



**Report of the High-Level Committee on Programmes (HLCP)
at its thirty-fifth session
(UN Headquarters, New York, 9 and 10 April 2018)****Introduction**

1. The High-level Committee on Programmes (HLCP) of the United Nations System Chief Executives Board for Coordination (CEB) held its 35th session at the Headquarters of the United Nations (UN) in New York on 9 and 10 April 2018. The agenda of the meeting and the list of participants are contained in annexes I and II, respectively, to the present report.
2. In opening the session, the Chair of HLCP, Mr. Guy Ryder, Director-General of ILO, recalled that HLCP had pursued forward-looking initiatives on “frontier” challenges from the perspective of system-wide policy coordination and programmatic coherence since its initial examination of global megatrends at its 33rd session. As inputs to CEB’s deliberations, in November 2017, on the implications of rapidly developing new technologies, HLCP had, at its 34th session, carried out analyses of the opportunities and challenges posed by frontier technologies – with a particular focus on artificial intelligence, cyberspace, biotechnology and new weaponry – and considered value-added entry points for UN system engagement.
3. Both HLCP and CEB had underscored the transformative power of technologies for the attainment of the Sustainable Development Goals (SDGs) while also recognizing that technologies could exacerbate inequalities and leave the most marginalized further behind. The UN had a distinct role in supporting countries, especially the poorest, in harnessing the benefits of new technologies for the implementation of the SDGs, in upholding an “ethical voice” and serving as a “moral compass” for safeguarding universal norms and values, and minimizing the destabilizing effects of technological innovations.
4. CEB had, in conclusion, decided to pursue UN system engagement on new technologies through a multi-tiered “roadmap,” in which the Board tasked HLCP to undertake system-wide “deep-dive” analyses on the power of technologies and innovations in accelerating the achievement of the SDGs. At the current session, the Committee focused on four distinct yet closely interlinked “frontier” issues: artificial intelligence, the future of work, the future of learning and education, and the future of food. They were intended to serve as substantive inputs to CEB’s consideration of the socio-economic implications of the so-called fourth industrial revolution in May 2018.

UN Engagement on Frontier Technologies

I - HLCP's Contributions to UN Engagement on Frontier Technologies

5. The Chair recalled that CEB, at its last session, agreed to pursue a coordinated and multi-layered roadmap for UN system engagement on frontier technologies and in this context tasked HLCP with system-wide “deep-dive” analyses to build collective knowledge of the impact of new technologies on the achievement of the SDGs. To place such efforts in the context of broader initiative, the Committee was invited to consider how best to contribute to the implementation of the roadmap, in particular with a view to identifying perspectives and approaches that should guide its analytical work as well as additional deep-dive themes that could merit system-wide examination in the future.

6. Ms. Simona Petrova (Secretary of CEB), noting the Secretary-General’s vision for CEB as a strategic policy forum, informed that the Board would address technological and operational innovations at its forthcoming session in May 2018 with a view to arriving at a common view on measures to systematically foster innovations in the UN system. HLCP’s analyses on the impact of technologies and innovations on the attainment of the SDGs would be an important input to facilitate and stimulate the deliberations of the Board.

7. Ms. Ayaka Suzuki (EOSG) outlined key foreseen tenets of the Secretary-General’s strategy on new technologies which was currently under development. Guided by five fundamental principles – built around universal values, inclusion and transparency, multi-stakeholder partnerships, existing capacities, and humility - the strategy would propose a number of areas for action by the UN system aimed at enhancing its capacity; strengthening advocacy and dialogue; supporting the development of a normative cooperation framework; and providing capacity building support to Member States.

8. Mr. Robert Opp (WFP), who co-chairs the UN Innovation Network, focused on the role of the UN as catalyst for achieving the SDGs and for ensuring that no one was left behind in the face of exponential change driven by technological development and innovations. Calling for the adoption of a new mind-set, Mr. Opp suggested ways to “do things differently” in the policy and analytical work relevant to HLCP, including by listening to new voices, inviting external expertise into the UN through partnerships, integrating greater flexibility into policies and strategies, and being willing to take risks.

9. In the ensuing discussion, the Committee recognized the need for greater creativity, innovation, and “humble-yet-bold” mind-set in the work of the UN system. The Committee also pointed to several cross-cutting concerns that needed to guide the UN’s analytical work on frontier issues. Members emphasized the need for more focused attention by the UN system to norms and value-driven considerations related to frontier technologies and technological innovations. UN values and universal norms - a hallmark of the international system - needed to inform the process of creating innovations as well as their application. A suggestion was made to explore the development of a common framework – akin to a social compact - to guide the UN’s work in this area.

10. Leaving no one behind was an important normative paradigm that needed to be consistently upheld by the UN system to help minimize the risk of new technologies further deepening existing inequalities and biases. The “ethics of AI” was a central concern, which needed to be addressed holistically from human rights, gender equality, accessibility, inclusiveness, and data privacy perspectives. The Committee was informed that, under the auspices of UNESCO, a process was underway to address the issue. Members observed that a variety of entry points for engagement on emerging challenges were accessible to the UN system and that various existing UN platforms needed to be utilized to the maximum effect.

11. Partnerships, in particular with the private sector, were seen as a critical component of any system-wide approach on frontier technologies and innovations. To effectively engage with private sector partners, some members were of the view that the UN system needed to be less overly risk averse, while other members called for “responsible” partnerships based on appropriate due diligence requirements.

12. There was broad agreement that staff capacities to innovate, create, partner and respond to new challenges and opportunities needed to be strengthened, and linkages to ongoing work under the auspices of HLCM were recognized in this context. Some members called for greater sharing of best practices among UN system entities on the application of new technologies and innovations in the work of the UN in order to learn from each other. Drawing on the innovation potentials at the country level, integrating new voices, in particular youth, and creating institutional spaces and capacity to experiment were seen as particularly important in this regard. As such, innovating - defined by one participant as ‘mastering the art of staying relevant’ – required an urgent change in the culture and mind-set of the UN system.

13. Given wide-spread, inter-linked, and complex impact of new technologies, the need was emphasized to prioritize, focus, and target HLCP’s future analytical efforts, which, some suggested, might best be approached through a focus on, e.g., a specific socio-economic angle or certain vulnerability. Such factors as market capitalization and combined or cross-fertilized impact of numerous new technologies were also mentioned as a lens through which to prioritize future analytical topics, with the imperative of leaving no one behind as the key overarching perspective.

