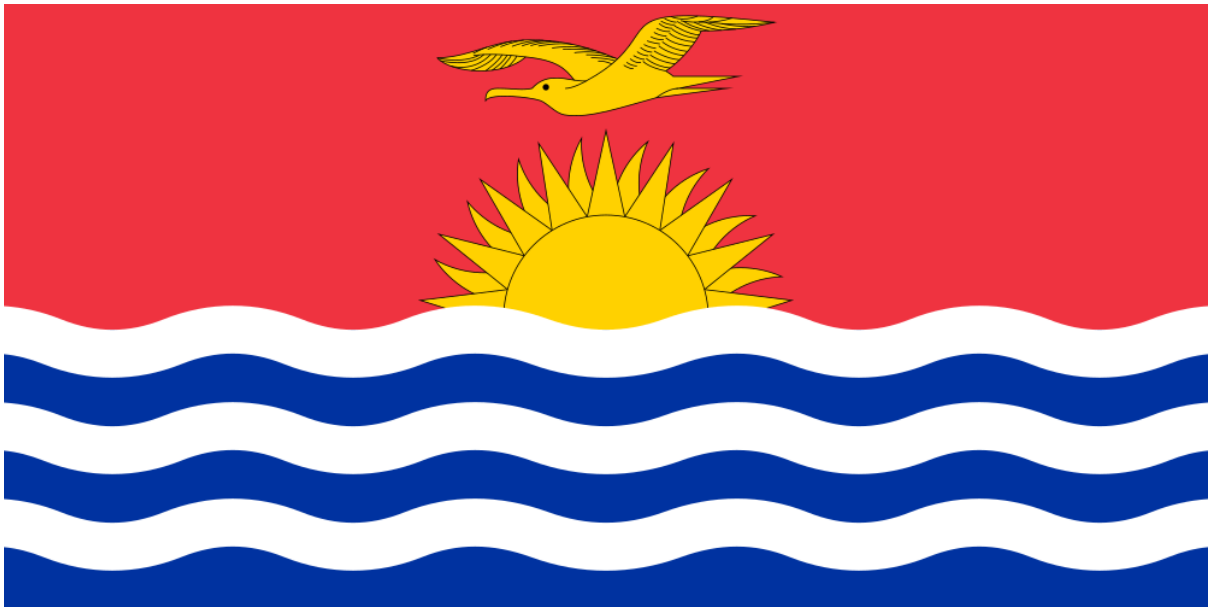
The United Nations Micronesia
Kiribati National Study 2024/25



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Abbreviations and Acronyms

ADB	Asian Development Bank
BELUU	Building Economic Inclusion via the Blue Economy Programme
BlueEARTH	Blue economy, education, aid, remittance, tourism, and health
BPT	Business profits tax
BRI	Belt and Road Initiative
CIP	Country Implementation Plan
CoFA	Compact of Free Association
COP 19	19th Conference of Parties
CROP	Council of Regional Organisations of the Pacific
CROSS	Coronavirus Relief One-Stop Shop
CSO	Civil society organization
DRR	Disaster risk reduction
EEZ	Exclusive economic zone
ESCAP	Economic and Social Commission for Asia and the Pacific
ESG	Environmental, social, and governance
FAO	Food and Agriculture Organization
FAS	Freely associated states
FFA	Forum Fisheries Agency
FSM	Federated States of Micronesia
GDP	Gross domestic product
GHG	Greenhouse gas
GNI	Gross national income
GRT	Gross revenue tax
HDI	Human Development Index
IAEA	International Atomic Energy Agency
ICT	Information and communication technology
IFI	International Financial Institution
ILO	International Labour Organisation
IOM	International Organization for Migration
IRENA	International Renewable Energy Agency
LDC	Least developed country
LOR	Land ownership reform
M&E	Monitoring and evaluation
MIRAB	Migration, remittance, foreign aid, and public bureaucracy
MIYCN	Maternal, infant and young child nutrition
NCD	Non-communicable disease
NDBP	National Development Bank of Palau
NEMO	National Emergency Management Office
NIIP	National Infrastructure Investment Plan
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the United Nations High Commissioner for Human Rights
ODA	Official development assistance
PBP	Partners in the Blue Pacific

PACC	Palau Pacific Adaptation to Climate Change
PGST	Palau Goods and Services Tax
PICRC	Palau International Coral Reef Center
PICTs	Pacific island countries and territories
PICTA	Pacific Island Countries Trade Agreement
PIF	Pacific Islands Forum
PIFS	Pacific Islands Forum Secretariat
PINA	Pacific Islands News Association
PNA	Parties to the Nauru Agreement
PNCC	Palau National Communications Corporation
PNMS	Palau National Marine Sanctuary
PPP	Post-Pandemic Palau
PPUC	Palau Public Utilities Corporation
PROFIT	People, resources, overseas management, finance, and transport
PSDCF	Pacific Sustainable Development Cooperation Framework
RMI	Republic of the Marshall Islands
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SAMOA	SIDS Accelerated Modalities of Action
SDGs	Sustainable Development Goals
SIDS	Small island developing states
SITE	Small island tourism economies
SME	Small and medium-sized enterprise
SOE	State-owned enterprise
SOP	Standard operating procedure
SPC	The Pacific Community
SREP	Secretariat of the Regional Environment Programme
TOURAB	Tourism, remittance, aid and bureaucracy
TTPI	Trust Territory of the Pacific Islands
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNCT	United Nations Country Team
UNCTAD	United Nations Conference on Trade and Development
UNSDG	United Nations Sustainable Development Group
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UN-HABITAT	United Nations Human Settlement Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UN-OHRLLS	United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
UNODC	United Nations Office on Drugs and Crime

UNPS	United Nations Pacific Strategy
UNWOMEN	United Nations Entity for Gender Equality and the Empowerment of Women
USD	United States dollars
USP	University of the South Pacific
VAWG	Violence against women and girls
VDS	Vessel Day Scheme
WASH	Water, sanitation, and hygiene
WCPFC	Western and Central Pacific Fisheries Commission
WFP	World Food Programme
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization
WTO	World Trade Organization
5Ps	Five pillars

Executive Summary

The Kiribati National Study covers a wide range of issues pertaining to the sustainable development of this island nation, including emerging opportunities as well as complexities and circumstances to which the United Nations is seeking balanced solutions and strategies. The analysis was piloted within the United Nations 2030 Agenda for Sustainable Development or the Sustainable Development Goals (SDGs). Additionally, the analysis is focused on five main pillars of the 2030 Agenda – also known as the 5Ps – namely: people, prosperity, planet, peace, and partnerships.

Kiribati is located in the central Pacific Ocean and comprises 32 low-lying atolls covering 180 square kilometres. Because of its low atoll position, Kiribati is heavily affected by the implications of climate change, including strong storms and sea level rise. This has direct impacts on agriculture and people's livelihood. Kiribati also faces various cross-cutting challenges common to most Small Island Developing States (SIDS). These problems are caused in large part by limited natural resources, a highly specialized economy, and geographic remoteness leading to high transport costs and difficult access to overseas markets.

People

This section of the national study uncovers the people pillar of Kiribati, focusing on: (i) population and demographic dividends; (ii) inequality and poverty; (iii) education; (iv) labour; (v) food and nutrition, health and sanitation; (vi) human rights; and (vii) gender and inclusiveness. Equipping its citizens with the tools to overcome the challenges critical to the islands is a central issue for Kiribati. Addressing these challenges demands a multi-dimensional approach involving different spheres and levels: public administration, communities, private sector, civil society organizations, local businesses, urban and rural areas, and core and remote islands.

The section on demographic dividends and risks (4.1) outlines in detail the following challenges and opportunities for the island nation: Kiribati's young population is a source of potential long-term economic benefits but requires investment in education, health care, job skills, and participation in governance. By failing to capitalize on the demographic window of opportunity, youth unemployment and 'brain drain' may increase, weakening Kiribati's potential to achieve middle-income status. In addition, migration from the remote islands to South Tarawa, driven by environmental pressures and opportunities for education, labour, and health care, puts a strain on the island's resources.

The section on inequality and poverty (4.2) highlights important trends: poverty levels in Kiribati are lower than in other small island developing States, but there are significant disparities between islands and socio-economic groups. The Government should consider targeting vulnerable areas with appropriate policies.

The education section (4.3) illustrates that Kiribati has a high dropout rate at the secondary level, especially among boys. Uneven access to quality education and the lack of tertiary institutions in the country contribute to disparities in youth development. Investments in post-secondary education, including vocational training, and addressing gender and geographic disparities in access to education are needed.

The labour market section (4.4) reports high unemployment, informal employment, and gender segregation in Kiribati's labour market. Services, agriculture, fisheries and government are the main employers, with the formal sector dominating in South Tarawa. Diversification of the economy, private sector job creation, and upgrading the skills of the labour force are in need of promotion.

The Food and Nutrition, Health and Sanitation sub-sections (4.5) highlight that Kiribati faces the "triple burden" of malnutrition, micronutrient deficiencies, and elevated levels of overweight and obesity. Poor nutrition, due to limited access to fresh fruits and vegetables, dependence on imported products, and traditional practices, combine to pose a serious public health problem. Inadequate water supply and sanitation, especially in South Tarawa, increase the risk of waterborne diseases. Improvement of the quality of health services should be fostered.

The Human Rights section (4.6) notes that Kiribati faces various human rights challenges, including gender discrimination, access to basic services, and forced migration. It is recommended that the Government strengthens the protection of human rights, especially for women and girls, and ensure access to justice for all citizens.

The section on Gender Equality and Inclusion (4.7) notes that women in Kiribati face discrimination and unequal access to resources and opportunities. High household burdens, limited political and economic participation and violence against women are the main challenges of gender inequality. The Government should take measures to empower women, promote gender equality, and combat violence against women.

Prosperity

There are numerous challenges facing Kiribati that impede the strengthening of its economy and prosperity. These include a limited economic base, lack of skilled labour, over-population in the capital city, and exposure to the impacts of climate change. This section of the study highlights five key themes for Kiribati's economic development.

The macro-economic overview (sub-section 5.1) recognizes that Kiribati's economy has recovered relatively quickly from the COVID-19 pandemic. However, while GDP growth is expected to be 2-3% in the coming years, inflation remains high, which requires close monitoring.

Economic vulnerability analysis (5.2) reveals that government revenues are largely dependent on fishing licenses and development partner assistance, creating dependency and a risk of instability. There is a considerable discrepancy between GDP and GNI per capita, indicating limited use of revenues for local production.

The section on the private sector and state-owned enterprises (5.3) notes that the private sector is small and faces difficulties, largely due to a non-transparent investment climate and competition from state-owned enterprises.

The primary sector segment (5.4) points out that agriculture is characterized by a small land area, poor soil, and water scarcity. Although food security is a concern, local production cannot meet demand. Fishery activities are vital, but sustainability needs to be achieved.

The section on infrastructure and digitalization (5.5) addresses the fact that weak infrastructure, including transport, communications, and utilities, is a major obstacle to economic development. The lack of or limited connectivity to the Internet and information technology hinders development and service delivery.

Planet

An island nation, Kiribati is confronting nothing less than an existential threat from climate change as one of the world's most at-risk countries. Islanders are particularly threatened by rising sea levels,

which affect atolls, reefs and coastal areas, freshwater agriculture, and the health and livelihoods of the population. All of Kiribati's atolls except Banaba are less than four meters above sea level. Changes in global climate conditions are impacting the biodiversity of the ocean, land, and forests.

The section on Climate Change and Disasters (6.1) stresses that Kiribati is experiencing the impacts of climate change, which is already affecting human security, the environment, biodiversity, the economy, and public health. Risks of coastal flooding, storms, and seawater intrusion are acute. Rising sea levels and associated changes in soil salinity threaten agroforestry. In addition, there is an increase in insect-borne diseases, such as dengue fever and lymphatic filariasis, is derived from warmer and wetter conditions in the Pacific. Furthermore, the dispersed nature of Kiribati makes it difficult to manage and respond to these risks.

In the section on biodiversity conservation (6.2), it is noted that Kiribati is undertaking measures to restore fish and bird populations and atoll ecosystems through the establishment of nature sanctuaries and the eradication of pest mammals. The Phoenix Islands Marine Protected Area (PIPA) has provided refuge for many species of fish, marine mammals, and seabird colonies since 2006. The closure of PIPA to commercial fishing, however, has caused an 8% drop in demand for fish in Kiribati's Exclusive Economic Zone and a loss of revenue of between $60 and $150 million dollars from 2015 to 2021.

The portion on deep-sea mining (6.3) records that polymetallic manganese nodules and cobalt-rich ferromanganese crusts have been located in the exclusive economic zone of Kiribati. Deep seabed mining is controversial because of the potential for environmental harm and the lack of a full assessment of environmental effects.

Peace and Partnership

The dynamic geopolitical environment Kiribati faces in the region dictates the country's cautious positioning on the global stage. The section on Geopolitical Dynamics (6.1) finds that Kiribati has traditionally received significant support from Australia, but more recently, the US has actively engaged in regional initiatives related to Kiribati's development, security, and diplomatic relations.

The United Nations Multi-Country Office (MCO) for Micronesia coordinates United Nations' work in Kiribati and other countries in the region (see section 6.2). The United Nations is supporting Kiribati in realizing the Sustainable Development Goals (SDGs). At the SDG Summit in September 2023, the United Nations offered six key crosscuts to fast-track progress towards the SDGs by 2030.

LDC graduation

Kiribati has been demonstrating stable socio-economic development since its inclusion in the United Nations' Least Developed Country (LDC) category in 1986. Nonetheless, it is facing new contemporary challenges. Indicators for LDC graduation (section 7.1) show that Kiribati is projected to continue to meet two of the three graduation thresholds in 2024, namely: GNI per capita and the human capital index. However, the Economic and Environmental Vulnerability Index (EVI) remains well below the graduation threshold at 32.0. The aggregate nature of the indicators may not fully reflect the country's situation, especially given the geographical characteristics and the gap between the central and outer islands. There are also, according to the Additional Output Indicators segment (7.2), supplementary indicators that consider economic, environmental, human, and social vulnerabilities, as well as income. These are not mandatory for release but serve as a tool to identify discrepancies between official criteria and broader aspects of vulnerability.

According to the sector Multidimensional Vulnerability Index for UNM (MVI) (7.3), the MVI has been designed to measure the vulnerability of island developing States and the allocation of concessional resources. The MVI evaluates economic, environmental, and social vulnerability, and considers a country's resilience to external shocks. Moreover, the MVI can supplement traditional output indicators.

The final section of the national study identifies twelve critical gaps and challenges for Kiribati to realize the SDGs, and proposes a new development model for Kiribati and the other PICTs. In conclusion, after reviewing Kiribati's current concerns and capacities, this CAA underscores the need for a holistic post-crisis development strategy, for which an integrated approach is imperative. It is necessary for Kiribati to have a holistic approach to its development that tackles the interrelated socio-economic, environmental, and geopolitical dimensions. At the core of the strategy is the focus on the most pressing issues and the interconnection between the multiple sectors. In addition, Kiribati's various government agencies should collaborate to achieve optimal results without operating in a state of uncertainty.

1. Introduction

The Kiribati National Study was developed within the 2030 Agenda for Sustainable Development or the Sustainable Development Goals (SDGs).[1] This national study is intended to serve as an integrated, forward-looking, and evidence-based analysis of the target country's context for sustainable development. It is an impartial, collective, and independent analysis, undertaken by a United Nations Multi-Country Office for Micronesia, to help the country realize its development vision and achieve the 2030 Agenda. The study aims to ensure that the United Nations' support to the host government is relevant and linked to national development priorities and within its normative role, as mandated by the United Nations Sustainable Development Group (UNSDG) and as guided by the United Nations member states.[2]

As a basis for the study structure, the five pillars (or 5Ps) of the 2030 Agenda have been used: people, prosperity, planet, peace and partnerships. Within these five pillars, the 17 SDGs are posited (see Figure 1 below). The national study concludes by identifying the most likely and damaging risks to the development process and discussing key challenges and opportunities that have the most catalytic impact on achieving the SDGs in the country. They are living documents that are refreshed annually to reflect evolving trends and integrate new data.

Figure 1
SDGs and their five pillars or 5Ps

Source: The United Nations (2023).

Following the introduction, this national study presents the regional and country contexts and provides some relevant Pacific and Micronesian comparisons. Then, Kiribati's status across the 5Ps (people, prosperity, planet, peace and partnership) is assessed in sequence, again showing regional

[1] The United Nations Department of Economic and Social Affairs (DESA) (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. New York: The United Nations.

[2] Established in 2008, UNSDG, initially called the United Nations Development Group (UNDG), unites 31 United Nations funds, programmes, specialized agencies, departments and offices that promote change and innovation to deliver together on sustainable development.

and sub-regional data and national details where relevant. Before concluding, critical gaps and challenges for Kiribati to realize the SDGs are discussed, proposing a new development model for Kiribati and the other PICTs.

Box 1

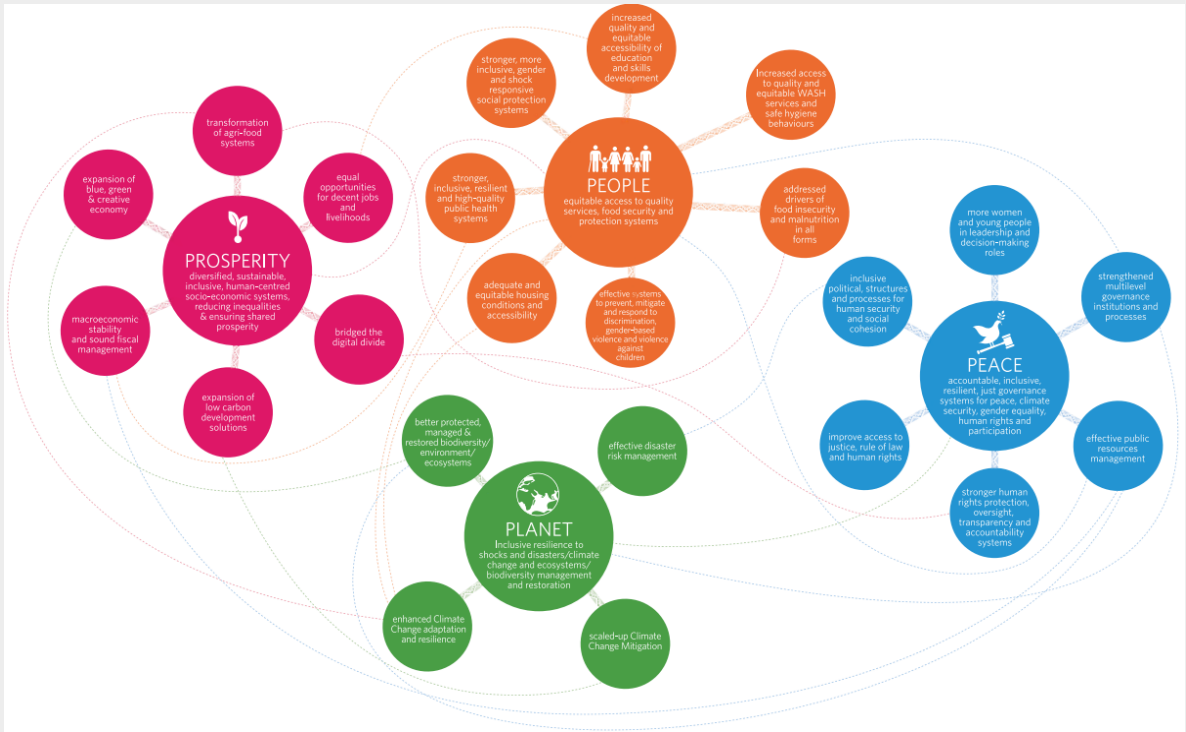
The Pacific Sustainable Development Cooperation Framework 2023-2027

The United Nations' Pacific Sustainable Development Cooperation Framework (PSDCF) 2023-27 aims to accelerate ongoing and future investments for attaining the SDGs in PICTs, to be funded by domestic resources, debt, bilateral or multilateral development assistance, as well as national and international private financing. The PSDCF mainstreams multi-sectoral resilience, gender equality, human rights and blue economy into its entire framework, from its vision and theory of change, through outcomes and indicators, to tracking and reporting on progress. The key accelerators of change and means of implementation comprise digital transformation and innovative financing while acknowledging the fundamental role of traditional culture, unique biodiversity and natural resources in the Pacific societies and economies.

The PSDCF is articulated around the 2030 Agenda's four main pillars: planet, people, prosperity and peace. (Partnership, the fifth pillar, is principally a means of implementing programmes to be developed under each thematic area.) Figure 2 below presents a visualisation of the PSDCF.

Figure 2

PSDCF framework



Source: The United Nations in the Pacific (2022).

The PSDCF's Country Implementation Plan (CIP) defines the United Nations Country Team's actions and deliverables on the ground, intended to help achieve the PSDCF's outcomes, firmly anchored to country-level needs and structures. The Joint (United Nations–government) Steering Committee oversees the implementation of the CIP.

Box 2
The SAMOA Pathway

The "SAMOA Pathway", the United Nations-led global programme of action for SIDS for 2014-2024, was adopted at the United Nations' Third International Conference on Small Island Developing States in 2014. It recognizes the adverse impacts of climate change and sea-level rise on SIDS' efforts to achieve socio-economic development, food security, disaster risk reduction and ocean management, among other challenges.[3] As a SIDS, Kiribati is a beneficiary partner of the SAMOA Pathway.

The SAMOA Pathway is intended to specifically address the unique challenges SIDS face, and support their development via the five priority areas. These are: (i) promoting sustained and sustainable, inclusive and equitable economic growth with decent work for all, sustainable consumption and production and sustainable transportation; (ii) acting to mitigate climate change and adapt to its impacts by implementing sustainable energy and disaster risk reduction programmes; (iii) protecting the biodiversity of SIDS and caring environmental health by mitigating the impact of invasive plant and animal species and by adequately managing chemicals and water, including hazardous waste, as well as protecting oceans and seas; (iv) improving human health and social development through food security and nutrition, improved water and sanitation, reducing the incidence of non-communicable disease and by promoting gender equity and women's empowerment; and (v) fostering partnership among SIDS, the United Nations agencies, development partners and others to achieve these goals.[4]

The United Nations plans to launch a new ten-year programme of action for SIDS at the Fourth International Conference on Small Island Developing States, to be held in Antigua and Barbuda in May 2024. It will focus on practical and impactful solutions to keep SIDS afloat, to secure a sustainable and safe future for its citizens.[5]

[3] The United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS) (2014). *SIDS Accelerated Modalities of Action (S.A.M.O.A.) Pathway*. New York: The United Nations.

[4] Ibid.

[5] Visit: https://sdgs.un.org/smallislands.

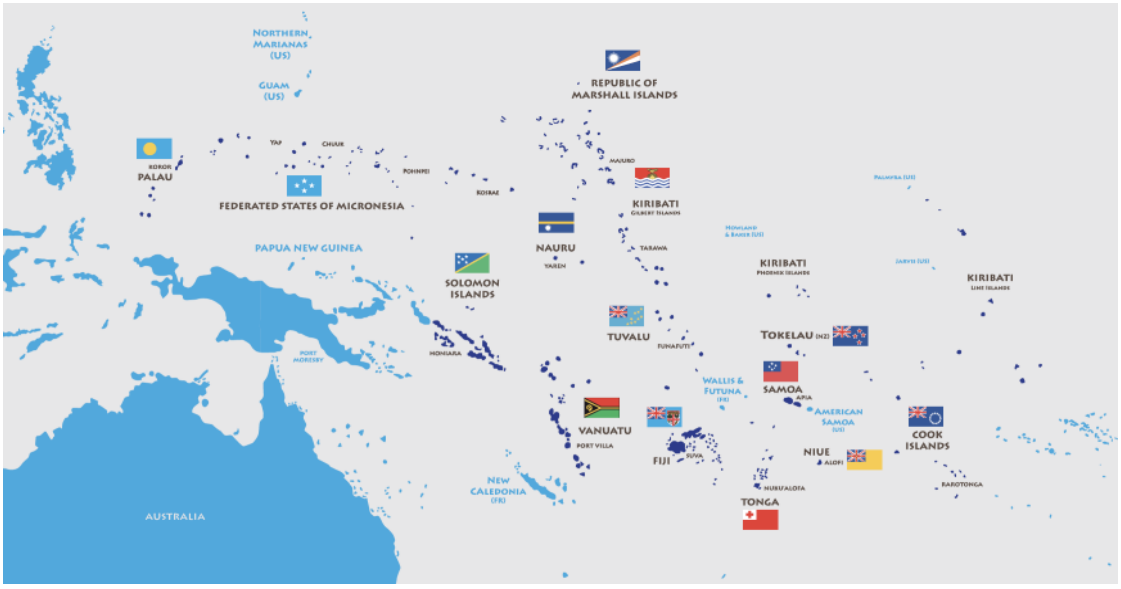
2. Regional and National Context

Before assessing the detailed status of the 5Ps in Kiribati, a small island developing State (or "SIDS") and one of 14 Pacific island countries and territories (or "PICTs"), this section highlights some key issues pertaining to the country's sustainable development. Both regional and domestic issues are discussed, including demographic, development, historical, geo-political and socio-economic reviews. They are crucial to better understanding Kiribati's present and emerging development challenges and opportunities.

2.1. The Pacific Island Countries and Territories (PICTs)

The 14 SIDS that comprise the PICTs – see Figure 3 below – have a cumulative population of slightly more than 2.6 million people: less than 0.03 per cent of the global population.[6] However, they possess territories that cumulatively span 15 per cent of the world's surface. While the specific profiles of the 14 PICTs, including Kiribati, vary considerably, they also share some common denominators, including relative remoteness, limited landmasses, small populations, modest sizes of their economies and high exposure and vulnerability to external environmental and economic shocks.[7] They have typically depended on tourism, remittances, development partner assistance and high levels of imported food and other commodities.[8] This broad depiction of PICTs is also pertinent to Kiribati.

Figure 3
Pacific island countries and territories



Source: The United Nations (2021).

[6] World Bank (2023). *DataBank: World Development Indicators*, at https://databank.worldbank.org/source/world-development-indicators. The Pacific is young, with almost a fifth of its population between 15 and 24 years of age.

[7] The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) (2022). *Asia-Pacific Countries with Special Needs Development Report 2022: Financing a Sustainable Recovery from COVID-19 and Beyond*. Bangkok: The United Nations.

[8] Tisdell, C. A. (2016). "Models of the International Economic Dependence of Pacific Microstates: A Critical Review with Important Implications for International Policies and Relations", *Journal of Self-Governance and Management Economics*, 4(2), 7–27.

Notwithstanding their large offshore territories, the PICTs tend to possess a narrow resource base and host small domestic markets, which deprive them of any benefits stemming from economies of scale, although they significantly contribute to a few global food supply chains, such as tuna and copra.[9] They face a combination of being far from export markets and import resources and must cope with low and sometimes irregular international traffic volumes of many essential inputs.[10] This, in turn, translates into high energy, infrastructure, transportation and communication costs (particularly on a per capita basis). Moreover, most of them tend to rely on exporting a few primary commodities and attracting inbound tourists, making them highly vulnerable to external economic shocks, as they lack the resilience that comes from having more diverse income sources.

