

# Networks for a Resilient Future: An Asian Perspective

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## Executive Summary

In 2021, resilience is undoubtedly top-of-mind for business leaders as they face the COVID-19 pandemic and threat of climate change amidst a precarious geopolitical environment. While corporate resilience is the capacity of an individual company to transform nimbly, rebound quickly, and prepare effectively for dramatically changed circumstances, collective resilience refers to the capacity of multiple companies and stakeholders to jointly respond to, recover from, and defend against some of the most pressing global challenges of our time.

In Asia, companies ranging from multinationals and private corporations to sovereign wealth funds and state-owned enterprises are leading, expanding, and participating in networks for collective resilience. These include response networks that channel information in times of acute crisis, stabilization networks that aim at recovery and recuperation after the crisis, and defense networks formed in anticipation of future threats. In contrast to the “chessboard view” of international relations which emphasizes the zero-sum power game among nation-states, more relevant in this context is the “web view” which recognizes the role of non-state actors such as businesses in forming meaningful networks of sharing, connection, engagement, and collaboration.

First, the pandemic brought together companies and other stakeholders in a variety of resilience networks. In May 2021, members of the Asia Business Council supported the Confederation of Indian Industry in addressing the second wave of the COVID-19 crisis in India. Meanwhile, given the critical gaps in the supply of COVID-19 vaccines for developing countries, vaccine manufacturers signed advance purchase agreements with multistakeholder network COVAX, which also enjoys the support of corporate donors like Nikkei, TikTok, and HSBC. Furthermore, digital vaccine passports can be seen as stabilization networks where health, technology, and aviation industry partners are collectively working toward a global recovery in travel.



Second, climate change is another area where business action is necessary to help secure a resilient future. In June 2021, the Green Digital Finance Alliance launched the “Every Action Counts” coalition to encourage sustainable consumer behavior through apps like Ant Forest and GCash Forest. In Vietnam, the United Nations Industrial Development Organization engaged more than 70 companies to transform conventional industrial zones into eco-industrial parks in what can be seen as a networked solution against the environmental crisis. In addition, the SME Climate Hub is a network of networks that encourages collective action among SMEs as well as multinationals that have made a commitment to halve emissions by 2030 and achieve net zero emissions by 2050. The hub is a focal point for overlapping networks as the firms engaged in the broader resilience network are often leading or participating in narrower resilience networks that are specific to a company or industry.

Companies are also working together to resolve other complex problems, ranging from big picture issues to more specific challenges in a particular area. Importantly, corporate resilience and collective resilience are inter-linked in both directions. Companies need to do well before they can work with other stakeholders to solve global challenges. At the same time, business competitiveness is also tied to leveraging participation in key networks to gather critical information, unlock partnership opportunities, and successfully tackle global crises which cannot be overcome by the efforts of any single company.



*Photo by Denys Nevozhai*

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## Part I: Introduction

In 2021, resilience is no doubt top of the agenda as business leaders face an unprecedented pandemic and the urgent threat of climate change in an increasingly complex global operating environment.

### From Corporate Resilience to Collective Resilience

In a business context, corporate resilience is the capacity of a company to transform nimbly, rebound quickly, and prepare effectively for dramatically changed circumstances. Companies that are resilient exhibit the ability to absorb and process information, activate decision-making across their operations, rely on diverse supply chains, delink failure in one part of the system from other parts, and adapt to changes with new plans and new actions.<sup>1</sup> But if corporate resilience is what enables individual companies to survive and thrive as profit-making entities in trying times, it is collective resilience, defined as the capacity of multiple stakeholders to come together to manage, recover, and prevent crises, that encourages companies to join forces with non-profits, governments, and international organizations to address some of the most pressing challenges of our time.

What are some of the characteristics of companies working toward collective resilience? First, they are committed to going beyond meeting the bottom line. Society is demanding that companies not only deliver financial performance but also serve a social purpose and make a positive contribution to society.<sup>2</sup> The second characteristic is that it involves corporate citizenship in an interconnected world, where companies harness their resources in initiatives that span cultures and geographies.<sup>3</sup> Third, companies that embrace collective resilience are enmeshed in global networks that form the “web view” of international relations.<sup>4</sup> In contrast to the “chessboard view” which emphasizes the zero-sum power game among nation-states, the “web view” recognizes the role of non-state actors such as businesses in forming meaningful networks of sharing, connection, engagement, and collaboration.<sup>5</sup>

Importantly, corporate resilience and collective resilience are inter-linked in both directions. On the one hand, companies need to do well before they can work with other companies and stakeholders to solve complex problems like the pandemic and climate change. On the other hand, business competitiveness today is tied to leveraging participation in resilience networks to unlock partnership opportunities and successfully tackle global crises that cannot be overcome by the efforts of any single company.<sup>6</sup> The rise of shapeholders – political, regulatory, media, and activist actors that expand or constrain a company’s risks and opportunities but have no stake in a company’s operations – also makes it essential for businesses to keep abreast of economic, environmental, and societal developments that inform strategy and leadership in both the short term and long term.<sup>7</sup> Resilience networks are an avenue for companies to gather critical information while contributing to the development of global solutions to global challenges.

