

Theme Paper

24th International Conference on  
**Environment Management and Climate Change**

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Theme:

**Board's Strategy towards a Green Economy**  
(Climate Change, Biodiversity and Pricing of Natural Capital)

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Environmental trends and developments include risks, challenges and existential threats that directors and boards cannot afford to ignore. Six of the top ten risks in terms of severity of impact over ten years identified by the 2023 global risks survey and report of the World Economic Forum (WEF) are environmental (WEF a & b). The top three are failure to mitigate climate change, failure of climate-change adaptation and natural disasters and extreme weather events. They are followed by biodiversity loss and eco-system collapse in fourth place. Natural resource crises and large-scale environmental damage incidents also appear in the top ten list. The nature of the environmental challenges that confront many directors and boards are global. Their scale, combination and cumulative impact, and the inter-relationships between them suggest that individual corporate responses may not be sufficient to address certain existential threats (WEF, 2023a & b).

Other risks in the WEF 2023 global risks report such as geoeconomic confrontation which ranked third for severity of impact over a two-year period also have environmental consequences (WEF, 2023b). Conflicts such as Russia's unprovoked and illegal invasion of Ukraine can result in massive environmental damage affecting large areas, which is being recorded with the help of the United Nations Environment Programme (UNEP) and might lead to a claim for reparations along the lines of that brought by Kuwait against Iraq (Early, 2023). The economic and human consequences of Russia's aggression have included supply chain disruptions and international inflationary pressures. Communities around the world and corporate boards are experiencing the consequences (Coulson-Thomas, 2023d).

The negative impacts of human activities upon the environment, eco-systems and our collective futures continue to increase (Dasgupta, 2021; IPCC, 2022c; UNEP, 2022). Their affects are already being felt, noticeably in the impact of wildfires, floods, melting ice and rising sea levels and the increased frequency and severity of various extreme weather events (IPCC, 2022a). Natural capital continues to be overexploited. Populations in many countries are still increasing. The purpose of this Theme Paper is to explore some of the areas on the agenda for the forthcoming 2023 and 24<sup>th</sup> International Conference on Environment Management and Climate Change. They are particularly important for India in view of the scale and composition of its population and its growing significance in world energy and other markets. The Theme Paper suggests issues and questions that directors, speakers and other participants might wish to consider ahead of the event and discuss in Bengaluru.

## Preparing for COP28 to Ensure 'Net Zero' by 2050

According to the United Nations Environment Programme (UNEP) more needs to be done and more quickly to address global warming and climate change (UNEP, 2022a & b). The Intergovernmental Panel on Climate Change suggests that 'net zero' targets need to be brought forward by a decade (IPCC, 2023). Many species are struggling to adapt to the speed and scale of temperature and climate changes and their impacts, and the consequential risk of mass extinctions extends to the world's oceans (Hannah, 2022; Penn and Deutsch, 2022). What more could be done to ensure the achievement of 'net zero' by 2050? How should directors prepare for COP28 being held in Dubai (UAE) from the 30<sup>th</sup> of November to the 12<sup>th</sup> of December 2023 in relation to implementing what has been agreed at previous conferences of the parties and outstanding business from COP27?

Global trends and developments are internationalising a range of issues, challenges and threats and related opportunities. Concerns about globalisation are not new. They drove attempts to close national borders to flows of people, goods and capital in Europe in the last century between the two world wars (Zahra, 2023). What might be the environmental consequences of contemporary trends, reshoring activities and the disruption of supply chains? Should more attention be devoted to climate risks in global supply chains (Ghadge et al, 2020)? How could businesses contribute to nature-based solutions or to addressing consumption-based emissions? What do boards feel about the prospects of their companies, the state of business generally and their ability to contribute to and achieve 'net zero' goals? What should their strategy be in relation to effective climate governance, the achievement of UN Sustainable Development Goals, and their and their country's 'net zero mission'?

Addressing the multiple and inter-related impacts of climate change and other contemporary challenges may require more responsible leadership that addresses the interests of a wider range of stakeholders and the environment (Coulson-Thomas, 2022b; Saks, 2023). What should a board's social and economic policies and priorities be in relation to lifestyles, corporate and community infrastructures, communities and cities? Are the consequences of growing populations, their likely implications and their root causes being addressed? How might more environment-friendly business practices be identified, adopted and implemented? Are social, economic and environmental development policies aligned and integrated with those for a more sustainable and low-carbon future? How affordable, responsible and sustainable are a company's current and planned use of technology and scarce resources?