As a cumulative result, there are limited, relatively niche, opportunities for private sector development in PICTs, and they typically must also contend with volatility in their macro-economic growth patterns. This partly explains why PICTs suffer from a vicious cycle of low productivity and sparse investment.[11] All these characteristics act as further structural impediments to their long-term development.

PICTs also face numerous other challenges, such as high rates of non-communicable diseases (NCDs), vulnerable food systems, inadequate education opportunities, ever-increasing waste, and perils posed by climate change (e.g., erratic and extreme weather-related events and sea-level rise), all of which impact adversely on livelihoods.[12] The impact of the COVID-19 pandemic (2020-2023) – and various measures taken to restrict its spread – were pronounced for all PICTs, including Kiribati, leading to near total economic paralysis for the region, and far-reaching ramifications for food security.[13]

2.2. Pacific Development Strategies and Models

Experts have proposed numerous development strategies and socio-economic models in a bid to overcome the challenges PICTs face.[14] Initially, these strategies proposed enhancing PICTs' self-sufficiency (e.g., securing external funds or earning adequate incomes to sustain lifeline and luxurious imports and develop the provision of modern infrastructure). At the same time, PICTs are too small to capture economies of scale in their domestic markets.[15] Some subsequent strategies suggested diversifying PICTs' revenue sources to enhance their long-term sustainability (e.g., tourism incomes and private sector activities and investments). More recently, they have pivoted towards addressing

[9] Although almost no cereals are grown in PICTs, wheat-based foods and rice play a significant role in the diets of their populations, substituting for traditional staple foods like taro, breadfruit and cassava.

[10] The United Nations Conference on Trade and Development (UNCTAD) (2022a). *Review of Maritime Transport 2022: Navigating Stormy Waters*. Geneva: The United Nations.

[11] ESCAP (2022).

[12] Ibid.

[13] Food and Agriculture Organization (FAO) and World Food Programme (WFP) (2022). *Pacific Island countries: Impact of rising costs of food, feed, fuel, fertilizer and finance Bulletin*, November 2022 | Issue #1. Suva: FAO and WFP.

[14] Tisdell (2016).

[15] Baldacchino, G. (2006). "Managing the hinterland beyond: Two ideal-type strategies of economic development for small island territories", *Asia Pacific Viewpoint*, 47(1), 45–60.

sustainability issues (e.g., dealing with climate change impacts and maintaining maritime ecosystem), congruent with SDGs implementation.[16]

Perhaps the most well-known of these strategies is the so-called MIRAB model, proposed in the 1980s, which has four main components: migration (MI); remittance (R); foreign aid (A); and public bureaucracy (B).[17] The MIRAB model proposes two distinct revenue sources. The first source depends on the provision of foreign aid, mainly used to fund the government bureaucracy, leading to a local multiplier effect on incomes and employment. The second revenue source involves remittances from emigrants to people remaining at home, again leading to the multiplier effect. However, the import leakage from these effects is typically high, so the multiplier effect may not be archived as desired.[18] In the mid-1990s, the TOURAB (tourism, remittance, aid and bureaucracy) model focused on tourism for revenues, supplemented with aid and remittance inflows. There is also the ROT (that is remittance, official development assistance (ODA) and tourism), SITE (small island tourism economies) and PROFIT (people-resources-overseas management-finance-transport) models.[19] There have also been attempts to generate economic revenues from providing offshore services, such as offshore private banking, vessel registration, digital residency and so on.[20] Table 1 summarises those development models for PICTs.

Table 1
Development models for PICTs

Models	Key elements	Income sources	Enablers	Past studies
MIRAB	[MI]gration [R]emittance [A]id [B]ureaucracy	International remittances and foreign aid	Migration and public Bureaucracy	Bertram and Watters (1985 and 1986)[21]
TOURAB	[TOU]rism [R]emittance [A]id [B]ureacracy	Tourism, international remittances and foreign aids	Tourism specialization, dynamic private sector, migration	Guthunz and von Krosigk (1996)[22]

[16] UNCTAD (2022b). *Note by the UNCTAD secretariat, TD/B/C.II/EM.6/2*, at the Expert Meeting on Revisiting Development Strategies for Small Island Developing States in the Post-Pandemic Competitive Landscape, Trade and Development Board, Investment, Enterprise and Development Commission. Geneva: The United Nations.

[17] Tisdell (2016).

[18] For MIRAB's specific application to Kiribati, read Chapter 24: The Next Forty Years of Walsh, M. R. (2021). *A History of Kiribati: From the Earliest Times to the 40th Anniversary of the Republic* (the second edition). Monmouthshire, Wales: Independently published.

[19] Ibid; and Kakazu, Hiroshi (2019). *Nissology*. Tokyo: Kokin Publishing.

[20] Refer to various IMF Article IV Staff Reports. Visit: https://www.imf.org/en/Publications/SPROLLs/Article-iv-staff-reports#sort=%40imfdate%20descending.

[21] Bertram, I. G. and Watters, R. F. (1985). "The MIRAB Economy in South Pacific Microstates", *Pacific Viewpoint*, 26(3), 497-519; Bertram, I. G., and Watters, R. F. (1986). "The MIRAB Process: Earlier Analyses in Context", *Pacific Viewpoint*, 27(1), 47-59.

[22] Guthunz, U. and von Krosigh, F. (1996). "Tourism Development in Small Island States: From 'MIRAB' to 'TOURAB'", in L. Briguglio, B. Archer, J. Jafari, G. Wall, D. Harrison and W. L. Filho (eds.*), Sustainable Tourism in Islands and Small States: Issues and Policies*. London: Pinter, 18–35.

			and public bureaucracy	
ROT	[R]emittance [O]fficial development assistance (ODA) [T]ourism	International remittances, foreign aid and tourism	Migration, public bureaucracy, tourism	Kakazu (2019)[23]
SITEs	[S]mall (warm water) [I]sland [T]ourist [E]conomie[s]	Tourism	Tourism specialisation and foreign direct investment	McElroy (2006); Oberst and McElroy (2007)[24]
PROFIT	[P]eople (migration) [R]esources [O]verseas management (diplomacy) [FI]nance [T]ransport	Various	Enabling domestic policy framework, dynamic private sector and strategic diversification	Baldacchino (2006)[25]

Sources: various.

Moving to multilateral development agencies, UNCTAD broadly categorizes SIDS' development strategies, which include all the PICTs, into (i) agriculture-led development; (ii) manufacturing-led industrialization; (iii) extraction-led development; and (iv) service-led development. [26] The organization argues that SIDS can take one or more of these development strategies that best fit with their own specific geographic and demographic structures. Figure 4 depicts an overview of those development strategies among SIDS. The figure also includes the "blue economy" strategy for those SIDS which have a large fisheries sector. Palau, FSM, Marshall Islands and Nauru, are grouped in service-led development states, while Kiribati is categorized as a state pursuing the blue economy strategy.

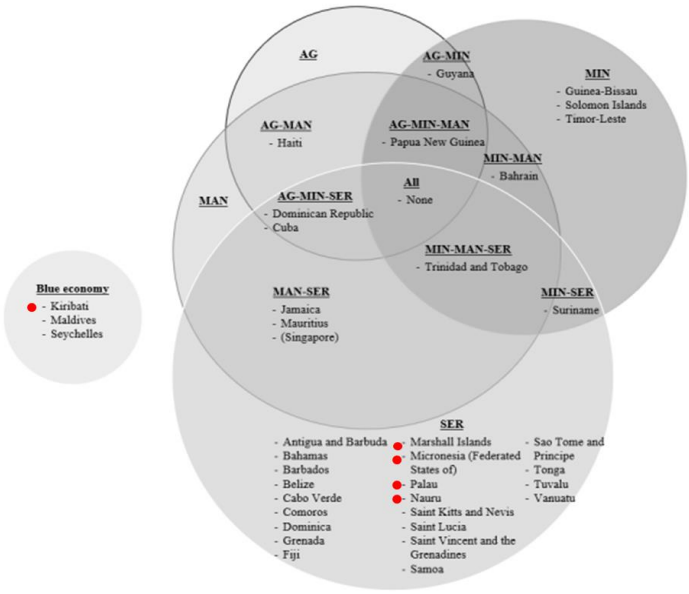
[23] Kakazu (2019).

[24] McElroy, J. L. (2006). "Small Island Economies across the Life Cycle", *Asia Pacific Viewpoint*, 47(1), 61–77; Oberst, A. and McElroy, J. L. (2007). "Contrasting Socio-Economic and Demographic Profiles of Two, Small Island, Economic Species: MIRAB versus PROFIT/SITE", *Island Studies Journal*, 2(2), 163-176.

[25] Baldacchino (2006).

[26] UNCTAD (2022b).

Figure 4
Development strategies for small island developing States

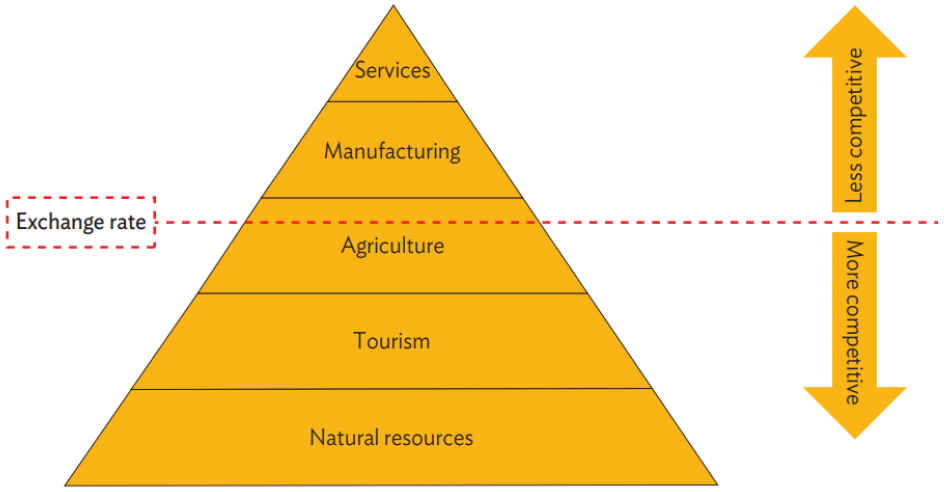


Source: UNCTAD (2022).
Note: AG = natural resource-led strategy, agriculture variant; MAN = manufacturing-led industrialisation; MIN = natural resource-led strategy, minerals variant; SER = service-led development.

Based on the comparative advantage theory, the IMF has proposed a PICT development strategy, as depicted in the "Pacific Pyramid" (Figure 5).[27] The strategy implies PICTs' comparative advantage in their trade patterns and performances, intrinsically linked to their small size and remoteness. PICTs lack economies of scale and exhibit high-cost structures, significantly disadvantaging some sectors like manufacturing. The pyramid suggests that a descending degree of comparative advantage exists from the (non-tourism) "services" sector to the "natural resources" sector (e.g., minerals, hydrocarbon, fisheries and forestry). PICTs also enjoy a strong comparative advantage in the tourism sector due to their favourable conditions, such as tropical climate, sandy beaches, pristine water and distinctive cultures. Agriculture ranks third in the pyramid, where land and water resources are relatively abundant with a tropical climate (e.g., Babeldaob in Palau and Pohnpei in Micronesia), although distance to major markets and high transportation costs lessen this advantage.

[27] Chen, H., Rauqeuqe, L., Raj Singh, S., Wu, Y. and Yang. Y. (2014). "Pacific Island Countries: In Search of a Trade Strategy". *IMF Working Paper WP/14/158*. Washington, DC: International Monetary Fund.

Figure 5
IMF's Pacific Pyramid



Source: Chen, *et al.* (2014).

Finally, the "blue economy" is a development concept that aims to achieve socio-economic progress simultaneously with ocean and environmental protection, and sustainable maritime resource extraction.[28] It spans fisheries, eco-tourism, maritime transport, aquaculture, seabed extractive activities, marine biotechnology and bioprospecting. It is a relatively new term and broadly adopts the "green economy" concept in the maritime context.[29] The blue economy's greatest challenge is reconciling two competing interests: (i) opportunities for local development and growth; and (ii) protection of vulnerable and threatened spaces.[30]

In recent years, numerous PICT governments and agencies have been increasingly dedicated to promoting the blue economy by implementing various proactive policies and programmes.[31] As a major step towards such a trajectory, the 2050 Strategy for the Blue Pacific Continent was endorsed by 18 countries and territories, including Kiribati, at the Pacific Islands Forum (PIF) in 2022.[32] The strategy consists of seven themes, spanning: (i) political leadership and regionalism; (ii) resources and economic development; (iii) climate change; (iv) oceans and natural environment; (v) people-centred development; (vi) technology and connectivity; and (vii) peace and security. The strategy is intended to guide how the countries of the Pacific navigate various challenges confronting the region (including the impacts of climate change, slow economic growth, poor health and education outcomes and significant ocean and land-based environmental degradation) and leverage their collective strengths (including cultures and traditions, a youthful population and significant island and ocean resources).

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[28] Srinivasan, M., Kaullysing, D., Bhagooli, R. and Pratt, S. (2022). "Marine tourism and the blue economy: Perspectives from the Mascarene and Pacific Islands", in Urban, E. R., and Ittekot, V. (eds.), *Blue Economy*, 153-189. Singapore: Springer.

[29] See: https://www.theblueeconomy.org/en/the-blue-economy/.

[30] Srinivasan, *et al.* (2022); Lee, K, Noh, J. and Khim, J. (2020). "The Blue Economy and the United Nation's sustainable development goals: Challenges and opportunities", *Environment International*, 137, 105528.

[31] PIFS (2022). *2050 Strategy for the Blue Pacific Continent*. Suva: Pacific Islands Forum Secretariat.

[32] The 18 countries and territories comprise: Australia, Cook Islands, Fiji, FSM, French Polynesia, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. See: https://www.forumsec.org/wp-content/uploads/2022/08/PIFS-2050-Strategy-Blue-Pacific-Continent-WEB-5Aug2022.pdf.

The ocean and its resources are critical assets for Kiribati and all other PICTs, accounting for the substantial economic value of marine and coastal products and services, including fisheries, tourism and carbon storage.[33]

Clearly, many development strategies and models have been proposed for PICTs. However, no single strategy or model can effectively cover all the countries' needs, due to the distinct characteristics. Here, policymakers may need to carefully combine select policy options from different strategies and models to maximize their effectiveness, while continuously searching for new and innovative development approaches to suit PICTs under changing conditions.

Table 2 provides an overview of PICTs' select socio-economic data, including the five Micronesian countries and Papua New Guinea, in light of the above-summarized development strategies and models. In so doing, it highlights the diversified nature of the development paths in the region. Papua New Guinea is by far the largest country in the region, by population and economy, while many others are micro island states. Nauru, Palau, Marshall Islands, Tuvalu, Fiji and Tonga are categorized as upper-middle-income countries. Three South Pacific countries – Tonga, Samoa and Vanuatu – rely heavily on inward remittances. Almost all countries annually receive foreign development assistance as a large part of their fiscal budget, whereas their private sector is typically at the nascent development stage. Three countries – Niue, Cook Islands and Palau – have a very active tourism sector, due to their favourable natural endowments and convenient locations from major tourist homes. The sectoral compositions of their industries also illustrate diversified pictures across agriculture, fishery, mining, manufacturing, and services, while many of them show their comparative advantage in the primary sector. Seven nations – Kiribati, FSM, Papua New Gunia, Marshall Islands, Cook Islands, Solomon Islands and Fiji – possess an (exclusive economic zone) EEZ of over one million square kilometres, and operate active fishery sectors, except for Fiji and the Cook Islands. This overview (see Table 2 again) strongly suggests that those previously cited development strategies and models are pertinent to the PICTs in multiple aspects, and also point to various policy options in the future. However, no single strategy cannot fit well with all PICTs in seeking to meet all their development aspirations, due to their unique natural endowments and socio-economic characteristics.

Kiribati, a least developed country (LDC) and a lower-middle-income country, relies heavily on foreign development assistance and fishing fees for national revenues.[34] [35] The government dominates the economy, while its private sector, including the tourism sector, is still at a nascent stage of development. Compared with other Micronesian nations, Kiribati's migration flows have been modest, resulting in relatively low dependence on international remittances to its economy, although emigration flows have been nearly six times greater than immigration.

[33] Rouatu, I., Leport, G., Pascal, N., Wendt, H., Abeta, R., Brander, L., Fernandes, L., Seidl, A. and Salcone, J. (2017). *National Marine Ecosystem Service Valuation: Kiribati*. MACBIO (GIZ/IUCN/SPREP).

[34] See: https://unctad.org/topic/least-developed-countries/list; and https://www.isca.org/files/World-Bank-list-of-economies.pdf. Solomon Islands and Tuvalu are two other LDCs in the Pacific.

[35] Solomon Islands is scheduled to graduate from the LDC category in December 2027. See: DESA (2023). "GA resolution on postponement of Solomon Islands graduation from the LDC category", *News and Events,* Economic Analysis, DESA, the United Nations, 25 August, at https://www.un.org/development/desa/dpad/2023/ga-resolution-on-postponement-of-solomon-islands-graduation-from-the-ldc-category/#:~:text=On%2025%20August%2C%20the%20UN,graduate%20on%2013%20December%202027.

Table 2
A statistical overview of select PICTs' development status

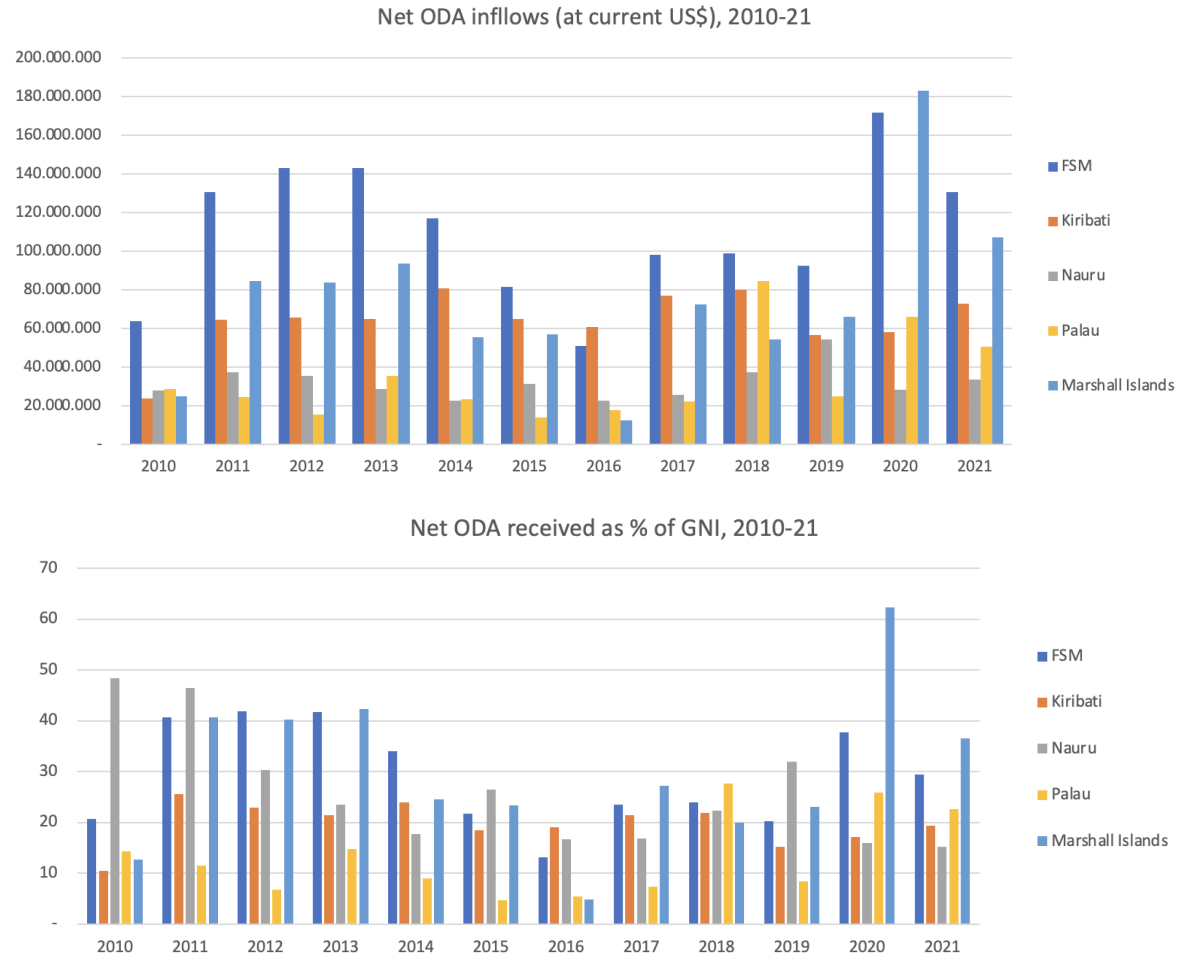
Country	Population 2022 data (Niue: 2019, Cook Island: 2020, Tokelau: 2019)	Migration stock (as % of population) Indicates what percentage of the population is represented by immigrants who entered (immigrant) and left (emigrant) the country. (2020 data) |1-2| >=15%		GDP (US$ million)		GNI/capita (Atlas method US$)		Remittances (%) Indicates the percentage of GDP overseas remittances represent Remittance>= 15%		Aid (%) Indicates what percentage of the government budget the amount of foreign aid corresponds to. Aid>=35%		Bureaucracy It shows how many times GDP is the national budget. The higher this number, the larger the private sector. Bureaucracy<3 %		Tourism It shows how many times the number of tourists per year is compared to the country's population. Tourism>=1		Composition of GDP by sector (%) Agriculture>=15% Industry >=20% Service >=70%				EEZ size (square KMs)	Tuna catch (catch by national waters) (US$ million 2021 data)
		Immigrant	Emigrant		Year		Year		Year		Year		Year		Year	Agriculture	Industry	Services	Year		
Papua New Guinea	10 142 619	0.35	0.68	30 633	2022	2 730	2022	0.01	2022	12.64	2019	4.82	2019	0.00	2021	22.1	42.9	35.0	2017	2 396 575	791
Fiji	929 766	1.91	15.20	4 943	2022	5 270	2022	9.28	2022	12.79	2020	2.96	2020	0.03	2021	13.5	17.4	69.1	2017	1 281 703	31
Solomon Islands	724 273	1.39	0.63	1 595	2022	2 220	2022	5.09	2022	41.69	2019	3.02	2019	0.00	2021	34.3	7.6	58.1	2017	1 596 464	212
Vanuatu	326 740	0.67	3.33	984	2022	3 560	2022	15.25	2022	36.79	2019	2.64	2019	0.07	2020	27.3	11.8	60.8	2017	827 626	10
Samoa	222 382	3.08	53.23	832	2022	3 630	2022	33.63	2022	63.41	2020	3.30	2020	0.01	2021	10.4	23.6	66.0	2017	131 535	5
Kiribati	131 232	2.23	12.56	223	2022	3 280	2022	6.72	2022	37.63	2017	0.92	2017	0.01	2020	23.0	7.0	70.0	2016	3 437 132	534
Micronesia (FSM)	114 164	2.76	13.45	427	2022	4 130	2022	5.46	2022	74.58	2012	1.70	2012	0.16	2019	26.3	18.9	54.8	2013	2 992 415	212
Tonga	106 858	1.53	43.61	469	2021	4 930	2021	46.22	2021	55.08	2019	2.61	2019	0.09	2020	19.9	20.3	59.8	2017	664 751	9
Marshall Islands	41 569	2.98	11.00	280	2022	7 920	2022	10.73	2022	43.12	2019	1.52	2019	0.02	2020	4.4	9.9	85.7	2013	1 992 022	128
Palau	18 055	31.82	92.15	218	2021	12 790	2021	1.17	2021	20.62	2019	2.30	2019	1.00	2020	3.0	19.0	78.0	2016	604 253	4
Nauru	12 668	43.69	14.71	151	2022	17 870	2022	4.99	2018	17.88	2020	0.79	2020			6.1	33.0	60.8	2009	308 506	225
Tuvalu	11 312	2.11	35.66	60	2022	7 210	2022	4.14	2022	41.45	2019	0.62	2019	0.09	2020	24.5	5.6	70.0	2012	751 672	119
Cook Islands	8 574	13.53	103.41							1.14	2016			2.92	2020	5.1	12.7	82.1	2010	1 960 027	24
Niue	2 000	18.41	292.29											6.18	2017	23.5	26.9	49.5	2003	316 584	91
Tokelau	1 647									62.74	2017					n/a	a/a	a/a		319 049	13

Source: Adapted from JICA (2015) based on data from various sources, including the World Bank (2023). DataBank: World Development Indicators.

2.3. Foreign Development Assistance

PICTs' small economic base and narrow fiscal space, further compounded by occasional losses caused by trade deficits, external shocks and natural disasters, means that their reliance on ODA is some of the highest globally.[36] ODA inflows to PICTs, between 2010 and 2021, held steady or rose for the majority (nine of the 11) countries.[37] Figure 6 provides panel data of ODA flows in Micronesia, from 2010 to 2021, for the five recipient countries: Palau, FSM, Marshall Islands, Nauru and Kiribati. The figure suggests large differences in received ODA amounts and year-by-year fluctuations regarding net amounts, their shares of GNI and per-capita amounts. It is noteworthy that Kiribati receives relatively small amounts of aid per citizen compared with neighbouring countries.[38]

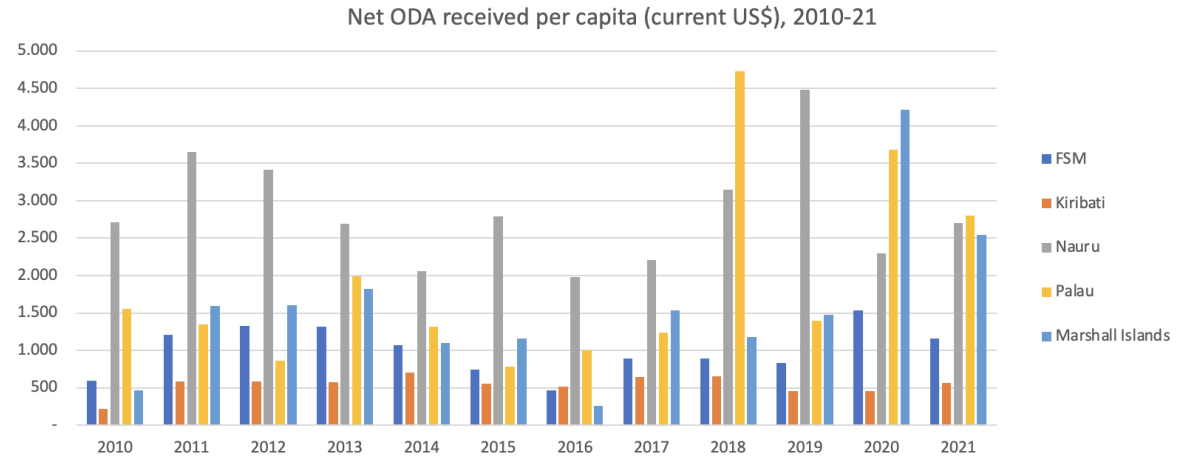
Figure 6
ODA inflows to Micronesia



[36] World Bank (2023).