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## Networks for a Resilient Future

Indeed, in today's world, businesses are engaged in one or more of the three types of resilience networks that foreign policy scholar Anne-Marie Slaughter has identified<sup>8</sup>:

- Response networks: speedy, accurate, and effective information networks in a moment of acute crisis.
- Stabilization networks: recovery networks necessary to restore an affected population, ecosystem, or community to its previous state before the attack or disaster, or even to build it back better.
- Defense networks: pre-emptive networks that can be activated when a threat materializes in the future.

The “chessboard view” and the “web view” are not mutually exclusive. Businesses are aware of geopolitical tensions among nation-states and their effect on trade, investment, and supply chains.<sup>9</sup> But companies are also important non-state actors whose impact is magnified when they come together. In response to two of the most significant challenges of our time, namely the global pandemic and climate change, companies ranging from multinationals and private corporations to sovereign wealth funds and state-owned enterprises are leading, expanding, and participating in networks to help secure a resilient future.

## Part II: Resilience Networks during the Global Pandemic

The COVID-19 pandemic is a health and humanitarian disaster that can only be overcome if companies and other stakeholders embrace collective resilience as a shared goal. Even as the pandemic is entangled in complex geopolitics with ongoing frictions in larger and smaller economies, Asian companies are engaged in multistakeholder networks that address the unprecedented crisis. This can be seen through philanthropic responses to support hard-hit countries, international efforts to promote the equitable distribution of vaccines, and the confluence of health, technology, and aviation industry partners to help global travel recover in a post-pandemic world.

### 1. A Resilience Network to Address the Second Wave of the COVID-19 Crisis in India

One example of a resilience network during an acute crisis is the collaboration between the Asia Business Council, the first pan-Asian CEO organization, and the Confederation of Indian Industry (CII), the largest business chamber in India, in addressing the second wave of the COVID-19 crisis in India. This was a combination of a response network that relayed information about the crisis quickly and accurately, and a stabilization network that sought to help the affected community recover through financial support and donations of medical equipment.





Photo by Mohd Aram

## The Power of Personal Networks

In May 2021, India was engulfed in a deadly second wave of the pandemic, and a collapsing healthcare system meant that there were thousands of deaths and some 400,000 new cases every day.<sup>10</sup> What began as an idea in the Hong Kong headquarters of the Council soon translated into concrete action as Chairman Daniel Tsai of Fubon Group and Vice-chairman Takeshi Niinami of Suntory Holdings appealed to Council members to consider contributing in any way to save lives in India.

While the Council emphasized that this would be totally discretionary and could be in any form that members deemed appropriate, the Council recommended that one option was to donate to CII, which was coordinating imports of medical oxygen related equipment, making lifesaving drugs available, and supporting the ongoing vaccination drive.<sup>11</sup>

## Financial Support and Donation of Medical Equipment

The strong response illustrated how deep connections and relationships in times of relative normalcy can be mobilized quickly and effectively in times of acute crisis. Apart from a lead donation of \$1 million from Fubon Group, member companies from across the region, including Suntory Holdings, SM Foundation, Hyundai Capital, PT Triputra Investindo Arya, DatVietVAC Group Holdings, and Gund Investment made monetary contributions to support relief efforts in India.<sup>12</sup>

Meanwhile, other member companies played their part in addressing the worsening crisis. Saudi Aramco supplied critical equipment such as oxygen tanks; PI Industries Ltd. set up 12 oxygen plants across hospitals in Gujarat, Rajasthan, Haryana, and Delhi, and provided financial assistance to healthcare facilities for oxygen concentrators, oxygen-CPAP devices, and medicines; and Temasek distributed over 8,500 oxygen concentrators, 500 BiPAP machines, and 50,000 oximeters, as well as ICU-grade ventilators equipped with remote monitoring and control capabilities.<sup>13</sup>

As an employer of India's tech community, Taiwan Semiconductor Manufacturing Company (TSMC) also committed to donating 1,000 oxygen concentrators to India, including 500 oxygen concentrators to CII, to assist with on-the-ground relief efforts.<sup>14</sup> Along with Foxconn, TSMC also agreed to a deal with Fosun, the Chinese sales agent for Germany's BioNTech, to purchase 10 million vaccine doses for the people of Taiwan.<sup>15</sup>

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## 2. COVAX as a Resilience Network that Promotes Equitable Access to COVID-19 Vaccines

The realm of vaccines and its equitable distribution has also emerged as a critical area for global collaboration. This is true not only among governments, but also among businesses. Pharmaceutical companies are engaged in the COVID-19 Vaccine Global Access (COVAX) Facility as manufacturers of vaccines, while corporate donors are providing financial resources for the purchase of vaccines.