14. Bearing in mind the perspectives and factors raised above as critical to considering frontier challenges, the Committee identified a number of additional “deep-dive” themes that potentially merited system-wide examinations in the future, including: demographic shifts and transitions; the role of new technologies in rapid urbanization; implications of frontier technologies on developing countries with the focus on the “bottom one billion”; impact of new technologies on persons with disabilities; implications of genetic engineering; data privacy, data security and digital identity; and potentials of blockchain, cryptocurrencies, and e-commerce.

15. In response to the issues raised, the presenters underscored the role and responsibility of UN system leadership to encourage a culture of creativity and innovation. The development of a system-wide approach to partnerships was recommended as a timely and effective measure to address some of the normative and operational concerns raised by members of the Committee.

16. ***Conclusion: The Chair requested the HLCP Secretariat to ensure that concrete themes, ideas, and approaches suggested be appropriately taken into account in the Committee’s future work.***

“Deep-Dive” Analyses on Frontier Issues

II - Artificial Intelligence

17. In introducing the agenda item, the Chair referred to the discussions during the 34th session of the Committee that stressed that complex multi-dimensional impact of technological breakthroughs, such as artificial intelligence (AI), needed to be addressed through an integrated, cross-sectoral and collaborative approach that mobilized and engaged the entire United Nations system. In line with the subsequent guidance from CEB, HLCP’s efforts were now focused on enhancing, through system-wide policy coherence and programmatic coordination, AI-related capacity building support in the context of the SDGs.

18. Ms. Doreen Bogdan-Martin (ITU) presented the discussion paper on AI and capacity development, prepared in consultation with interested UN entities and with the collaboration of the Berkman Klein Centre for Internet Society. Building on the broadly-scoped paper considered at the 34th session, this new paper aimed at examining AI’s SDG implications and outlining the opportunity for constructing coordinated system-wide positions and engagement in supporting member state capacities on AI.

19. The paper explored ways to scale up capacity building in support of the 2030 Agenda for Sustainable Development, harnessing the positive elements of AI’s transformative powers in a manner that benefits humanity equally and leaves no one behind. Divided in five sections, the paper highlighted ways in which the UN could help build capacity around AI and advocate a people-centred and inclusive approach that would ultimately advance AI in the global public interest and in support of the SDGs. The paper explored the main building blocks required for such efforts, noting that while many were already part of ongoing UN capacity development efforts, AI was making such efforts ever more critical and urgent. Five broad substantive areas of

capacity development were identified to address the unique challenges of AI technologies and advance the SDGs, with some concrete steps proposed towards developing system-wide engagement.

20. Turning to the question of the role of the United Nations system, Ms. Bogdan-Martin noted that many UN system entities were already engaged on various aspects of AI, ranging from normative to operational support to internal application of AI technology for effective mandate delivery. While not the biggest player in the field, the UN system was perceived as having an important role to play in ensuring that AI technology development and application benefitted humanity, was anchored by universal norms and standards, and supported sustainable development and peace.

21. To this end the paper proposed a three-step approach, as follows, towards developing UN system-wide engagement on AI capacity building: i) develop a common UN system position and shared guiding principles on AI technologies that would help define the internal strategic direction of the UN system in its assistance to Member States; ii) based on the guiding principles, articulate a system-wide framework on AI technologies in order to encourage and guide integrated action within the UN system; and iii) based on this system-wide framework, elaborate recommendations and concrete actions towards a capacity building programme for developing countries.

22. In the ensuing discussion, the Committee reaffirmed its strong commitment to pursuing coordinated system-wide engagement on this important issue and expressed support for the three-step approach proposed to that end. Members noted, however, that the rapid evolutions of AI technologies required expedited progress across the three steps, and suggested an extra complementary step to pursue, in parallel, “deep-dive” examinations of broader yet relevant issues to inform and enrich this – and other ongoing - initiative. For example, given the need to deepen understanding of implications of AI and other frontier technologies specifically on developing countries, UNCTAD offered to contribute an analysis. The need to consider and integrate lessons from past system-wide efforts was also mentioned.

23. Praising the high quality of the paper’s analysis, the Committee expressed particular appreciation for its focus on social equity and the 2030 Agenda’s pledge to leave no one behind. While recognizing the political complexity of the spheres in which AI operates, members highlighted the potential role the UN system could play in fostering a social compact approach and closing the “AI divide” to be better aligned with universal values and standards.

24. Suggestions for additional capacity building elements were offered. Members recognized that country driven capacity on AI needed to have the national digital development strategies as the point of departure with close links to the national sustainable development strategies. The Committee underscored the importance of linking future AI related activities to existing intergovernmental processes and platforms, as well as with the ongoing reform of the UN development system. It was noted that the use of targeted AI could help fill unpopulated indicators and contribute to the work of the Statistical Commission and National Statistical Offices, as well as in connection with the work in preparation to the National Voluntary Presentations at HLPF.

25. Notwithstanding that the need for AI capacity development was universal in scope, the Committee noted that south-south cooperation, regional and sub-regional dimensions needed to be given greater recognition, paired with enhanced references to the economic dimension, resource implication, taxation systems and investments. Several members noted that this initiative could contribute to prevention of violent conflicts through innovative and whole of society means of mining data. More explicit references to data privacy safeguards and confidentiality, access to disaggregated unbiased data, and capacity for digital identify at the national level were also suggested.

26. The Committee voiced the importance of presenting a stronger position on the role and responsibility of the private sector on the use of AI and the principles that should guide such engagement. Members exchanged views on impact stemming from an enhanced UN engagement in AI, and the potential influence it may have in disrupting or shifting the current perception of AI towards a public good produced and utilized to benefit humanity. The need for the development of technologies to insulate AI applications from absorbing human biases (racial, gender, age, national, etc.) was emphasized, as was the need to ensure clear lines of accountability for harms caused by AI technologies.

27. In conclusion, the Committee reaffirmed that the complex multi-dimensional nature of artificial intelligence necessitated an integrated system-wide approach and agreed to pursue it through the three-step approach proposed in the paper, in an expedited pace through an iterative process. The Committee also recognized the dynamic nature of this topic and its close linkage to the Committee's other deep-dives analytical efforts.