[37] Ibid.

[38] In addition to ODA, three Micronesian countries – Palau, FSM and Marshall Islands – separately receive the Compact fund from the United States under their respective Compact (CoFA) agreements.



Source: Developed based on the World Development Indicators (2023).

In the previous five-year programming cycle (2018-2022), the Pacific UNCTs disbursed over $700 million to PICTs under the United Nations Pacific Strategy (UNPS) 2018-2022, albeit down from close to one billion dollars during the 2013-2017 United Nations development framework for the Pacific. This relative decline is primarily attributed to the impact of the pandemic on United Nations operations as well as the capacity of PICTs to continue development investments and absorb funds during major operational restrictions due to COVID-19.

Box 3
The United Nations Pacific Strategy 2018-22

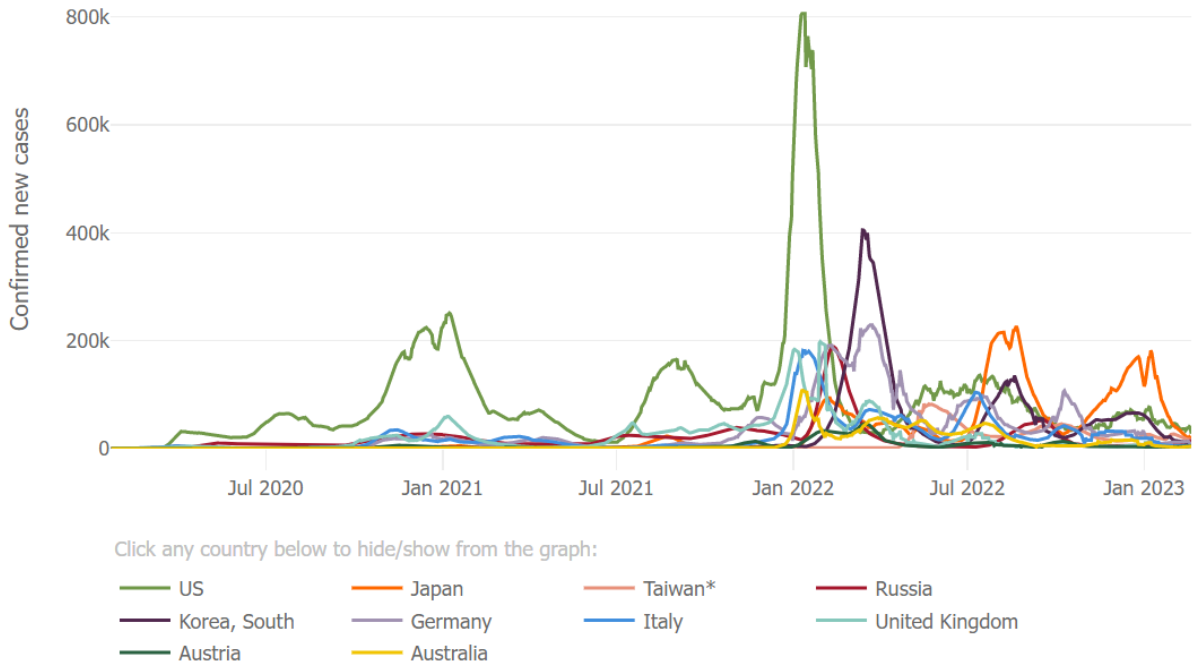
Preceding the PSDCF 2023-2027, the United Nations Pacific Strategy (UNPS) 2018-2022 was a five-year strategic framework that outlined the collective response of the United Nations system to the development priorities in 14 PICTs, including Kiribati.[39] The UNPS supported governments and peoples in the Pacific to advance a localized response to the 2030 Agenda. In Kiribati, the UNPS was aligned with the country's National Development Plan 2016-2019, particularly in six areas: (i) climate change, disaster resilience and environmental protection; (ii) gender equality; (iii) sustainable and inclusive economic empowerment; (iv) equitable basic services; (v) governance and community engagement; and (vi) human rights. The UNPS complemented the work of regional organizations, such as the Council of Regional Organisations of the Pacific (CROP) which comprise, among others, the Pacific Islands Forum Secretariat (PIFS), the Pacific Community (SPC), the Secretariat of the Regional Environment Programme (SPREP), the Forum Fisheries Agency (FFA) and the University of the South Pacific (USP), in line with their regional priorities.

2.4. Regional Impact of the COVID-19 Pandemic and the War in Ukraine

The COVID-19 pandemic (2022-2023) illustrates PICTs' vulnerability to exogenous shocks. Although widespread vaccinations and growing immune systems in society have reduced COVID-19's severity to patients (passing its peak in the first quarter of 2022), its effects and impacts were felt worldwide, and in the Pacific by the first quarter of 2023 (see Figure 7).

[39] The United Nations in the Pacific (2019). *United Nations Pacific Strategy 2018-2022: A Multi-Country Sustainable Development Framework in the Pacific Region*.

Figure 7
Worldwide COVID infections



Source: Johns Hopkins University and Medicine (2023). *New COVID-19 Cases Worldwide.*

The pandemic disproportionately impacted PICTs, with potentially devastating blows on human health through the socio-economic effects of both the virus itself and government containment policies, coupled with rapid and significant inflation further fuelled by commodity supply chain disruptions caused by the conflict in Ukraine (2022-present). Inadequate domestic financial reserves, elevated debt levels and fragile health systems present crucial challenges in these economies.[40] Moreover, the health crisis has had far-reaching impacts on education, human rights and food security in the short term. The economic impacts of the pandemic and the conflict on PICTs have been particularly large due to their limited institutional capacities and resources, narrow economic diversification, and heavy dependence on remittances and foreign assistance, as well as on tourism and fishery trade as drivers of economic growth.[41] All of these aspects increase their vulnerability to external shocks, such as the pandemic, which altered considerably normal patterns of behaviour, economic activity, and the kinds of global networks on which we all rely (but often take for granted).

The Micronesian states, i.e., Palau, FSM, Marshall Islands, Nauru and Kiribati, as well as two US territories – Guam and the Commonwealth of the Northern Mariana Islands – also went through a turbulent time during the recovery from the COVID-19 pandemic and the war in Ukraine. The elevated levels of inflation caused by the increased prices of food, energy and transportation hampered the countries' economies, at least in the short term, while experts have warned of the risk of recessions in some economies.[42]

[40] ESCAP (2022). *Asia-Pacific Countries with Special Needs Development Report 2022: Financing a Sustainable Recovery from COVID-19 and Beyond*. Bangkok: The United Nations.

[41] Ibid.

[42] Monteiro, A. (2023). "World Bank Cuts 2023 Forecasts and Warns of Global Recession", *Bloomberg: Economics*, 11 January 2023.

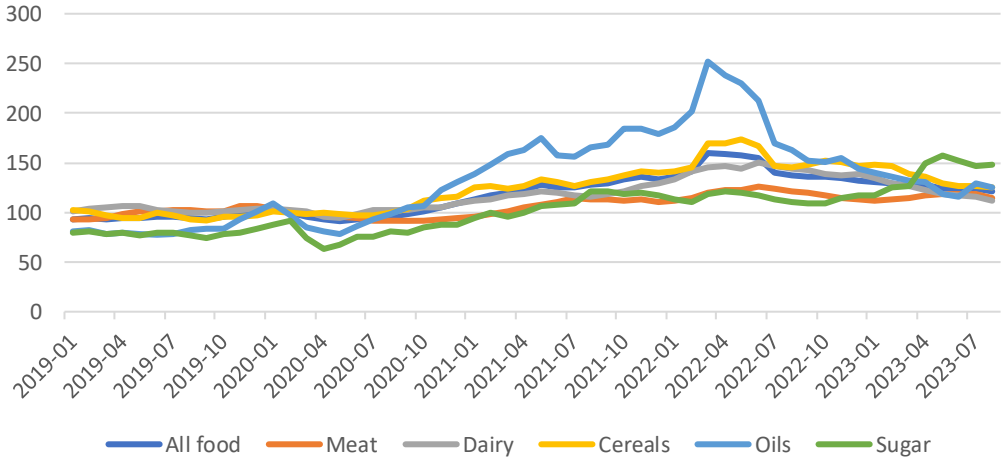
So far, however, those countries' economic dips have been relatively brief, except for Palau where the tourism sector was heavily damaged by lockdowns. They began to experience economic recovery, starting in 2021 and 2022, due in large part to various social and business counter-measures, such as unemployment benefits and business closure grants (also see Table 3).[43] It is expected that their economic growth will continue in 2023 and beyond. One minor concern is the long-term price increase in global food and commodity markets, as these countries heavily rely on imported foods and products (see Figure 8). This supply-push inflation, coupled with the post-COVID demand hike and the conflict-driven disruptions, could complicate policy responses, given weak transmission channels, potentially leading to additional job losses and increased poverty in Kiribati and other PICTs.[44]

Table 3
GDP growth rates in Micronesia
2018-2024

	2018	2019	2020	2021	2022	2023*	2024*
Palau	-0.1	-1.9	-9.7	-17.1	-1.0	3.8	6.5
FSM	0.1	2.7	–3.6	–1.3	2.0	4.1	0.5
Marshall Islands	4.2	10.8	–1.8	1.1	–0.9	2.2	2.5
Nauru	5.7	1.0	0.7	1.5	1.2	1.6	1.6
Kiribati	5.3	–2.1	–1.4	1.5	1.8	2.3	2.8

Source: ADB (2023).[45]
Note: * indicates predicted figures.

Figure 8
World food prices
2019-2023



Source: FAO (2023). *World Food Situation: FAO Food Price Index*. https://www.fao.org/worldfoodsituation/foodpricesindex/en/.[46]

[43] Asian Development Bank (ADB) (2023). *Asian Development Outlook September 2023*. Manila: ADB.

[44] Although world food prices peaked in the second quarter of 2022, prices have remained higher than the pre-COVID levels.

[45] ADB (2023).

[46] FAO (2023). *FAO Food Price Index, World Food Situation*, at: https://www.fao.org/worldfoodsituation/foodpricesindex/en/.

3. Country Profile

Kiribati comprises 32 low-lying atolls that rise to no more than two or three metres above sea level, with the exception of Banaba, a raised coral island with a high point of 81 metres, and once a rich source of phosphate.[47] Kiribati is one of the smallest countries in the world, with a land area of just 810 square kilometres. However, it spreads out in the Central Pacific Ocean over an area roughly the size of India, while its northern-most and southern-most points are about 800 kilometres apart, with 3,200 kilometres separating its easternmost and westernmost edges (Figure 9). Its exclusive economic zone (EEZ) is almost 3.5 million square kilometres in size.[48]

Kiribati consists of three archipelagos. The eastern Line Islands and the central Phoenix Islands are sparsely populated,[49] but the western Gilbert Islands, home to 90 per cent of the population, are some of the most densely settled places on earth; especially the main island of South Tarawa.[50] The total population of Kiribati was estimated to be over 130,000 in 2022.[51] The median age of 22.9 in 2020 ranks among the youngest in the region and beyond.[52] The administrative divisions include six districts (Banaba, Central Gilberts, Line Islands, Northern Gilberts, Southern Gilberts and Tarawa) and 21 island councils - one for each of the inhabited islands – Abaiang, Abemama, Aranuka, Arorae, Banaba, Beru, Butaritari, Kanton, Kiritimati, Kuria, Maiana, Makin, Marakei, Nikunau, Nonouti, Onotoa, Tabiteuea, Tabuaeran, Tamana, Tarawa and Teraina. Kiribati is the only country in the world to span all four cardinal hemispheres.

[47] See: The Pacific Data Hub at https://pacificdata.org/population-dashboard.

[48] World Bank (2023).

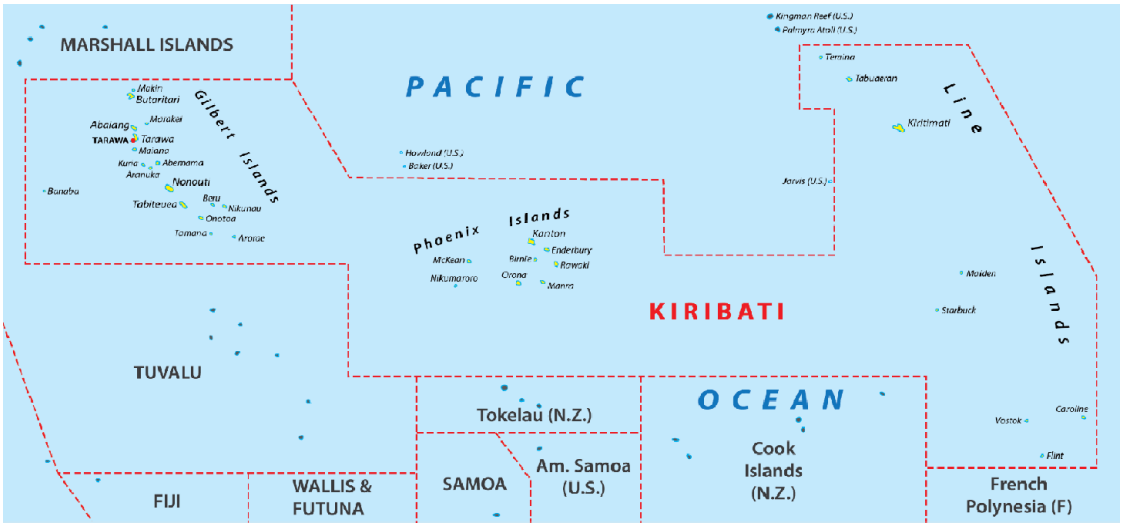
[49] Line Islands' economic hub, Kiritimati, the world's largest atoll with a land mass of 388 square kilometres, accounts for around half of Kiribati's land area, though only for about six per cent of its population. Kiritimati serves as a commercial hub for Line and Phoenix Islands, and its population (about 7 400) is the third largest after South and North Tarawa. Most land on the island is owned by the government, which issues licenses for land use. However, unlike Tarawa, Kiritimati is rich in natural resources, and families require less income for their basic food needs (although the island recently experienced a considerable price hike). The only inhabited atoll in the Phoenix Islands is Kanton, where 40 persons lived in 2020. See: Pacific Community (SPC) (2022). *Kiribati Census Atlas 2022*. Noumea: SPC.

[50] While the average population density for Kiribati is 164 inhabitants per square kilometres, this figure increases to 3 942 in South Tarawa. SPC (2022).

[51] World Bank (2022).

[52] SPC (2022).

Figure 9
Kiribati



Source: WorldAtlas (2023).[53]

Kiribati has few natural resources. Commercially viable phosphate deposits in Banaba were exhausted by the time of independence from the United Kingdom in 1979. Earnings from fishing licences and seafarer remittances are important sources of income. Although the number of seafarers employed has declined due to changes in global shipping demands and the recent COVID-19 pandemic, remittances are expected to improve with more overseas temporary and seasonal work opportunities for Kiribati nationals, particularly in Australia, Fiji, New Zealand and other neighbouring countries.[54]

The low-lying character of atolls makes Kiribati highly exposed to risks related to climate change, such as extreme weather conditions and rising sea levels, threatening agricultural production and livelihoods.[55] Only 2.5 per cent of Kiribati's land is arable, while just 1.5 per cent of the surface is covered by forest.[56] Most islands are situated in the dry belt of the equatorial oceanic climate zone, which experiences frequent and prolonged droughts. The alkaline coral composition and high porosity of the soil in this climate zone make it one of the poorest quality soils for agriculture in the world. Typhoons can occur at any time, but usually between November and March; occasional tornadoes also threaten the islands. *La Niña* and *El Niño* exacerbate Kiribati's exposure to extreme weather events. During *La Niña* events, the islands experience drier weather, warmer temperatures, less rainfall and droughts. On the other hand, *El Niño* events provide the islands with strong winds, additional rainfall, cooler temperatures and higher sea levels.

Unlike Kiribati's terrestrial life, the marine fauna is highly diverse, rich and productive. Lagoon and coastal fisheries currently provide sufficient protein for most of I-Kiribati, although overfishing, population and climate change create challenges for long-term food security.[57] Kiribati is also one of

[53] See: https://www.worldatlas.com/maps/kiribati.

[54] The authors' interviews on Tarawa in February and October 2023.

[55] Otiuea, T., Teariki-Ruatu, N., Timeon, E., Francis, J. A. and Dietershagen, J. (2019). "The agriculture–nutrition nexus in Kiribati", *CTA Technical Brief*, 15. Wageningen. Technical Centre for Agricultural and Rural Cooperation.

[56] World Bank (2023).

[57] The Government of Kiribati (2013). *Kiribati National Fisheries Policy 2013–2025.* Ministry of Fisheries and Marine Resources Development and AusAID.

the largest fishing licensers in the Pacific, but unregulated commercial development has adversely affected coastal fisheries and marine stocks (see Table 3 again).

Kiribati shares the economic challenges common to most SIDS, which, due to their small economies and narrow resource base, face limited scope for exploitation of economies of scale and possess a limited range of crops, minerals and manufactures. Their geographic remoteness also leads to high transportation costs for trade and market access. These challenges result in limited export and employment opportunities, high import dependence and high outward migration, both skilled and non-skilled labour.[58] In addition, the geographic dispersion of Kiribati increases the cost and the difficulty of providing public services and connectivity within its territory.

The Multidimensional Poverty Index (MPI) for Kiribati (2021-22) shows that 19.8 per cent of the population are poor, while 30.2 per cent are classified as vulnerable to poverty.[59] Deprivation is mainly the result of low standards of living, followed by poor health services. Violence against women and girls (VAWG), suicide rates and prison population are high compared to regional and world averages.[60] Specific social, economic, environmental and governance issues Kiribati has faced can be summarized as follows:[61]

(i) Climate change, weather turbulence and sea-level rise;
(ii) Narrow supply base and limited resources;
(iii) Overdependence on fisheries licensing revenues;
(iv) Urban-rural divide (main islands versus outer islands);
(v) Poor infrastructure;
(vi) Lack of safe and affordable inter-island transportation;
(vii) Adverse geopolitical events;
(viii) Nascent private sector;
(ix) Poor state-owned enterprise (SOE) management;
(x) Widespread subsistence economy;
(xi) High unemployment rate;
(xii) Risks pertaining to offshore investment of the Revenue Equalization Reserve Fund (RERF), Kiribati's sole sovereign wealth fund; and
(xiii) Limited administrative capacity.

3.1. Kiribati's Historical Development

The first settlers in Gilbert Islands and Banaba came from Southeast Asia, via Micronesia, some 4,000 to 5,000 years ago. Around the 14th century, the southern islands received an influx of Samoans, and soon thereafter the islanders adopted a gerontocratic style of government (i.e., based on rule by elders). Line and Phoenix islands had no pre-historic population. Spanish explorers sighted some islands in the 16th century, but most of Kiribati was not charted until the early 19th century when first

[58] UNCTAD (2014). *Closing the distance partnerships for sustainable and resilient transport systems in SIDS*. UNCTAD/DTL/TLB/2014/2.

[59] The United Nations Development Programme (UNDP) and Oxford Poverty and Human Development Initiative (OPHI) (2022). *Global Multidimensional Poverty Index 2022: Unpacking deprivation bundles to reduce multidimensional poverty*.

[60] Ibid.

[61] IMF (2018). *Kiribati: Staff Report for the 2018 Article IV Consultation*; The Government of Kiribati (2018). *Statement of H. E. Teburoro Tito, Permanent Representative of Kiribati to the United Nations to the Expert Meeting Group (EGM)*, Friday, 2 February 2018, at the United Nations, New York.

whalers and then coconut oil traders reached the islands. From the middle of the 19th century, Gilbert Islanders were recruited to work on plantations elsewhere in the region. The Gilbert Islands became a British protectorate in 1892, and Banaba was annexed in 1900 after the discovery of its rich phosphate deposits. Both were linked with Ellice Islands (now Tuvalu) as the Gilbert and Ellice Islands colony from 1916, which subsequently was extended to include most of Phoenix and Line Islands and, for a time, Tokelau.[62] During World War II, the islands were occupied by Japan, which was later ejected by the Allied forces in fierce combat. Nearly 6,400 Japanese, Koreans and Americans died in the fighting, mostly on and around the small island of Betio, on the extreme southwest of Tarawa.[63]

Because of the 1974 Ellice Islands self-determination referendum, separation occurred in two stages.[64] The Tuvaluan Order of 1975 made by the Privy Council recognized Tuvalu as a separate British dependency with its own government. The second stage occurred in 1976 when separate administrations were created out of the civil service of the Gilbert and Ellice Islands colony.[65] In 1971, Banabans attempted to sue the British government for a more significant share of royalties from phosphate mining and compensation for the island's environmental devastation. The trial ended inconclusively without a court order to have the mining company restore the land; the outcome for which Banabans had hoped. In 1981 the community agreed to Britain's offer of a one-time trust payment of AUD 10 million ($7.3 million), in return for the abandonment of further litigation.[66]

The Gilbert Islands achieved independence under the name Kiribati in 1979. A high priority was given to economic development, especially the exploitation of marine resources and the use of the country's strategic position astride the Equator for space launch and tracking projects. Japan and China constructed Earth-satellite telemetry stations in the late 1990s, although China dismantled its facilities after Kiribati shifted its formal recognition of China to the Taiwan Province of China in 2003.[67] In 2019, Kiribati re-established diplomatic relations with China.

3.2. Implementing the SDGs in Kiribati

Following the launch of the SDGs in 2015, Kiribati issued their preliminary indicators to all government agencies, community groups, development partners and private sector organizations. This led to the formation of the *Kiribati Development Plan (KDP) 2016-19* and a national set of performance indicators.[68] In addition to the four-yearly national plan, the government also has a 20-year vision for

[62] Encyclopaedia Britannica (2023). https://www.britannica.com/place/Kiribati/History.

[63] Alexander, J. (1993). *Across the Reef: The Marine Assault of Tarawa*.

[64] Nohlen, D., Grotz, F. and Hartmann, C. (2001). *Elections in Asia: A data handbook, Volume II*.

[65] McIntyre, W. D. (2012). "The Partition of the Gilbert and Ellice Islands", *Island Studies Journal*, 7(1).

[66] An Australian company recently considered resuming mining on Banaban. See: https://www.theguardian.com/world/2023/sep/04/mining-once-made-this-pacific-island-unliveable-now-residents-fear-its-return.

[67] All references to the Taiwan Province of China in the text are made on a factual basis and in the context of the United Nations General Assembly Resolution 2758 (XXVI), according to which China is represented in the United Nations by the Government of China as the only lawful representative of China to the United Nations, and the sole government representing the whole of China. The question of the Taiwan Province of China in the United Nations is regulated by the cited General Assembly Resolution on the restoration of the lawful rights of China in the United Nations.

[68] The Government of Kiribati (undated, a). *Kiribati Development Plan 2016-19: Towards a better educated, healthier, more prosperous nation with a higher quality of life.*

developing Kiribati into a prosperous, healthy and peaceful nation. Covering the period out to 2036, the *Kiribati Vision 20* (or KV20) is designed around the enabling environment and social benefits from the key economic sectors of tourism and fisheries.[69]

In 2018, integrating the mid-term review of the KDP 2016-19, Kiribati conducted its first voluntary national review (VNR) for SDGs, aiming to assess national SDG implementation alongside international and regional commitments in a single report.[70] Following the review, national goals and indicators were realigned for the second half of the four-year term of the KDP. Consequently, Kiribati launched its *KDP 2020-23* with six key areas: (i) human wealth; (ii) economic wealth with Leaving No-One Behind (LNOB); (iii) health; (iv) environment and resilience; (v) governance; and (vi) infrastructure.[71] Those actions have identified two significant challenges to achieving the SDGs in Kiribati: (i) resource and skill constraints; and (ii) difficulty covering outer islands, rural populations and various socio-economic groups.

According to the latest *Sustainable Development Report*, Kiribati has achieved two SDGs, namely: SDG10 "reduced inequality" and SDG13 "climate action".[72] Although they are encouraging, Kiribati has faced many issues in realizing other SDGs, as challenges remain in SDG4 "quality education" and SDG 17 "partnerships", while nine SDGs are categorized as either significant or have major challenges (also see the details in Figures 10 and 11).[73] The progress of the remaining five SDGs is undecided as information is unavailable. It is expected that Kiribati will continue to face limited institutional and human capacity to effectively implement and monitor the SDGs. Therefore, continued support by development partners, including the United Nations entities, is crucial for Kiribati to achieve the SDGs.

[69] The Government of Kiribati (undated, b). *Kiribati 20-Year Vision 2016-2016*.

[70] The Government of Kiribati (2018). *Kiribati Voluntary National Review and Kiribati Development Plan Mid-Term Review*. New York.

[71] The Government of Kiribati (undated, c). *Kiribati Development Plan 2020 – 2023: A Joint Effort of All Ministries/Departments within the Government of Kiribati: A Wealthy, Healthy and Peaceful Nation*.

[72] Sachs, J. D., Lafortune, G., Fuller, G. and Drumm, E. (2023). *Sustainable Development Report 2023: Implementing the SDG Stimulus*. Paris: SDSN, Dublin: Dublin University Press.

[73] Sachs, *et al.* (2023); Massa, I., Marinescu, S., Fuller, G., Díaz, L. B. and Lafortune, G. (2023). *Sustainable Development Report for Small Island Developing States 2023, Addressing structural vulnerability and financing the SDGs in Small Island Developing States*. New York: Sustainable Development Solutions Network and the United Nations.

Figure 10
Kiribati's progress in the SDG implementation

Source: Sachs, *et al.* (2023).

Figure 11
Kiribati's related indexes and their statuses

		Value ↓	Year ↓	Rating ↓	Trend ↓
SDG 1.	Poverty headcount ratio at $2.15/day (2017 PPP, %)	-	-	-	-
SDG 2.	Prevalence of obesity, BMI ≥ 30 (% of adult population)	46.0	2016	🔴	↓
SDG 3.	Life expectancy at birth (years)	59.4	2019	🔴	→
SDG 4.	Lower secondary completion rate (%)	99.9	2020	🟢	→
SDG 5.	Seats held by women in national parliament (%)	6.7	2021	🔴	↓
SDG 6.	Population using at least basic sanitation services (%)	45.6	2020	🔴	→
SDG 7.	Population with access to electricity (%)	92.0	2020	🟡	↗
SDG 8.	Unemployment rate (% of total labor force, ages 15+)	-	-	-	-
SDG 9.	Population using the internet (%)	53.6	2021	🟠	↑
SDG 10.	Gini coefficient	27.8	2019	🟢	-
SDG 11.	Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) (µg/m³)	10.0	2019	🟢	↑
SDG 12.	Municipal solid waste (kg/capita/day)	0.9	2016	🟢	-
SDG 13.	CO_2 emissions from fossil fuel combustion and cement production (tCO_2/capita)	0.6	2021	🟢	→
SDG 14.	Ocean Health Index: Clean Waters score (worst 0-100 best)	-	-	-	-
SDG 15.	Red List Index of species survival (worst 0-1 best)	0.8	2023	🔴	↓
SDG 16.	Corruption Perceptions Index (worst 0-100 best)	-	-	-	-
SDG 17.	Statistical Performance Index (worst 0-100 best)	43.8	2022	🔴	↗

Source: Massa, *et al.* (2023).