*Photo by Braño*

Directed by Gavi, the Vaccine Alliance, the Coalition for Epidemic Preparedness Innovations (CEPI), and the World Health Organization (WHO), COVAX was launched in April 2020 and serves as a response and stabilization network that promotes recovery through efforts to ensure equitable access of vaccines for all economies. Leveraging the collective purchasing power from the participation of more than 190 economies, COVAX negotiates competitive prices with vaccine manufacturers which are then passed on to participants.<sup>16</sup> Within COVAX, Gavi also administers a separate financing mechanism, the COVAX Advance Market Commitment (COVAX AMC), that supports 92 low- and middle-income countries.<sup>17</sup>

### Vaccine Manufacturers Sign Agreements with COVAX

By April 2021, Gavi had reserved around 1.8 billion doses of COVID-19 vaccines from a variety of manufacturers in what it called “one of the biggest and fastest international efforts in decades.”<sup>18</sup> In its latest Global Supply Forecast in July 2021, COVAX revealed that it has signed advance purchase agreements with six new vaccine manufacturers, including Moderna (500 million), Clover (414 million), Sinovac (380 million), Novovax (350 million), J&J (200 million), and Sinopharm (170 million), adding up to more than 2 billion doses.<sup>19</sup> Among the total commitment of 5.1 billion doses either directly from vaccine manufacturers or from dose-sharing countries, COVAX estimated that 1.9 billion doses would be available by the end of 2021, among which 1.5 billion doses would be for countries covered by COVAX AMC, covering 23% of their populations.<sup>20</sup>

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The roll-out of COVAX has not been without challenges. In May 2021, as the virus resurged in India, the Serum Institute of India, which is also the world's largest vaccine maker, said that it could not restart deliveries to COVAX until the end of the year.<sup>21</sup> In Africa, COVAX delivered 60 million fewer cumulative doses between January and May 2021, compared to its original forecast.<sup>22</sup> This is in addition to other problems such as inadequate storage equipment, lack of information, hesitancy to take vaccines, and slow distribution, which resulted in the expiration of doses.<sup>23</sup>

### **Nikkei, TikTok, and HSBC among Corporate Donors to COVAX AMC**

Nonetheless, COVAX is a forum that brings together multiple stakeholders in a purposeful resilience network. In the private sector, COVAX AMC counts among its earlier donors companies such as American multinational MasterCard, British-Dutch company Royal Dutch Shell, Japan-based Nikkei Inc., London-based fintech Transferwise, as well as TikTok, which is owned by Chinese company ByteDance.<sup>24</sup> HSBC also donated \$1.5 million to UNICEF to deliver COVID-19 vaccines on behalf of the COVAX Facility.<sup>25</sup> With contributions from the private sector at only a fraction of donations from governments, there is room for companies to step up their financial support for the “urgent, high-profile imperative” of global vaccination.<sup>26</sup> Companies with international operations especially have an interest in reducing the spread of COVID-19 and lowering the need for lockdowns in the countries that benefit from COVAX.

But philanthropy can only go so far when technology transfer is key. For Seth Berkley, CEO of Gavi, “now that we have a networked solution” with COVAX, the next step is to invest in additional manufacturing capabilities in developing countries to equip them with the human capital and infrastructure to produce vaccines.<sup>27</sup> In July 2021, a consortium of key actors from COVAX partners, industry, government, academia, and funding agencies announced the establishment of the South African mRNA technology transfer hub.<sup>28</sup> While the problem of inequitable vaccine access cannot be solved overnight, the South African hub is a nonetheless an important development in strengthening African regional health security. It marks a step forward in building resilience in the ongoing pandemic and in developing a defense network against future pandemics.<sup>29</sup>

### **3. Digital Vaccine Passports as Networked Solutions for the Global Travel Recovery**

Digital vaccine passports are networked solutions that enable the safe re-opening of borders, with the participation and support of governments, travelers, as well as airlines and health companies. Centered around a mobile app, these emerging networks can be seen as stabilization networks because they aim at restoring global travel, which was once regular and necessary, to pre-pandemic times.

#### **CommonPass as an Example of a Digital Vaccine Passport**

CommonPass is one of the digital vaccine passports that illustrates the power of bringing together stakeholders from different industries for a common purpose.



The project itself is the result of an international gathering convened by The Commons Project, The World Economic Forum, and The Rockefeller Foundation, which brought together 350 public and private sector leaders from 52 countries to design a common framework for re-opening borders safely.<sup>30</sup>

CommonPass asks individual travelers to consent to having their medical records used to validate their COVID-19 health status.<sup>31</sup> It relies on its global network of labs and vaccination providers from some 32 jurisdictions to verify compliance with health screening requirements of the travel destination.<sup>32</sup> Should the requirements be met, CommonPass provides a downloadable health certificate to the traveler's mobile phone, eliminating the need to carry paper-based records which could be lost or fabricated.<sup>33</sup>

Aviation companies are also part of the networked solution. Carriers like ANA, Cathay Pacific, JetBlue, Lufthansa, Swiss Air, United Airlines, and Virgin Atlantic are all trialing the technology.<sup>34</sup> In July 2021, Cathay Pacific completed a CommonPass trial on a route between Hong Kong and Singapore.<sup>35</sup> Volunteer customers created digital health passes using the CommonPass app, which corroborated their personal vaccination and PCR test records against the travel requirements.<sup>36</sup>