28. ***Conclusion: The Committee decided to proceed, in as accelerated a manner as possible, with the three-step approach to pursue UN system-wide engagement on AI capacity development, and requested ITU, in cooperation with interested agencies and, taking into account the comments offered, to present a draft system-wide framework for the Committee's consideration at its 36th session. The Committee also agreed to explore, in parallel, additional complementary analyses on key relevant issues to inform and enrich this and other ongoing initiatives.***

III - Future of Work

29. The Chair recalled that at its last session the Committee, in discussing the implications of new technologies, had seen value in developing a coordinated, cross-sectoral approach to supporting Member States in building policy frameworks to shape the future of work in the context of supporting the implementation of 2030 Agenda for Sustainable Development, and had requested ILO to lead an inter-agency process to produce a proposal to this end. At the current session, the Committee was expected to provide feedback on the draft strategy outline.

30. Mr. Sangheon Lee (ILO) introduced the discussion note, which had been prepared by ILO in collaboration with 12 entities. Recalling the Committee's previous discussions on this subject, Mr. Lee outlined the proposed guiding principles, building blocks and elements for UN system efforts, as a basis to flesh out a UN system-wide strategy to realize "the future of work we want." Soliciting the Committee's views and guidance on the further development of the strategy, he invited members to comment on the UN vision for the future of work, the actions that the UN system could take to advance that vision – building on the wide range of initiatives that were already underway across the system – and what innovations may be required within UN organizations to effectively implement the strategy.

31. Members welcomed the proposal, broadly agreeing with the paper's analysis and recommendations. The Committee supported the suggested structure and proposed content of the system-wide strategy, which was expected to bolster UN system entities' ability to generate appropriate policy guidance and programmes reflecting new employment trends as well as to help mitigate and manage the impact of technology on jobs, averting the much publicized "doomsday" scenarios. The importance of anchoring the strategy in the SDGs and in UN norms and standards was emphasized, as was the need to ensure that the inter-relationships among the goals were well reflected through an integrated and multi-sectoral approach that facilitated coordinated UN system action and promoted a whole-of-government response, with a key role for the education sector.

32. The strategy was seen to have strong linkages to inequality, and would have to help prevent the vulnerable – especially women and girls, refugees, stateless persons, the rural poor, older persons, and others less likely to have access to modern technologies – from being left behind in the future world of work. From the outset, it would be helpful to examine who was most at risk – particularly those losing their livelihoods to automation – to ensure the strategy would target the furthest behind first. The Committee was nevertheless mindful that the least developed countries were not likely to experience the impacts of the fourth industrial revolution in the near-term and, therefore, noted that the UN system must continue to support traditional development models in the meantime.

33. It was stressed that the strategy should promote the equitable sharing of technological dividends across society, rather than having only a small segment benefit. Indeed, it was observed that the threat of unprecedented power asymmetry was real and, if left unfettered, would undermine the achievement of the SDGs; accordingly, it was suggested that the United Nations take a position to help prevent such an outcome. More broadly, the UN's role as advocate and defender of norms and standards, in particular labour rights, also needed to feature prominently in the strategy.

34. Quality work was seen as a priority and, in this regard, members underscored that it was necessary for the strategy to address the growing informal economy as well as the formal. Improving the quality of informal work would also be instrumental in achieving other development goals.

35. Members supported reflecting social aspects more strongly in the principles and implementation elements, including the human right to an adequate standard of living, the social value of work, and the gender dimension. Strengthening social protection systems – which in recent past had been increasingly delinked from employment – was identified by the Committee as a key action to combat inequality and advance the SDGs, including exploration of alternative models such as the universal basic income, recognizing that new models (e.g., the “gig economy,” the “sharing economy”) offered workers little security or protection. Among other concerns, potential negative health impacts were also highlighted, as informal and “gig” workers generally lacked health insurance and did not benefit from occupational health provisions. It was acknowledged, however, that remote work had the potential to provide employment opportunities and new economic horizons to individuals without their having to relocate, which had important implications for migration.

36. Members stressed the need for the strategy to promote greater investment in human capital, especially in youth, who the Committee acknowledged should be at the heart of the discussion on the future of work. It was necessary that the strategy take into consideration demographic trends and offer young men and women better prospects, with benefits for both the young South and the aging North.

37. Recognizing the close connection between this effort and the concurrent HLCP work on the future of learning and education, the Committee observed that the changing nature of work and the creation of new (yet unknown) industries demanded a corresponding change in formal education to equip future workers with the necessary skills in the transition to the labour market. Vocational training would continue to be relevant in the future world of work and should therefore also be addressed in the strategy. Moreover, it was necessary to provide access to life-long learning opportunities, including re-skilling workers already in the labour market, especially with digital skills. It was emphasized that action by both public and private sectors was crucial. New fiscal and taxation policies would need to be promoted to fund investment in education, as well as provide social protection.

38. Additionally, members suggested enhancing the macroeconomic angle in the implementation elements. It was agreed that research should proceed in parallel to developing the strategy in order to better inform policy responses. Relevant work was ongoing or planned on a number of topics - including on the relationship between capital and labour, the impact of market concentration on productivity, regional impacts, trade policies, and digitalization and fiscal policy - for which the importance was underscored to place a special focus on the perspectives of developing countries. It was also recommended that regional dynamics be better reflected in the strategy.

39. Furthermore, the political dynamics inherent in the issue were highlighted, and it was suggested that the scope of the strategy might be broadened to reflect these aspects. Specifically, members underscored the linkages between work and conflict prevention, and highlighted that the strategy could help alleviate some of the shocks that could drive countries into conflict situations. Further, in the context of displacement, it was observed that employment could help mitigate humanitarian crisis, for example, by restoring the dignity of migrants, refugees and internally displaced persons (IDPs) and advancing employment opportunities for them.

40. With regard to the vision for the “future of work we want,” members suggested that it speak to work as an institution with value in and of itself, that provides dignity, identity, self-worth, self-determination and an opportunity to contribute to a common enterprise. It could reflect additional aspirations such as full employment, no working poor, and decent work; yet, it could not ignore the reality that new technologies were increasing the incidence of informal work and undermining the rights-based approach to employment. Given rapidly evolving and intertwined factors influencing the future of work, it was noted as important to develop stronger foresight capabilities for scenario planning and qualitative analysis.

