.175
T4	8.91	8.90	0.18	0.250
T5	8.90	8.90	0.17	0.200
Goal 8	8.93	8.90	0.15	0.200
T1	8.75	8.75	0.12	0.150
T2	8.75	8.75	0.11	0.150
T3	8.77	8.75	0.10	0.150
T4	8.80	8.76	0.10	0.150
T5	8.76	8.75	0.10	0.150
T6	8.96	8.95	0.17	0.225
T7	8.93	8.90	0.16	0.200
T8	8.96	8.95	0.16	0.225
T9	8.92	8.90	0.14	0.200

Goal/Targets (T)	Median	Mean	SD	IQD
T10	8.92	8.90	0.13	0.175
T11	8.93	8.90	0.12	0.175
T12	8.92	8.90	0.11	0.150
Goal 9	8.95	8.93	0.18	0.225
T1	8.80	8.78	0.20	0.250
T2	8.80	8.77	0.18	0.200
T3	8.80	8.79	0.17	0.200
T4	8.80	8.76	0.19	0.225
T5	8.75	8.75	0.18	0.225
T6	8.75	8.70	0.15	0.200
T7	8.76	8.75	0.15	0.225
T8	8.80	8.76	0.14	0.200
Goal 10	7.06	7.05	0.10	0.150
T1	7.00	6.98	0.21	0.275
T2	6.95	6.95	0.9	0.225
T3	6.95	6.95	0.17	0.225
T4	6.96	6.95	0.18	0.200
T5	6.93	6.90	0.16	0.225
T6	6.92	6.90	0.16	0.225
T7	6.91	6.90	0.14	0.200
T8	6.92	6.90	0.15	0.200
T9	6.92	6.90	0.13	0.175
T10	6.91	6.90	0.12	0.175
Goal 11	8.97	8.95	0.15	0.225
T1	8.60	8.60	0.23	0.300
T2	8.60	8.60	0.22	0.250
T3	8.70	8.70	0.18	0.200
T4	8.60	8.60	0.19	0.225
T5	8.70	8.70	0.16	0.200
T6	8.70	8.70	0.16	0.200
T7	8.70	8.70	0.14	0.175
T8	8.70	8.70	0.13	0.175
T9	8.65	8.65	0.14	0.200
T10	8.70	8.68	0.15	0.225
Goal 12	7.10	7.07	0.09	0.150
T1	6.96	6.95	0.14	0.200
T2	6.92	6.90	0.13	0.225
T3	6.93	6.90	0.13	0.175
T4	6.92	6.90	0.11	0.175
T5	6.93	6.90	0.12	0.200

Goal/Targets (T)	Median	Mean	SD	IQD
T6	6.93	6.90	0.10	0.175
T7	6.92	6.90	0.10	0.175
T8	6.92	6.90	0.11	0.200
T9	6.91	6.90	0.10	0.175
T10	6.92	6.90	0.10	0.175
T11	6.91	6.90	0.08	0.175
Goal 13	8.82	8.82	0.01	0.010
T1	8.83	8.80	0.18	0.225
T2	8.82	8.80	0.15	0.200
T3	8.82	8.80	0.16	0.200
T4	8.81	8.80	0.14	0.225
T5	8.82	8.80	0.13	0.200
Goal 14	8.88	8.87	0.10	0.200
T1	8.73	8.70	0.20	0.250
T2	8.69	8.60	0.20	0.225
T3	8.72	8.70	0.17	0.200
T4	8.73	8.70	0.16	0.200
T5	8.80	8.79	0.15	0.225
T6	8.80	8.75	0.15	0.225
T7	8.71	8.70	0.18	0.225
T8	8.73	8.70	0.16	0.200
T9	8.72	8.70	0.14	0.225
T10	8.75	8.70	0.14	0.225
Goal 15	8.93	8.90	0.16	0.200
T1	8.65	8.65	0.15	0.200
T2	8.60	8.58	0.12	0.175
T3	8.61	8.60	0.13	0.200
T4	8.60	8.60	0.11	0.150
T5	8.62	8.60	0.13	0.175
T6	8.71	8.70	0.12	0.150
T7	8.72	8.70	0.11	0.175
T8	8.71	8.70	0.11	0.150
T9	8.75	8.75	0.10	0.150
T10	8.72	8.70	0.09	0.125
T11	8.75	8.73	0.10	0.150
T12	8.71	8.70	0.10	0.150
Goal 16	5.45	5.45	0.10	0.150
T1	5.42	5.40	0.09	0.150
T2	5.42	5.40	0.09	0.150
T3	5.41	5.40	0.08	0.150

Goal/Targets (T)	Median	Mean	SD	IQD
T4	5.43	5.40	0.10	0.150
T5	5.45	5.44	0.10	0.200
T6	5.43	5.40	0.10	0.150
T7	5.43	5.40	0.09	0.200
T8	5.45	5.45	0.10	0.150
T9	5.45	5.44	0.10	0.150
T10	5.45	5.45	0.10	0.150
T11	5.45	5.45	0.09	0.150
T12	5.45	5.45	0.10	0.150
Goal 17	5.53	5.50	0.07	0.200
T1	5.50	5.50	0.08	0.200
T2	5.40	5.40	0.10	0.200
T3	5.55	5.53	0.09	0.200
T4	5.50	5.50	0.10	0.300
T5	5.55	5.55	0.08	0.200
T6	5.50	5.50	0.08	0.200
T7	5.23	5.55	0.08	0.200
T8	5.50	5.50	0.07	0.200
T9	5.53	5.50	0.07	0.200
T10	5.53	5.50	0.07	0.200
T11	5.50	5.50	0.06	0.200
T12	5.53	5.50	0.06	0.200
T13	5.53	5.50	0.06	0.200
T14	5.50	5.50	0.07	0.200
T15	5.50	5.50	0.07	0.200
T16	5.50	5.50	0.07	0.200
T17	5.50	5.50	0.06	0.200
T18	5.50	5.50	0.07	0.200
T19	5.50	5.49	0.30	0.100
Cronbach alpha:	Goal: 0.91		Target: 0.97	
Total goal contribution	Mean		Median	SD
All goal contributions	7.88		7.95	0.22
Cronbach alpha:	0.94			