In addition, the CommonPass network includes technology partners such as IBM, Oracle, Salesforce, as well as Chinese multinational Trip.com, which launched an online portal to promote safe travel protocols and provide information on the latest entry requirements for countries around the world.<sup>37,38</sup>



Photo by Daniel Lim

## Other Digital Vaccine Passports and Reasons for Resistance

CommonPass is not the only digital vaccine passport under development. There are close to 50 airlines trialing the IATA Travel Pass, which was developed by IATA, the world's biggest airline association.<sup>39</sup> The International Chamber of Commerce has also teamed up with medical and travel security firm International SOS and verification, testing, and certification company SGS Group to develop the AOKPass.<sup>40</sup>

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Meanwhile, digital vaccine passports have met resistance for a variety of reasons. The WHO has warned that they would exacerbate inequalities at a time when vaccination is not available in the world in an equitable manner.<sup>41</sup> There are also concerns that such apps would undermine privacy because they would capture personal medical details.<sup>42</sup>

While there is no question that these issues should be addressed, digital vaccine passports can enmesh businesses in a stabilization network of health, technology, and aviation industry partners, enabling collaborative efforts for a much-awaited recovery in global travel.

## Part III: Resilience Networks in Face of Climate Change

Climate resilience is also top of the global agenda. In Asia, most companies are well-aware of the very real challenges from increasingly adverse effects of climate change, such as typhoons, intense heat waves, and accelerated sea level rise. Globally, a growing number of companies are taking action on climate change by engaging other companies and stakeholders in a variety of resilience networks.<sup>43</sup>

In the run-up to COP26 in Glasgow in November 2021, more than 3,000 corporations have joined the Race to Zero campaign, which mobilizes businesses to join the Climate Ambition Alliance launched at the UN Climate Action Summit in 2019.<sup>44</sup> Other industry networks include the We Mean Business Coalition and the World Business Council for Sustainable Development, as well as RE100, which brings together corporates committed to 100% renewable energy, EV100, a group of companies that support electric transport as the new normal by 2030, and the Hydrogen Council, which gathers businesses with a united vision for hydrogen to foster the clean energy transition.<sup>45,46</sup>

In addition, the Mission Possible Partnership develops public-private partnerships to achieve net-zero CO<sub>2</sub> emissions in carbon-intensive sectors such as aluminum, aviation, cement and concrete, chemicals, shipping, steel, and trucking.<sup>47</sup> Many asset owners and asset managers are engaged as signatories to networks such as Climate Action 100+ and the United Nations Principles for Responsible Investment (UNPRI).<sup>48</sup> Global securities exchanges have also signed up for the Sustainable Stock Exchanges initiative.<sup>49</sup>

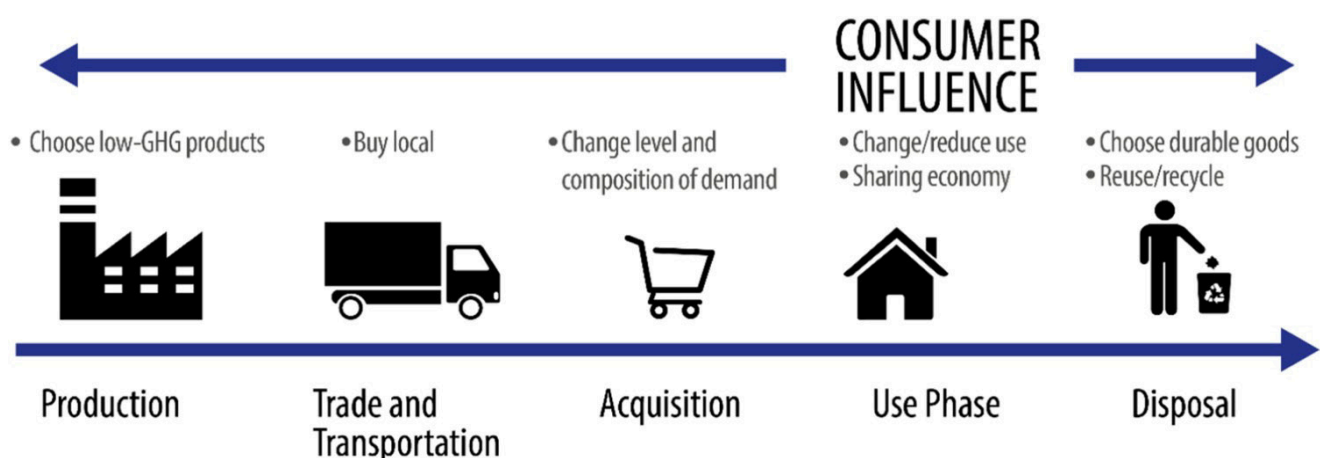
### 1. Green Digital Finance Alliance (GDFA) initiated by Ant Financial and UN Environment Program (UNEP)

One resilience network that was initiated by an Asian company is the Green Digital Finance Alliance (GDFA), which was launched in 2017 by Ant Financial and the UN Environment Program (UNEP). Digital finance refers to the integration of mobile platforms, big data, artificial intelligence (AI), blockchain, and the Internet of Things (IoT) in the provision of financial services.<sup>50</sup> Since its inception, GDFA has led efforts to promote digital finance as a key driver for sustainability.