## Leadership for Promoting Transformational Technologies and ESG

In evolving and uncertain situations, and during transition and transformation journeys, it may not be easy to assess the sustainable benefits of investments in digital and other technologies (Savastano et al, 2022). Many directors receive different accounts of the various areas of life that could be transformed by digital and other technologies, but they often receive fewer assessments of their energy and resource requirements. Those responsible for the development of general-purpose technologies may themselves be uncertain as to how to derive income streams from certain applications (Yang et al, 2022). How should boards ensure technology is used wisely and that products are designed to be recyclable and reused, and not to harm the environment or create other negative externalities (Sheppard, 2023)?

Some directors and boards adopt ‘wait, see and react’ approaches to both climate risks and new technologies. Others take steps to increase their understanding of how they might affect people and how technologies could be responsibly employed. Forewarned can be forearmed. Modelling the impact of climate change upon supply chains can reveal a variety of negative impacts, including a reduction in the availability of natural resources, raw materials and capacity that could lead to shortages, affect inventory costs, cause bottlenecks and disrupt procurement, manufacturing and logistics activities (Er Kara et al, 2023). These impacts can also affect the availability of new technologies and suggest prioritisation of their use which should also reflect ESG objectives and priorities. How should boards promote ESG compliant transformational technologies to achieve inclusive, sustainable and responsible growth and limit global temperature rises to 1.5°C since 1850 (Paris Agreement, 2015; Saks, 2023)?

Directors and boards need to consider how best to build businesses that are themselves climate resilient and green and also contribute to a wider climate resilient green economy. What strategies should they adopt? How might climate uncertainty risks be better managed? How could climate resilient technologies help in this? Are changes required to governance arrangements to address climate and technology challenges and opportunities? How should a board prepare for actionable climate and technology governance? What form of responsible and transformational leadership and roadmap should be adopted for attaining UN SDGs (Coulson-Thomas, 2022b; Saks, 2023)? Are related corporate governance changes required (Coulson-Thomas, 2023b)? How might these best be identified, scoped and adopted?

### Green Growth and Sustainable Development

Our knowledge of our evolution and history suggests climatic and environmental factors and their interaction with human societies have had a significant influence on the development, prospects and decline of various communities and a succession of civilisations (Frankopan, 2023). It suggests our future will depend upon whether we can prevent, slow and/or adapt to global warming and cope with its climatic and other consequences. How might green growth and sustainable development be achieved, while at the same time preventing further decline in biodiversity and safeguarding scarce natural capital (Dasgupta, 2021; Hannah, 2022)? Are regulatory changes required to reduce and/or internalise negative environmental impacts (Maitre, 2018)? Experience suggests that pragmatic intervention could enable more threatened species to survive, but its consequences may raise philosophical issues, involve choices, impact some human activities, and may require monitoring and management (Preston, 2023).

Continuing as before will not address the existential climate related environmental threats that we face (UNEP, 2022a & b; IPCC, 2023). Innovative solutions for the challenges of climate change and achieving a zero carbon and sustainable future are urgently required? What are the options and which of these do businesses prefer? Should carbon and/or natural capital pricing be fast-tracked? How might promising possible solutions best be discussed, developed, quickly evaluated and rapidly implemented? What regulatory or other changes are required to speed up responsible adoption? How could public and private investment and carbon funding speed up the creation, assessment and adoption of green growth solutions? Are additional sources of funding required? What are the best ways of creating energy and corporate resilience and accelerating the ‘net zero’ agenda (Coulson-Thomas, 2023a)?

Boards should review environmental governance for economic growth and green financing. What are the most urgent priorities and areas of greatest need? Could more be done to address negative externalities? What role could or should Central and State Governments play in improving biodiversity in coastal areas and combating sea level rise? Could re-wilding be an affordable means of increasing biodiversity in urban and other environments? Experience suggests that as well as increasing biodiversity and providing an antidote to monocultures, rewilding can: be undertaken by working with nature; generate new income streams; help to regenerate local economies and enable people to reconnect with nature (Tree and Burrell, 2023). What 'green' funds are available for specific ESG issues and what, if any, new sources of funding are required? How might barriers to their use be addressed? Are changes to investment criteria required? How should these be developed and promoted?