## Appendix C

Questionnaires for experts:

### Appendix C.1

Delphi Study Questionnaire: Round 1

Name of expert:

Assessment of the Impact of AI on SDG 1 (No Poverty)

Instructions:

Please assess the impact of AI on Sustainable Development Goal 1 (No Poverty) and its seven targets on reducing poverty levels. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 1 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 1 Overall Goal Impact						
Target 1.1: Eradicate extreme poverty (<USD 1.25/day)						
Target 1.2: Reduce poverty by at least half according to national definitions						
Target 1.3: Implement social protection systems for the poor and vulnerable						
Target 1.4: Ensure equal rights to economic resources and basic services						
Target 1.5: Build resilience of the poor to disasters and shocks						
Target 1.a: Mobilize resources for poverty eradication programs						
Target 1.b: Create policy frameworks for poverty eradication						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

Assessment of the Impact of AI on SDG 2 (Zero Hunger)

Instructions:

Please assess the impact of AI on Sustainable Development Goal 2 (Zero Hunger) and its eight targets on reducing hunger levels. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 2 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 2 Overall Goal Impact						
Target 2.1: End hunger and ensure access of all people to safe, nutritious, and sufficient food						
Target 2.2: End all forms of malnutrition						
Target 2.3: Double the agricultural productivity and incomes of small-scale food producers						
Target 2.4: Ensure sustainable food production systems and implement resilient agricultural practices						
Target 2.5: Maintain the genetic diversity of seeds, cultivated plants, farmed and domesticated animals						
Target 2.a: Increase investment, including through international cooperation, in infrastructure, technology, and gene banks for agriculture						
Target 2.b: Correct and prevent trade restrictions and distortions in world agricultural markets						
Target 2.c: Adopt measures to ensure the proper functioning of food commodity markets and to facilitate timely access to market information						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

Assessment of the Impact of AI on SDG 3 (Good Health and Well-being)

Instructions:

Please assess the impact of AI on Sustainable Development Goal 3 (Good Health and Well-being) and its thirteen targets on improving health globally. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 3 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 3 Overall Goal Impact						
Target 3.1: Reduce the global maternal mortality ratio						
Target 3.2: End preventable deaths of newborns and children under 5 years						
Target 3.3: End the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases						
Target 3.4: Reduce by one third premature mortality from non-communicable diseases						
Target 3.5: Strengthen the prevention and treatment of substance abuse						
Target 3.6: Halve the number of global deaths and injuries from road traffic accidents						
Target 3.7: Ensure universal access to sexual and reproductive healthcare services						
Target 3.8: Achieve universal health coverage						
Target 3.9: Reduce illnesses and deaths from hazardous chemicals and pollution						
Target 3.a: Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control						
Target 3.b: Support research and development of vaccines and medicines						
Target 3.c: Increase health financing and support health workforce in developing countries						
Target 3.d: Improve early warning systems for global health risks						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

#### Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

#### Assessment of the Impact of AI on SDG 4 (Quality Education)

##### Instructions:

Please assess the impact of AI on Sustainable Development Goal 4 (Quality Education) and its ten targets on enhancing educational outcomes globally. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 4 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 4 Overall Goal Impact						
Target 4.1: Ensure all girls and boys complete free, equitable, and quality primary and secondary education						
Target 4.2: Ensure all girls and boys have access to quality early childhood development, care, and pre-primary education						
Target 4.3: Ensure equal access for all women and men to affordable and quality technical, vocational, and tertiary education						
Target 4.4: Increase the number of youth and adults who have relevant skills for employment, decent jobs, and entrepreneurship						
Target 4.5: Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable						
Target 4.6: Ensure that all youth and a substantial proportion of adults achieve literacy and numeracy						
Target 4.7: Ensure all learners acquire knowledge and skills needed to promote sustainable development						
Target 4.a: Build and upgrade education facilities that are child-, disability-, and gender-sensitive and provide safe, non-violent, inclusive, and effective learning environments for all						
Target 4.b: Expand the number of scholarships available to developing countries						
Target 4.c: Increase the supply of qualified teachers in developing countries						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

#### Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

#### Assessment of the Impact of AI on SDG 5 (Gender Equality)

##### Instructions:

Please assess the impact of AI on Sustainable Development Goal 5 (Gender Equality) and its nine targets on promoting gender equality and empowering all women and girls. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 5 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 5 Overall Goal Impact						
Target 5.1: End all forms of discrimination against all women and girls everywhere						
Target 5.2: Eliminate all forms of violence against all women and girls in the public and private spheres						
Target 5.3: Eliminate all harmful practices, such as child, early, and forced marriage and female genital mutilation						
Target 5.4: Recognize and value unpaid care and domestic work through the provision of public services, infrastructure, and social protection policies						
Target 5.5: Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision making						
Target 5.6: Ensure universal access to sexual and reproductive health and reproductive rights						
Target 5.a: Undertake reforms to give women equal rights to economic resources						
Target 5.b: Enhance the use of enabling technology, particularly information and communications technology, to promote the empowerment of women						
Target 5.c: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