Digital finance can inform the green investment process through powerful data analysis. With the ability of AI and machine learning to process vast amounts of data, it is possible to reduce the costs of gathering information on sustainable investments, enabling investors to lower their exposure to carbon risks and align investments to their chosen climate pathway, such as the goal of holding the global temperature rise to no more than 2°C or 1.5°C.<sup>51</sup> On the other hand, blockchain technology can help check and assess corporate delivery on sustainability by tagging and scoring green products and activities and verifying the immutability of the “green” claims.<sup>52</sup>

### The Importance of Sustainable Consumer Behavior

Importantly, digital finance can also create innovative products that encourage sustainable consumer behavior. Consumer action can be a powerful driver of greenhouse gas reductions because production is ultimately linked to households through long supply chains.<sup>53</sup> Apart from individual actions such as driving, heating, or cooling, human choices can affect “upstream” emissions in the production of consumer goods and “downstream” emissions such as those arising from waste disposal.<sup>54</sup> In a recent study on the European Union, scientists estimated that green consumer actions can reduce the carbon footprint by as much as 25%.<sup>55</sup>



Source: Daniel Moran, Richard Wood, Edgar Hertwich, Kim Mattson, Joao F. D. Rodriguez, Karin Schanes & John Barrett (2020) Quantifying the potential for consumer-oriented policy to reduce European and foreign carbon emissions, *Climate Policy*

### Ant Forest, GCash Forest, and the “Every Action Counts” coalition

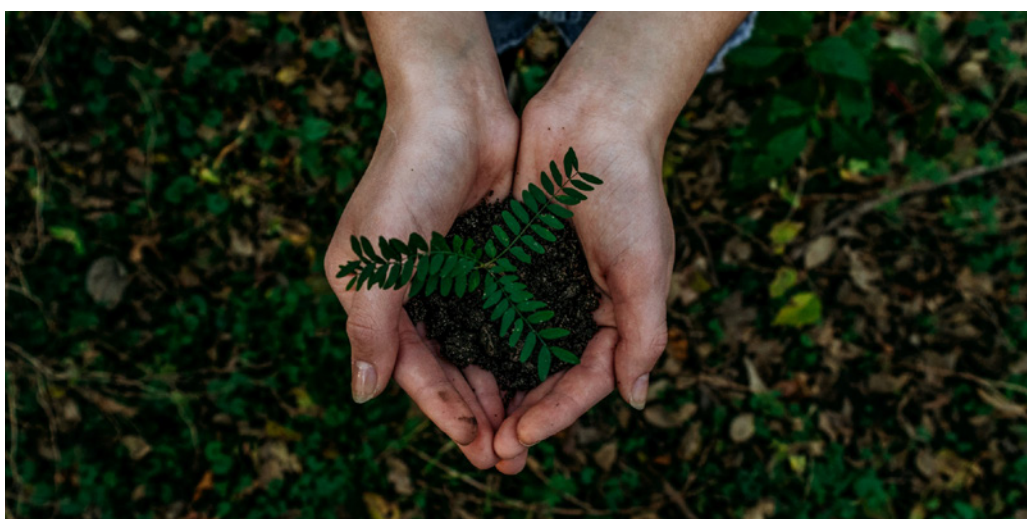
In June 2021, the GDEA launched the “Every Action Counts” coalition, an international network of corporates that shares best practices and helps each member pursue locally relevant approaches to encouraging sustainable consumer behaviors.<sup>56</sup> In the typology of resilience networks, this can be seen as a response and stabilization network that channels information quickly and accurately in face of climate change and helps with recovery through encouraging low-carbon lifestyles. With the support of businesses including Ant Group (China), BBVA (Spain), BigPay (Malaysia), Dana (Indonesia), FNZ (Scotland), GCash (Philippines), Lazada Group (Singapore), Mastercard (United States), MTN Group (South Africa), Paytm (India), Rabobank (Netherlands), Sanlam (South Africa), and Telenor Microfinance Bank/Easypaisa (Pakistan), the goal of the coalition is to “empower 1 billion digital green champions by 2025.”<sup>57</sup>



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The Ant Forest app, developed by Ant Financial, is a concrete example of how fintech can encourage a low-carbon lifestyle. Launched by Alipay in 2016, the app encourages users to reduce their carbon footprint by walking instead of driving, by renting shared bicycles, or by recycling their unwanted goods and packaging.<sup>58,59</sup> After users amass a certain number of virtual “green energy points” from these low-carbon activities, Alipay and its non-profit partners plant real trees in some of China’s most arid areas.<sup>60</sup> As of October 2020, more than 550 million people have joined Ant Forest, resulting in the reduction of roughly 12 million tons of carbon emissions, and the planting of over 200 million trees.<sup>61,62</sup>