4. People

As noted briefly in the previous section, one of the crucial issues for Kiribati is how to empower its citizens to deal with the paramount challenges the Islands face. This requires dealing with multiple sectors, functions and areas while strengthening Kiribati's institutional capacities at various levels, such as government, communities, the private sector, civil society organizations, urban and rural areas and main and outer islands. This section addresses the first SDG pillar: People. It broadly covers eight key issues, namely: (i) population and demographic dividends; (ii) inequality and poverty; (iii) education; (iv) labour; (v) food and nutrition, health and sanitation; (vi) human rights; and (vii) gender and inclusiveness. Kiribati is ranked 136th in the Human Development Index (HDI).[74]

4.1. Population and demographic dividends

Kiribati's population was over 130,000 in 2022, with a relatively high birth rate even for a developing country.[75] Kiribati projects significant population growth, reaching nearly 180,000 people by 2050.[76] The country's citizens are broadly categorized as Micronesians whose majority speak Gilbertese (or I-Kiribati) and English, the official language. Over 50 per cent of citizens are Roman Catholic, and most of the rest are Protestant, with small minorities of Mormon and Bahā'ī.[77] South Tarawa hosts 53 per cent of the population, with a density of nearly 4,000 per square kilometre, while other atolls and Banaba only represent densities of around 80 per square kilometre.[78] People in the outer islands who have typically relied on subsistence livelihoods are expected to migrate to urban areas, predominantly South Tarawa, due to the impacts of climate change and environmental pressures, resulting in population growth and higher commercial, labour, education and healthcare opportunities (Figure 12). But it is implausible to sustain this influx due to the islands' resource and capacity constraints in land, water and sanitation, power, food and other supplies, as well as waste management, unless very significant investments and structural changes are made to mitigate these issues.[79]

[74] Among the PICTs, Palau (80th), Fiji (99th) and Samoa (111th) are in the high human development category, while Tuvalu (130th), Marshall Islands (131st), FSM (134th), Vanuatu (140th) and Solomon Islands (155th) are in the medium category. Any PICT is ranked in neither the very high nor low human development category. See: UNDP (2023). *Human Development Index (HDI)*. Visit: https://hdr.undp.org/data-center/human-development-index#/indicies/HDI.

[75] SPC (2022); World Bank (2023).

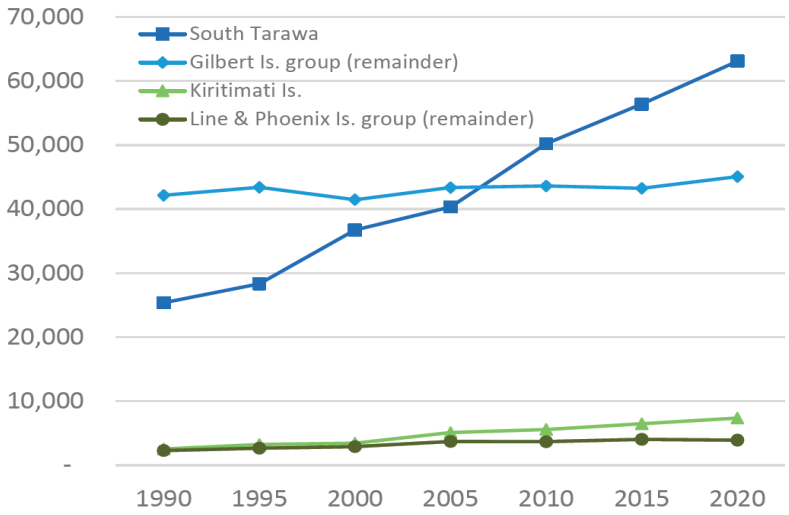
[76] The Government of Kiribati (2022). *2020 Kiribati Population and Housing Census*.

[77] Encyclopaedia Britannica(2023).

[78] SPC (2022).

[79] Curtain, R. and Dornan, M. (2019). *A pressure release valve? Migration and climate change in Kiribati, Nauru and Tuvalu*. Development Policy Centre. Crawford School of Public Policy. Australian National University (ANU).

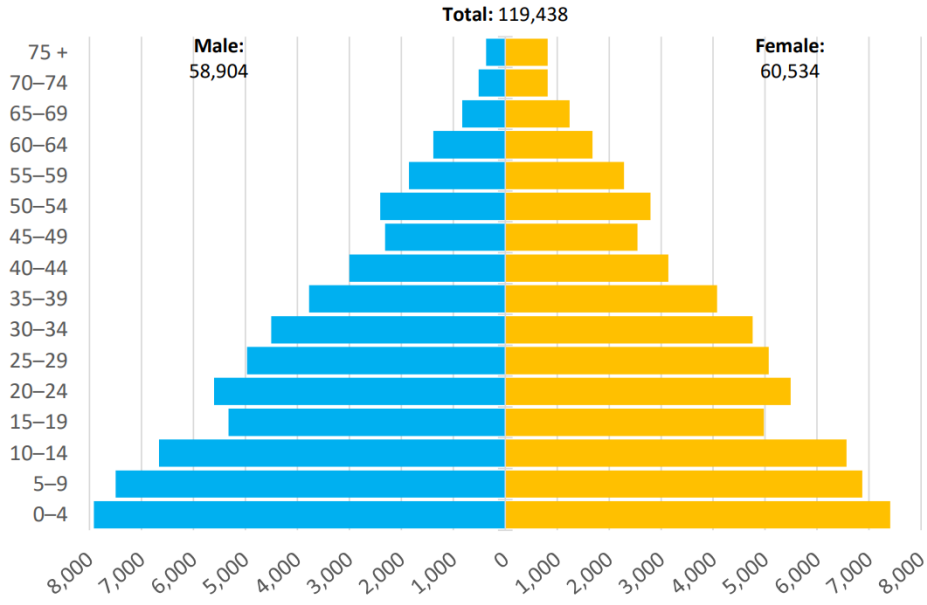
Figure 12
Urbanization in Kiribati, population



Source: SPC (2022).

Kiribati's population is young and brings with it potential long-term demographic dividends (Figure 13). However, for Kiribati to harness the benefit, there needs to be targeted investments in the younger generation. The youth need better access to quality education; quality health services, including sexual and reproductive health services; skills training for employability, decent work and employment opportunities; and meaningful participation options in governance. In this regard, Kiribati's current development plans (i.e., KV20 and KDP 2020-23) recognize the importance of investment in education, skills development, health-care and private sector development to tackle youth empowerment.[80]

Figure 13
Demographic Data of 2022



Source: SPC (2022).

[80] The Government of Kiribati (undated, b and c).

Conversely, failure to capitalize on the current demographic window of opportunity may escalate the already high youth unemployment and job-related emigration, worsen the "brain drain", multiply missed opportunities for economic reforms that require human capital, and ultimately undermine the potential for Kiribati to achieve middle-income status.

4.2 Inequality and poverty

One of the most significant social risks Kiribati faces is its current poverty level. Kiribati had a Gini coefficient of 27.8 in 2019 (see Figure 11 again), indicating an inequality level greater than other PICTs. Nearly 22 per cent of the population in Kiribati was poor in 2019-20, compared to the national standards of living, mainly deprived of non-monetary needs, such as access to clean water, sanitation and electricity.[81] The ample segment of vulnerable populations and the large numbers of unemployed, especially among the youth, could fall easily into the poverty trap.

Kiribati's poverty rates also vary significantly across the island groups where outer islands have a higher chance of falling into poverty.[82] The highest rates of poverty are found in the southern Gilbert Islands, reflecting their relative isolation, limited agricultural potential and vulnerability to drought.[83] These islands also have the highest incidence of basic needs poverty. From a demographic point of view, these islands have the highest proportion of elderly people in the country and therefore experience high dependency and related costs. In contrast, poverty rates were meagre in Line Islands, reflecting its younger population and more abundant natural resources. The 2018 VNR noted that the key drivers of this difference across islands are: i) the available economic opportunities; ii) the extent of isolation; iii) the varying access to subsistence agriculture and fisheries; and iv) the age structure of the population.[84] A large proportion of the Kiribati population is vulnerable to falling into poverty depending on their socio-economic status and geographical location.

4.3 Education

Kiribati fully recognizes the importance of building youth's skills and capabilities for the nation's future and understands winding pathways to adult lives.[85] Kiribati provides compulsory and free primary and junior secondary schooling for children aged from six to 14 years old. Only primary and junior secondary schools exist throughout its 24 inhabited islands, while South Tarawa predominantly hosts senior secondary schools and specialized or technical education facilities.[86] Kiribati has recently improved students' literacy and numeracy skills at the primary level.[87] Yet, many students do not achieve the minimum performance levels. In particular, critical thinking and problem-solving remain issues for young students. In response to the COVID-19 pandemic, Kiribati has developed online and

[81] The Government of Kiribati (2018).

[82] Ibid.

[83] Kiribati National Statistics Office (KNSO), Ministry of Finance and Economic Development, the Government of Kiribati (2022). *Kiribati 2019-2020 Household Income and Expenditure Survey*. Noumea Cedex: New Caledonia: SPC.

[84] The Government of Kiribati (2018).

[85] The Government of Kiribati (undated, b and c).

[86] Ibid.

[87] SPC (2019). *Pacific Islands Literacy and Numeracy Assessment 2018 Regional Report*. Suva: SPC.

offline school resources.[88] The country has also promoted equitable access to multi-media teaching and learning through remote digital communications.

In early childhood education, the net attendance ratio for three- to five-year-old children is relatively high, at 80 per cent. Evidence supports that attending pre-school has a clear and consistent positive influence on children's development.[89] The government is encouraged to continue and expand the coverage of early childhood education to all children, particularly those on the outer islands.

While universal primary education is almost achieved in Kiribati, its secondary education presents growing issues, as students move to the upper levels. The net enrolment ratio for the primary level was 101 per cent in 2020 (99 per cent for males and 104 per cent for females), and no difference in attendance among different age groups.[90] However, differences begin at the junior secondary level. The net enrolment ratio decreases to 78 per cent (75 per cent for males and 82 per cent for females) at the junior secondary level.[91] The completion rates for the upper secondary level remain low in Kiribati, with 21 per cent for girls and 13 per cent for boys in 2019.[92] Boys' high dropout rate has been attributed to the preference or need to dedicate time to paid work, specifically in agriculture and fisheries. The main issues remain in geo-social and gender inequality and education opportunities, especially among children in rural areas and those in the lower wealth quintile.

Kiribati aims to increase opportunities for young I-Kiribati by creating further pathways from schools to post-secondary national programmes. The nation provides post-school technical and vocational education and training (TVET) programmes to enhance workforce skills, productivity and employability while maximizing decent work opportunities. As a result, Kiribati has improved its higher education in recent years (e.g., strengthening the Kiribati Institute of Technology and the Marine Training Centre). Yet, enrolments in post-secondary school training in Kiribati remain weak. One crucial issue is the lack of four-year degrees (i.e., bachelor's) at local institutions.[93] Data on Kiribati students obtaining higher education degrees is not readily available, but over one thousand Kiribati students studied overseas in 2018.[94] Figure 14 illustrates Kiribati's formal education structure.

[88] Iwakuni, S. (2021). *Learning Passport brings innovation to education in Kiribati: Reaching children with access to quality education*. Tarawa: UNICEF Pacific.

[89] World Bank (2018). *The Status of Early Childhood Health and Development in Kiribati*. Washington D.C.: World Bank.

[90] SPC (2023). *Education Management Information System (EMIS)*. The primary net enrollment rate exceeds 100 per cent most likely due to issues related to the population estimates.

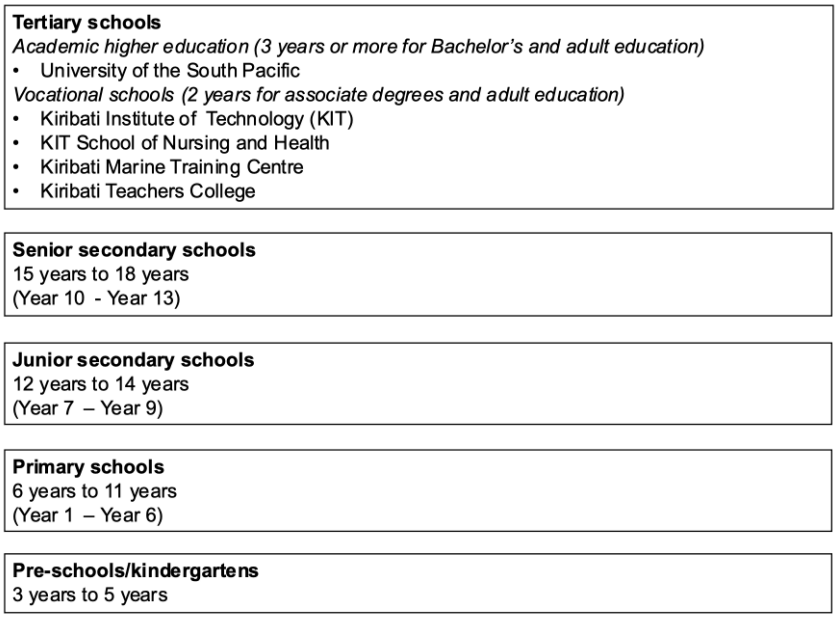
[91] UNICEF (2021). *Kiribati Education Fact Sheets 2021: Analyses for learning and equity using data from Kiribati Development Indicator Survey 2018–2019 (as part of the global MICS initiative)*.

[92] Ibid.

[93] "Kiribati hosts a satellite campus of the University of the South Pacific, which offers in-class and online courses for bachelor's and masters". Visit: https://www.usp.ac.fj/usp-kiribati/.

[94] The United Nations Educational, Scientific and Cultural Organization (UNESCO) (2021). *An overview of higher education system and country profiles in the Pacific region*.

Figure 14
Formal education in Kiribati



Source: Adapted from the Department of Education (2023).

Continued uneven access to educational resources and facilities based on geographical locations and socio-economic factors risk widening disparities and divides in education and youth development. In sum, Kiribati faces three significant challenges in its education system: (i) a high dropout rate at the secondary level; (ii) consistent disparity between urban areas and outer islands; (iii) lack of ICT infrastructure and digital telecommunication facilities; and (iv) a lack of local bachelor's programmes.[95] Other issues identified in Kiribati's education system include a lack of access to quality learning resources, facilities and teachers, and gathering and holding data in multiple databases across the education system, which hampers timely and quality decision-making.[96]

4.4. Labour

Kiribati's workforce is a crucial determining factor in creating broad-based economic opportunities and enhancing economic resilience. Significant unemployment, high informality, family/kinship labour in the traditional subsistence economy and horizontal segregation among sectors and islands, however, characterize Kiribati's labour market.[97] The labour participation rate of the working population is 54 per cent nationally.[98] The formal sector employment accounts for only 20 per cent of the workforce, concentrated in urban areas and dominated in the public sector (approximately 80 per cent of formal sector jobs). There are also significant differences in employment participation rates among islands.[99] Women participate in the labour market to a lesser extent than men (60 and 74 per

[95] UNESCO (2018). *Kiribati Country Background Report*.

[96] The Government of Kiribati (2020). *The Education Sector Strategic Plan (ESSP) 2020 – 2023*.

[97] UNCTAD (2020). *Women Producers of Kiribati and their Participation in Inter-island and International Trade*. UNCTAD/DITC/2020/4.

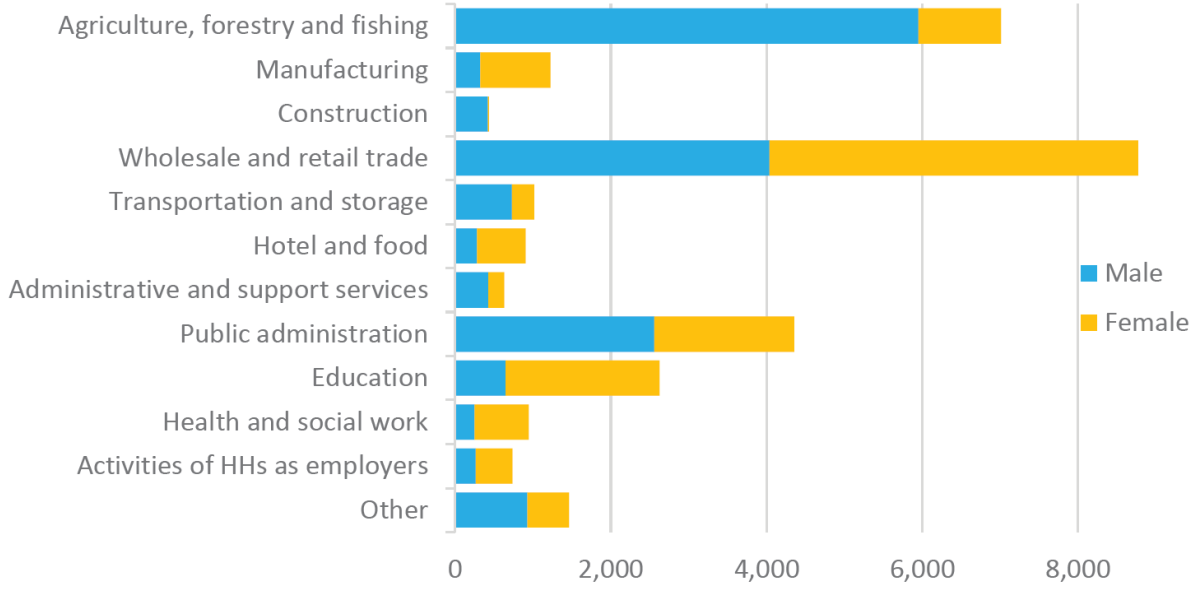
[98] SPC (2022).

[99] Ibid.

cent, respectively in 2015). The unemployment rate in the urban areas (South Tarawa and Kiritimati Island) was 15 per cent in 2020, with many people seeking a limited number of jobs, compared to six per cent for rural islands, and the rate was higher among women than men. Youth also face difficulty in finding formal jobs.[100]

The services sector, agriculture, fishing and government jobs dominate the labour market in Kiribati. As shown in Figure 15, the three dominant industries are "wholesale and retail trade" (29 per cent of all employed persons), "agriculture and fishing" (23 per cent) and "public administration" (14 per cent). Coconuts and copra, Kiribati's major exports, account for nearly 90 per cent of employment in agriculture and are mainly held by men. The same applies to fishing. Several sectors also show significant differences in gender, such as "education" (75 per cent for women), "health and social work" (74 per cent for women), "construction" (97 per cent for men) and "agriculture and fishing" (85 per cent for men).[101] Manufacturing is a more important workplace for women than men. In manufacturing, cigarettes, handicrafts, food and beverages and garments are the main areas where women are mainly employed.[102]

Figure 15
Kiribati's employment by industry and gender



Source: SPC (2022).
Note: HHs stand for households.

4.5. Food and nutrition, health and sanitation

Kiribati, like other PICTs, faces a "triple burden" of malnutrition, whereby under-nutrition, micronutrient deficiencies, and overweight and obesity simultaneously exist within a population. They also increase diet-related NCDs. About four per cent of Kiribati's population was under-nourished in

[100] UNCTAD (2020).

[101] SPC (2022).

[102] Ibid.

2019-21.[103] Numerous households in Kiribati (41 per cent of the population) experience poor access to foods of adequate quality or quantity.[104] Kiribati has moderate child stunting, while child wasting and overweight are low.[105] However, there are marked disparities in stunting and wasting among islands, districts and socio-economic groups. Stunting is observed more among children in rural and poor households.[106] Obesity among adults (18 years and older) increased from 35 per cent in 2000 to 46 per cent in 2016.[107] In 2016, 81 per cent of women aged 15-49 years were classified as overweight.[108] Overweight among youth has also increased in Kiribati.[109] Diabetes and anaemias are also high among women and youth.[110]

Kiribati's dietary practices are problematic. People's typical diet is low in protein, fruits and vegetables, with limited diet diversity and inadequate micronutrient intakes.[111] [112] Household meals rarely contain vegetables due to a combination of three influences: i) food security-related challenges (e.g., low availability of vegetables due to poor growing conditions and high market prices of fresh foods in the urban area); ii) habits (e.g., eating carbohydrates- and protein-based meals); and iii) convenience of procurement and preparation (e.g., labour-intensive local foods to procure and prepare).[113] Imported, processed foods are cheap and convenient sources of energy, preferred by younger generations and easier to prepare than locally grown products (e.g., breadfruits, pandanus fruit and giant taro). Moreover, Kiribati imports the most essential foodstuffs, with food imports accounting for around 35 per cent of the total value of all imports in 2021.[114] The main food import categories are rice and poultry, as well as processed foods made from meat, fish and cereals.[115] Dietary diversity is also lowest in rural areas and poor households.[116]

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[103] FAO, International Fund for Agricultural Development (IFAD), UNICEF, WFP and World Health Organization (WHO) (2022). *The State of Food Security and Nutrition in the World 2022: Repurposing food and agricultural policies to make healthy diets more affordable*. Rome: FAO.

[104] KNSO, FAO and SPC (2021). *Kiribati Food Security Profile*.

[105] KNSO (2019a). *Kiribati Social Development Indicator Survey 2018-19, Survey Findings Report*. South Tarawa, Kiribati: National Statistics Office.

[106] KNSO (2019b). *Kiribati Social Development Indicator Survey 2018-19, Snapshot of Key Findings*. South Tarawa, Kiribati: National Statistics Office.

[107] KNSO, FAO and SPC (2021).

[108] World Health Organization (WHO) (2016*). Global Health Observatory (GHO).*

[109] UNICEF (2019). *The State of the World's Children: Statistical Tables*. Visit: https://data.unicef.org/resources/dataset/sowc-2019-statistical-tables/.

[110] WHO (2016).

[111] Eme, P. E., Kim, N. D., Douwes, J., Burlingame, B., Foliaki, S. and Wham, C. (2020). "Are Households in Kiribati Nutrition Secure? A Case Study of South Tarawa and Butaritari", *Food and Nutrition Bulletin*, 41(1), 131-46.

[112] Ibid.

[113] FAO, IFAD, UNICEF, WFP and WHO (2022).

[114] Calculated based on ITC's Trade Map at: https://www.trademap.org/Index.aspx.

[115] FAO, IFAD, UNICEF, WFP and WHO (2022).

[116] KNSO (2019b).

Kiribati has close to 60 per cent of the population in urban areas, mostly concentrated on the capital island of South Tarawa.[117] The migration from outer islands to the capital for better job opportunities and access to services places a heavy burden on Tarawa´s natural resources, infrastructure and essential services. In particular, the population pressure is severely straining water resources, and the lack of adequate protection and management of water reserves is deteriorating water availability and quality. For instance, in South Tarawa, there are only two viable water reserves, both subject to contamination from human, household and commercial wastes, as uncontrolled informal settlements and business activities are in their vicinity.[118] In addition, only about 38 per cent of solid waste is collected by the municipality, and nearly 60 per cent is disposed on-site or directly into the ocean.[119]

Most of the urban population has access to basic drinking water services. However, more than one-third of rural households do not have access to fresh water, and its poor quality risks public health (Table 4).[120] [121] The majority of the population does not also have access to private toilets and open defecation rates are some of the highest in the region, contributing to contamination of the water supply. [122] The amalgamation of over-crowding, limited access to drinking water, inadequate sanitation facilities and a degraded sewage system has resulted in a high incidence of water-borne diseases and the child mortality rate is among the highest in the Pacific.

Table 4
Basic sanitation conditions among island groups

District/ Island Group	Basic Drinking Water	Basic Sanitation	Basic Hygiene
National	**80.8**	**45.1**	**60.2**
South Tarawa	95.3	50.6	63.4
Northern Gilbert	67.6	44.4	52.1
Central Gilbert	69.2	34.9	60.1
Southern Gilbert	62.8	36.7	56.6
Line/Phoenix	52.5	32.2	63.8

Source: Pacific Data Hub (2022).[123]

[117] Census Atlas (2022).

[118] The United Nations Human Settlements Programme (UN-Habitat) (2020). *National Urban Policy: Pacific Region Report*.

[119] Ibid.

[120] KNSO, FAO and SPC (2021).

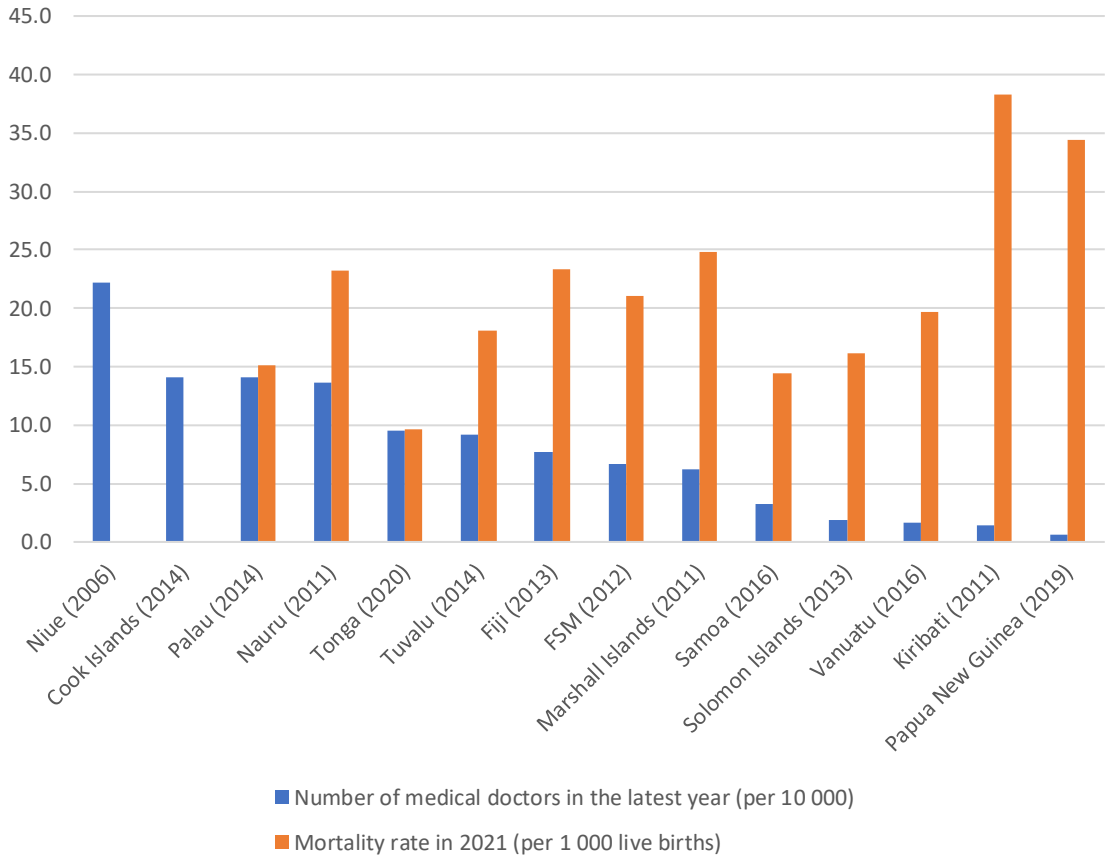
[121] KNSO (2019b).

[122] Ibid.

[123] Pacific Data Hub (2022). *Social Development Indicator Survey 2018-2019, MICS6, Version 01*.