Assessment of the Impact of AI on SDG 6 (Clean Water and Sanitation)

Instructions:

Please assess the impact of AI on Sustainable Development Goal 6 (Clean Water and Sanitation) and its eight targets on ensuring availability and sustainable management of

water and sanitation for all. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 6 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 6 Overall Goal Impact						
Target 6.1: Achieve universal and equitable access to safe and affordable drinking water						
Target 6.2: Achieve access to adequate and equitable sanitation and hygiene						
Target 6.3: Improve water quality, wastewater treatment, and safe reuse						
Target 6.4: Increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater						
Target 6.5: Implement integrated water resources management at all levels						
Target 6.6: Protect and restore water-related ecosystems						
Target 6.a: Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs						
Target 6.b: Support and strengthen the participation of local communities in improving water and sanitation management						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

Assessment of the Impact of AI on SDG 7 (Affordable and Clean Energy)

Instructions:

Please assess the impact of AI on Sustainable Development Goal 7 (Affordable and Clean Energy) and its five targets on ensuring access to affordable, reliable, sustainable, and modern energy for all. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact

- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 7 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 7 Overall Goal Impact						
Target 7.1: Ensure universal access to affordable, reliable, and modern energy services						
Target 7.2: Substantially increase the share of renewable energy in the global energy mix						
Target 7.3: Double the global rate of improvement in energy efficiency						
Target 7.a: Enhance international cooperation to facilitate access to clean energy research and technology						
Target 7.b: Expand infrastructure and upgrade technology for supplying modern and sustainable energy services in developing countries						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

Assessment of the Impact of AI on SDG 8 (Decent Work and Economic Growth)

Instructions:

Please assess the impact of AI on Sustainable Development Goal 8 (Decent Work and Economic Growth) and its twelve targets on promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 8 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 8 Overall Goal Impact						
Target 8.1: Sustain per capita economic growth in accordance with national circumstances						
Target 8.2: Achieve higher levels of economic productivity through diversification, technological upgrading, and innovation						
Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity, and innovation						
Target 8.4: Progressively improve, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation						
Target 8.5: Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities						
Target 8.6: Substantially reduce the proportion of youth not in employment, education, or training						
Target 8.7: Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking, and secure the prohibition and elimination of the worst forms of child labor						
Target 8.8: Protect labor rights and promote safe and secure working environments for all workers						
Target 8.9: By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products						
Target 8.10: Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance, and financial services for all						
Target 8.a: Increase Aid for Trade support for developing countries, particularly least-developed countries						
Target 8.b: Develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

### Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

Assessment of the Impact of AI on SDG 9 (Industry, Innovation, and Infrastructure)

Instructions:

Please assess the impact of AI on Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) and its eight targets on building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 9 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 9 Overall Goal Impact						
Target 9.1: Develop quality, reliable, sustainable, and resilient infrastructure						
Target 9.2: Promote inclusive and sustainable industrialization						
Target 9.3: Increase the access of small-scale industrial and other enterprises to financial services						
Target 9.4: Upgrade infrastructure and retrofit industries to make them sustainable						
Target 9.5: Enhance scientific research, upgrade technological capabilities in industrial sectors						
Target 9.a: Facilitate sustainable infrastructure development for developing countries						
Target 9.b: Support domestic technology development, research, and innovation						
Target 9.c: Significantly increase access to information and communications technology						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

Assessment of the Impact of AI on SDG 10 (Reduced Inequalities)

Instructions:

Please assess the impact of AI on Sustainable Development Goal 10 (Reduced Inequalities) and its ten targets on reducing inequality within and among countries. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 10 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 10 Overall Goal Impact						
Target 10.1: Progressively achieve and sustain income growth of the bottom 40% of the population						
Target 10.2: Empower and promote the social, economic, and political inclusion of all						
Target 10.3: Ensure equal opportunity and reduce inequalities of outcome						
Target 10.4: Adopt policies, especially fiscal, wage, and social protection policies, and progressively achieve greater equality						
Target 10.5: Improve the regulation and monitoring of global financial markets and institutions						
Target 10.6: Ensure enhanced representation and voice for developing countries in decision making in global international economic and financial institutions						
Target 10.7: Facilitate orderly, safe, regular, and responsible migration and mobility of people						
Target 10.a: Encourage official development assistance and financial flows, including foreign direct investment, to states where the need is greatest						
Target 10.b: Encourage assistance and investment in least-developed countries						
Target 10.c: By 2030, reduce to less than 3% the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5%						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

Assessment of the Impact of AI on SDG 11 (Sustainable Cities and Communities)

