1. Introduction

As we approach the midpoint of the 21st century, it is evident that the world is off course to meet internationally agreed goals. The state of our environment and development underscores the urgency to look beyond the immediate horizon. Climate change, biodiversity loss, and environmental degradation all intersect with our time’s social, economic, and political challenges. Future planning is crucial as we look forward to 2050: the choices we make today will have major impacts on planetary health and human well-being.

The interplay between human activities and the environment will be central to developments in Asia and the Pacific. Critical questions arise about the choices that must be made. Will the effective enforcement of environmental policies require strict monitoring and surveillance, and hence the surrendering of individual freedom and personal privacy? Are the drastic, rapid, and transformational changes we need only possible through autocratic rule? Does advancing technology and its deployment necessarily translate into the loss of Indigenous knowledge, traditional practices, and cultural values?

2. UNEP regional foresight workshop

These are just some of the challenging questions that participants asked themselves during a recent regional foresight workshop conducted as part of UNEP’s strategic foresight initiative. The workshop was held in Bangkok in December 2023, with the participation of 42 academics and practitioners from 15 countries in Asia and the Pacific. Participants at the workshop discussed and contributed to four global scenarios representing a spectrum of plausible alternative “futures”, developed as a practical tool to analyse change globally. The goals of the workshop included gaining regional insights to inform these scenarios, making sense of horizon scanning outputs at a regional level by assessing the changes under each scenario, and identifying potential interventions. The future scenarios helped participants reflect on current and future challenges critical to the region and its people and environment.

This brief summarizes some of the key issues discussed at the workshop, followed by potential areas for intervention generated during the exercise. As the workshop
3. Summary of discussions and recommendations

This section highlights key arenas discussed at the workshop where the direction of change will have cascading impacts on the environment, society and development. Despite the huge social, political, economic and geographic diversity of the region, common themes emerged, albeit with different manifestations and pathways in each sub-region. These include technology, particularly artificial intelligence (AI); cultural values and social dynamics; and economic and power relations. These changes shape and are shaped by direct environmental changes that the region is experiencing, as well as existing environmental commitments and their pursuit through different mechanisms.

3.1 Technology

Countries such as China, Japan, and South Korea are global leaders in new technologies like AI. Innovations in technologies including the rise of automation, AI, and machine learning, bring both opportunities and challenges for the future in Asia and the Pacific, and how such tools are governed and used will have major implications beyond the field of technology and innovation.

AI and big data can help us manage and govern our natural resources more efficiently and effectively. They can support food security and enable regenerative agriculture and help in developing green, smart cities and help revive green spaces and biodiversity in urban areas. AI also has potential to empower marginalized groups and enable their participation in decision making.

At the same time, AI carries risk. It can widen inequality depending on who has access to it and who is left out, for example through technology monopolization, data inequality and job losses. The use of AI for surveillance and monitoring raises ethical concerns, and its manipulation to influence narratives and manage dissent is a major concern, both for governance and social cohesion.

Moreover, the environmental impacts of AI are not yet well understood, and there is a need for greater scrutiny and transparency of its energy intensity demands.

Finally, as we rely more on technology in our lives and for addressing social, economic and environmental challenges, we might lose touch with nature and traditional norms.

3.2 Cultural values, social norms, education, and civic engagement

Asia and the Pacific are rich in history and traditions, with place-based norms and values passed through generations. While these can be drawn upon to strengthen
planetary health and well-being, there is also a risk they can be subject to manipulation and stifling forces. Indigenous and traditional knowledge are invaluable sources of wisdom for living in balance with the environment. It is vital to preserve, revive, and enhance traditional ecological knowledge if we are to successfully tackle climate change and biodiversity loss. The rapid march of technology, however, puts these traditions at risk of being replaced, lost and forgotten.

Environmental skills and knowledge, and intimacy with the living world, can also be jeopardized as technology advances. Workshop participants raised concerns about societies becoming more inward looking, where the human-nature connection is lost, and people lose their sense of curiosity and wonder.

In such circumstances, the social sciences, humanities and arts become increasingly important for innovation and the public good. However, the advancement of technology may lead to a disproportionate focus on science, technology, engineering, arts, and mathematics (STEAM), resulting in under-investment in other critical areas.

Furthermore, as social dynamics evolve alongside technological, political and economic shifts, the older generation may find themselves at odds with the technological preferences and civic engagement patterns of the younger generation. Civil society actors may be empowered in an environment more oriented towards justice and democracy, while authoritarian governance and individual monitoring could breed less civic forms of resistance and demonstrations. Populist ideologies and in a post-truth context could contribute to reinforcing traditional gender roles and regressing social progress.

### 3.3 Economic and power relations

Power relations are shaped by the accumulation of wealth and resources and shape how the world operates, who are winners and losers, and also the relationship between development and the environment.

Possible futures in Asia and the Pacific could include growing inequity and patterns of exploitation between high- and low-income countries, and the dominance of the private sector and family dynasties over government and economy. Alternatively, the region could be a place where marginalized groups are empowered, exclusionary systems are diminished, and alternative trade and finance relations emerge.