### Water Management for Sustainable Societies

Competition for available water supplies has increased along with the risk of water-related conflicts and particular areas ceasing to be habitable and resulting mass migrations (Rowe, 2019; WEF, 2023a & b). How might what is available best be more equitably distributed to achieve fairer and more inclusive and sustainable outcomes (Sohrabi et al, 2023)? What new arrangements should be put in place to handle disputes over water use between riparian business operations, local communities and neighbouring States? How might water conservation and transportation arrangements be improved? At what point should water use be rationed or charged on a differential basis to ensure that essential requirements have priority over discretionary uses? What relative priority should be placed upon agricultural, industrial and domestic uses? Are new allocation, pricing and charging mechanisms required?

Competition and the desire to survive can result in undesirable behaviour and negative externalities (Frank, 2012). Responsible leaders also seek collaborative advantage. How might this be achieved? What needs to be done in relation to water collection, storage, transportation and distribution to minimise wastage? Could its loss be reduced and its storage better managed (Bozkurt et al, 2022)? How might the management and conservation of water resources be better integrated and improved? What regulatory changes are required? Are there smart solutions for water availability and use that could be adopted or more widely used? How might the more efficient and responsible use of water enable communities, economies and societies to be more resilient? Are there lessons to be learned from indigenous methods and traditional approaches to water management (Edgar et al, 2022)?

Significant populations, especially in poorer countries lack access to sanitation and safe water (UN, 2023). What are the opportunities and challenges for enabling universal and equitable access to safe drinking water? Could market based solutions incorporating incentives, subsidies and pricing help to widen access to water and other arenas of scarce natural capital? How might competing claims for available supplies be better resolved? Could less water intensive forms of agriculture and greater use of recycling, reuse and drought resistant crops be encouraged? What role could private sector financing play in ensuring sustainable safe water supply for all? How might insurance cover be widened in drought-stricken areas? Are there opportunities for public-private cooperation in the relocation of certain communities?

## G20, Net Zero and India's role

India's energy demand has grown rapidly with consequences for global emissions and international energy markets. The country is just becoming the world's most populous. It could be the main driver of energy demand and overtake the EU in energy consumption by 2030 (IEA, 2021). India is the third largest carbon-emitter after China and the US. Transport is a major contributor to emissions. The use of cleaner energy is encouraged and progress has been made in widening access to electricity and the use of renewables, but India is still reliant on fossil fuels. With China it objected to the phasing out of coal at COP26. Given its growing carbon emissions, continuing reliance on coal, and increased oil purchases at a discount from Russia which helps to fund this country's aggression against Ukraine, India's presidency of G20 and achieving consensus on some agenda items may be challenging. How might it best use its current role to achieve beneficial change and advance environmental objectives?

Significant numbers of people in India have already been affected by extreme weather events (CSE, 2022). With rural and urban areas at different stages of development, could India become a bridge between the developed members of G20 and the developing world? How might innovation and leadership become the cornerstone for addressing climate change and environmental risks and challenges (Coulson-Thomas, 2023c)? Are there opportunities in relation to the economics of climate change? What strategies for a 'carbon constrained future' and 'waste to energy' technologies should India and boards pursue? How might India's drive for sustainable energy for all and exploiting renewable energy sources create opportunities for collaboration at home and abroad? Is the roadmap for India's target of 500GW of renewable energy by 2030 clear? What role should the International Solar Alliance play?

Colleague and stakeholder perceptions of the proximity of climate change risks and how they might be affected can vary. A survey of Canadians found similar levels of concern about the health impacts of climate change and its biophysical, economic and national security consequences (Casson et al, 2023). Communicating the health risks of climate change may help people to understand the implications for them personally. Should more effort be made to personalise the impacts of climate change and highlight how people in less developed areas are affected? Should India be less concerned with 'catching up' with what others have done by emulating approaches of the so-called 'advanced economies' whose early industrialisation triggered certain global existential threats we now face? Or should it instead follow a more sustainable, inclusive and enlightened path, follow Indian and other ancient wisdom, and revere and live in harmony with nature (Baindur, 2015; Coulson-Thomas, 2019 & 2022a)?