Instructions: Please assess the impact of AI on Sustainable Development Goal 11 (Sustainable Cities and Communities) and its ten targets on making cities and human settlements inclusive, safe, resilient, and sustainable. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 11 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 11 Overall Goal Impact						
Target 11.1: Ensure access for all to adequate, safe, and affordable housing and basic services						
Target 11.2: Provide access to safe, affordable, accessible, and sustainable transport systems for all						
Target 11.3: Enhance inclusive and sustainable urbanization and capacity for participatory, integrated, and sustainable human settlement planning and management						
Target 11.4: Strengthen efforts to protect and safeguard the world’s cultural and natural heritage						
Target 11.5: Significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters						
Target 11.6: Reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management						
Target 11.7: Provide universal access to safe, inclusive and accessible, green, and public spaces						
Target 11.a: Support positive economic, social, and environmental links between urban, peri-urban, and rural areas by strengthening national and regional development planning						

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
Target 11.b: Increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters						
Target 11.c: Support least-developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

**Submission Instructions**

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

**Assessment of the Impact of AI on SDG 12 (Responsible Consumption and Production) Instructions:**

Please assess the impact of AI on Sustainable Development Goal 12 (Responsible Consumption and Production) and its eleven targets on ensuring sustainable consumption and production patterns. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 12 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 12 Overall Goal Impact						
Target 12.1: Implement the 10-Year Framework of Programs on sustainable consumption and production						
Target 12.2: Achieve the sustainable management and efficient use of natural resources						
Target 12.3: Halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains						
Target 12.4: Achieve the environmentally sound management of chemicals and all wastes throughout their life cycle						

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
Target 12.5: Substantially reduce waste generation through prevention, reduction, recycling, and reuse						
Target 12.6: Encourage companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle						
Target 12.7: Promote public procurement practices that are sustainable						
Target 12.8: Ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles						
Target 12.a: Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production						
Target 12.b: Develop and implement tools to monitor sustainable development impacts for sustainable tourism						
Target 12.c: Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

#### Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

#### Assessment of the Impact of AI on SDG 13 (Climate Action)

##### Instructions:

Please assess the impact of AI on Sustainable Development Goal 13 (Climate Action) and its five targets on taking urgent action to combat climate change and its impacts. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 13 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 13 Overall Goal Impact						
Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters						
Target 13.2: Integrate climate change measures into national policies, strategies, and planning						
Target 13.3: Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning						
Target 13.a: Implement the commitment to the United Nations Framework Convention on Climate Change to jointly mobilize USD 100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions						
Target 13.b: Promote mechanisms for raising capacity for effective climate-change-related planning and management in least-developed countries and small island developing states						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

#### Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

#### Assessment of the Impact of AI on SDG 14 (Life Below Water)

Instructions: Please assess the impact of AI on Sustainable Development Goal 14 (Life Below Water) and its ten targets on conserving and sustainably using the oceans, seas, and marine resources for sustainable development. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 14 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 14 Overall Goal Impact						
Target 14.1: Prevent and significantly reduce marine pollution of all kinds						
Target 14.2: Manage and protect marine and coastal ecosystems to avoid significant adverse impacts						
Target 14.3: Minimize and address the impacts of ocean acidification						
Target 14.4: Effectively regulate harvesting and end overfishing; illegal, unreported, and unregulated fishing; and destructive fishing practices						
Target 14.5: Conserve at least 10% of coastal and marine areas						
Target 14.6: Prohibit certain forms of fisheries' subsidies, which contribute to overcapacity and overfishing; eliminate subsidies that contribute to illegal, unreported, and unregulated fishing						
Target 14.7: Increase the economic benefits to small island developing states and least-developed countries from the sustainable use of marine resources						
Target 14.a: Increase scientific knowledge, research, and technology for ocean health						
Target 14.b: Provide access for small-scale artisanal fishers to marine resources and markets						
Target 14.c: Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

#### Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

#### Assessment of the Impact of AI on SDG 15 (Life on Land)

##### Instructions:

Please assess the impact of AI on Sustainable Development Goal 15 (Life on Land) and its twelve targets on protecting, restoring, and promoting sustainable use of terrestrial ecosystems, sustainably managing forests, combating desertification, and halting and reversing land degradation and halting biodiversity loss. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact

- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 15 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 15 Overall Goal Impact						
Target 15.1: Ensure the conservation, restoration, and sustainable use of terrestrial and inland freshwater ecosystems						
Target 15.2: Promote the implementation of sustainable management of all types of forests						
Target 15.3: Combat desertification, restore degraded land and soil						
Target 15.4: Ensure the conservation of mountain ecosystems						
Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity						
Target 15.6: Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources						
Target 15.7: Take urgent action to end poaching and trafficking of protected species						
Target 15.8: Introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species						
Target 15.9: Integrate ecosystem and biodiversity values into national and local planning						
Target 15.a: Mobilize and significantly increase financial resources to conserve and sustainably use biodiversity and ecosystems						
Target 15.b: Mobilize significant resources from all sources and at all levels to finance sustainable forest management						
Target 15.c: Enhance global support for efforts to combat poaching and trafficking of protected species						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

Assessment of the Impact of AI on SDG 16 (Peace, Justice, and Strong Institutions)

**Instructions:**

Please assess the impact of AI on Sustainable Development Goal 16 (Peace, Justice, and Strong Institutions) and its twelve targets on promoting peaceful and inclusive societies for sustainable development, providing access to justice for all, and building effective, accountable, and inclusive institutions at all levels. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