41. Concluding the item, the Chair recognized that the future of work was being shaped also by forces other than technology and the threat of automation – for example climate change and changing employment models – and that the final strategy would need to take these elements holistically into consideration to ensure a productive transformation for the world of work. He also observed that the course of globalization was growing more uncertain and that future policy choices on the management of the global economy would necessarily have an impact on the future of work.

42. The Chair noted the Committee’s support for the proposed outline and approach, and requested ILO to reflect members’ comments and suggestions in a revised version of the paper that would serve as input to the CEB’s discussion on the socio-economic implications of the fourth industrial revolution at its May meeting. He also requested

ILO to work with interested agencies to proceed with developing the full strategy – towards finalization at the Committee’s 37th session - in due synergy with ILO’s centenary initiative and taking into consideration the Committee’s current feedback as well as any guidance to come from CEB.

43. ***Conclusion - The Committee supported the analysis and recommendations on the future of work put forward in the 34th and 35th sessions by the task team led by ILO and approved the proposed outline of the system-wide strategy, subject to incorporation of comments made during the discussion. The combined work will serve as input to the CEB at its upcoming session. The Committee further requested ILO to carry forward the inter-agency process to develop the system-wide strategy, reflecting the Committee’s deliberations and any guidance that might be provided by CEB, and report on progress, as relevant, at the Committee’s 36th session.***

IV - Future of Learning and Education

44. In introducing the agenda item, the Chair noted how the ongoing analytical work carried out by the Committee on AI and the future of work pointed to the critical role of education and learning to guide societies to adapt. He observed that new technologies could offer important contribution to reaching those who are left behind by the current education system and enable societies to leapfrog towards achieving the SDGs.

45. The Committee’s deliberations were informed by a discussion paper prepared jointly by UNICEF and UNESCO in consultation with interested entities. In line with CEB’s directive and tailored to the scope of its upcoming consideration of the impact of the fourth industrial revolution on sustainable development, the paper focused particularly on the transformative power of innovative technologies and the important role of learning and education to prepare current and future generations for the new realities and demands it would create.

46. Ms. Jo Bourne (UNICEF) and Mr. Jordan Naidoo (UNESCO) introduced the paper which examined the opportunities for innovative technologies to enhance learning and education and outlined options for mitigating challenge of innovative technologies for learning and education. The paper offered recommendations for the UN system to help realize an optimal future for learning and education, including: i) support countries in making the best use of ICT and other innovative technologies for learning and strengthening education systems; ii) emphasize the use of technology to promote learning throughout the life-cycle; iii) provide guidance in the use of new and innovative technologies to address the data gaps in education and gain new insights from enhanced data analysis; iv) ensure that governments are well equipped to manage the risks of the greater use of new technologies for learning; and v) support countries to ensure that the potential gains from the production and use of new technologies are broadly shared, decreasing existing inequalities and promoting inclusive learning opportunities.

47. The Committee welcomed the paper and its recommendations. In the ensuing discussion, it underscored that, while technology was instrumental to promoting education and learning, the drivers in support of effective education systems to meet the SDGs are multi-dimensional, thus necessitating system-wide and cross-sectoral attention and engagement.

48. The Committee considered fundamental shifts required in education and learning for the future, in the overall context of supporting the 2030 Agenda and with an emphasis on its pledge to leave no one behind. Members suggested several factors and perspectives critical to enhancing UN system understanding of learning and education in the era of innovative technologies and beyond. These included a growing need for life-long learning and re-skilling, given the changing landscape of employment – as well as the evolving role of “informal” education and that of teachers.

49. Members also emphasized the importance of integrating into future education ethics and universal values so as to develop and deliver skills that could help reduce inequalities, enhance inclusion, promote social cohesion and, thus ultimately, prevent conflict. It was suggested that this could be seen as the “fifth C” (core values/civics) after communication, collaboration, creativity, and critical thinking. The role of new educational technologies in advancing these goals and values was underscored.

50. The Committee also underscored the critical role of governments in ensuring equitable and inclusive access to education, as well as effective private-public partnerships in financing and delivering education outcomes. The Committee underscored the role of the UN system to support member states in pursuing appropriate and effective policy choices that best fit their specific challenges and circumstances.

51. The Committee agreed that the UN system had an important role in promoting the “future of learning and education we want,” by promoting and supporting an inclusive, equitable, and innovative approach. Recognizing that this would require an integrated and holistic approach to mobilize, enhance, and coordinate the UN system’s collective capacities and efforts, the Committee was in favour of exploring an optimal way to pursue coordinated system-wide engagement based on policy and programmatic coherence, and asked UNESCO and UNICEF to continue leading the initiative towards this objective.

52. In closing, the Chair reiterated the Committee’s recognition that new technologies had the potential of having a transformative effect on learning and education but also posed the risk of widening the digital divide and resulting in deeper or new inequalities. There was broad agreement among members that the UN system had an important role in promoting an inclusive and equitable approach to integrating new technologies in education and learning and that HLCP could contribute to this end through the development of a system-wide approach to mobilize, enhance, and coordinate the system’s collective capacities and efforts. The Chair asked UNICEF and UNESCO to continue leading the initiative and prepare, in cooperation with interested entities, an initial proposal for HLCP’s 36th session.

53. ***Conclusion: The Committee supported the analysis and recommendations put forward in the discussion paper and approved it, subject to incorporation of comments made, for onward submission to CEB as input to its upcoming session. The Committee requested UNICEF and UNESCO to lead an inter-agency process to prepare a proposal for system-wide engagement on this topic, for its consideration at the 36th session.***

V -Future of Food

54. In introducing the agenda item, the Chair recalled that HLCP, at its 34th session, held an initial discussion on this topic on the basis of a comprehensive analysis of the numerous and wide-ranging factors relevant to understanding the future landscape of food systems and its linkages to the 2030 Agenda. To expand its understanding of the transformative power of technologies and in response to CEB’s directives for deep-dive analysis, the Committee was now invited to review and provide feedback on a new and re-oriented paper - prepared through an inter-agency consultative process under the leadership of FAO and involving 17 UN entities – that specifically examined the future of food through the foresightful lens of frontier technologies and innovations and their impact on the achievement of the SDGs.