## Global Initiatives: Climate Resilient Economic Development

India's role in transition to a green economy and whether its net impact will be to compound global challenges or advance solutions is likely to be critical. The Deputy Director of the UK Government's COP 26 unit suggests that reductions in greenhouse gases for each unit of global GDP needs to be five times faster than that achieved over the past two decades (Sharpe, 2023). Deeper thinking and greater commitment to more focused and much faster change, transition and transformation is urgently required before it is too late. Much of the earth could become uninhabitable (Wallace-Wells, 2019). Ignoring warning signs, not anticipating and delaying preparation may increase the risk of disaster (Omand, 2013). The scale of the challenge is highlighted by regular reports from monitoring organisations and

agencies (GCP, 2021; UNEP, 2022a & b; IPCC, 2023). What could and should be done differently in the light of Global Carbon Budget and IPCC Assessment Reports? What are their implications for business and those of 'Our Solar Future' roadmap (WRI et al, 2021)?

The pre-COP 27 United Nations Environment Programme gap report suggests that Governments are not doing enough and that time for an effective response is running out (UNEP, 2022). India has committed in a Nationally Determined Contribution (NDC) to reduce the carbon emissions intensity of its GDP by 45% by 2030. How might the responsible applications of available and affordable technologies help and support transition to a lower carbon economy? What new and/or different priorities and practices might be required? Should net positive be an aspiration of more businesses (Polman and Winston, 2021)? How can climate resistant economic development be achieved, while also addressing other and inter-related existential threats and sustaining progress towards a more inclusive future and operations, activities and lifestyles that are healthier and rewarding (WEF, 2023)?

Boards need to ensure they and the companies for which they are responsible have the bandwidth, connections, collaborations and courage to address new strategic risks, while also tackling more established ones. Sometimes and collectively, we are too slow to react to emerging and accelerating risks and threats. For example, the 2022 UN Biodiversity Charter agreed in Montreal allows practices that destroy forest, wetland and sea-bed habitats to continue until 2030 (COP 15, 2022). When past UN biodiversity targets have not been met, cynics may wonder whether current and future ones will be achieved. In practice, collective aspirations seem to be about slowing the plundering of the natural world rather than its regeneration. Biodiversity loss remains an existential threat and strategic risk (Dasgupta, 2021; WEF, 2023). How can directors avoid greenwashing and better confront it?

#### Addressing Emerging Strategic Risks While Tackling Established Ones

Boards should be ever open to possibilities for innovation, enterprise and entrepreneurship and for reinvention and relocation. In India and elsewhere across much of the developing world people continue to migrate from rural areas into major cities. There are opportunities to reimagine, reinvent and rewild cities to meet their aspirations and those of children and young people in relation to the neighbourhoods and wider communities they would like to grow up in. For Madrid, one of the key elements in a programme to 'green' the city is a 75-kilometer-long metropolitan forest that will be composed of 1.5 million trees (Stewart, 2023). Many interventions considered to be beneficial overall may still have some negative consequences. For example, protection of predators that raises their numbers may not only enhance risks to livestock, but also increase the annual number of people they kill (Hart, 2023). Choices will need to be made. By the time everyone agrees it may be too late.

Directors should exercise independent thought before and while contributing to collective board discussions. Resilient spirits may be those who avoid surrendering to determinist and fatalistic prognostications based upon human frailties. Boards should stay positive, retain hope, tackle challenges, remain open to possibilities, embrace enquiry and encourage action while there is still time (Bakewell, 2023). Natural capital required by future generations continues to be depleted more quickly than it can be regenerated, recycled or new supplies brought on stream (Tucker, 2019; Hannah, 2022). Existence and being alive can be magical, yet many people who seek 'more' are anxious and preoccupied with problems they and other

humans have collectively created. Escaping into digital arenas may distance them even more from the natural world they are degrading. How might boards inspire transition and transformation journeys, display greater authenticity and also inspire, encourage and support reconnection with the reality of what is happening to the natural world (Sherwood, 2022)?

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#### Further information

Details the 24<sup>th</sup> International Conference on Environment Management and Climate Change, including the agenda, can be obtained from the website of the organiser: India's Institute of Directors ([www.iodglobal.com](http://www.iodglobal.com)): [https://iodglobal.com/upcoming\\_events/details/24th-international-conference-on-environment-management-and-climate-change](https://iodglobal.com/upcoming_events/details/24th-international-conference-on-environment-management-and-climate-change)

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