Table for SDG 16 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 16 Overall Goal Impact						
Target 16.1: Significantly reduce all forms of violence and related death rates everywhere						
Target 16.2: End abuse, exploitation, trafficking, and all forms of violence against and torture of children						
Target 16.3: Promote the rule of law at the national and international levels and ensure equal access to justice for all						
Target 16.4: By 2030, significantly reduce illicit financial and arms flows, strengthen recovery and return of stolen assets, and combat all forms of organized crime						
Target 16.5: Substantially reduce corruption and bribery in all their forms						
Target 16.6: Develop effective, accountable, and transparent institutions at all levels						
Target 16.7: Ensure responsive, inclusive, participatory, and representative decision making at all levels						
Target 16.8: Broaden and strengthen the participation of developing countries in the institutions of global governance						
Target 16.9: By 2030, provide legal identity for all, including birth registration						
Target 16.10: Ensure public access to information and protect fundamental freedoms						
Target 16.a: Strengthen relevant national institutions for building capacity at all levels						
Target 16.b: Promote and enforce non-discriminatory laws and policies						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

**Submission Instructions**

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

**Assessment of the Impact of AI on SDG 17 (Partnerships for the Goals)**

**Instructions:**

Please assess the impact of AI on Sustainable Development Goal 17 (Partnerships for the Goals) and its nineteen targets on strengthening the means of implementation and revitalizing the global partnership for sustainable development. Tick the appropriate box that best describes the impact of AI on each goal and target.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Provide your score of the impact in the space provided after each item according to the range of your selected impact.

**Table for SDG 17 and Its Targets**

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 17 Overall Goal Impact						
Target 17.1: Strengthen domestic resource mobilization						
Target 17.2: Developed countries to fully implement their ODA commitments						
Target 17.3: Mobilize additional financial resources for developing countries						
Target 17.4: Assist developing countries in achieving debt sustainability						
Target 17.5: Adopt and implement investment promotion regimes for LDCs						
Target 17.6: Enhance international cooperation on science, technology, and innovation						
Target 17.7: Promote sustainable technologies to developing countries						
Target 17.8: Fully operationalize the technology bank and science, technology, and innovation capacity-building mechanism for LDCs						
Target 17.9: Enhance international support for implementing effective and targeted capacity-building						
Target 17.10: Promote a universal, rules-based, open, non-discriminatory, and equitable multilateral trading system under the WTO						

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
Target 17.11: Increase the exports of developing countries						
Target 17.12: Realize timely implementation of duty-free, tariff-free market access for LDCs						
Target 17.13: Enhance global macroeconomic stability						
Target 17.14: Enhance policy coherence for sustainable development						
Target 17.15: Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development						
Target 17.16: Enhance the global partnership for sustainable development						
Target 17.17: Encourage effective partnerships						
Target 17.18: Enhance capacity-building support to developing countries						
Target 17.19: Support statistical capacity-building in developing countries						

Kindly provide your reasoning on your selected level of impact of AI on the goal and targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Thank you for contributing your expert opinion to this study.

#### Appendix C.2

Round two study

Delphi Study Questionnaire: Round 2

Name of expert:

Further Assessment of the Impact of AI on SDG 1 (No Poverty)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 1 (No Poverty) and its seven targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 1 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 1 Overall Goal Impact (R1 avg. score:)						
Target 1.1: Eradicate extreme poverty (<USD 1.25/day) (R1 avg. score:)						
Target 1.2: Reduce poverty by at least half according to national definitions (R1 avg. score:)						
Target 1.3: Implement social protection systems for the poor and vulnerable (R1 avg. score:)						
Target 1.4: Ensure equal rights to economic resources and basic services (R1 avg. score:)						
Target 1.5: Build resilience of the poor to disasters and shocks (R1 avg. score:)						
Target 1.a: Mobilize resources for poverty eradication programs (R1 avg. score:)						
Target 1.b: Create policy frameworks for poverty eradication (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 2 (Zero Hunger)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 2 (Zero Hunger) and its eight targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 2 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 2 Overall Goal Impact (R1 avg. score:)						
Target 2.1: End hunger and ensure access of all to safe, nutritious, and sufficient food (R1 avg. score:)						

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
Target 2.2: End all forms of malnutrition (R1 avg. score:)						
Target 2.3: Double agricultural productivity and incomes (R1 avg. score:)						
Target 2.4: Sustainable food production systems and resilient agricultural practices (R1 avg. score:)						
Target 2.5: Maintain genetic diversity (R1 avg. score:)						
Target 2.a: Investment in rural infrastructure and technology (R1 avg. score:)						
Target 2.b: Prevent agricultural trade restrictions (R1 avg. score:)						
Target 2.c: Ensure stable food commodity markets (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 3 (Good Health and Well-being)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 3 (Good Health and Well-being) and its thirteen targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 3 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 3 Overall Goal Impact (R1 avg. score:)						
Target 3.1: Reduce maternal mortality (R1 avg. score:)						
Target 3.2: End preventable deaths of children under 5 years of age (R1 avg. score:)						