While Kiribati has developed and renovated hospitals and clinics, adequate healthcare provision remains a significant developmental challenge, especially for pregnant women and mothers, new-borns and younger children. The high incidence of NCDs also requires significant human and financial investments as well as changes in mindset. In Kiribati, access to health and medical services is free, but not all I-Kiribati have equal access, due to limitations on service provision. Reaching the furthest behind remains a challenge in Kiribati with its geographically dispersed population, high logistical costs and a lack of medical provisions and facilities, an inadequate number of medical personnel per capita in outer islands and difficult access, availability and uptake of sexual and reproductive health services.[124] In this sense, Kiribati has made limited progress towards universal health coverage. Figure 16 illustrates the present status of Kiribati's healthcare services as one of the poorest in the Pacific.

Figure 16
The status of health-care services in the Pacific



Source: The authors, developed based on the World Bank (2023).
Note: The years of data are 2021 or the latest available.

Kiribati's fertility rate is high for developing country standards (at 3.3 per cent in 2020), with higher rates in rural areas and outer islands, and among women from poorer families or without education.[125] Adolescent births for women aged 15-19 are also higher in rural areas and poorer families. Only one-third of women use a method of family planning. Particular attention should be given to sexual and reproductive health to reduce the high adolescent birth rate.[126] Closing these healthcare gaps requires

[124] WHO (2016).

[125] World Bank (2023).

[126] Ibid.

a holistic, collaborative and integrated approach that encompasses the right of all individuals to have adequate coverage of essential healthcare services, as measured by the availability, accessibility, acceptability and quality of the services. A strong health workforce is also necessary to provide essential health services. Further disaggregation of data at local levels will assist in better targeting programmes and resources.[127]

4.6. Human rights

The legal system of Kiribati is based on English common law, supplemented by customary law.[128] The President is both the Head of State and the Head of Government, directly elected by a simple majority popular vote, following the nomination of candidates from among House of Assembly Members. The presidential term is four years, and the President is eligible for two additional terms. The Vice President is appointed by the President.[129]

The I-Kiribati are represented by a unicameral House of Assembly, or Maneaba Ni Maungatabu, comprising 46 seats: i) 44 members directly elected; ii) one member appointed by the Rabi Council of Leaders, representing Banaba Island; and iii) one ex officio member, the Attorney General. The members serve four-year terms. There are two established political parties: the Boutokaan Kiribati Moa Party and the Tobwaan Kiribati Party, sharing, after parliamentary elections in 2020, equal numbers of seats in the Parliament. The incumbent president, re-elected for a second term in 2020, is also the leader of the Tobwaan Kiribati Party.

Kiribati´s judiciary consists of a High Court with jurisdiction over constitutional issues. The Chief Justice is appointed by the President on the advice of the Cabinet, in consultation with the Public Service Commission (PSC). Other judges are appointed by the President, on the advice of the Chief Justice and the PSC. Subordinate courts include the Court of Appeal and Magistrates' Courts.

Kiribati has faced multi-faceted human rights issues, such as varying access to basic public services, such as utilities, education and healthcare and gender discrimination in household responsibilities and job opportunities; issues that PICTs commonly share. Kiribati also has some unique human rights issues, including: (i) forced migrants from Banaba Island caused by phosphate mining; (ii) sea-level rise-driven displacements and climate-induced refugees; and (iii) issues related to nuclear weapons testing in Line Islands.[130]

4.7. Gender and inclusion

Kiribati's Constitution guarantees women formal equality before the law, but this practice has not followed legislation.[131] Discrimination against women is grounded in customs and traditions that have not evolved with society, and additional reinforcing misogyny denies women and girls their rights. Women have no legal recourse where customs infringe on the enjoyment of their rights and

[127] SPC (2022).

[128] Paterson, D. E. (1995). "South Pacific customary law and common law: Their interrelationship", *Commonwealth Law Bulletin*, 21(2), 660-671.

[129] Refer to: https://www.parliament.gov.ki/constitution.

[130] Various academic sources.

[131] Refer again to: https://www.parliament.gov.ki/constitution.

freedoms.[132] VAWG represents a grave risk to social cohesion in Kiribati. Child and adolescent marriages and the adolescent birth rate are other manifestations of the same problem.[133]

In Kiribati, like other PICTs, women face gender-based differences in the burden of household care responsibilities, as well as access to -- and control of -- resources and decision-making, due to socio-cultural and gender norms.[134] Kiribati is a patriarchal society that does not regard women as having an equal role in decision-making. Women are often responsible for producing goods needed to meet traditional community obligations, as well as for housekeeping and childcare. These obligations often limit their ability to engage in informal and formal paid work or skills and business development, although equal pay and freedom from sexual harassment in the workplace have been formally enacted since 2015.[135] Barriers still subsist to women's full participation in political, economic and social life in Kiribati. Women living in rural areas and outer islands, in particular, face significant barriers to gaining access to healthcare, higher education and paid employment.

Regarding I-Kiribati women's representation in government, four women have appeared on the Parliamentary stage, including the Speaker of Parliament.[136] At the sub-national level, six women serve on island councils and local governments, including one female mayor, while 44 per cent of judges are women, and five per cent of the police establishment is represented by female officers. While rates of women in political leadership remain low, women hold most senior leadership positions within the public sector. Overall, there are more female high-level government officials than men.[137]

Women face more severe challenges operating businesses than men, although they run 40 per cent of them in Kiribati.[138] Access to finance is a major supply-side constraint faced by women producers in both rural and urban areas of Kiribati. Women producers usually rely on individual contributions or family, village and community loans when starting their businesses. The principal industrial sectors where women work are manufacturing, especially in tobacco factories, handicrafts production (largely own account working), food and beverages companies, and garment businesses. However, these are characterized by low wages and volatility of employment. The hospitality sector, where women also play a major role, is sensitive to economic downturns, including the recent effects of COVID-19-related measures.[139] Women face barriers in formal employment, and there is insufficient support provided to working women with children: employers in the private sector are required to pay only 25 per cent of a woman's salary during maternity leave; the 12-week maternity leave period has to begin six weeks before the due date and end six weeks after birth; there are no nursing spaces or day-care centres;

[132] UN-Habitat (2020).

[133] SPC (2022).

[134] The Government of Australian (2011). *Australian Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation (CSIRO). International Climate Change Adaptation Initiative. Pacific Climate Change Science Climate Change in the Pacific: Scientific Assessment and New Research. Volume 2: Country Reports*. Chapter 6: Kiribati. https://www.pacificclimatechangescience.org/wp-content/uploads/2013/09/Kiribati.pdf.

[135] The Government of Kiribati (2015). *Employment and Industrial Relations Code 2015*.

[136] UNDP (2021). *Pacific Women in Politics: Kiribati*.

[137] The Government of Australia (2019). *Kiribati Country Plan Summary. Pacific Women Shaping Pacific Development*. Department of Foreign Affairs and Trade.

[138] Pacific Community (2017). *Women's Economic Empowerment in the Pacific. Regional Overview*. 13th Triennial Meeting of Pacific Women and 6th Meeting of Ministers for Women.

[139] Ibid.

and there is no provision for paternity leave.[140] Other challenges to progressing women's economic empowerment include a concentration of women in the informal sector without any social security benefits.

Physical and sexual violence against women is prevalent in Kiribati, which is widely tolerated with general impunity for men, and difficulties for women in finding either protection or shelter. In 2019, 60 per cent of ever-partnered women reported perpetration of physical and/or sexual abuse within the previous year, and 66 per cent of women reported physical and/or sexual violence from an intimate male partner.[141]

[140] International Labour Organization (ILO) (2011). *Kiribati - Maternity protection – 2011*.

[141] UN Women (2020). *Violence Against Women and Girls in South Tarawa, Kiribati: Findings from a 2019 Baseline Study*.

5. Prosperity

Kiribati has faced multiple challenges to strengthening its economy. Kiribati's persistent structural challenges include a narrow economic base, geographical remoteness, heavy reliance on external grants, near-total dependence on imported foods and fuels, limited sources of revenue (i.e., fishery licenses) and poor infrastructure. Kiribati's economic development is also constrained by a shortage of skilled workers, overcrowding of the capital Tarawa, and growing vulnerability to climate change. Kiribati remains one of the poorest countries in the Pacific.

This section addresses Kiribati's unique challenges in fostering its economy in sustainable, inclusive and resilient ways. It focuses on five key topics, spanning: (i) a macro-economic overview; (ii) distinct economic vulnerabilities; (iii) the private sector and SOEs; (iv) the primary sector; and (v) infrastructure and digitalization.

5.1. Macroeconomic overview

The economic impact of the COVID-19 pandemic in Kiribati was less severe than in the rest of the world. Under the COVID-19 outbreak, Kiribati went into lockdown with borders closed from March 2020, with the government declaring a State of Emergency, while no local COVID-19 case was reported. Kiribati remained COVID-free until early 2022. Except for civil servants engaged in essential services, most were not required to work for nearly three months. Shortly after the nation re-opened its borders in January 2022, the islands finally reported its first local case and announced a nationwide curfew, again imposing strict travel restrictions until November of the same year. It fully reopened its border and economy in August 2022. Kiribati accounted for 2,810 cases and nine deaths in total.[142]

The economic contraction, only 1.4 per cent in 2020, was mainly driven by the impact of border closures on development partner-financed construction activities, slow fresh tuna exports, as well as lower public spending during a long election caretaker period.[143] Its economy moderately recovered in 2021 (1.5 per cent growth) based on consumer demand from expanded social protection schemes and public sector pay rise, as the government accounts for some 80 per cent of formal sector jobs.[144] Due to the late outbreak of COVID-19 followed by lockdown, severe droughts affecting the agricultural industry and slow fishery revenues, Kiribati's GDP growth in 2022 was still moderate (1.8 per cent).[145] Kiribati expects to grow moderately further with two to three per cent in the next few years (see Table 4 again).[146]

While the government's pandemic-related support, such as unemployment, senior citizen and disability benefits (supported by Australia) and business closure grants, provided an effective remedy, and Kiribati succeeded in relatively a speedy recovery from the pandemic, they did put extra pressure

[142] Interviews with various I-Kiribati at the United Nations Multi-Country Office for Micronesia (February and October 2023).

[143] ADB (2023). *Asian Economic Outlook 2023*. Manila: Asian Development Bank.

[144] ADB (2023); IMF (2023); Department of Foreign Affairs and Trade, Australia (2021*). PACIFIC COVID-19 RESPONSE PACKAGE – KIRIBATI ANNEX*. On the other hand, IMF (2023) projected a high growth rate of 7.9 per cent in 2021 with COVID-19 supportive fiscal policies.

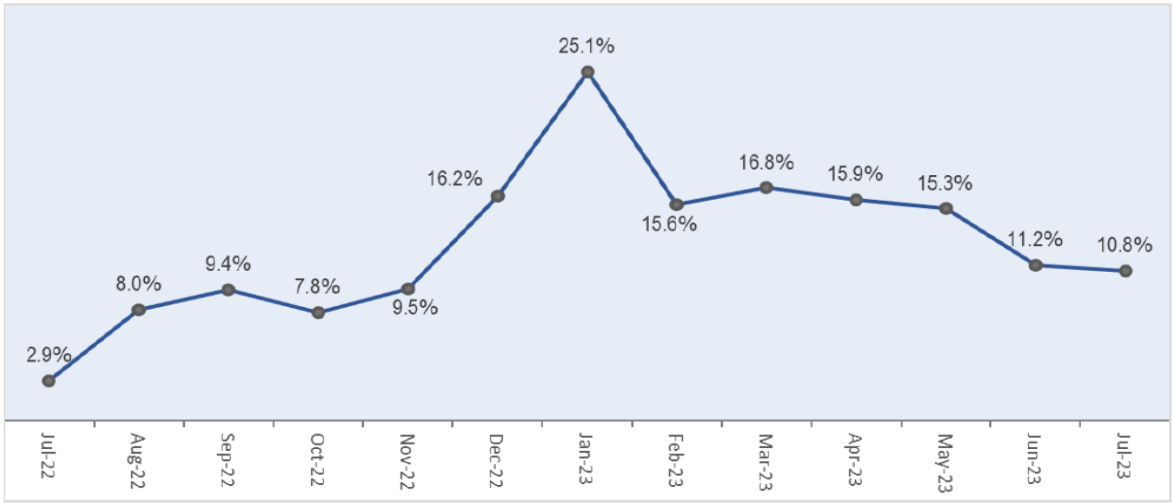
[145] ADB (2023).

[146] IMF (2023). "Kiribati: 2023 Article IV Consultation—Press Release; and Staff Report", *IMF Country Report No. 23/329*.

on its fiscal and debt management.[147] The current account is expected to swing from a surplus to a deficit of four per cent of GDP in 2022, due to large COVID-19-related measures, higher import prices and lower fishing revenues, while the Revenue Equalization Reserve Fund (RERF, also see box below)) provided double financial transfers.[148] Kiribati's projected fiscal deficits risk economic and financial stability, as it is expected to surpass 10 per cent of GDP continuously, and will therefore deteriorate the sovereign wealth fund's financial sustainability in the long run.[149] Kiribati's foreign reserves remained adequate during the pandemic and will do so in the near future, as they have accumulated nearly one billion dollars in reserves at the sovereign wealth fund, in addition to development partner receipts. However, the pandemic provided an extra burden to the government, the private sector and communities as they heavily rely on foreign inputs to sustain their economy and society.[150]

Inflation has also become an issue since the reopening of borders in August 2022. Although inflation peaked in January 2023 (at 25 per cent) and has gradually declined afterwards, inflation has kept over two digits since December 2022 (Figure 17). The increased price is attributed to restarted public infrastructure projects, a recovery of domestic demand, tourism inflows, supply shortages and elevated commodity prices and freight costs at the global level. While it may indicate a higher economic growth than estimated, the authority is required to monitor the trend carefully, for intervention if so required.

Figure 17
Monthly inflation rates from July 2022 to July 2023



Source: KNSO (2023).[151]

Kiribati's economy is primarily driven by fisheries license revenue and foreign development assistance, which has fluctuated widely, in addition to a small contribution from copra production and exporting. Fishery revenues reached over 90 per cent of GDP in both 2015 and 2019, although its share in GDP has subsequently declined (Figure 18). Grants from development partners accounted for 38 per cent of GDP in 2020 but sharply declined to 19 per cent in 2021. The earlier increase in fishing license

[147] IMF (2023). *Kiribati: 2023 Article IV Consultation-Press Release; and Staff Report*. Washington D.C.: IMF.

[148] IMF (2023).

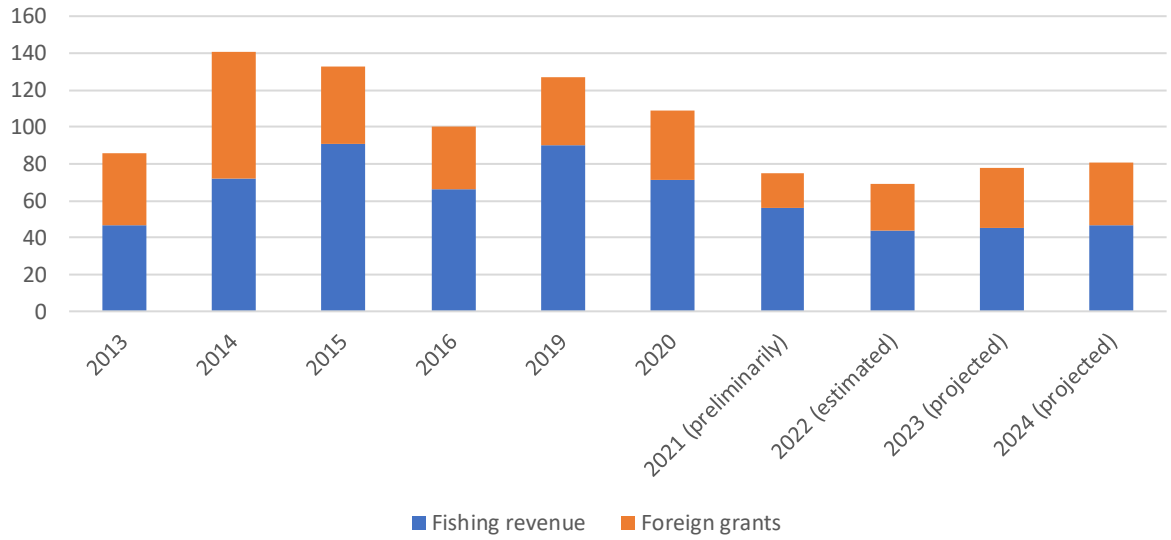
[149] Ibid.

[150] Interviews with the Ministry of Finance of Kiribati in February 2023.

[151] KNSO (2023). *CONSUMER PRICE INDEX – JULY 2023*.

revenue significantly improved the capacity for expanded public spending on capital asset development projects, such as road rehabilitation, water supply and sanitation and airport renovation. Public expenditure was equivalent to 112 per cent of GDP in 2021, supporting the activities of the public sector and state-owned enterprises (SOEs), including the SOE-driven service sector in South Tarawa. The private sector remains small, mostly consisting of small and medium-sized enterprises (SMEs) in the wholesale, retail, transport and hospitality sectors.[152] Kiribati's distinct structural challenges in this regard include: (i) foreign dominance in some supply chains; (ii) the necessity of fish stock preservation; and (iii) a lack of high-value-added local activities.

Figure 18
Kiribati's fishing revenue and foreign grants as the share of GDP
2013-2024, including projections



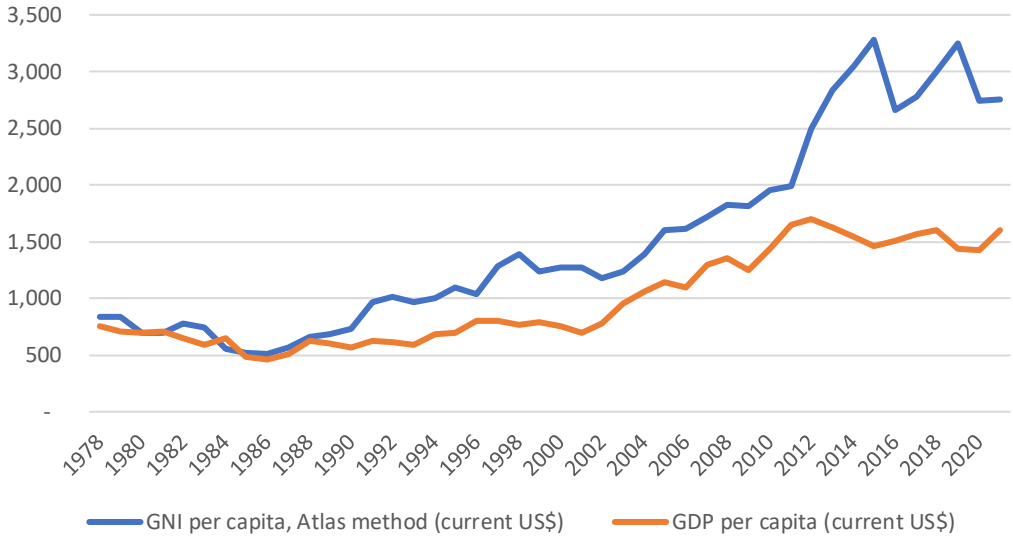
Source: Developed based on the data of IMF (2023).
Note: The final statistics for 2017/18 are not available.

5.2. Distinct economic vulnerabilities

This section presents two pertinent issues, namely: (i) turbulence in national revenues; and (ii) the gap between GNI and GDP and its implications. As partially discussed in the previous section, Kiribati's national income has experienced turbulence in recent years (Figure 19). After the peak in 2015 (GNI per capita of $3,280 per annum), its national income showed stagnant growth, even before the COVID-19 pandemic, and did not pass the ceiling of $3,500 per annum. The fishing license revenues have caused this trend mainly due to unfavourable and unpredictable weather events, such as *El Niño* and *La Niña* (see Figure 19 again). This is a worrying sign for the future, especially for a country with a rapidly growing population, where the demand for essential public services, including utilities, infrastructure, education, healthcare and social protection, is expanding even more quickly, thereby putting additional pressure on fiscal management.

[152] IMF (2023). *Kiribati: Staff Concluding Statement of the 2023 Article IV Mission*, 8 February.

Figure 19
Kiribati's GNI/GDP per capita
1978-2021, current dollars



Source: Developed on World Bank (2023).

Kiribati's GNI has also diverged from GDP by a wider margin (see Figure 18 again).[153] This suggests only a small portion of public revenues, including development partner assistance and spending, was used for local production while consuming imported goods and services. This phenomenon is typical with SIDS, as goods and services imports far outweigh goods and services exports, with this gap widening further with growing domestic demand (see Figures 20 and 21).[154] [155]

Figure 20
Kiribati's international trade for goods
Million dollars

Source: Developed on ITC (2023).
Note: No data is available for 2019 due to the COVID-19 pandemic's impact on public administration in 2020.

[153] GNI is based on ownership, while GDP is based on location. In another way, whereas GNI is the value produced by all the citizens, GDP is the value produced within a nation's borders. See more details: Webb, J. (2020). "Kiribati economic survey: Oceans of opportunity", *Asia and the Pacific Policy Studies*, 7, 5–26.

[154] UNDP (2022). *Graduation from LDC status: trade preference and development financing implications for Asia-Pacific countries.* UNDP Bangkok Regional Hub, Bangkok; Webb (2020).

[155] It is noteworthy that the value of 2021 imports increased by 60 per cent from the previous year, significantly affected by COVID-19-related social benefits.

Figure 21
Kiribati's international trade for services
Million dollars

Source: Developed on ITC (2023).
Note: ITC, UNCTAD and WTO estimated the values.

Fish (mostly frozen skipjack and bonito) and copra still contribute the most to overall export value, accounting for more than 97 per cent in 2021, and never less than 80 per cent (as in 2017).[156] In 2021, the biggest export markets were New Caledonia, Malaysia, Japan, Fiji and the United States, cumulatively representing 89 per cent of Kiribati's export markets.

Kiribati's increasing number of overseas migrants impacts its economic structure, reflected in its GNI, perhaps encouraged by Kiribati's earlier "migrate with dignity" policy.[157] Kiribati has a long history of labour migration (particularly seamen), promoting overseas employment and protecting its workers abroad.[158] The government has established strategic partnerships with overseas employment countries (i.e., Australia and New Zealand) and agencies. However, few I-Kiribati have migrated abroad permanently because of the temporary or seasonal nature of overseas jobs as seafarers, fishermen and agricultural workers.[159] Kiribati is among the top PICTs in terms of its dependence on remittances, which accounted for approximately 10 per cent of GDP before the COVID-19 pandemic.[160]

5.3. Private sector and SOEs

Two pertinent issues suggest a fundamental element in Kiribati's economic structure: i) the private sector and ii) SOEs. Kiribati's economic structure has a nascent private sector that is concentrated on

[156] The International Trade Centre (ITC)'s Trade Map at: https://www.trademap.org.

[157] Kupferberg, J. S. (2021). "Migration and dignity – relocation and adaptation in the face of climate change displacement in the Pacific – a human rights perspective", *The International Journal of Human Rights*, 25(10), 1793-1818.

[158] Kiribati's *National Labour Migration Policy* (2015).

[159] Voigt-Graf, C. and Kagan, S. (2017). "Migration and labour mobility from Kiribati", *Development Policy Centre Discussion Paper #56*. Crawford School of Public Policy. The Australian National University.

[160] International Organization for Migration (IOM) (2021). *Asia-Pacific Migration Data Report 2020*.

wholesaling, retailing, transport and hospitality, and contributes to a small part of the economy.[161] Inflows of foreign direct investment (FDI) for Kiribati are also sparse.[162] In addition to its small economy and lack of resources, an opaque investment climate makes economic activity uncertain in Kiribati. The difficulties of accessing credit, trading across borders, enforcing contracts, dealing with construction permits and contracting electricity and water supply all represent obstacles that deter economic operators from investing or developing their business footprint.[163] Transparency International´s corruption research also points to a perceived lack of integrity in key public offices for economic activity and a lack of ethics in the business sector, particularly among public contractors.[164]

Unfair competition with SOEs exacerbates the difficulties the private sector faces in Kiribati. The government owns nearly 30 SOEs that provide essential public services to citizens in various areas, such as telecommunications, transport, power, water and waste, as well as some commercial services, such as wholesaling and retailing, where the private sector typically operates.[165] Demand for these services has been enlarged with Kiribati's widely scattered territories and growing population. However, the SOEs are typically loss-making, despite their monopoly positions in the market, and survive with heavy public subsidies.[166] There is a real risk that SOEs undermine the private sector's ability to become commercially sustainable and stifle entrepreneurship, while adding to the fiscal risk represented by the budget transfers required to sustain SOEs and the employment they provide to I-Kiribati. Although the sovereign fund is a solid buffer that mitigates these risks, especially if it continues to be prudently managed and increasingly endowed, SOEs' role and relationships with the private sector should be carefully reviewed. In particular, SOEs' managerial efficiency is an issue in need of being revisited. In this vein, corporatization and privatization have been two popular strategies to enhance SOEs' performance, although, without large improvements in managerial capability and entrepreneurship, such actions may lead to no positive outcomes.[167]

5.4. Primary sector

In Kiribati, the primary sector contributed one-fourth of GDP, excluding the fishing license revenues.[168] More than 80 per cent of the population participates in farming or fishing.[169] While the primary sector is substantial in Kiribati, domestically produced food does not fulfil national demand and tends to be more expensive than imported food. Preferences to consume ultra-processed and less expensive imported food, coupled with the absence of diversified food supplies, has implications for people's

[161] Duncan, R. (2014). "Chapter 6 Kiribati: A political economy analysis of constraints to economic growth", in R. Duncan and H. Codippily (eds.). *Identifying Binding Constraints in Pacific Island Economies*. Honolulu: East-West Center.

[162] UNCTAD (2023). "General profile: Kiribati", *UNCTADstat*.

[163] World Bank (2020). *Doing Business Archive*. https://archive.doingbusiness.org/en/doingbusiness.

[164] Transparency International (2023). *Kiribati: Country Data*.

[165] Duncan (2014).

[166] Ibid.

[167] Ibid.

[168] Gillett R. and Tauati, M. I. (2018). *Fisheries in the Pacific: Regional and national information*. Food and Agriculture Organization (FAO).

[169] SPC (2022).

diets and health.[170] Traditional knowledge of food preservation has increasingly diminished over the years, further affecting the availability of domestic food.