In the Philippines, one of the world’s biodiversity hotspots where more than half of mangrove forests have been cleared to make room for agriculture and human settlements, the GCash Forest app allows users to collect “green energy points” by taking actions that reduce carbon emissions, such as opting for renewable utensils when ordering food or simply by walking.<sup>63</sup> According to the World Wide Fund for Nature (WWF), the millions of transactions on GCash Forest have enabled it to complete the reforestation of 75 hectares of Ipo Watershed, a vital link in the Angat-Umiray-Ipo watersheds system which supplies around 96% of the water needs of Metro Manila.<sup>64,65</sup>



*Photo by Noah Buscher*

In addition to Ant Forest and GCash Forest, MasterCard’s Carbon Calculator and the carbon footprint feature in BBVA’s One View are other initiatives that blend fintech with sustainable development. MasterCard’s calculator allows individuals to view the estimated carbon footprint of their purchases across a variety of spending categories, while the BBVA feature analyzes companies’ bank accounts that are related to electricity, gas, and fuel expenses and tracks the amount of greenhouse gases emitted into the atmosphere.<sup>66,67</sup>

Aside from the coalition, other projects that the alliance has launched include the “Making Oceans Count” initiative which focuses on how finance impacts and is dependent upon ocean ecosystems and the “Fintech for Biodiversity Challenge” which documented the landscape for fintech companies working to support

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biodiversity.<sup>68,69</sup> These efforts for collective resilience are aided by the global reach of the Alliance's Advisory Council, which has representatives from the Central Bank of Kenya, European Climate Foundation, International Finance Cooperation, MAVA Foundation, MIT Media Lab, M-Kopa, Paulson Institute, PayTM, Sustainable Energy for All, and UN Women.<sup>70</sup>

## 2. Eco-Industrial Parks in Vietnam

In Vietnam, eco-industrial parks can be seen as networked solutions where corporate participation has contributed to collective resilience against the environmental crisis.

An eco-industrial park (EIP) refers to an industrial area in which companies engage in clean production, make effective use of natural resources, and pursue collaborative efforts to promote economic, environmental, and social performance.<sup>71</sup> Since 2014, the UN Industrial Development Organization (UNIDO) and the Vietnam Ministry of Planning and Investment have been working together to transform conventional industrial zones into EIPs. A first project (2014–2019) was funded by the UN Development Program (UNDP), Global Environment Facility (GEF), and State Secretariat for Economic Affairs (SECO) of Switzerland, and a second project (2020–2023) is being funded by SECO.<sup>72,73</sup> The combined efforts of public and private partners, including international companies, institutions, and individuals, resulted in a response and stabilization network for the sharing of information and transformation of industrial zones amidst the climate crisis.

### Transforming Conventional Industrial Zones into Eco-industrial Parks in Vietnam

At the start of the first project, Vietnam had experienced a decade of rapid economic growth, mainly driven by manufacturing, and industrial zones accounted for 40% of national industrial output and 49% of the total export value of the country.<sup>74</sup> But industrial activities also had a negative impact on the environment. Consumption of natural gas, electricity, and coal especially led to increased greenhouse gas emissions and water and soil pollution.<sup>75</sup>

From 2014 to 2019, the project team worked with 73 companies in four target industrial zones to come up with opportunities to reduce and manage waste, improve chemical safety, and optimize inputs of raw materials, energy, and water.<sup>76</sup> The total environmental benefits because of the interventions included reductions of 2,901,681 tons of CO<sub>2</sub> eq, 225,354 kg/y in chemical oxygen demand (COD), 8,115,999 m<sup>3</sup> in water use, 20,262 µg/y in unintended persistent organic pollutants (UPOPs), and 669,774 t in solid waste.<sup>77</sup>

### Pataya Food and Duong Giang as Examples of Corporate Participation

Companies referred to increased competitiveness, improvements in productivity, and a commitment to sustainability as some of the drivers for participating in the project.<sup>78</sup>

For example, the local branch of Thai company Pataya Food Industries decided to engage the project network when its Vietnamese base, the Tra Noc Industrial Zone, was selected to be part of the initiative.<sup>79</sup> Pataya's business is the manufacturing of canned shrimp, crab, tuna, and mackerel, and it had generated a large amount of wastewater from washing raw materials and cleaning equipment and facilities.<sup>80</sup> The international network allowed Pataya to undergo training in chemical management and successfully implement solutions for electricity saving, water saving, and mitigation of impact on the environment.<sup>81</sup> The company managed to improve hygiene conditions and reduce the concentration of pollutant emissions.<sup>82</sup>

As another example, the Duong Giang Company in the Khanh Phu Industrial Zone also engaged the project network to reduce carbon emissions for its Trang An Glass Floating Factory, which produces 300 tons of glass per day.<sup>83</sup> By implementing heat and fuel-saving solutions, such as the construction of a new kiln and the use of residual heat from exhaust fumes for fuel drying, the company was able to reduce its total coal consumption by 9.5%.<sup>84</sup> The environmental benefits included reductions of 9,100 tons of CO<sub>2</sub> emissions and 343 tons of solid waste per year.<sup>85</sup>