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
Target 3.3: Fight communicable diseases (R1 avg. score:)						
Target 3.4: Reduce mortality from non-communicable diseases and promote mental health (R1 avg. score:)						
Target 3.5: Prevent and treat substance abuse (R1 avg. score:)						
Target 3.6: Reduce road injuries and deaths (R1 avg. score:)						
Target 3.7: Ensure access to sexual and reproductive healthcare services (R1 avg. score:)						
Target 3.8: Achieve universal health coverage (R1 avg. score:)						
Target 3.9: Reduce illnesses from hazardous chemicals and pollution (R1 avg. score:)						
Target 3.a: Strengthen implementation of the WHO Framework Convention on Tobacco Control (R1 avg. score:)						
Target 3.b: Support research, development, and universal access to affordable vaccines and medicines (R1 avg. score:)						
Target 3.c: Increase health financing and support for the health workforce in developing countries (R1 avg. score:)						
Target 3.d: Improve early warning systems for global health risks (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 4 (Quality Education)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 4 (Quality Education) and its ten targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 4 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Score
SDG 4 Overall Goal Impact (R1 avg. score:)						
Target 4.1: Ensure all children complete free, equitable, and quality primary and secondary education (R1 avg. score:)						
Target 4.2: Ensure access to quality early childhood development and pre-primary education (R1 avg. score:)						
Target 4.3: Ensure equal access for all to affordable technical, vocational, and higher education (R1 avg. score:)						
Target 4.4: Increase the number of youth and adults with relevant skills for employment (R1 avg. score:)						
Target 4.5: Eliminate gender disparities and ensure access to education for the vulnerable (R1 avg. score:)						
Target 4.6: Ensure that all youth and adults achieve literacy and numeracy (R1 avg. score:)						
Target 4.7: Ensure all learners acquire knowledge to promote sustainable development (R1 avg. score:)						
Target 4.a: Build and upgrade education facilities that are child-, disability-, and gender-sensitive (R1 avg. score:)						
Target 4.b: Expand scholarships available to developing countries (R1 avg. score:)						
Target 4.c: Increase the supply of qualified teachers in developing countries (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 5 (Gender Equality)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 5 (Gender Equality) and its nine targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact

- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 5 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 5 Overall Goal Impact (R1 avg. score:)						
Target 5.1: End all forms of discrimination against all women and girls everywhere (R1 avg. score:)						
Target 5.2: Eliminate all forms of violence against women and girls (R1 avg. score:)						
Target 5.3: Eliminate all harmful practices, such as child marriage (R1 avg. score:)						
Target 5.4: Recognize and value unpaid care and promote shared domestic responsibilities (R1 avg. score:)						
Target 5.5: Ensure full participation and equal opportunities for leadership (R1 avg. score:)						
Target 5.6: Ensure universal access to sexual and reproductive health (R1 avg. score:)						
Target 5.a: Undertake reforms to give women equal rights to economic resources (R1 avg. score:)						
Target 5.b: Enhance the use of enabling technology to promote empowerment of women (R1 avg. score:)						
Target 5.c: Adopt and strengthen policies for gender equality (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 6 (Clean Water and Sanitation)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 6 (Clean Water and Sanitation) and its eight targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Please focus on providing insights where your opinions differ from the majority or where you feel additional clarity is needed.

Table for Re-assessment of AI impact on SDG 6 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 6 Overall Goal Impact (R1 avg. score:)						
Target 6.1: Universal and equitable access to safe and affordable drinking water (R1 avg. score:)						
Target 6.2: Access to adequate and equitable sanitation and hygiene (R1 avg. score:)						
Target 6.3: Improve water quality, wastewater treatment, and safe reuse (R1 avg. score:)						
Target 6.4: Substantially increase water-use efficiency (R1 avg. score:)						
Target 6.5: Implement integrated water resources management (R1 avg. score:)						
Target 6.6: Protect and restore water-related ecosystems (R1 avg. score:)						
Target 6.a: Expand international cooperation and support for water- and sanitation-related activities (R1 avg. score:)						
Target 6.b: Support and strengthen the participation of local communities in improving water and sanitation management (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 7 (Affordable and Clean Energy)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 7 (Affordable and Clean Energy) and its five targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 7 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 7 Overall Goal Impact (R1 avg. score:)						
Target 7.1: Ensure universal access to affordable, reliable, and modern energy services (R1 avg. score:)						
Target 7.2: Substantially increase the share of renewable energy in the global energy mix (R1 avg. score:)						
Target 7.3: Double the global rate of improvement in energy efficiency (R1 avg. score:)						
Target 7.a: Enhance international cooperation to facilitate access to clean energy research and technology (R1 avg. score:)						
Target 7.b: Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 8 (Decent Work and Economic Growth) Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 8 (Decent Work and Economic Growth) and its twelve targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 8 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 8 Overall Goal Impact (R1 avg. score:)						
Target 8.1: Sustain per capita economic growth (R1 avg. score:)						
Target 8.2: Achieve higher levels of productivity (R1 avg. score:)						