Kiribati's agricultural sector is severely limited by the small land area, poor soil quality and limited water resources.[171] The shallow, calcareous, alkaline and coarse-textured soils, with poor organic matter contents and low water-holding capacity and fertility, represent a major constraint to agricultural production. Further, agricultural lands are not freely accessible due to the local and traditional land tenure system, and available lands may diminish over time as coastal and low-lying land is lost due to increasing erosion and rising sea levels. Overuse, droughts and sea-level rise also result in saltwater contamination of groundwater resources, which are the main water sources for agriculture. Southern islands have harsher climatic conditions, lower crop variety and the lowest accessibility to food crops. Variable seasonal rainfalls affect water sources, with northern islands receiving maximum rainfall and southern islands becoming increasingly water-scarce.[172] Thanks to their wet climate and richer soils, Makin and Butaritari, located in the northernmost of Gilbert Islands, are major producers of fruits, such as banana and papaya, delivered to South Tarawan markets.[173]

Kiribati's EEZ is the most productive tuna fishing zone in the western and central Pacific.[174] Foreign-based offshore fishing vessels chiefly operate mass-scale commercial tuna fisheries. Kiribati's locally based longline fleets consist of up to 20 Chinese and Fijian-flagged joint venture vessels, and one Kiribati-flagged vessel operating out of Fiji.[175] Longline landings occur directly at Kiribati's joint venture company (with Chinese and Fijian partners) -- Kiribati Fish Limited (KFL) -- on Tarawa, primarily processing for export. KFL also sells lower-grade tuna, processing offcuts (e.g., tuna heads and jaws) and longline bycatch on the local market, according to demand in various product forms.[176] Kiribati's dependence on fisheries income necessitates further improvement of the management of this sector, for longer-term sustainable economic development and the avoidance of over-fishing.

Box 4
Kiribati's subsistence economy

The Kiribati population is mostly involved in subsistence agriculture. Communities have developed sophisticated agriculture systems based mainly on coconut, breadfruit, pandanus (sweet varieties), giant swamp taro (bwabwai), taro, sweet potato, cassava, pumpkin, wild fig (te bero), pawpaw and vegetables such as Chinese cabbage, cucumber, eggplant, tomato, spinach, water spinach (kang kong), Chaya, bele, iaroo and iamai. The traditional farming method is adopted, which involves an extensive composting technique, using pits dug to a depth of between one and eight meters and filled with compost.[177]

[170] KNSO (2019). *Kiribati Social Development Indicator Survey 2018-19: Survey Findings Report.* Tarawa.

[171] Otiuea, *et al*. (2019).

[172] Ibid.

[173] Ibid.

[174] Gillett and Tauati (2018).

[175] The Central Pacific Producers Limited (CPPL), wholly owned by the Government of Kiribati, has operated three tuna longliners since 2019. Its catches are sold primarily for export through KFL.

[176] Campbell, B. and Hanich, Q. (2014). *Fish for the future: Fisheries development and food security for Kiribati in an era of global climate change*. Project Report 2014-47. Penang, Malaysia: WorldFish.

[177] Thomas, F. (2002). "Self-reliance in Kiribati: contrasting views of agricultural and fisheries production", *The Geographical Journal*, 168(2), 163–177.

Many Kiribati people meet their everyday needs with trees, especially coconut, pandanus, mangroves and other indigenous tree species. Those local trees often have multiple uses, and all provide important ecological services in the harsh atoll environment, such as for construction, boatbuilding, toolmaking, handicrafts, fuelwood, fish trap stakes, dyes, medicines and leaves, and flowers for making garlands and perfumes.[178]

Coastal fishing is primarily for subsistence and sale in local markets, though some coastal fisheries (mainly aquarium fish and sea cucumber) are exported.[179] Population growth, increasing exploitation of coastal resources (particularly close to urban markets), climate change and pollution are intensifying impacts on Kiribati's coastal fishery sector. The government has enforced a community-based fisheries management mechanism and established a registry of licensed fishing vessels in a bid to preserve coastal fishery stocks.[180]

Box 5
Copra subsidy

The subsidy scheme for copra can be an applicable industrial and anti-poverty policy, increasing its production and promoting light manufacturing, such as crude coconut oil and copra meat. The scheme also transfers fishing license revenues and foreign aid to outer island communities where the subsistence economy still dominates, and multiplier effects are expected from cash income distribution. However, the long-run sustainability of the copra subsidy has been in question. If the price tag per kilogramme (see below) continues to be raised, the incentive may deteriorate the quality of copra and export competitiveness, while discouraging other valuable activities.

The copra subsidy was initially enacted in the mid-1990s. It has had several policy objectives: promoting copra production, boosting national revenue, growing exports, facilitating cash transfer to outer islands and reducing unemployment. The government doubled the copra subsidy from $1 to 2 Australian dollars per kilogramme in 2016, increasing the programme costs nearly four times before, while the price for copra on Asian markets between 2014 and 2018 averaged 1.1 Australian dollars per kilogramme.[181]

Copra-based exports (e.g., copra, crude oil and copra meal) rapidly increased, peaking in 2017, but slumped shortly after that. Several problems have been observed, including (i) the weight-based subsidy has encouraged the focus on quantity instead of quality; (ii) the quick hike of copra production often exceeded the processing capacity, resulting in excess and unprocessed copra on Tarawa and outer atolls; and (iii) the copra subsidies have also impacted on fiscal management with the increased programme and logistics costs. The current scheme has also introduced distortions to the commercial and labour markets while undermining the viability of other uses for coconuts.[182] However, it is not realistic to terminate this long-standing and potentially effective policy. The government is therefore recommended to improve this scheme's efficiency by fine-tuning the scheme's entire supply chain and moving up to more value-added processes.

[178] Ibid.

[179] Bell, J. D., *et al*. (2021). "Pathways to sustaining tuna-dependent Pacific Island economies during climate change", *Nature Sustainability*, 4, 900–910.

[180] Ibid.

[181] Webb (2020).

[182] Ibid.

5.5. Infrastructure and digitalization

Infrastructure deficits in utilities, transport and telecommunications, exacerbated by the impacts of climate change, with some critical assets unprotected from inundation and coastal erosion, are severe constraints to Kiribati's economic stability and development. Infrastructure development is further constrained by the lack of or minimal available land, and limited logistical and ICT connectivity is another major impediment to service delivery and data collection for a nation with such a widely dispersed territory. A poorly developed private sector also limits the chance to develop the country's infrastructure and deliver public services, through sub-contracting, turn-key services, and public-private partnerships, while increasing operating costs.[183]

Kiribati remains one of the least connected countries in the world, where much of the population has no access to ICT. Even if they live within range of the existing, often unreliable, networks, they are unable to afford the services. Until recently, about 40 per cent of the population relied entirely on public broadcast access (e.g., radio, satellite-based telecentres).[184] In 2020, Internet users only represented 14 per cent of the population, while household Internet access was at just seven per cent, although the number of new Internet service providers has subsequently increased (Table 5).

Table 5
Kiribati connective parameters

Mobile Connectivity Parameter	Coverage
3G coverage (% of population)	60.0
Mobile connections (% penetration)	48.5
Mobile broadband connections (% penetration)	0.9
Individuals using the Internet (%)	13.7
Households with the Internet (%)	6.9
Mobile cellular prices (% of GNI per capita)	5.5
Mobile broadband prices (% of GNI per capita)	5.3

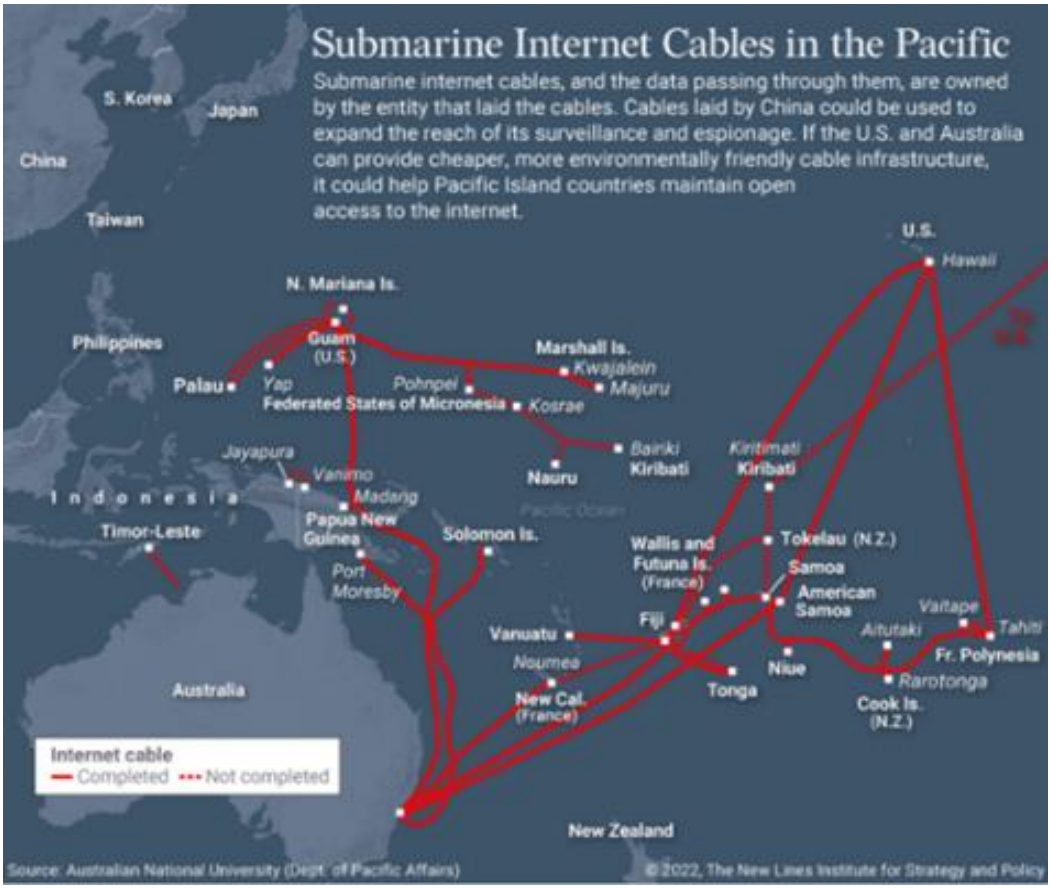
Source: The World Bank (2023).

Digital infrastructure in Kiribati is fragile, mainly due to the lack of an undersea internet cable connections, resulting in a reliance on less reliable satellite connections. Australia, Japan and the United States have financially supported a new submarine line connection from Pohnpei through Kosrae to Tarawa. Figure 22 illustrates the planned connection lines (dotted lines) and the existing ones (solid lines).

[183] Office of the Pacific Ocean Commissioner (OPOC) (2021). *Blue Pacific Ocean Report: A Report by the Pacific Ocean Commissioner to the Pacific Islands Forum Leader*.

[184] World Bank (2019). *Implementation Completion and Results Report (IDA H780-KI) on a Grant in the Amount of SDR 0.7 million (US$ 1.0 million Equivalent) to the Republic of Kiribati for a KI: Telecommunications and ICT Development Project, Report No: ICR00004956*, December 27, Digital Development Global Practice, East Asia and Pacific Region.

Figure 22
Submarine Internet cable connection in the Pacific



Source: The New Lines Institute for Strategy and Policy (2022).

Box 6
Developing Kiritimati Island as a new blue frontier of Kiribati

Kiritimati Island, located in Northern Line islands, holds the largest landmass in Kiribati, and its population is growing rapidly, reaching 7,400 in 2020 (6.2 per cent of the total national population).[185] The island provides a rare opportunity for economic development in Kiribati, allowing more settlers to develop additional lands for housing, farming and business, including potential land reclamation.[186] Furthermore, its location as the middle point among major markets, such as Hawaii, Australia and New Zealand, provides a strategic advantage to the island from both commercial and security points of view. The island is also rich in natural resources and minerals.

However, the government needs to develop a plan, considering the rapid population growth, urbanization, environmental degradation and climate change impacts. One critical challenge for Kiritimati Island is providing quality public services (e.g., education and healthcare) and adequate utilities, including power, water and waste facilities, while enhancing connectivity in transport, telecommunications and the internet. Those services and facilities tend to be extremely expensive, requiring high development costs on an isolated island such as this. Here, the United Nations system, including UN-HABITA, can provide necessary technical assistance to the government for developing a comprehensive island development plan.

[185] SPC (2022).

[186] Ibid.

6. Planet

In Kiribati, an atoll nation, the risks posed by climate change are existential and growing, as one of the world's most vulnerable countries. The islands particularly face a threat of sea level rise impacting atolls, reefs and coastal areas, fresh-water farming and people's health and livelihoods, intensified by the more frequent occurrence of droughts, extreme heat and high tides.[187] Apart from Banaba, all of Kiribati's atolls are less than four metres above sea level. Therefore, rising sea levels and associated salinity have shown critical impacts on the islands, including biodiversity in the ocean, land and forest.

Against the above background, this section covers three crucial environmental issues for Kiribati, namely: (i) climate change and natural disasters; (ii) biodiversity preservation; and (iii) deep-sea mining. The latter topic has recently attracted international attention, and it may provide considerable commercial benefits to Kiribati, albeit with potentially adverse impacts to its environment, including biodiversity degrading.

6.1. Climate change and natural disasters

In Kiribati, the effects of climate change are already being observed. Climate change broadly impacts Kiribati's human security, environment, biodiversity, economy and health. Associated losses could be devastating to the small economy as a whole, and less resilient infrastructures of the country in particular.[188] Table 6 provides a brief overview of Kiribati's climate risk projection, by type of natural disasters.[189]

Table 6
Kiribati's Climate Risk Projection

Hazard	Level
Coastal flooding	High
Tsunami	High
Extreme heat	Medium
Cyclone	Low
River flooding	Very low
Urban flooding	Very low
Landslide	Very low

[187] Global Facility for Disaster Reduction and Recovery (GFRDD) ThinkHazard! (2023). *Kiribati*, at: https://thinkhazard.org/en/report/135-kiribati. The GFDRR is an initiative of the World Bank.

[188] The Government of Australia (2018). *Australia´s Commitment to Climate Change Action in Kiribati*. Department of Foreign Affairs and Trade (DFAT).

[189] Kiribati is ranked differently in the various global indices on climate and natural disaster risks, including the World Risk Report, ThinkHazard! and INFORM. These differences in global rankings originate from different methods of selecting, combining and weighing indicators and then relating them to different baselines (e.g., population, area and GDP). Usually, such global risk assessments are not based on detailed analysis of specific countries, but on several freely available global data sets which might not reflect local circumstances very well. These rankings are helpful for comparing hazard, exposure, vulnerability and risk on a regional or global scale; however, a thorough assessment of risks on the national level determines the extent of risk and facilitates understanding how such risks may be reduced. The Bündnis Entwicklung Hilft, formed by various aid and development NGOs for research on crises and disasters globally, issues the World Risk Report (WRR). INFORM is a collaboration of the Inter-Agency Standing Committee Reference Group on Risk, Early Warning and Preparedness and the European Commission.

Wildfire	Very low
Earthquake	No data
Volcano	No data
Water scarcity	No data

Source: Developed based on the data of GFDRR ThinkHazard! (2023).

Kiribati is one of the countries most threatened by losing its land to sea level rise in the world.[190] Without appropriate adaptation measures, for instance, half of the lands in Tarawa are at serious risk of inundation, deterioration and loss of vegetation.[191] Indeed, Kiribati has acquired land in Fiji for the eventuality of a forced relocation, should some islands disappear under the sea.[192]

Risks of coastal flooding, storms and saltwater intrusion are grave. High tides could result in seawater flooding low-lying areas of the islands. Tropical cyclones or storms in the ocean waters surrounding Kiribati, combined with strong winds, can push seawater further inland and lead to seawater inundation of coastal and low-lying areas, known as storm surges.[193] The effects of storm surges happening at the same time as a king tide are potentially disastrous. Kiribati's atolls average less than 500 meters in width, making the islands vulnerable to sea storms and high tides.[194]

In 2021, Kiribati had more than two months of drought – in the middle of the COVID-19 pandemic – reducing the availability of water in homes and schools. Kiribati's important trees, coconuts, pandanus and breadfruit, can die due to droughts. Agroforestry further inland is also in danger, as seawater increases soil salinity and affects the freshwater lens. To deal with the danger, mangrove planting has been viewed as a potentially promising conservation activity in Kiribati.[195]

The warming of the oceans will likely decrease the number of reefs acting as coastal defences. With many healthy reefs diminishing, infrastructure, fisheries and agriculture will likely also be affected. Impacts on human health are also expected to become more prevalent.[196] These hazards and their impacts are expected to intensify and are already causing impacts on human health (such as insect-borne diseases and poor sanitation), infrastructure, fisheries and agriculture.[197] For example, a longer period of drought will worsen sanitation, a driver of increased rates of diarrhoea. Further, mosquito-

[190] The Government of Kiribati (2016). *Kiribati National Development Plan 2016-2019.* Ministry of Finance and Economic Development.

[191] The Government of Kiribati (2018). *Kiribati Climate Change Policy*.

[192] Hermann, E. and Kempf, W. (2017). "Climate Change and the Imagining of Migration: Emerging Discourses on Kiribati's Land Purchase in Fiji", *The Contemporary Pacific*, 29(2), 231-263.

[193] Office of Te Beretitenti. (2019). *Situation Report No# 1: Impact of Tropical Cyclone Sarai in the Southern Islands of Gilbert Group*, 25-28 December.

[194] The Government of Kiribati (2018).

[195] Donner, S. D. and Webber, S. (2014). "Obstacles to climate change adaptation decisions: a case study of sea-level rise and coastal protection measures in Kiribati", *Sustainability Science*, 9, 331–345.

[196] Interview with the WHO Kiribati in October 2023.

[197] Bündnis Entwicklung Hilft (2021). *World Risk Report (WRR) 2021*. Ruhr University Bochum. Institute for International Law of Peace and Armed Conflict (IFHV).

borne disease outbreaks, such as dengue fever and lymphatic filariasis, have increased in the last 50 years due to the warmer and wetter conditions of the Pacific.[198]

In Kiribati, water shortages, extreme temperatures and frequent droughts are compounded by weak utility management, low storage capacities and urbanization stress in some areas. Poor water supply and sanitation represent a risk to hygiene, health and community life, and there is a significant need for increased water storage capacity in all islands, as well as safe water management.

Kiribati's dispersed geography further constrains the government's ability to manage and respond to the risks. This highlights the need for pooling resources through a cross-sectoral approach to risk management, as risks in Kiribati do not exist in isolation from one another, and are often interconnected and systemic, with compound and cascading impacts. [199] Multi-stakeholder engagements and processes that enable the exchange of risk information across administrative levels and societal sectors are pivotal for identifying and managing risks to safety.

Climate change and natural disasters impact the lives and workloads of women and men in Kiribati differently, echoing gender-based differences in the burden of household care responsibilities, and differences in access to and control of resources and decision-making.[200] Women have unequal access to and control over financial, natural, human and physical assets, due to social and gender norms.[201] Women typically control fewer and lower-value assets than men, which are more likely to be lost during climate-related shocks. Household resources, such as coconuts for firewood, pandanus for handicrafts, gardens for food security and clean water for cooking, are all more vulnerable to climate change.[202]

Finally, climate change and its impact have already caused displacement of populations in Kiribati. Figure 23 below perhaps provides the most comprehensive view of such movements in the Pacific, including Kiribati, in the past 30 years, caused by ongoing climate change and other factors, such as employment (or the lack of), education, healthcare and family. Kiribati appears as the country recording the largest number of such displacements, followed by Tuvalu and Fiji.

[198] UNDRR (2020). *Disaster Risk Reduction in the Republic of Kiribati: Status Report 2019*. Bangkok: The United Nations Office for Disaster Risk Reduction, Regional Office for Asia and the Pacific.

[199] Ibid.

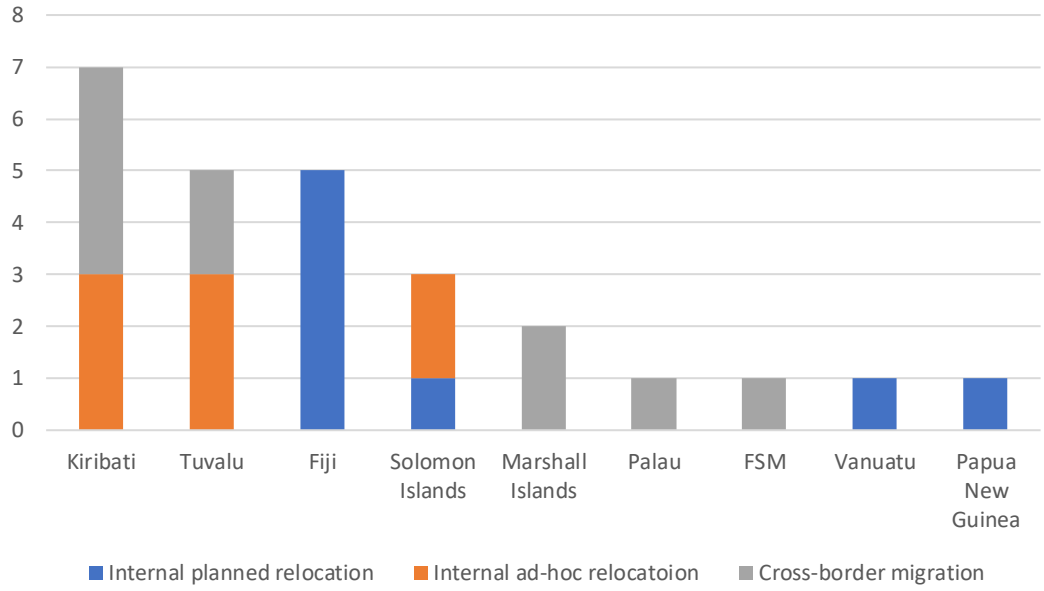
[200] ESCAP (2021). *Inequality of Opportunity: Who are Those Left Behind? Kiribati*. Bangkok: ESCAP Social Development Division.

[201] The Government of Australian (2011). Australian Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation (CSIRO). *International Climate Change Adaptation Initiative. Pacific Climate Change Science Climate Change in the Pacific: Scientific Assessment and New Research. Volume 2: Country Reports. Chapter 6: Kiribati*.

https://www.pacificclimatechangescience.org/wp-content/uploads/2013/09/Kiribati.pdf.

[202] ESCAP (2021).

Figure 23
People's displacements in the Pacific, 26 cases



Source: Yates (2022).[203]
Note: Each case represents a group migration or relocation with a different origin or destination, captured in various studies published between 1990-2019.

6.2. Biodiversity

Kiribati has undertaken actions to restore fish and bird populations, and atoll ecosystems, by establishing natural environmental sanctuaries and eradicating mammalian pests, especially rats.[204] It also recognizes that land use change directly affects biodiversity through degrading natural habitats and species diversity existing within them. Increased change in land use has mainly occurred in urban and growth centres such as South Tarawa, Kiritimati and North Tabiteuea.

The Phoenix Islands Protected Area (PIPA), a natural heritage site and a former exclusive "no-take zone", for example, has maintained oceanic coral archipelago ecosystems, underwater sea mounts and other deep-sea habitats since 2006.[205] While the area preserves many diverse species of fishes and marine mammals, it also supports breeding colonies of seabird species, many threatened and/or globally significant. The nation also established the second-largest shark sanctuary in the world in 2015.[206] Those actions strengthen the biosecurity of Kiribati, undertaking surveillance of any illegal aggressions and species that might breach the biosecurity, and implementing emergency response

[203] Yates, O. E. T. (2022). *Stories of Neighbours and Navigators: Perceptions and Implications of Climate Mobility from Tuvalu and Kiribati to Aotearoa New Zealand*. A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Psychology, the University of Auckland.

[204] Eco Oceania Pty. Ltd. (June 2010). *Biosecurity Guidelines for the Phoenix Islands, Kiribati. Report for Government of Kiribati and Critical Ecosystem Partnership Fund*. https://www.cepf.net/sites/default/files/final-report-sg50155.pdf.

[205] On 15 November 2021, however, Kiribati lifted the closure of the PIPA as a no-take zone.

[206] The Republic of Kiribati (2015). *Fisheries Act 2010 (No. 6 of 2010) Shark Sanctuary Regulations 2015*. Tarawa.

procedures, although fisheries and tourism-based commercial activities frequently challenge their objectives and outcomes.[207]

The closure of PIPA to commercial fishing activities or as a no-take zone was enacted in 2015. The decision was made on the assurance that new "reversed fishing license" funds with the PIPA Conservation Trust's endorsement would compensate revenue forgone, allowing Kiribati to proceed with its intent to conserve its marine resources and at the same time rely on a new stream of funds to uplift the livelihoods of its people.[208] However, from its inception, the PIPA Conservation Trust raised approximately seven million dollars, generating interest only sufficient to support the operations and management of PIPA. It has therefore not been able to deliver on the assurances of reverse fishing license funds. Since the PIPA closure for fisheries in 2015, there has been a decline in demand for fishing in Kiribati EEZ by eight per cent. This translates to approximately $60 million to $150 million in lost revenue from 2015 to 2021.[209]

The government strongly felt that the PIPA's policy logic was insufficient to meet the development needs of the entire country. Consequently, Kiribati has considered options to invest in marine and biodiversity protection and promote climate resilience through the blue economy.[210] Congruent with blue economy principles, a decision to sustainably develop marine resources within the PIPA area that will favour both economic and conservation objectives has been developed. While this means forgoing the no-take zone within PIPA, it aims at adopting innovative programmes to sustainably develop natural resources in a manner that benefits all I-Kiribati although it also raises international concerns.[211]

6.3. Deep-sea mining

Ocean resources, both living and non-living, are critical assets for Kiribati.[212] Polymetallic manganese nodules (PMN) and cobalt-rich ferromanganese crusts (CFC) were discovered in Kiribati's EEZ.[213] Kiribati is one of five PICTs (including the Cook Islands, Nauru, Tonga and Tuvalu) considering exploration activities within and beyond their national jurisdiction under the supervision of the International Seabed Authority (ISA).[214] Significant international efforts, including those of ISA, DESA and donors, have been invested in the development and adoption of specifically designed legal,

[207] Stone, G. S. and Obura, D. (eds.) (2012). *Underwater Eden: Saving the Last Coral Wilderness on Earth*. Chicago: University of Chicago Press.

[208] Davis, J. (2013). "The Reverse Fishing License Mechanism for Kiribati's Phoenix Islands Protected Area: An Experiment in MPA Financing", *Open Communication for the Ocean (OCTO)*, 24 July.

[209] Fiertz, N., Yozell, S. and Rouleau. T. (2022). *Climate Risk Summary Report, Tarawa, Kiribati, Findings from a CORVI Rapid Assessment*. Stimson Center.

[210] Interviews on South Tarawa in October 2023.

[211] UNESCO (2021). "UNESCO expresses concern over the lifting of fishing no-take zones in Kiribati's Phoenix Islands Protected Area", *News*.

[212] Rouatu I, Leport G, Pascal N, Wendt H, Abeta R, Brander L, Fernandes L, Seidl A, Salcone J. (2017*). National Marine Ecosystem Service Valuation: Kiribati*. MACBIO (GIZ/IUCN/SPREP).

[213] Also see: https://www.isa.org.jm/wp-content/uploads/2022/06/eng7.pdf and https://oceanexplorer.noaa.gov/edu/lessonplans/ferrocrust.pdf.

[214] Sue F. (2022). "Deep-sea mining and the potential environmental cost of 'going green' in the Pacific", *Environmental Law Review*, 24(3).

institutional and policy frameworks for this novel sector, although the capacity to comply with these frameworks remains a challenge.

Effective engagement in deep-sea mining requires further analysis of its cumulative impacts, enforceable environmental safeguards and appropriately trained human resources, coupled with the proper and practical regulatory structure. Mining is a long-term, non-renewable, extractive enterprise that must be pursued attentively, but the potential is undeniable as a resource for a small country like Kiribati.