Other futures could involve the carbon market bringing disproportionate benefits to corporations and affluent countries. The business case for climate action may replace government-led processes and drive new forms of resource extraction. Big technology actors may reap the benefits of future progress while making solutions inaccessible to the rest of the region. Family dynasties may gain further control and power over the economy and governments, perpetuating corruption.

Such outcomes would have major implications for geopolitics and the future of multilateralism, alongside the emergence of multipolarity and the rise of protectionism and nationalism. The domination of high-income countries and superpowers in access to resources could manifest in gentrification, displacement and conflict, amplifying
disparities within and between nations. The prevailing trade and finance systems need greater scrutiny and accountability, because they have the potential to either reinforce existing power structures or pave the way for alternative models that prioritize fairness and environmental values.

Voices of marginalized groups, often muted in traditional power structures, are integral in shaping a more equitable future. Resource-dependent groups, such as fisherfolk, are likely to be left behind unless deliberate efforts are made to ensure their protection. There is a risk that progress made on human rights and the rights of nature, unless reinforced and protected through capable institutions, strong legal frameworks, and sensitized justice systems, can be undone.

4. Moving forward

After an exercise in back-casting from future scenarios, workshop participants highlighted the following areas for action aimed at planetary health and well-being. Transformation of economic systems, effective governance, and progress on rights, justice, and equity were among the key interventions discussed at the workshop.

4.1 Transforming the economy

The region's current consumerist and resource-exploitative economic model is a root cause of environmental degradation and social inequity. Major shifts in economic systems, norms and practices can have major implications for social dynamics and environmental commitments. Below is a list of key areas discussed at the workshop for transforming the economy.

Understand and redistribute power

A better understanding of embedded power relations and vested interests and how they operate in the region is needed to prevent corruption, nepotism and monopolization. State and non-state actors need to collaborate and practice transparency, and also identify influential stakeholders who can leverage their influence to bring about change.

Develop alternative systems

Governments can invest in developing and deploying alternative economic systems, for example by moving away from GDP as the standard measure of economic health. Instead, by adopting non-economic indicators like ecological footprint and happiness indices, governments can promote planetary health and well-being as a goal. Governments and intergovernmental bodies can initiate the restructuring of the global economic landscape to enable resources to be allocated for inclusive social and environmental commitments. This can be done through debt relief for highly indebted, low-income countries, reform of multilateral banks, and support for Indigenous people's participation in trade policies.
Strengthen local economic resilience

Governments can provide targeted support, including financial incentives and enabling policies, for sustainability-driven SMEs and locally led initiatives. This can help promote innovative solutions for circular economy, food security, and local economic resilience. Businesses and civil society can adopt and promote alternative communication and marketing strategies, such as eco-propaganda, to cultivate behavioural and lifestyle changes, reduce excessive consumption, and drive aspirational consumption (e.g. green spaces, clean air, personal development).

4.2 Enhancing governance

Good governance is at the heart of the transition to planetary health and well-being. Inclusive, equitable decision-making and effective reinforcement mechanisms are needed to tackle the interrelated challenges of our time. Below is a list of key areas discussed at the workshop for improving governance.

Make governance systems work better

Workshop participants emphasized that existing global and regional systems are not working as they should. Accountability mechanisms are needed at multiple levels to ensure policies, including human rights and environmental frameworks, are implemented. This means governments must invest in institutional capacities and justice systems at all levels.

Invest in environmental governance

Governments and the private sector need to invest in research, technology and innovation to develop and deploy solutions for environmental sustainability, such as using AI for environmental intelligence. Transboundary cooperation is needed to tackle transboundary climate risks and environmental issues, by enhancing capacities of institutions such as the Mekong River Commission. Decision makers should address gaps and ensure alignment between national policies and international standards and best practices in governance mechanisms.

Promote evidence-driven governance and AI governance

Governments and businesses can use AI as a tool to enhance governance and promote evidence-based decision making. There is a need for robust legal and policy frameworks to govern the use of AI and technology, focusing in particular on the ethics of AI, data accessibility and transparency, diverse knowledge systems, and the risk of manipulation.

4.3 Rights, equity, and justice at the centre

Without deliberate efforts to protect and promote principles of rights, equity, and justice, progress on environmental sustainability or development can leave out
marginalized groups or further their suffering. Below is a list of key areas discussed at the workshop for centreing rights, equity and justice.

**Promote justice, equity, and rights in policies**

Governments must prioritize justice, equity, and rights. Legal and policy frameworks that recognize the rights of nature and human rights are needed in the region, along with mechanisms that protect the rights of environmental defenders. Meaningful engagement and participation of all stakeholders in decision-making processes, including Indigenous peoples and other marginalized groups, ensures diverse perspectives are considered.

**Strengthen the rule of law**

It is important to strengthen the rule of law to ensure that marginalized and vulnerable groups who bear the brunt of environmental change have legal avenues to seek justice, protect their rights to a safe, clean and healthy environment, and hold polluters and duty-bearers accountable. A strengthened rule of law requires not only enhanced legal frameworks but also capable institutions and sensitized justice systems.

**Embed justice in education**

Government and civil society actors can support the reform of the educational systems to integrate traditional ecological and Indigenous knowledge and environmental justice into curriculum and teacher training. This is necessary to cultivate a mindset shift towards environmental stewardship and a culture of rights-based and justice-driven sustainability.

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