Meanwhile, a key concept of EIPs is "industrial symbiosis," which helps traditionally separate businesses optimize resource usage through the physical exchange of materials, energy, water, or by-products.<sup>86</sup> In the case of the Heineken Brewery in the Hoa Khanh Industrial Zone, the project team identified multiple ways for neighboring companies to reuse the treated wastewater, for example as process water for a paper producer, or as water for the fire extinguishing system in the industrial zone.<sup>87</sup> While current regulations hinder the reuse of wastewater among companies, the Government of Vietnam is working on a revision and improvement of the regulatory framework.<sup>88</sup> Having said that, as much as "industrial symbiosis" and by-product reuse is an example of potential collaboration, the increased inter-dependence may make individual companies at higher risk of external shocks.<sup>89</sup>

Finally, in addition to engaging individual companies, the project also financed studies for using solar radiation to generate energy at rooftops in Da Nang and Ninh Binh and developed a study for co-processing in cement plants in the Can To province, where co-processing refers to the use of solid waste as alternative fuels or raw materials.<sup>90</sup>



*Photo from UNIDO*



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The second country in Asia that UNIDO is working with is Indonesia. The Indonesia Project was launched in October 2020 with the goal of incentivizing and mainstreaming EIPs in relevant policy and regulations, and confirming the environmental, economic, and social benefits achieved by companies in EIPs.<sup>91</sup> The two industrial parks selected for the project are the MM2100 Industrial Park in Java and the Batamindo Industrial Park in Batam.<sup>92</sup> Interestingly, MM2100 is operated by a joint venture company set up by Japanese corporation Marubeni and Indonesian corporation Argo Manunggal Group. The Park has attracted tenants from Japan, Indonesia, South Korea, as well as Malaysia, Taiwan, Singapore, United Kingdom, France, and Germany, making it likely that the Indonesia Project will have a strong international dimension.<sup>93</sup>

### 3. The SME Climate Hub as a Network of Networks to Fight Climate Change

In face of the global threat of climate change, the SME Climate Hub is a network of networks initiated by the International Chamber of Commerce, the Exponential Roadmap Initiative, the We Mean Business Coalition, and the United Nations Race to Zero Campaign.<sup>94</sup>

In the typology of resilience networks, the hub has elements of both response and defense networks. It channels information quickly and accurately to companies during the ongoing crisis while also spurring action to prevent a threat that may materialize in the future. This threat is both environmental and economic in nature. According to the Climate Disclosure Project (CDP), estimates from more than 8,000 suppliers show that around \$1.26 trillion of revenue will be at risk from 2020 to 2025 because of climate change, deforestation, and water insecurity.<sup>95</sup>

#### Asian SMEs and Tech Mahindra join the SME Climate Hub

The SME Climate Hub engages SMEs on the one hand and 1.5°C Supply Chain Leaders on the other hand. SMEs may not always have the capacity to address collective action problems like climate change. In that regard, the hub provides one-stop-shop resources for SMEs to develop a climate strategy to measure and reduce carbon emissions. Asian SMEs have joined SMEs from other regions by making a commitment to reduce greenhouse gas emissions and disclose progress on a yearly basis.<sup>96</sup>

Also engaged in the broader network are a group of multinationals called 1.5°C Supply Chain Leaders that have made a commitment to work with their suppliers to halve emissions before 2030 and achieve net zero emissions by 2050. The founding companies are Ericsson, IKEA, Telia, BT Group, and Unilever, and the alliance welcomed Nestlé, Telefónica and Ragn-Sells in December 2020. The first Asian company, Tech Mahindra, joined the group in April 2021.<sup>97</sup> This follows the selection of the Indian multinational as among the 7% of companies included in the Supplier Engagement Rating Leaderboard published in February 2021, where CDP used its climate questionnaire to identify companies that are proactively working with suppliers to ensure a sustainable value chain.<sup>98</sup>

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## Multiple Layers of Networks: IKEA's Company-specific Network and Nestlé's Industry-specific Network

Indeed, the hub can be characterized as a network of networks because the companies that are enmeshed in the broader resilience network, such as IKEA and Nestlé, are often leading and participating in narrower resilience networks that are focused on greening the supply chain in a specific company or industry. A network of networks will potentially have a multiplying effect of urging collective action among all types of companies.

An example of a company-specific network is IKEA's new program announced in June 2021 which supports suppliers in Poland, China, and India in generating renewable energy on-site or purchasing from the grid through bundled framework agreements and Power Purchase Agreements.<sup>99</sup> The program may evolve in the direction of Apple's Supplier Clean Energy Program, which was launched in 2015 and now comprises a company-specific resilience network of more than 100 suppliers committed to 100 percent clean energy, covering China, India, Japan, South Korea, and Southeast Asia, and across the entire value chain in material extraction, component manufacturing, and final product assembly.<sup>100</sup>

An example of an industry-specific network is the Rimba Collective, a private sector forest conservation initiative in which Nestlé joined hands with PepsiCo, Procter & Gamble, and Singapore-headquartered Wilmar to restore "nature positive supply chains" in the palm oil industry.<sup>101</sup> The resilience network brings together four companies that are processors, traders, and manufacturers in the industry to make financial contributions that are linked to the procurement volumes of palm oil.<sup>102</sup> Starting in Indonesia, and expanding to other countries in Southeast Asia, the initial aim is to provide \$1 billion of conservation finance for projects that protect natural ecosystems and critical habitats such as primary rainforest, peatland, and mangroves.<sup>103</sup> As of May 2021, the initial 200,000 ha project portfolio has been

identified and an additional 300,000 ha project area is being targeted.<sup>104</sup>

In sum, by encouraging knowledge sharing and collective action among SMEs and 1.5°C Supply Chain Leaders, many of which are already leading or participating in company or industry-specific resilience networks, the SME Climate Hub can be seen as a network of networks that is responding to and preventing the adverse environmental and economic effects of climate change.