Deep sea mining is not without controversy. Many experts are concerned that the potentially harmful effect of deep-sea mining has not been fully assessed.[215] Extractive industries may be motivated to maximize returns and extract these resources, at least temporarily eschewing environmental sustainability concerns. The controversy surrounding such an extractive industry is compounded by the likely negative consequences for ocean biodiversity and the climate impact it may imply. Besides, there is serious scientific scepticism that deep-sea mining can be undertaken without incurring significant damage to the oceans and their sustainability.[216] In this vein, multinationals might take advantage of their advanced knowledge of market dynamics and decide on which investments to make or not to make, ahead of Kiribati, especially where the nation may lack knowledge assets to make informed decisions or engage in large-scale contract negotiations.

Kiribati, in whose jurisdiction the resources sit, cannot afford to ignore the opportunity of deep-sea mining, and policy responses need to be provided, grounded in principle, operationally sound and mindful of the political economy implications. Furthermore, reasonable taxation (such as those found in conventional mineral extraction, spanning royalties, resource rent, "brown", franchise and profits tax) would be paramount, as this industry is unlikely to generate significant local employment.

Box 7
Waste control: Circular economy

Waste is generated from agricultural, commercial, domestic, household, industrial and municipal activities. The environmental implications of the waste are witnessed globally and in the Pacific, including Kiribati, to an exaggerated degree, regarding air, land and water pollution, including ocean plastic.

South Tarawa exhibits an unbreakable chain of massive waste materials throughout its beachfront of nearly 100 kilometres (see Figure 24).[217] Although the waste was often purposely used to protect ocean fronts from saltwater intrusion as readily available no-cost materials, various policies and practices must be urgently considered and implemented for better waste management. They may include, among others: waste reduction through taxes and fees on consumption, fees and incentives (e.g., waste-based import duties, dumping fees and import substitutions), waste treatment (e.g., landfill, burning and offshore/atoll dumping), waste exporting and various circular economy practices, including reuse, repair and recycling, a ban on single-use plastic, and so on. The safe and immediate disposal of household, human, high-tech and metal wastes must be a major concern in the islands.

[215] Ibid.

[216] Hallgren, A. and Hansson, A. (2021). "Conflicting Narratives of Deep Sea Mining", *Sustainability*, 13(9).

[217] It is noteworthy that many residents purposefully put the garbage on coaster lines to reclaim eluded lands caused by sea-level rise and high tides.

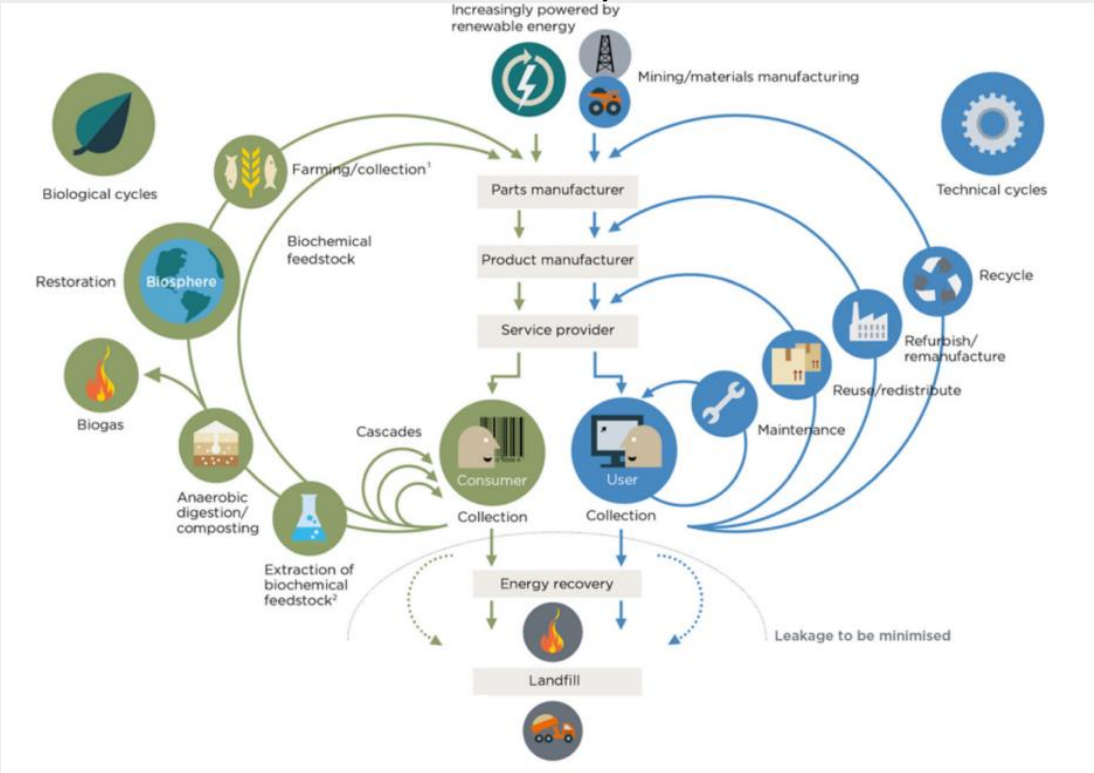
Figure 24
Beach waste on South Tarawa

Source: A photo taken by the author on a south beach of Banraeaba, Tarawa, in October 2023.

Waste management is particularly challenging for Kiribati due to its high per-capita infrastructure costs, remoteness, narrow resource bases and high dependence on imported goods and fossil fuels. Current waste management is associated mainly with a linear economy, involving linear production and supply processes. Moving away from the linear economy (sometimes also called an "extract-produce-use-discard" model), the circular economy promotes re-use, re-manufacturing and recycling, partly to reduce waste volumes. There is a need to adopt the circular economy in Kiribati, to reduce waste.[218] Figure 25 illustrates a typical circular economy model.

[218] See: Fuldauer, L. I. (2019). "Participatory planning of the future of waste management in small island developing states to deliver on the Sustainable Development Goals", *Journal of Cleaner Production*, 223, 147-162; Wiebe, K. S. (2019). "Global Circular Economy Scenario in a Multiregional Input–Output Framework", *Environmental Science Technology*, 53, 6362–6373.

Figure 25
Circular economy model



Source: Halog and Anieke (2021).

7. Peace and Partnerships

While tackling its distinct challenges and opportunities, Kiribati has observed rapid geopolitical development around its dispersed territory that has urged the country to carefully consider its repositioning on the ever-evolving global landscape. This section presents the status of power dynamics in the region and the growing presence of the United Nations system in the country.

7.1. Geopolitical dynamics

While Kiribati has traditionally received considerable support from Australia, one of three former trustees (with New Zealand and the United Kingdom), the United States recently commenced several regional initiatives related to Kiribati's development, security and diplomatic allegiances. In February 2022, the United States released the "Indo-Pacific Strategy", which reiterated its commitment to an Indo-Pacific that is free and open, connected, prosperous, secure and resilient.[219] Then in June 2022, the US jointly launched the Partners in the Blue Pacific, with Australia, New Zealand, Japan and the United Kingdom in order to boost economic and diplomatic relations with PICTs. In September 2022, the first-ever US-Pacific Island Country Summit took place in Washington, D.C., which endorsed the "Pacific Partnership Strategy".

In May 2022, the United States released a four-year Integrated Country Strategy for Kiribati, along with four other PICTs, (i.e., Fiji, Nauru, Tonga and Tuvalu).[220] The strategic framework for the US Embassy in Suva, Fiji, which covers all five PICTs, aims to protect the United States' interests in (i) ocean transportation; (ii) fisheries; and (iii) naval security, in addition to promoting economic development, confronting climate change and other environmental challenges, strengthening human rights and democratic institutions and promoting digitalization.

7.2. The United Nations in Kiribati

The United Nations Multi-Country Office (MCO) for Micronesia was established on 1 October 2021 under the leadership of the United Nations Resident Coordinator. Based on Pohnpei, FSM, MCO covers Palau, FSM, Marshall Islands, Nauru and Kiribati. Together with MCO, the United Nations Country Teams (UNCT) in Micronesia support Kiribati in meeting its national development priorities and achieving the SDGs. There are six resident United Nations agencies (UNDP, UNFPA, UNICEF, UNOPS, UNWOMEN and WHO) and other various non-resident United Nations entities supporting the United Nations' work in Kiribati. MCO established a satellite office in South Tarawa in 2022, with a full-time Country Coordination Officer to assist in coordinating the United Nations support in-country. Kiribati also remains a partner country under several United Nations joint programmes and projects in Micronesia, typically managed by their regional offices in Apia, Bangkok, Jakarta, Manila and Suva.

At the latest SDG Summit, held in New York City in September 2023, the United Nations proposed six major transitions in further driving progress towards the SDGs by 2030. The key transitions that can have catalytic and multiplier effects across the SDGs comprise (i) food systems; (ii) energy access and affordability; (iii) digital connectivity; (iv) education; (v) jobs and social protection; and (vi) climate change, biodiversity loss and pollution. Kiribati's development agendas clearly suggest the six transitions play a critical role in realising the SDGs for which the present study provides a relevant strategic direction for the country.

[219] Visit: https://www.state.gov/subjects/indo-pacific-strategy/.

[220] Visit: https://www.state.gov/wp-content/uploads/2022/07/ICS_EAP_Fiji_Public.pdf.

Box 8

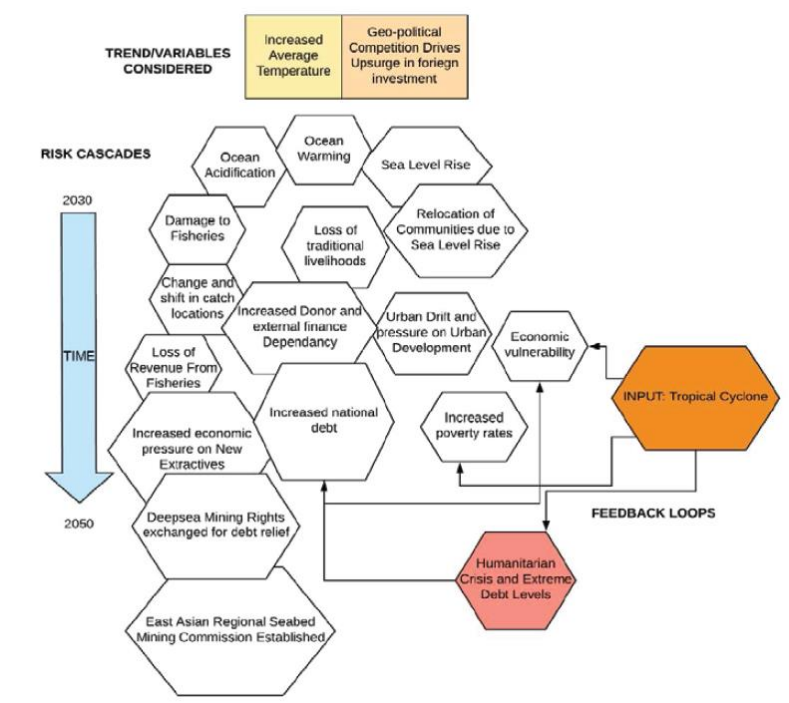
The United Nations' strategy on deep-sea mining

The United Nations in the Pacific does not promote any mineral resource-intensive economic diversification strategy. Extreme caution must be exercised in this industrial strategy especially by PICTs already sponsoring and licensing with exploration activities underway. The United Nations is cognizant of the existence of these resources and participates in the debate on the advisability of their exploitation, well aware of the limited growth options Kiribati has at its disposal and expressing a strong preference for new approaches to economic development that would steer investments toward a greener, more inclusive, sustainable and resilient future. Incontestable are the risks of mining and the likelihood to have a degrading impact on fisheries. A better-informed approach may be warranted as science is not conclusive, but the risks exist and ought not to be underestimated. Within this context, the United Nations' technical assistance and international cooperation with Kiribati might be part of the necessary confidence-building measures to develop the proper regulatory framework for this potentially transformative initiative.

Within this context, UNDP proposes a climate change-inversed damage, loss and reaction scenario for PICTs (see Figure 26).[221] Its main finding is the necessity of deep-sea mining and income generation through this novel industry to eradicate the massive damage it might cause, while indicating negative impacts on fiscal management and social issues. It also proposes establishing a regional deep-sea mining commission. The United Nations and its development partners must carefully review the feasibility of the industry along with its environmental and biodiversity impacts before recommending any actions.

Figure 26

Damage, loss and reaction scenario for the Pacific



Source: UNDP (2023).

[221] UNDP (2023). *Policy Primer on Loss and Damage Consideration for Pacific Island Countries, Pacific Perspectives Briefing Series*. Suva: UNDP Pacific Office in Fiji.

8. LDC graduation[222]

Kiribati was included in the United Nations' least developed country (LDC) category in 1986 and joined the United Nations in 1999. Since then, Kiribati has achieved steady socio-economic development support on multiple fronts, including economic, social and environmental aspects. The Committee for Development Policy (CDP) of the United Nations, which administers the LDC inclusion and graduation, recommended Kiribati for its graduation from the LDC category in 2012 and 2018, respectively. In 2018, the United Nations Economic and Social Council (ECOSOC) deferred the consideration of the recommendation to 2021.[223] The ECOSOC again deferred its decision for Kiribati's LDC graduation to 2024, amid the global COVID-19 pandemic in 2021.[224]

Kiribati has faced multiple challenges that affected its national development plan, including its graduation from the LDC status.[225] While the government remains committed to graduating out of the LDC category, it has concerns that the nation as a whole is not ready for graduation shortly, as it is currently navigating recovery from multiple crises, spanning (but not limited to): the unprecedented and prolonged COVID-19 pandemic, on top of increasing climate and disaster risks, supply chain disruptions, and elevated inflation in commodity, energy and transport prices, frequent large-scale droughts and water shortage, main-outer islands divide and outpaced population growth straining public service supplies.[226] Due to these multifaceted challenges, which intensified from 2020 to the present, Kiribati is re-assessing its readiness for LDC graduation. Kiribati needs to identify key policy and capacity gaps and develop concrete measures to prepare the nation for the LDC graduation.

8.1. Indicators for LDC graduation

The CDP decides its recommendation on the LDC graduation of a member State to the ECOSOC based on a combination of three criteria and associated indicators, namely: (i) gross *national income* (GNI) per capita; (ii) *human asset* index (HAI); and (iii) *economic and environmental vulnerability* index (EVI). Kiribati met the LDC graduation criteria for GNI per capita and the HAI in 2021 by wide margins. Table 7 provides an overview of the CDP's measures, indicators and others, including the thresholds and Kiribati's current status.

[222] This section of the study was previously published in Monaco, E. and Abe, M. (2023). "Kiribati's graduation from Least Developed Country status: An analysis of strengths, weaknesses, opportunities and threats", *Asia and the Pacific Policy Studies*, 11, 1–18.

[223] The United Nations (2021). *United Nations Committee for Development Policy, Report on the twenty-third session (22–26 February 2021), Economic and Social Council, Official Records, Supplement No. 13, E/2021/33.*

[224] DESA (2023). Graduation: Recommended for graduation by the CDP; ECOSOC decision deferred to 2024 *Least Developed Country Category: Kiribati Profile.* https://www.un.org/development/desa/dpad/least-developed-country-category-kiribati.html.

[225] The Government of Kiribati (2016). *Kiribati 20-Year Vision: 2016-2036*.

[226] Gay, D. (2021). "Structural transformation in graduating Pacific least developed countries (LDCs)", *MPFD Working Paper Series, No. ESCAP / 1-WP / 2*. Bangkok: ESCAP; IMF (2023). *Kiribati: Staff Concluding Statement of the 2023 Article IV Mission*, 8 February 8; Throsby, D. (2001). "The Kiribati economy—performance and prospects", *Pacific Economic Bulletin*, 16(1).

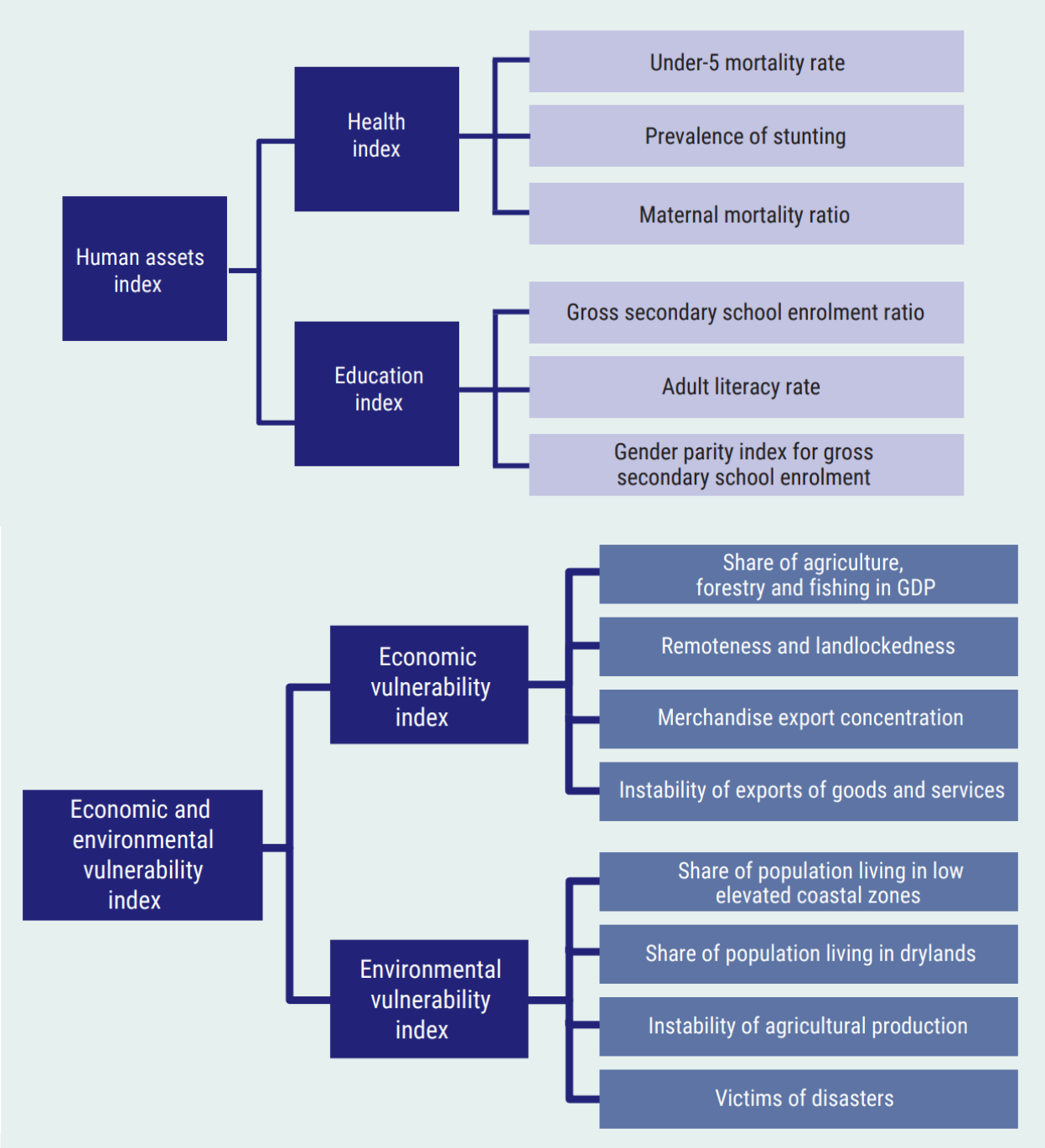
Table 7
LDC identification:
Criteria, indicators, applications, thresholds and Kiribati's scores

Criteria	Indicators	Applications	Thresholds	Kiribati
Income	GNI per capita	Inclusion	$1 018	**$2 913***
		Graduation	$1 222	
		Income-only graduation	**$2 444**	
Human assets	Human Assets Index (HAI)	Inclusion	60.0	81.5
		Graduation	66.0	
Economic and environmental vulnerability	Economic and Environmental Vulnerability Index (EVI)	Inclusion	36.0	51.7
		Graduation	**32.0**	

Sources: UN DESA (2023). *Country Profile: Kiribati*; World Bank (2023). *World Development Indicators*.
Notes: GNI is calculated from national accounts data converted into US dollars using the World Bank Atlas method (to reduce the impact of short-term exchange rate fluctuations). GNI per capita is derived by dividing GNI in US dollars by Kiribati's annual population. (*) The number is the three-year average from 2019 to 2021.

The HAI comprises six indicators: (i) under-five mortality rate; (ii) prevalence of stunting; (iii) maternal mortality ratio; (iv) gross secondary school enrolment ratio; (v) adult literacy rate; and (vi) gender parity index for gross secondary school enrolment. The HAI indicators can be grouped into two clusters: (i) health; and (ii) education. On the other hand, the EVI composes eight indicators: (i) share of agriculture, forestry and fishing in GDP; (ii) remoteness and "landlocked-ness"; (iii) merchandise export concentration; (iv) instability of exports of goods and services; (v) share of population living in low; (vi) share of population living in dryland; (vii) instability of agricultural production; and (viii) victims of disasters. The EVI indicators can be divided into groups: (i) economic vulnerability; and (ii) environmental vulnerability. At first glance, it is noticed that the HAI has yet to cover social aspects, such as human rights, social protection and the urban-rural divide. At the same time, the EVI lacks indicators on infrastructure development and the private sector (see Figure 27).

Figure 27
The compositions of the HAI and EVI



Source: UN DESA (2021). *Handbook on the Least Developed Country Category: Inclusion, Graduation and Special Support Measures*. New York: United Nations Committee for Development Policy.

Kiribati will most likely continue to meet two of the three graduation thresholds at the 2024 triennial review of the CDP, even after the impacts of the present multiple crises are factored into calculating the graduation indicators. The level of GNI per capita would remain comfortably above the expected graduation threshold of $1,422 (and the income-only graduation threshold of $2,444). The country's HAI score of 81.5 in 2021 is unlikely to drop below the threshold of 66.0 in 2024, even after the impact of the COVID-19 pandemic is fully reflected. It is noteworthy, however, that Kiribati's EVI score (51.7) is much lower than the graduation threshold of 32.0.

According to Kiribati's present and foreseeable future status, the CDP is expected to hold its recommendation for Kiribati's graduation at its triennial review for ECOSOC's decision in 2024. However, the graduation indicators (i.e., HAI and EVI) are all aggregate. They may not fully reflect the country's situation, especially for an archipelagic state such as Kiribati, where the population is sparsely scattered across different islands (i.e., the Gilbert Islands, the Phoenix Islands and the Line Islands) and the divide between the main and outer islands is pronounced. For instance, the nation's senior secondary school enrolment, one of the subcomponents of the HAI, reveals a vast disparity across its islands. Based on the spatial variance, provinces may not be ready to accept or celebrate graduation from LDC status. Notably, the EVI is the most critical indicator for Kiribati to make the graduation process smooth, sustainable and irreversible, even though the country is not required to meet this particular threshold to be eligible for graduation (as it already meets the two other criteria).

8.2. Supplementary graduation indicators

Given the emerging conditions under the multifaced crises, the CDP and other cooperating United Nations systems introduced new supplementary graduation indicators, while conducting an ad-hoc study on COVID-19's impact on the LDC category in 2020.[227] The supplementary indicators are grouped into five clusters: (i) economic vulnerabilities; (ii) environmental vulnerabilities; (iii) human assets; (iv) incomes; and (v) others. They complement both the official LDC criteria and the country-specific information of the graduation assessments, including vulnerability profiles and impact assessments. However, they are not a requirement for graduation and have neither thresholds nor aggregated indexes. They are expected to function as a screening device for identifying discrepancies between an LDC's performance against the criteria, and broader vulnerabilities and structural factors. The CDP has worked to include those supplementary indicators for the 2024 triennial review. The current set of supplementary indicators is listed in Table 8.