55. Mr. Michael Clark (FAO) introduced the discussion paper, underscoring that the future of food and the 2030 Agenda were closely inter-linked through the need for an inclusive, equitable and sustainable rural transformation – a common agenda that could be described as the “future of food we want.” Innovations and frontier technologies had the potential to be important drivers for such a structural transformation. Stressing that scientific and technological innovations offered important means for eradicating poverty, ending hunger, and fostering inclusive, sustainable and resilient economic growth and development, the paper explored their “game changing” power to engender transformations in food systems, through three case studies: precision farming, genome editing/genetic engineering, and distributed ledger. Mindful of the possibility that the introduction of frontier technologies could be a source of instability and potential harm, the paper argued for a strong global consensus and attendant legal and policy regimes to improve monitoring and safeguards. The need for special attention to developing countries, in particular the rural poor and other vulnerable groups, was also emphasized.

56. Mr. Clark concluded by arguing that in order to catalyse food systems evolution towards inclusive and sustainable development, the UN system must adapt to the challenges and opportunities posed by technologies. Acknowledging that the material role of the UN system to develop and apply frontier technologies was limited, the paper proposed three strategic entry points for the UN system: i) convene an international dialogue on how to unlock technologies’ potential for good and safeguard against its potential for harm; ii) engage private sector actors around UN norms and standards in order to strengthen the relevance and application of UN norms in commercial and private practices; and iii) advocate for rural transformation, and the role of food systems within it, as a key driver for inclusive structural transformation and sustainable development.

57. In the ensuing discussion, HLCP expressed its deep appreciation for the well-researched and academically rigorous paper that highlighted the potential of technological innovation in significantly advancing the achievement of the SDGs in the world's rural and semi-rural areas, ending hunger and poverty, and fostering economic growth and sustainable development through rural transformation.

58. The Committee acknowledged that technology – though potentially transformative - was only one among several important dimensions of the future of food. Other aspects related to the broader SDG agenda – examined in full depth in the analysis considered by HLCP at the previous session – remained equally critical when looked at from a more comprehensive perspective. In this context, members highlighted in particular issues of governance, demographic changes, social dynamics, population movements, conflict, and environmental and climate factors, all of which needed to be taken into account holistically through the broader concept of food systems. It was observed that the paper, indeed, addressed the broader scope of overcoming the challenges to ending hunger and all forms of malnutrition and making agriculture and food system sustainable, with a suggestion that this be reflected in the title of the paper. However, HLCP strongly recognized that innovations enabled by science and technologies offered many transformative possibilities in this regard.

59. Several members highlighted the linkages between increased productivity/economic development and access to basic technology, including the need for investments in infrastructure, electricity, and broadband, recalling that this same point was also underscored in the context of the earlier discussion on AI. Furthermore, targeted analysis was noted as needed to assess the specific impact and opportunities of new technologies for developing countries in general and least developed countries in particular – to inform and complement the paper's analysis.

60. Noting rural-urban linkages and the connection between growing urbanization and rural transformation, members pointed to the importance of creating jobs and economic opportunities outside agriculture and food production with the help of new technologies. Urban farming and vertical agriculture were additional innovations that could be further explored. In addition to focusing on means to increase the quantity of food - through efficiency gains in food production, processing and marketing, the Committee underlined the need to consider issues related to the quality of food, including improvements in nutrition, diversification of diets, and healthy eating habits, supported by sustainable production and consumption.

61. Leaving no one behind was a central paradigm of the 2030 Agenda. Both governments and the UN system had a role to play in ensuring that the process of rural transformation, especially when powered by new technologies, was inclusive and did not further exacerbate existing vulnerabilities and inequalities. The role of rural youth and women farmers and entrepreneurs was emphasized in this context. It was suggested that building on the paper's analysis, the application of technological innovations at the country level and its potential for fostering inclusive rural transformation and sustainable development that leaves no one behind should be further explored.

62. Promoting inclusive, equitable and sustainable food system transformations, including the equitable distribution of food, using the power of new technologies along with other important drivers, required astute policy choices by governments, as did the regulatory control of harmful technologies. In this regard, HLCP underscored the normative and policy advisory role of the UN system in support of member states' efforts, as had been highlighted during the Committee's previous session. In addition, members noted the UN's convening role and the need to use existing UN platforms to deepen the dialogue among different stakeholders, in particular scientists and policy makers, to maximise new technologies' benefits for the "future of food we want" while safeguarding against potential harms.

63. Mr. Clark thanked the Committee for the rich feedback and insightful comments provided on the paper. Stressing that the paper had been primarily intended to stimulate thinking and debate with a very specific focus on the implications of emerging technologies for the future of food in the context of supporting the SDGs, he noted that technological innovations represented only one - albeit an important – aspect of a fuller, more comprehensive analysis of the multi-dimensional complexity of food system and the future of food. With a projected increase of 50% in demand for food and agricultural products between 2012 and 2050, integrating the 2.5 billion family farmers and small-scale rural entrepreneurs and youth into the process of rural transformation will be key and required a variety of pathways and entry points.

64. In closing, the Chair reiterated the Committee's strong appreciation and broad support for the paper's analysis and recommendations. With the finalization of the discussion paper for CEB, this workstream was now considered completed. Nevertheless, the Chair noted that this important topic merited the Committee's continued attention and proposed that broader issues raised during the discussion might be separately addressed, as appropriate, through HLCP's other ongoing or future analytical work.

65. ***Conclusion: On the basis of the Committee's deliberations, the discussion paper on the Future of Food will be finalized, for onward submission to CEB as an input for its upcoming discussion on the socio-economic implications of the fourth industrial revolution on the implementation of the 2030 Agenda and for further guidance.***

Scoping Consultations with New Partners

VI - Policy Dialogue with the Youth Envoy and the "Young UN"

66. Recalling that the Committee had previously noted the need for forging connections with youth as advocates for and partners in the UN's work, the Chair welcomed the Secretary-General's Envoy on Youth, Ms. Jayathma Wickramanayake, and representatives of the Young United Nations network as special guests to dialogue with the Committee. A novel effort to outreach beyond its immediate membership, the dialogue aimed to bring fresh perspectives and new ideas to the Committee's work and hoped to serve as a first step towards meaningful and inclusive youth participation in HLCP's deliberations.