Photo by Alec Bennett

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## Part IV: Building Resilience in Multiple Fields

As much as pandemic resilience and climate resilience are two of the most urgent crises right now, companies are engaged in a variety of networks that address other complex problems. Resilience networks are venues for synergies among businesses, governments, and civil society and allow companies to gather critical information, forge partnerships, and tackle crises that cannot be overcome by any single firm. Companies cannot solve all problems, but they can choose to be part of networked solutions.

In terms of broader issues, individual companies have a growing awareness of the need for a more equitable form of capitalism and have in recent years strengthened their commitment to addressing this through a collaborative approach. High-level response networks such as The Council for Inclusive Capitalism with the Vatican launched in December 2020 and the Trilateral Task Force on Global Capitalism in Transition launched in May 2021 may be the beginnings of collective efforts to develop a global economic system that works for people as well as profits.<sup>105</sup>

Indeed, one of the issues that corporate boards may need to address in 2021 is the risk of a more siloed and protectionist world where there is a lower desirability for market capitalism – at least in the form that it has existed in the postwar era.<sup>106</sup> The Global Financial Crisis of 2008 unleashed an “unstoppable avalanche” of popular uproar against elites and the system, while the COVID-19 pandemic only exacerbated socio-economic inequalities within and among countries.<sup>107</sup> In the words of Nazir Razak, former Chairman of CIMB Group, there is a pressing need to evolve toward a system that is fairer and more inclusive, and to marry capitalism’s “survival of the fittest” tenet with a purpose-first culture.<sup>108</sup>

In terms of more specific issues, businesses have adopted a networked approach by making collective efforts to safeguard mental health in the workplace, especially amidst the COVID-19 crisis. In January 2021, the CEOs of BHP, Clifford Chance, Deloitte, HSBC, Salesforce, and Unilever launched the Global Business Collaboration for Better Workplace Mental Health (GBC) as the first initiative of its kind that seeks to raise awareness of the importance of mental health.<sup>109</sup> This is timely because the deaths, anxiety, fear, and unprecedented lockdowns as a result of the pandemic have had a marked effect on mental health.<sup>110</sup> The GBC network is gaining momentum as more business leaders of large and small companies sign the pledge to promote a more positive culture around mental health.<sup>111</sup>

Furthermore, companies are engaged in resilience networks that address a specific aspect of a wider challenge. For example, in light of the broader challenge of tensions arising from the rise of China, companies are supporting specific educational networks that promote dialogue and understanding among the next generation. Consider the Schwarzman Scholars Program at Tsinghua University, a business-led initiative that was launched in 2016 as “the first scholarship created to respond to the geopolitical landscape of the 21st century.”<sup>112</sup> As donors and supporters, businesses are helping to build a platform that fosters relationships among the younger generation of leaders around the world.



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## Part V: Conclusion

In conclusion, businesses in Asia are leading, expanding, and participating in resilience networks that help them respond to, recover from, or defend against global crises, exemplifying the web's orientation toward sharing, connection, engagement, and collaboration.

As initiators of resilience networks, companies are the architects of alliances that bring multiple stakeholders together in pursuit of a common goal. As financiers of resilience networks, companies provide monetary resources and funding for collective efforts to solve global challenges. As supporters of resilience networks, companies develop their experience and expertise through partnerships led by other companies or stakeholders.

In face of global threats and challenges, how can companies identify and interact in resilience networks so that they optimize their involvement?

First, companies that belong to tight-knit networks in times of relative normalcy are well-placed to step up in times of acute crisis. Close communities form a solid foundation for activating and implementing urgent networks, from the development of digital vaccine passports to initiatives to green the supply chain.

Second, companies can work with international organizations to strengthen their commitment to global corporate citizenship. In the case of COVAX, companies can be helpful actors that downplay nationalist and geopolitical tensions in a time of urgency. Companies are also at the heart of UNIDO-led initiatives that seek to address the environmental crisis by transforming conventional industrial zones into eco-industrial parks.

Third, companies that are deeply rooted in the localities and societies in which they operate can mobilize action on the ground through resilience networks. This is the case for tree planting initiatives through the Ant Forest and GCash Forest apps, which enjoy the support of non-profits such as the World Wide Fund for Nature.

Indeed, global crises like the pandemic and climate change cannot be overcome by the efforts of any single company. Joint efforts are also necessary to address challenges ranging from big picture issues to more specific problems. In contrast to the black-and-white chessboard where one side advances at the expense of the other, a web of connections and relationships is poised to play an influential role as the businesses of today and tomorrow weave networks for a resilient future.

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