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
Target 8.3: Promote policies to support job creation and growing enterprises (R1 avg. score:)						
Target 8.4: Improve global resource efficiency in consumption and production (R1 avg. score:)						
Target 8.5: Achieve full and productive employment for all (R1 avg. score:)						
Target 8.6: Reduce the proportion of youth not in employment, education, or training (R1 avg. score:)						
Target 8.7: Take immediate measures to eradicate forced labor (R1 avg. score:)						
Target 8.8: Protect labor rights and promote safe working environments (R1 avg. score:)						
Target 8.9: Promote sustainable tourism (R1 avg. score:)						
Target 8.10: Strengthen the capacity of domestic financial institutions (R1 avg. score:)						
Target 8.a: Increase Aid for Trade support for developing countries (R1 avg. score:)						
Target 8.b: Develop a global strategy for youth employment (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 9 (Industry, Innovation, and Infrastructure)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) and its eight targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 9 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 9 Overall Goal Impact (R1 avg. score:)						
Target 9.1: Develop sustainable, resilient, and inclusive infrastructures (R1 avg. score:)						
Target 9.2: Promote inclusive and sustainable industrialization (R1 avg. score:)						
Target 9.3: Increase access to financial services for small industries (R1 avg. score:)						
Target 9.4: Upgrade infrastructure for sustainability (R1 avg. score:)						
Target 9.5: Enhance scientific research and innovation (R1 avg. score:)						
Target 9.a: Facilitate sustainable infrastructure development for developing countries (R1 avg. score:)						
Target 9.b: Support domestic technology development and innovation (R1 avg. score:)						
Target 9.c: Significantly increase access to information and communications technology (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 10 (Reduced Inequalities)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 10 (Reduced Inequalities) and its ten targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 10 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 10 Overall Goal Impact (R1 avg. score:)						
Target 10.1: Progressively achieve and sustain income growth of the bottom 40% (R1 avg. score:)						
Target 10.2: Empower and promote social, economic, and political inclusion (R1 avg. score:)						
Target 10.3: Ensure equal opportunities and reduce inequalities of outcome (R1 avg. score:)						
Target 10.4: Adopt policies for greater equality (R1 avg. score:)						
Target 10.5: Improve regulation of global financial markets (R1 avg. score:)						
Target 10.6: Enhance representation for developing countries in financial institutions (R1 avg. score:)						
Target 10.7: Facilitate orderly, safe, regular, and responsible migration (R1 avg. score:)						
Target 10.a: Encourage ODA and financial flows to states where the need is greatest (R1 avg. score:)						
Target 10.b: Encourage assistance and investment in least-developed countries (R1 avg. score:)						
Target 10.c: Reduce transaction costs of migrant remittances (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 11 (Sustainable Cities and Communities) Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 11 (Sustainable Cities and Communities) and its ten targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 11 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 11 Overall Goal Impact (R1 avg. score:)						
Target 11.1: Ensure access to safe, affordable housing and basic services (R1 avg. score:)						
Target 11.2: Provide access to safe, affordable transport systems (R1 avg. score:)						
Target 11.3: Enhance inclusive and sustainable urbanization (R1 avg. score:)						
Target 11.4: Strengthen efforts to protect the world's cultural and natural heritage (R1 avg. score:)						
Target 11.5: Significantly reduce the number of deaths caused by disasters (R1 avg. score:)						
Target 11.6: Reduce the environmental impact of cities (R1 avg. score:)						
Target 11.7: Provide universal access to green and public spaces (R1 avg. score:)						
Target 11.a: Support positive economic, social, and environmental links (R1 avg. score:)						
Target 11.b: Increase the number of cities implementing integrated policies (R1 avg. score:)						
Target 11.c: Support building sustainable and resilient buildings using local materials (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 12 (Responsible Consumption and Production)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 12 (Responsible Consumption and Production) and its eleven targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 12 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 12 Overall Goal Impact (R1 avg. score:)						
Target 12.1: Implement the 10-Year Framework of Programs on SCP (R1 avg. score:)						
Target 12.2: Sustainable management and use of natural resources (R1 avg. score:)						
Target 12.3: Halve global per capita food waste (R1 avg. score:)						
Target 12.4: Manage chemicals and waste throughout their life cycle (R1 avg. score:)						
Target 12.5: Substantially reduce waste generation (R1 avg. score:)						
Target 12.6: Encourage companies to adopt sustainable practices (R1 avg. score:)						
Target 12.7: Promote public procurement practices that are sustainable (R1 avg. score:)						
Target 12.8: Ensure that people have relevant information for sustainable development (R1 avg. score:)						
Target 12.a: Support developing countries to strengthen their scientific and technological capacity (R1 avg. score:)						
Target 12.b: Develop and implement tools to monitor sustainable development impacts (R1 avg. score:)						
Target 12.c: Rationalize inefficient fossil-fuel subsidies (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 13 (Climate Action)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 13 (Climate Action) and its five targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 13 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 13 Overall Goal Impact (R1 avg. score:)						
Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards (R1 avg. score:)						
Target 13.2: Integrate climate change measures into national policies (R1 avg. score:)						
Target 13.3: Improve education, awareness, and capacity on climate change (R1 avg. score:)						
Target 13.a: Implement the commitment to the UN Framework Convention on Climate Change (R1 avg. score:)						
Target 13.b: Promote mechanisms for raising capacity for effective climate-change-related planning (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 14 (Life Below Water)

Instructions: Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 14 (Life Below Water) and its ten targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 14 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 14 Overall Goal Impact (R1 avg. score:)						
Target 14.1: Prevent and reduce marine pollution (R1 avg. score:)						
Target 14.2: Protect and restore marine and coastal ecosystems (R1 avg. score:)						

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
Target 14.3: Minimize and address ocean acidification (R1 avg. score:)						
Target 14.4: Regulate harvesting, end overfishing (R1 avg. score:)						
Target 14.5: Conserve coastal and marine areas (R1 avg. score:)						
Target 14.6: Prohibit fisheries' subsidies contributing to overfishing (R1 avg. score:)						
Target 14.7: Increase economic benefits from sustainable marine resources (R1 avg. score:)						
Target 14.a: Increase scientific knowledge, research for ocean health (R1 avg. score:)						
Target 14.b: Provide access for small-scale fishers to marine resources (R1 avg. score:)						
Target 14.c: Enhance marine resource conservation under international law (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 15 (Life on Land)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 15 (Life on Land) and its twelve targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 15 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 15 Overall Goal Impact (R1 avg. score:)						
Target 15.1: Conserve and sustainably use terrestrial and inland freshwater ecosystems (R1 avg. score:)						