67. Highlighting her responsibility to bring the UN closer to young people and young people closer to the UN, Ms. Wickramanayake recalled her warning to CEB at its November 2017 session, that, in a world marked by a rapidly changing global environment and power dynamics, where over half of the population was under the age of 30, the UN could not afford to not include young people. It would be critical to substantially reshape the way UN entities worked with and for youth; otherwise, it would be young people who would leave the UN behind. Ms. Wickramanayake commended the Committee for its initiative to engage and solicit views from younger staff and expressed hope that this would lead to youth inputs featuring regularly in HLCP deliberations.

68. The Chair invited representatives of Young UN, present in person or via VTC from Bangkok and Geneva, to highlight key observations and recommendations that had emerged from their consultations, including: (i) policy factors, proposed to be integrated in HLCP's four current "deep-dive" analyses; (ii) policy priorities, proposed as additional frontier themes for HLCP's future consideration; and (iii) change ideas, proposed to promote doing things differently within the UN system, including greater engagement with youth.

69. Introducing the network of over 700 staff from across the UN system located in 80 duty stations, representatives of Young UN presented the network as a bottom-up movement for cultural and mindset change and as a solutions-oriented partner for reform, able to make collective contributions by quickly crowdsourcing ideas and piloting changes. Aspiring to positively influence policy decisions in HLCP and other fora, they called on senior management to themselves be change makers, and create space for innovative thinking and experimentation within their organizations, as outlined in the United Nations System Leadership Framework¹ endorsed by CEB in April 2017.

70. Presenting their analytical paper, the Young UN representatives observed that their views on the "deep dive" topics largely aligned with those of the Committee, but that they had taken an integrated approach when conducting their analysis, with emphasis on the interconnections among the subjects. Presenting some key points of their contributions, Young UN representatives stressed the need for the UN to offer different responses to changes of the scale that frontier technologies would bring. It was highlighted that the UN should continue to fulfil its norm-setting role and pursue innovative models for international agreements and frameworks. With respect to artificial intelligence and other frontier technologies, traditional treaty models might not be adequate to influence key players, and new accountability instruments such as global compacts or rating systems could provide for appropriately flexible international arrangements. Policy responses might also be necessary to roll back frontier technologies that unfolded in unwanted ways.

¹ See <https://www.unsceb.org/content/leadership>

71. Young UN representatives emphasised that frontier technologies, while bringing formidable challenges, also presented opportunities to enhance the work of the UN system in many ways, particularly by boosting efficiency of UN operations, expanding the evidence base and increasing impact. Indeed, their adoption could become a testing ground for the UN's relevance. Successful adoption depended on the buy-in of senior management, the ability of the system to expand alliances with the private sector, the training of staff to better leverage new technologies, and the establishment of conducive internal policies and structures. Existing foresight initiatives to scan trends that might impact the work of the UN should be identified and multiplied across the UN system; a central capacity to respond to megatrends could also be considered.

72. In the ensuing dialogue, the Committee recognized and appreciated the value-added inputs and creative suggestions that the Young UN had contributed, noting that they complemented the Committee's discussions to date and also offered a number of new angles. Members expressed appreciation for the invigorating, fluid and forward-looking conversation, which contributed to the sense of energy and optimism in the Committee's session. Welcoming the absence, in the Young UN presentation, of simplistic and discriminatory formulations that had sometimes been used to paint younger persons with a broad brush, either negative or positive, the value of a human rights-based and inter-generational approach was recognized, as was the rejection of stereotyping any age group.

73. The Committee responded positively to the Young UN's appeal that managers create space in their working methods and procedures for younger staff to contribute, agreeing with the need to break down hierarchy and bureaucracy and promote innovation. In that regard, several members called attention to various youth-focused initiatives that existed within their organizations or of experiences in engaging younger staff in particular processes. In cases where managers were not proactively creating such opportunities for younger staff, HLCP members encouraged the Young UN representatives to push within their organizations to have their ideas heard. What often seemed to be missing from the Young UN representatives' point of view were multidimensional learning across hierarchies and a culture of accepting failure. As a practical and economical way of changing this, it was suggested that managers could fill knowledge gaps by reaching out to and learning from more junior staff. Members supported this small but important behavioural change, and, in that vein, specifically expressed interest in engaging with Young UN on enhancing the ability of UN staff to leverage new technologies, as well as on helping to increase the risk appetite and embrace innovation within the system.

74. In this vein, members strongly supported having the Committee continue to benefit from younger staff's perspectives, noting that it was refreshing to access these views and important for the system to genuinely "walk the talk" with regard to inclusiveness. A suggestion was made that as a future contribution to HLCP Young UN could prepare a think-piece on the United Nations system of the future. Value was seen in seeking the input of younger staff in other fora as well, such as HLCM and the upcoming Artificial Intelligence for Good Summit. The representative of PBSO offered the possibility of engaging younger staff in the decision-making process to allocate funding from the Peacebuilding Support Fund and the representative of Global Pulse alluded to the possibility of secondments to the lab that the Secretary-General had established in his office. These opportunities, in turn, were welcomed by Young UN.

75. With regard to the deep-dive analysis topics, the Young UN stressed the point that the discussion should not be about technology, but about human needs. Design thinking methodology was focused on the user, making development of solutions about empathy not technology. This reminder of the human dimension of frontier technologies was welcomed by the Committee.

76. The emphasis in the Young UN's input on skills and the centrality of education – especially tertiary, technical and vocational – was appreciated, and an opportunity to work with Young UN on the subject of education as a public good was highlighted. The Young UN representatives further observed that the fundamental values behind education and learning needed to be reconsidered as AI was expected to erase many current jobs, and that a shift from traditional schooling on substance, towards a focus on adaptable foundational skills, including digital literacy, ethics and critical thinking, would be required. Peer-to-peer learning models would be important in the future of education. Further, the view was expressed that algorithms, which would increasingly influence people's lives, should be taught human values and empathy, which itself required a deep understanding of humanity. Legal and ethical considerations had to be at the heart of this to avoid bias.

77. Echoing the importance of the UN's engaging with non-state partners, members saw younger staff as possible connectors to the private sector, social movements, community activists, and other stakeholder groups, including youth groups outside of the system. Agreeing, Young UN representatives also saw the necessity of creating new platforms for youth collaboration including stakeholders ranging from Member States to civil society, the private sector as well as beneficiaries of the UN's work. They stressed that the Young UN network functioned in an open way and already was building linkages across themes and with different stakeholders, and could therefore provide a space for multidisciplinary discussions to move beyond traditional silos. Specifically, within the UN system, the perceived disconnect between headquarters and field could

be remedied by applying a mechanism resembling a circular economic model to channel existing innovative initiatives from the field back to headquarters and vice versa.

78. In conclusion, Young UN representatives observed that the world was in the midst of a period of exponential change and that the UN system, too, would have to change if it wanted to continue to have impact. New technologies were already touching lives around the globe, and UN organizations needed to better understand how to respond to them and what investments were needed. They reaffirmed the network's willingness to contribute regularly to the Committee's work to help project some of the new ways of working that could be more reflective of a UN fit for the future. Ms. Wickramanayae reiterated her appeal to HLCP members as senior managers, to foster opportunities for younger staff to thrive, provide constructive feedback, and contribute to innovations.

79. The Chair thanked the Youth Envoy and the Young UN representatives for their valuable contributions to the Committee's proceedings. He requested the entities leading the deep-dive analyses to incorporate relevant points in finalizing their respective papers, and also to reflect them, as appropriate, in the continuing work to develop the system-wide responses under each topic. He indicated that the Committee would consider taking up some of the new issues raised and requested the HLCP Secretariat to appropriately take these into account in the Committee's future work. Noting the Committee's desire to build on this successful dialogue, the Chair further requested the HLCP Secretariat to appropriately reflect in the Committee's future work modalities regular youth engagement. He committed to relay to CEB the nature, substance and value of the dialogue between HCLP and Young UN, and encouraged members to explore opportunities to propagate similar engagement in their individual organizations in order to serve as vectors for positive change.

80. ***Conclusion:*** The Committee requested the lead entities of the ongoing "deep-dive" initiatives to incorporate relevant points raised during this dialogue in their current and future efforts. The Committee decided to continue to bring a youth perspective regularly into its work and requested the HLCP Secretariat to ensure this through appropriate modalities.

Information/Transactional Topics

VII - Summary of Information Items - Istanbul Programme of Action for the Least Developed Countries

81. Further to its electronic review and endorsement in advance of the session, the Committee took note of an intersessional progress report (see Annex III) on the ongoing effort to mainstream the Istanbul Programme of Action for the Least Developed Countries for the Decade 2011-2020 into the work programmes of UN system organizations, submitted by the Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States.

VIII - Other Matters - Dates and Location of HLCP 36th Session

82. The HLCP Chair proposed the dates of 9-10 October 2018 for the Committee's 36th session - to be hosted by IFAD at its Headquarters in Rome, Italy.

83. ***Conclusion:*** The Committee approved the dates and location of its 36th session – 9-10 October 2018 at IFAD Headquarters in Rome.

Conclusion

84. In concluding, the Chair expressed his appreciation to the Committee for its continuous commitment to transcending individual institutional mandates and positions and for pursuing strategic and integrated discussions through system-wide perspectives. HLCP was responding adroitly to the Secretary-General's vision to serve as a think tank for the entire UN system and advance thought-leadership on current and emerging challenges faced by the international community. He encouraged the Committee to explore areas for further strengthening of its work, in particular with regards to the delivery of concrete outcomes for enhancing system-wide policy coherence and programmatic coordination.

Agenda

UN Engagement on Frontier Technologies

1. **HLCP's Contributions to UN Engagement on Frontier Technologies**

"Deep-Dive" Analyses on Frontier Issues

2. **Artificial Intelligence**
3. **Future of Work**
4. **Future of Learning and Education**
5. **Future of Food**

Scoping Consultations with New Partners

6. **Policy Dialogue with the Youth Envoy and the "Young UN"**

Information/Transactional Topics

7. **Summary of Information Items - Istanbul Programme of Action for the Least Developed Countries**
8. **Other Matters - Dates and Location of HLCP 36th Session**

List of Participants

Chair: **Mr. Guy Ryder** (ILO)
 Secretary: **Ms. Kayoko Gotoh**

United Nations	
Executive Office of the Secretary-General	Ms. Ayaka Suzuki
Department of Economic and Social Affairs	Ms. Marion Barthelemy
Office for the Coordination of Humanitarian Affairs	Mr. Hansjoerg Strohmeier
Department of Political Affairs	Ms. Roselyn Akombe
Office of the High Commissioner for Human Rights	Mr. Craig Mokhiber
Regional Commissions	Mr. Amr Nour
Peace-Building Support Office	Mr. Oscar Fernandez-Taranco
Global Pulse	Mr. Robert Kirkpatrick
	Ms. Josiane Toundzi Dzouankeu
International Labour Organization	Mr. André Bogui
	Mr. Sangheon Lee
	Mr. Vinicius Pinheiro
	Mr. Shengjie Li
Food and Agricultural Organization of the United Nations	Ms. Carla Mucavi
	Mr. Michael Clark
United Nations Educational, Scientific and Cultural Organization	Ms. Marie-Ange Théobald
	Mr. Jordan Naidoo
	Ms. Marie Paule Roudil
World Health Organization	Dr. Nata Menabde
	Ms. Ivana Milovanovic
World Bank Group	Mr. Bjorn Erik Gillsater
	Mr. Nicholas Bian
International Monetary Fund	Mr. Christopher Lane
Universal Postal Union	Mr. Abdellatif Meskine
International Civil Aviation Organization	Mr. Mitchell Fox
International Telecommunication Union	Ms. Doreen Bogdan-Martin
	Mr. Preetam Maloor
	Ms. Ursula Wynthoven
World Meteorological Organization	Mr. Paul Egerton
International Maritime Organization	Mr. Sung-Jin Kim
World Intellectual Property Organization	Ms. Melissa Marrero
International Fund for Agricultural Development	Mr. Torben Nilsson
	Mr. Zak Bleicher
United National Industrial Development Organization	Mr. Paul Maseli