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
Target 15.2: Promote sustainable management of all types of forests (R1 avg. score:)						
Target 15.3: Combat desertification, restore degraded land and soil (R1 avg. score:)						
Target 15.4: Ensure conservation of mountain ecosystems (R1 avg. score:)						
Target 15.5: Take action to reduce degradation of natural habitats (R1 avg. score:)						
Target 15.6: Ensure fair sharing of the benefits from the utilization of genetic resources (R1 avg. score:)						
Target 15.7: Take urgent action to end poaching and trafficking of protected species (R1 avg. score:)						
Target 15.8: Prevent the introduction and reduce the impact of invasive alien species (R1 avg. score:)						
Target 15.9: Integrate ecosystem and biodiversity values into national and local planning (R1 avg. score:)						
Target 15.a: Mobilize resources to conserve and sustainably use biodiversity and ecosystems (R1 avg. score:)						
Target 15.b: Mobilize significant resources for sustainable forest management (R1 avg. score:)						
Target 15.c: Enhance global support to combat poaching and trafficking (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 16 (Peace, Justice, and Strong Institutions)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 16 (Peace, Justice, and Strong Institutions) and its twelve targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact

- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 16 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 16 Overall Goal Impact (R1 avg. score:)						
Target 16.1: Reduce violence and related death rates (R1 avg. score:)						
Target 16.2: End abuse, exploitation, trafficking, and all forms of violence against children (R1 avg. score:)						
Target 16.3: Promote the rule of law and ensure equal access to justice (R1 avg. score:)						
Target 16.4: Reduce illicit financial and arms flows (R1 avg. score:)						
Target 16.5: Substantially reduce corruption and bribery (R1 avg. score:)						
Target 16.6: Develop effective, accountable, and transparent institutions (R1 avg. score:)						
Target 16.7: Ensure responsive, inclusive, and representative decision making (R1 avg. score:)						
Target 16.8: Broaden and strengthen participation of developing countries in global governance (R1 avg. score:)						
Target 16.9: Provide legal identity for all, including birth registration (R1 avg. score:)						
Target 16.10: Ensure public access to information and protect fundamental freedoms (R1 avg. score:)						
Target 16.a: Strengthen national institutions to prevent violence and combat terrorism and crime (R1 avg. score:)						
Target 16.b: Promote and enforce non-discriminatory laws and policies (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

Further Assessment of the Impact of AI on SDG 17 (Partnerships for the Goals)

Instructions:

Based on the consolidated findings and expert comments from Round 1, please re-assess the impact of AI on Sustainable Development Goal 17 (Partnerships for the Goals) and its nineteen targets. Please indicate your level of agreement with the majority opinion or provide an alternative view if you disagree.

- 8–10: Highly Positive Impact
- 6–7.99: Positive Impact
- 5–5.99: Neutral Impact
- 3–4.99: Negative Impact
- 1–2.99: Highly Negative Impact

Table for Re-assessment of AI impact on SDG 17 and Its Targets

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
SDG 17 Overall Goal Impact (R1 avg. score:)						
Target 17.1: Strengthen domestic resource mobilization (R1 avg. score:)						
Target 17.2: Fully implement ODA commitments (R1 avg. score:)						
Target 17.3: Mobilize additional financial resources (R1 avg. score:)						
Target 17.4: Assist developing countries in attaining long-term debt sustainability (R1 avg. score:)						
Target 17.5: Adopt investment promotion regimes for LDCs (R1 avg. score:)						
Target 17.6: Enhance international cooperation on science, technology, and innovation (R1 avg. score:)						
Target 17.7: Promote sustainable technologies to developing countries (R1 avg. score:)						
Target 17.8: Fully operationalize the technology bank and STI mechanism for LDCs (R1 avg. score:)						
Target 17.9: Enhance international support for effective and targeted capacity-building (R1 avg. score:)						
Target 17.10: Promote a universal, rules-based, open, multilateral trading system under WTO (R1 avg. score:)						
Target 17.11: Increase exports of developing countries (R1 avg. score:)						
Target 17.12: Realize timely implementation of duty-free and quota-free market access for LDCs (R1 avg. score:)						
Target 17.13: Enhance global macroeconomic stability (R1 avg. score:)						
Target 17.14: Enhance policy coherence for sustainable development (R1 avg. score:)						

Goal/Targets	Highly Positive Impact	Positive Impact	Neutral Impact	Negative Impact	Highly Negative Impact	Scores
Target 17.15: Respect each country's policy space and leadership (R1 avg. score:)						
Target 17.16: Enhance the global partnership for sustainable development (R1 avg. score:)						
Target 17.17: Encourage and promote effective public, public–private, and civil society partnerships (R1 avg. score:)						
Target 17.18: Enhance capacity-building support to developing countries (R1 avg. score:)						
Target 17.19: Support statistical capacity-building in developing countries (R1 avg. score:)						

Feedback on Majority Opinion—Provide any additional thoughts or contradictions to the majority view on the goal or any of the targets:

Final Comments on the Goal and Targets:

Submission Instructions

Please ensure all sections are completed and your responses are clear. Re-evaluate your scores considering the group feedback and provide additional comments, especially where your views differ. Thank you for your continued participation in refining our understanding.

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