World Tourism Organization	Ms. Zoritsa Urosevic Mr. Kazi Rahman
International Atomic Energy Agency	Ms. Tracy Brown
International Organization for Migration	Mr. Ashraf El Nour
United Nations Conference on Trade and Development	Ms. Chantal-line Carpentier
United Nations Development Programme	Mr. Abdoulaye Mar Dieye
United Nations Environment Programme	Ms. Maaïke Jansen
United Nations High Commissioner for Refugees	Mr. Andrew Harper Ms. Ninette Kelley Ms. Michelle Cervantes
United Nations United Nations Relief and Works Agency for Palestine Refugees in the Near East	Mr. Peter Mulrean
United Nations Children’s Fund	Mr. Ted Chaiban Ms. Jo Bourne Mr. Juan Pablo Giraldo Ospino Ms. Madhavi Ashok Ms. Solome Zemene
United Nations Population Fund	Mr. Ramiz Alakbarov Mr. Alexander Pak
World Food Programme	Mr. Stanlake Samkange Ms. Coco Ushiyama
United Nations Office on Drugs and Crimes	Ms. Gillian Murray
United Nations Human Settlements Programme	Mr. Christopher Williams
UN Women	Ms. Aparna Mehrotra Ms. Nicole van Huyssteen Ms. Sharon Taylor
United Nations University	Mr. James Cockayne Ms. Christina McElwaine Ms. Eleonore Pauwels
United Nations System Staff College	Ms. Claire Messina
Joint United Nations Programme on HIV/AIDS	Mr. Simon Bland Mr. Gang Sun
Comprehensive Nuclear-Test Ban Treaty Organization	Mr. José Rosemberg
	* * * *
Secretary-General’s Envoy on Youth	Ms. Jayathma Wickramanayake
UN Innovation Network	Mr. Robert Opp

Young UN

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**Progress report on implementation of the Istanbul
Programme of Action for the LDCs: Investment promotion for the LDCs**
By UN-OHRLLS

Background

1. In the Political Declaration of the Comprehensive High-level Midterm Review of the Implementation of the Istanbul Programme of Action (IPoA) for the least developed countries (LDCs) held in Antalya, Turkey in May 2016 (contained in General Assembly resolution 70/294, paragraph 69), Member States invited the Secretary-General, in his capacity as the Chair of the United Nations System Chief Executives Board for Coordination (CEB), to include the issue of investment promotion regimes for the LDCs in the agenda of the Board, with a view to enhancing the effectiveness of United Nations system support aimed at increasing the flow of foreign direct investment (FDI) to the LDCs and their ability to attract such investment. The invitation was reiterated in General Assembly resolution 71/238, paragraph 23. In paragraph 24 of the same resolution, Member States reiterated the invitation to ECOSOC to discuss investment promotion regimes for LDCs at the annual ECOSOC Forum on Financing for Development follow-up (FfD Forum). In the intergovernmentally agreed conclusions and recommendations of the 2017 FfD Forum (E/FFDF/2017/3), Member States encouraged an increase in the volume, quality, diversification and long-term nature of FDI to all developing countries, with specific reference to LDCs, including through strengthening investment promotion regimes, strategies and agencies, as well as addressing the problem of the scale of the market and size of projects as obstacles to FDI.

2. OHRLLS and UNCTAD prepared a set of short, pragmatic recommendations intended to help increase the coverage, scope and effectiveness of the UN system's support for investment promotion to the LDCs. The recommendations (see CEB/2017/HLCP33/INF.1) were taken note of by the High-Level Committee on Programmes at its thirty-third session (16-17 March 2017) and, subsequently, by the CEB at its first regular session of 2017 (26-27 April 2017).

Activities to date

3. The recommendations put forward by OHRLLS and UNCTAD included the creation of an Inter-Agency Technical Committee (IATC). The first meeting of this Committee took place on 21 September 2017 at UN Headquarters. Representatives of OHRLLS, ILO, UNCTAD, UNIDO as well as the Enhanced Integrated Framework (EIF) and UNOPS were in attendance. OHRLLS and UNCTAD hosted on the morning of 21 September 2017 a dialogue where all agency members of the IATC presented their approach to investment promotion for the LDCs. Several LDC representatives highlighted their needs and priorities in the area of investment promotion, thus informing the deliberations of the Committee on the capacity development program for LDC investment promotion agencies (IPAs).

4. In keeping with the recommendations referred to in paragraph 2 above, the IATC discussed the following matters:

- a. a proposal for an internet-based tool to increase and facilitate the sharing of information on investment promotion activities prepared by OHRLLS. The latter collected comments and is currently working with the Office of Information and Communication Technology (OICT) to host the proposed on-line platform in accordance with cybersecurity and accessibility standards of the UN Secretariat and relevant technical requirements;
- b. a draft project proposal for a dedicated capacity development program for LDC investment promotion agencies. Comments from IATC agency members have been incorporated in the concept note and fund-raising activities are about to be launched. (The Ministerial Declaration of the 7th UNIDO Least Developed Countries Ministerial Conference held in Vienna, 23 - 24 November 2017 “encourage[d] the relevant UN agencies to establish a Capacity Development Program for LDCs in order for Investment Promotion Agencies to attract, diversify and retain sustainable Foreign Direct Investment and derive maximum benefit from it.”);

- c. an investment monitor for LDCs to annually provide analysis and updates on investment trends, opportunities and challenges in LDCs. The first issue prepared by UNCTAD came out in September 2017². It was agreed that the next issue will be released in October 2018 during the UNCTAD World Investment Forum. It was further agreed that IATC members will endeavour to contribute to the preparation of the Monitor by providing relevant analysis; and
- d. the organization of an LDC Ministerial High-level Business Executive Roundtable on Investment in LDCs for the SDGs during the UNCTAD World Investment Forum, which will take place from 22 to 25 October 2018. The Roundtable is scheduled for 24 October at the Palais des Nations in Geneva, Switzerland.

Other noteworthy activities

5. In addition to the above activities related to investment promotion, another noteworthy area of ongoing effort is the establishment of the Technology Bank for the Least Developed Countries. The Addis Ababa Action Agenda and 2030 Agenda for Sustainable Development reiterated the call from the Istanbul Programme of Action for the creation of a Technology Bank for the LDCs. On 23 December 2016 the United Nations General Assembly established the Technology Bank for Least Developed Countries. In September 2017, the United Nations and the Government of Turkey signed the Host Country Agreement and a contribution agreement, and in November, the Council of the Technology Bank adopted the programme of work and budget for 2018. During its first year of work, the Technology Bank in collaboration with other UN entities, including UNCTAD and UNESCO, will focus on preparing science, technology and innovation (STI) reviews and technology needs assessments, and on promoting digital access to research and technical knowledge in selected LDCs.

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²<http://greenfdi.org/images/UNCTAD-Issues-Note-FDI-in-LDCs-2017.pdf>