Table 8
Supplementary LDC graduation indicators

	Indicators short	Indicators long
Economic vulnerability	GDP growth	GDP growth rate (%)
	Maximum GDP shock	Maximum GDP shock (Largest decline/lowest growth of GDP in 20 years)
	External debt	External debt (% of GNI)
	Debt servicing	Total debt servicing (% of exports and primary income)
	Remittances	Personal Remittances received (% of GDP)
	ODA	ODA received as a percentage of GNI
	Tourism	Tourism receipts as a share of exports
	Current account	Current account balance (% of GDP)
	Terms of Trade Volatility	The standard deviation of net barter terms of trade over 20 years
	Tax revenues	Tax revenue as a share of GDP
	Gross domestic savings	Gross domestic savings (% of GDP)
	Adjusted net savings	Adjusted net savings (% of GNI), adjusts net savings for resource depletion, CO2 and

[227] The United Nations (2021). *Comprehensive Study on the Impact of COVID-19 on the Least Developed Country Category*. New York: The Committee of Development Policy.

		particulate emissions damage and education expenditures
	Agriculture employment	Share of employment in agriculture
	Internet users	Percentage of individuals using the internet
	Broadband subscriptions	Fixed broadband subscriptions per 100 people
	Renewable electricity use	Renewable electricity capacity per capita
	Access to electricity	Percentage of the population with access to electricity
	PCI	Productive capacities index, a comprehensive measure of productive capacities based on 46 individual indicators
Environmental vulnerability	Environmental performance index	Environmental Performance Index 2020 edition, based on 32 indicators of environmental health and ecosystem vitality
	Global adaptation index	Global Adaptation Index, based on 45 indicators capturing climate change vulnerability in life-supporting sectors and readiness to invest in adaptation
	INFORM risk index	INFORM risk index 2021, measuring risk to humanitarian crises and disasters based on 79 indicators related to hazards and exposure, vulnerability and lack of coping capacity
	Loss from disasters	Economic loss from natural disaster (% of GDP)
	Water Access	Access to basic drinking water (% of population)
	Sanitation access	Access to basic sanitation (% of population)
	Air pollution	PM2.5 air pollution, mean annual exposure (micrograms per cubic meter)
	Level of water stress	Freshwater withdrawal as a proportion of available freshwater resources
	Red list index	Red list index, showing trends in overall extinction risks of species
	Domestic material consumption, pc	Domestic material consumption per capita, i.e., direct imports plus domestic extraction less direct exports of materials (biomass, fossil fuels, metal ores and non-metallic minerals) divided by population.
Human assets	Human development index	The human development index is a summary measure of achievements in three dimensions of human development: long and healthy life, knowledge and a decent standard of living.
	Human capital index	Human capital index, an aggregate measure of expected productivity relative to full health and complete education
	MPI	Multidimensional poverty index, capturing ten dimensions of deprivations in health, education and standard of living

	Undernourishment	Prevalence of undernourishment (% of population)
	Mortality NCD	Mortality rate attributed to major non-communicable diseases
	Mean years of schooling	Mean years of schooling
	Learning-adjusted years of school	Learning-adjusted years of school
	Total fertility rate	Total fertility rate
	Dependency ratio	Dependency ratio, i.e., the ratio of youth (Age 0-14) and elderly (age 65+) to population of age 15-64.
	Female labour participation	Female labour force participation rate
Income	GNDI per capita	Gross national disposable income (GNDI) per capita, market exchange rates
	GDP per capita	GDP per capita, market exchange rates
	GNI per capita, PPP	GNI per capita, PPP rates
	GINI coefficient	Gini coefficient of disposable income
	Income poverty	Percentage of population below international poverty line ($1.90)
Other	Battle death	Battle deaths per 100 000, the 20-year average
	Population of concern	The population of concern to UNHCR as a percentage of the total population
	Displaced persons	Stock of persons internally displaced by conflict as per cent of the total population
	Homicides	Homicide rate
	Voice and accountability	Voice and accountability, capturing perceptions of citizens' participation in selecting governments as well as of freedom of expression, association, and media
	Government effectiveness	Government effectiveness, capturing perceptions of the quality of public services and policies
	Women's Political Empowerment Index	Women Empowerment Index provides information on women's civil liberties, civil society participation, and political participation

Source: UN DESA (2023). *Supplementary graduation indicators (SGI) dataset (2002-2022).*

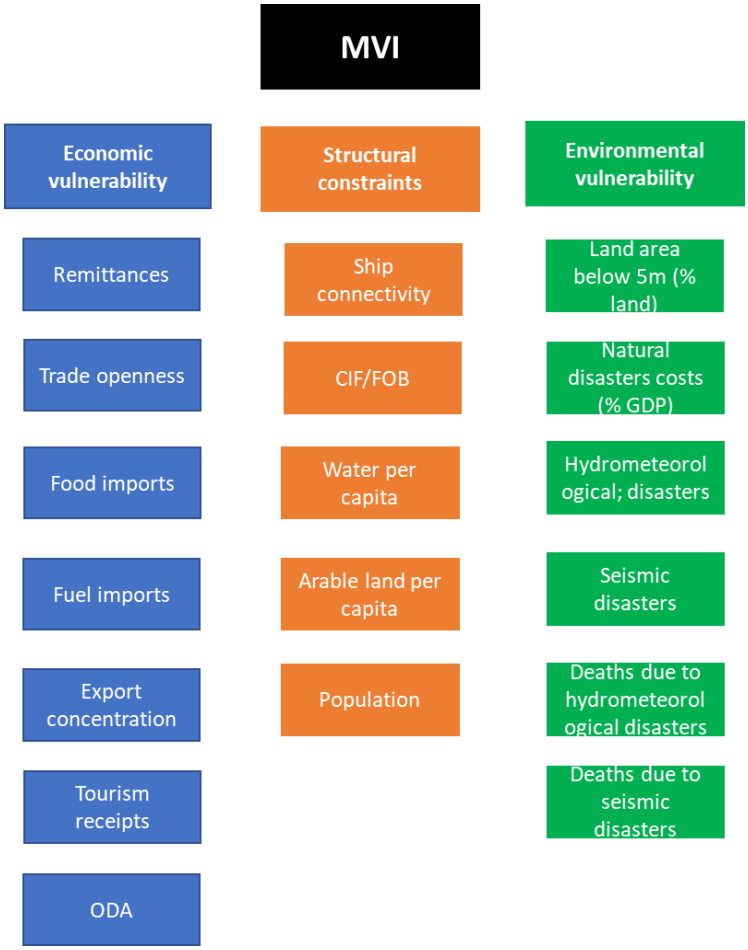
8.3. Multidimensional Vulnerability Index (MVI) for SIDS

In 2020, separate from the supplementary graduation indicators, the United Nations General Assembly requested the development and coordination of work within the United Nations system on a multi-dimensional vulnerability index (MVI) for SIDS. The MVI assesses the vulnerabilities of SIDS and serves as a criterion for access to, and allocation of, concessional resources among countries.[228]

[228] Sachs, J., Massa, I., Marinescu, S. and Lafortune, G. (2021). "The Decade of Action and Small Island Developing States: Measuring and addressing SIDS' vulnerabilities to accelerate SDG progress", *Working Paper 12 July*. Sustainable Development Solutions Network; the United Nations (2021). *Multidimensional Vulnerable Index: Potential Development and Uses—Analysis and Recommendations*. October. New York.

MVI's three essential dimensions are: economic, environmental and social. Economic vulnerability is the risk of the economy being affected by exogenous shocks, either of external or natural origin (thus including the economic effects of environmental or health shocks). The ecological vulnerability consists mainly of the physical vulnerability to climate change. The third vulnerability is the risk of being impacted by social shocks, mainly episodes of violence, and also health shocks such as epidemics. Alongside the three dimensions of vulnerability, the resilience of a country is its capacity to face and manage exogenous shocks, whether economic, environmental and linked to climate change or social. This resilience results from structural or related factors to the present policy. The structural elements reflect countries' inherited capacity and populations to face and cope with external shocks. Taking resilience into account allows for a better understanding of the structural handicaps developing countries face. It also allows capturing better the population's vulnerability to exogenous shocks and not only their economic impacts. Figure 28 presents an overview of the MVI framework.

Figure 28
The MVI framework



Source: United Nations (2021). *Multidimensional Vulnerable Index: Potential Development and Uses—Analysis and Recommendations.* October.

The MVI can complement the three conventional LDC graduation indicators by filling their substantive gaps, such as lacking social aspects and structural issues, as well as considering unique vulnerabilities that pertain to SIDS like Kiribati.

The Government of Kiribati remains committed to graduating from the LDC category and ensuring that graduation is sustainable and irreversible. However, regaining graduation momentum and

accelerating preparations may be more complex, and need to consider the broader implications of the multiple ongoing crises beyond the graduation and supplementary graduation indicators. The government should seek to react quickly and boldly to the slow implementation of development programmes at outer islands, and the need for improved infrastructure, especially for essential social services and the tourism sector development to help create employment and improve livelihoods. Proceeding with graduation in the near future may also signal the wrong message to disgruntled rural and outer-island populations that feel the government is moving ahead with graduation, despite the concerns of the majority of its population towards the lack of adequate access to essential health, education, housing and water and sanitation facilities.

9. Key Challenges and Recommendations for Attaining the 2030 Agenda

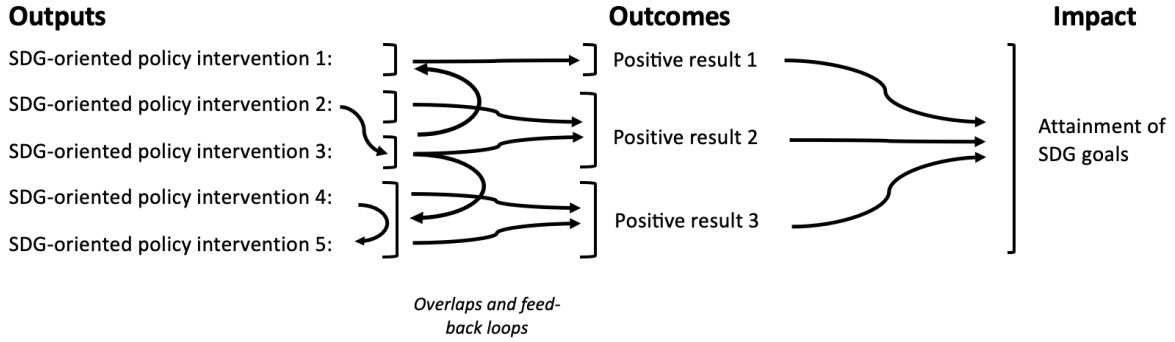
This final section seeks to identify critical gaps Kiribati confronts in attaining its national development plans, and policies that directly and indirectly contribute to SDG implementation. It also presents policy recommendations, broadly categorized into the five pillars of SDGs: people, prosperity, planet, peace and partnership. This part of the national study is based on the previously presented chapters. This is not an exhaustive checklist, nor does it seek to go into great depth. Instead, it seeks to delineate and prioritize some of the most pressing challenges confronting Kiribati.

9.1. Holistic Post-crisis Development Strategy

This study suggests that Kiribati would benefit from a holistic development approach to address the various overlapping socio-economic, environmental and geopolitical challenges confronting the islands. Those challenges can potentially limit Kiribati's policy options, lessen the effectiveness of the government's day-to-day operations and undermine the long-term fiscal well-being of the island economy. With competing demands for finite funds and resources, as well as limited institutional capacity, strategic and practical prioritization becomes critical in seeking to achieve the greatest net positive impact.

Furthermore, there are considerable overlaps and interlinkages among the 17 SDG goals and the challenges posed in attaining them. Thus, while it is helpful to clearly define each of these, for clarity and a strategic allocation of resources, pursuing these goals necessitates taking a holistic approach, and, conversely, avoiding the temptation to adopt a "silo approach" (Figure 29). Gains made in one area field may have a positive (or negative) knock-on effect in another area, while a lack of progress in one area could pose a negative drag on another.[229]

Figure 29
The silo approach



Source: The authors.

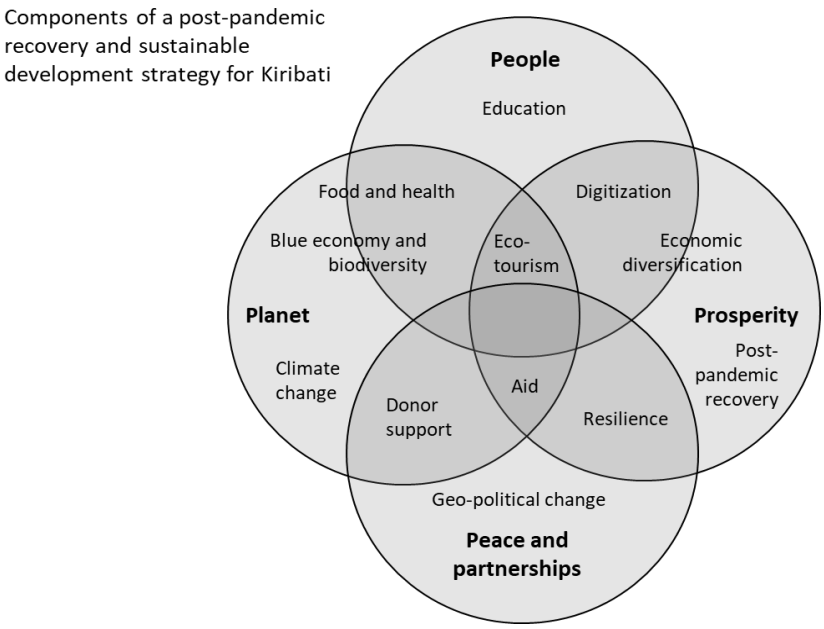
There is also a need to prioritize and pursue a strategy most likely to bring about the most significant desirable impact, relative to the funds, resources and institutional capacity available. In competing demands for such assets, effective prioritization becomes critical in achieving the greatest net positive impact. But those calculations, articulated in various development strategies and other policy

[229] For example, health and NCD issues in Kiribati are partly related to diet and high dependency on imported foods. Not only is there a need for a lifestyle change, but there is also a need to seek economic solutions that lessen Kiribati's dependence on imported products. But any import substitution programmes must overcome the stark reality that most imported produce is typically cheaper and more convenient than any real or potential home-grown equivalents. And there is a need for education and advocacy work as well. Thus, addressing health issues in Kiribati also necessitates interventions on the economic and socio-cultural fronts.

documents, are not static and are prone to changes triggered by events and other exogenous factors. The recent COVID-19 pandemic is a good example, with a "different Kiribati" coming out of the crisis, back into a world different from before the pandemic struck in early 2020.

This study would argue that the post-crisis period allows Kiribati to re-set some of its development priorities and re-position itself in a regional and global context different than before 2020-2023. While the various recommendations provided below are valid avenues to pursue in and of themselves, in combination they can be part of a new development narrative for Kiribati, leveraging its greatest strengths and current opportunities, while seeking to address some of its key weaknesses: holistic post-crisis development strategies, if you will. Figure 30 illustrates the strategy, categorized into the SDGs' 5Ps framework.

Figure 30
The 5Ps of post-pandemic Kiribati



Source: The authors.

As the reader goes through the text below, she/he will see the considerable extent to which some of these components are interdependent and overlapping in focus and intent. And that is a good thing, as it suggests there are areas where efficiency gains ("two—or three or more—for the price of one") can be achieved by adopting a holistic approach. Indeed, they inter-rely on progress attained elsewhere for their own progress. This underlines the necessity of what is sometimes called "joined-up government", where state agencies work in close coordination and resist the temptation to only focus on their own particular mandates, resulting in "siloed government". The latter tends to result in duplication of effort, a potential wastage of finite resources and, most importantly, an inability to make substantive gains across the full spectrum of socioeconomic and environmental priorities, as any initiatives undertaken will come up against, and be constrained by, the boundaries of their own respective silo.

9.2. People (1): Mitigate food security shocks

The recent and substantial rise in imported food prices in the post-pandemic recovery period and the war in Ukraine, while unwelcome, does present an opportunity to strengthen food system pathways and rejuvenate traditional agri-food systems that can both alleviate nutritional deficiencies and counteract the substantial prevalence of NCDs in Kiribati. In the near term, the priority will need to be

on mitigation of food security shocks, by boosting production and market-oriented initiatives, ensuring that: (i) both food producers and consumers have equitable access to improving their food security and livelihoods; (ii) increases in productivity are not achieved at the expense of the environment; and (iii) food import substitutions are taken, where possible, as the first option, considering healthcare-related cost implications. In the medium to long term, to support resilient agri-food systems, Kiribati needs to pursue agro-ecosystem diversity, sustain agri-food system transition and strengthen necessary food price/supply monitoring tools that are critical to allow raising the alarm of pending food shocks or crises, to be combined with anticipatory actions and preventative measures that strengthen food systems in advance.

There is much that Kiribati can do to expand its agricultural sector, on an environmentally sustainable basis, including focused efforts and interventions around contract farming, atoll fishing, aquaculture and agritech by participating more actively in a range of innovations intended to bring about a carbon neutral agriculture, forestry and fisheries sector. There is also a need to invest in the necessary supporting "soft" and "hard" infrastructure of domestic markets for the sale and consumption of local produce. Land ownership reform necessary to free up more land for onshore agriculture and other food-related activities also merits more significant efforts.

In addition to food import substitution in Kiribati, if the right policies and economic incentives are pursued, there may also be the potential for greater production of niche agro-products for export, from Makin and Bataritari to neighbouring island countries. A wide range of agricultural produce suggests various export diversification opportunities (e.g., copra, fish, dairy products, eggs, honey, edible animal products, flowers, vegetables, fruits and nuts) while adopting various quality and safety standards and certifications.[230]

More specifically, Kiribati may wish to consider "crowding in" investments in:

(i) Sustainable nutritious and healthier food production and livelihoods enhancement, whilst preserving natural resources and increasing renewable sources of energy;
(ii) Where possible, substitutions of heavily reliant imports, such as chicken and flour-based products;
(iii) Innovations to both improve productivity and reduce exposure to chemical and fertilizer supply shocks and to safeguard food production without the need for excessive use of inputs, water and energy; and
(iv) Capacity building in import and domestic food supply chains in collaboration with the private sector, such as producers, suppliers, wholesalers, retailers and logistics services providers.[231]

9.3. People (2): Empower and protect women and other underprivileged groups

Kiribati's Constitution affords women formal equality before the law, but this has yet to transpire in practice. Discrimination against women is grounded in customs and traditions that have not evolved with society, and additional reinforcing misogyny denies women and girls their rights. Women have

[230] Find details at: UNCTAD (2022). *Catalogue of Diversification Opportunities 2022: New export possibilities for 233 economies based on economic complexity analysis*. Geneva.

[231] In addition, development partners should: (i) address the 5F (food, feed, fuel, fertilizer and finance) constraints immediately where possible; and (ii) ensure multi-year funding to strengthen food systems. See: FAO and WFP (2022*). Pacific Island Countries: Impact of rising costs of food, feed, fuel, fertilizer and finance Bulletin*, November 2022, Issue #1.

no legal recourse where customs infringe on the enjoyment of their rights and freedoms.[232] VAWG, child marriages and adolescent birth clearly illustrate the issues women face commonly in the islands.

Furthermore, outer island women and other underprivileged groups are at risk of not accessing public services or suffering provisions with considerably lesser quality and frequency. The absence of a comprehensive social protection system that effectively targets those most in need, such as those in rural areas, old age and unemployment, is a significant risk.

Empowering and safeguarding women and other underprivileged groups necessitates comprehensively implementing various initiatives. Kiribati should also ratify multiple human rights instruments. Launching a widespread public awareness campaign is crucial to challenging gender stereotypes, promoting gender equality and fostering a culture of respect and inclusion. A multi-stakeholder approach involving government, civil society organizations and the private sector is vital to implement these initiatives effectively and bring about lasting empowerment and equality for women and underprivileged groups in Kiribati. Some specific actions might usefully include:

(i) Addressing violence against women and developing comprehensive strategies encompassing legal protection, support services, awareness campaigns and educational programmes promoting healthy relationships and gender equality;
(ii) Enhancing women's representation and participation in decision-making bodies, such as political institutions, corporate boards and public administration, perhaps by introducing gender quotas;[233]
(iii) Creating more job opportunities with equal pay to increase the number of women and disadvantaged people in formal employment;
(iv) Providing training programmes, financial assistance and networking opportunities to support female and all other disadvantaged entrepreneurs;
(v) Establishing social protection measures that encompass disability support and social assistance, benefiting all disadvantaged groups of people; and
(vi) Mainstreaming human rights, which includes promoting gender equality, empowering women and ending violence against women and girls, in the education system.

9.4. People (3): Enhance the quality of education to create a prosperous future for youth.

To provide better opportunities for Kiribati's future generations, it is crucial to overhaul the education system. This will not only enhance school performance but also enable young people to secure better careers within the country, thereby decreasing the rate of outward migration while reducing the nation's dependence on foreign workers to fill specialized roles. There is a need for a quality education system, at various levels and fields, spanning: academic (elementary, secondary and tertiary), vocational and adult/further education. A greater emphasis on quality TVET is particularly recommended, to equip I-Kiribati – particularly youth and women – with the skills needed to be employable.

Such a reform process would need to encompass improved governance structures, physical facilities and curricula, as well as well-trained educators and administration personnel. The proposed actions should include (but not necessarily be limited to) the following components:

[232] Ibid.

[233] For more information on the pros and cons of gender quotas, refer to: https://www.idea.int/data-tools/data/gender-quotas/quotas.

(i) Implementing mandatory early years education to provide a strong foundation for primary schools;
(ii) Enhancing the existing teachers' certification system, including opportunities for selected teachers to receive training abroad;
(iii) Improving modest infrastructure regarding physical and virtual learning platforms;
(iv) Addressing high youth unemployment requires TVET, aligned with the labour market demand;
(v) Addressing educational inequalities by prioritizing resources and support for disadvantaged islands and areas (e.g., outer atolls);
(vi) Providing incentives to young individuals to complete at least secondary education; and
(vii) Encouraging student exchange programmes with educational institutions abroad, fostering cross-cultural learning and knowledge exchange.[234]

It is also imperative to prioritize higher education in Kiribati. There is enormous merit for Kiribati to establish a fully-fledged, four-year, liberal arts college with vocational and further education streams, along with improving the secondary education system, all intended to improve the pool of skills and expertise available in the island country.[235] Courses and curricula that align with Kiribati's economic, social and environmental needs and priorities would be expected to reap dividends in the years ahead. Developing the skills is needed to reduce the "brain drain" of young I-Kiribati to other countries and to be less dependent on overseas workers to meet demand in the government and the private sector.

9.5. People (4): Taking measures to strengthen public health

Although Kiribati spends a significant amount of its income on the healthcare system, the coverage and outcomes are sub-optimal. Kiribati citizens struggle with one of the highest world obesity levels, leading to NCDs and premature deaths. They often seek healthcare services in Fiji, Hawai'i and Australia. Enhancing healthcare services should be one of the top development priorities for Kiribati. In addition to developing healthcare facilities (e.g., hospitals, clinics and dispensaries), medical professionals must be fostered to provide healthcare services locally.

Imported under-nutritious food places a high risk on people's health, and the government could explore the imposition of taxes and duties on sweet, salty and fatty foods, and tobacco or alcohol to discourage their high consumption.[236] [237] Here, additional revenues from taxes and duties could strengthen the healthcare system in Kiribati and promote healthier substitutes more readily available.

[234] Kiribati could provide conditional scholarships to its students. The students must return to Kiribati to serve the government or any organization for a predetermined number of years. Subsequently, the individuals are free to decide their future paths. This approach effectively enables the acquisition of critical skills and knowledge from overseas, which can then be transferred back to the country and passed on to local people.

[235] Such a four-year college could merge the existing four higher education institutions in Kiribati (i.e., Kiribati Institute of Technology, Teachers' College, Marine Training Centre and Nursing School).

[236] The primary purpose of such taxation was traditionally to generate additional government income. Countries have recently realized this could be a powerful tool to promote desired (e.g., healthy) behaviour. For more information on nutrition-related taxation: Jensen, J. and Smed, S. (2018). "State-of-the-art for food taxes to promote public health", *Proceedings of the Nutrition Society*, 77(2), 100-105.

[237] Such taxes and duties have been enacted in numerous countries, such as Norway, Denmark and Finland, as well as some cities in the United States, Mexico and Tonga. WHO has promoted nutrition-related taxation for years. Refer to: FAO (2014). *Policy measures to increase local food supply and improve food security in the Federated States of Micronesia*, November; WHO (2004) *Global Strategy on Diet, Physical Activity and Health*. Geneva.

To tackle health problems, the government should consider applying a comprehensive approach to strengthening public health and consider the following measures, among others:

(i) Increasing public awareness and knowledge about habits and nutrition to reinforce healthy lifestyles from early education;
(ii) Providing clear, simplified messages regarding healthy diets and physical activities to the public (reducing salt, sugar and fat; taking more fruit and vegetables; exercising more);
(iii) Supporting the adoption of healthy diets and physical activities in schools and communities;
(iv) Formulating national dietary and physical activity guidelines;
(v) Incorporating healthy lifestyle issues in national strategies, policies and action plans;
(vi) Encouraging people to grow more plants that have nutritional values and help tackle the obesity problem;
(vii) Introducing digital healthcare services such as mobile doctors and telemedicine implementing necessary ICTs or "health-tech";[238]
(viii) Renovating, expanding and upgrading healthcare facilities;
(ix) Improving women's healthcare provision, as well as supporting with childcare and eldercare provisions; and
(x) Pursuing more fishing, aquaculture and agriculture to improve food security and reduce the reliance on highly processed food imports.

9.6. Prosperity (1): Grow through economic diversification – Promoting sustainable fisheries and tourism

The post-pandemic recovery gives Kiribati a renewed opportunity to reboot its economy to be more resilient, diversified, and sustainable around its leading sector – fisheries. However, as Kiribati does not have a sufficient fishing fleet to fish the abundant tuna resources in its EEZ, the country has sold several fishing rights to foreign interests. The promotion of more significant private sector investment, whether from domestic or foreign sources, could do much to innovate, invigorate and inspire new elements of Kiribati's future fishery sector.

Kiribati is not currently reliant on the tourism sector. In this context, tourist sector development provides immediate opportunities for Kiribati, albeit from a relatively low base point. Increasing visitor arrivals through niche tourism (e.g., ecotourism, history-tourism – such as the war legacy on South Tarawa and Kiritimati Lagoon – and agrotourism) could usefully contribute to private sector diversification, increase demand for local businesses and better harness and preserve some local and traditional skill sets and handicrafts as well as socio-cultural resources. Effective tourist promotion to attract foreign tourists requires favourable local conditions (e.g., accommodation, transport connectivity and professional skills) and the presence of international hotel operators and marketing agencies to become a recognized destination. Kiribati may also wish to become a regional air hub with a leading air service provider, taking advantage of its dispersed territory in the Central Pacific (similar to the Singapore Airlines model, but on a smaller scale).

While the private sector alone might be relied upon to pursue some investments, others may require public funding, or at least co-financing, for developing infrastructure and utilities for the fishery and tourism sectors. Advances in public-private partnership and blended finance could also open promising new avenues for Kiribati to explore and better leverage private sector funds with those of the public sector and development partners. Specific efforts in this space should consider including (but not necessarily limited to) the following components:

[238] For more information, see: https://intelehealth.org/.

(i) Coordinating with the private sector to access local, regional and international fishery markets, investing in seafood processing facilities;
(ii) Providing support for small-scale fisheries with training in accounting and finance;
(iii) Enhancing regional cooperation, including the Nauru Agreement, for sustainability in fisheries; and reducing illegal, unreported and unregulated fishing;
(iv) Allocating public funds to help develop innovations and investments in fisheries and aquaculture enterprises that offer long-term nutrition, livelihoods and sustainability benefits;
(v) Developing a coherent and realistic sustainable tourism strategy for Kiribati, including ecotourism, that can serve as a roadmap for a multi-year push intended to significantly upgrade and expand the sector;
(vi) Making a very deliberate commitment to ensure that currently pristine locations are protected and that Kiribati is seen as an attractive location for inbound tourists to visit;
(vii) Committing multi-year public funds in support of a roadmap for infrastructure and logistics development, including airport rehabilitation and accommodation upgrading;
(viii) Developing a national airline, which will likely entail bringing in external expertise and finance and therefore may require some kind of public-private partnership;
(ix) Improving the level of transport and communications connectivity for Kiribati so that the islands become more readily accessible to visitors; and
(x) Enforcing favourable foreign labour policies for the tourism sector, at least initially, in addition to efforts made around TVET.

Box 9
Blue-ocean tourism

"Blue-ocean tourism" discourse has recently gained more attention as a driver of climate change adaptation and mitigation.[239] It is considered an emerging strategy to promote income generation and job creation, largely by strengthening a small island's tourism industry and proactively responding (and seeking to reverse) declining environmental conditions.

Massive environmental challenges can be seen today and will continue to increase, and the oceans and life underwater are not spared from these developments. While contributing only a tiny fraction to worldwide GHG emissions, as an atoll nation Kiribati is among the most affected by climate change.[240] On the other hand, it is also true that the tourism sector and its related activities pose considerable environmental stress; for instance, due to its high energy consumption, the sector significantly contributes to global CO_2 emissions.[241] Hence, integrating sustainability into tourism development policies is a fundamental step toward building a profitable and long-lasting tourism industry in Kiribati.[242] There is clearly a need to be strategic in this approach, and to avoid some of the erroneous approaches to economic growth, at the expense of the environment, taken in the past. The design and implementation of a national, comprehensive "blue ocean tourism" development plan for Kiribati might be an excellent place to start.

[239] Wolf, *et al.* (2021). "Influences of Climate Change on Tourism Development in Small Pacific Island States", *Sustainability*, 13 (8).

[240] Althor, Watson and Fuller (2016).

[241] Wolf, *et al.* (2021).

[242] Bhattacharya, P. and Dash, A. K. (2021). *Determinants of blue economy in Asia-Pacific island countries: A study of tourism and fisheries sectors*. Available at: https://www.semanticscholar.org/paper/Determinants-of-blue-economy-in-Asia-Pacific-island-Bhattacharya-Dash/f5d17c9e81c77d53629765d7a132f52147623652.

9.7. Prosperity (2): Develop a more resilient economy based on private sector activities, robust infrastructure and accelerated digitalisation

Kiribati is exposed to various exogenous factors and forces that can deleteriously impact the country, its economy and its people (e.g., heavy dependency on essential goods imports and global commodity price hikes). Some of those risks can be mitigated by developing a more resilient economy based on the development of greater private sector activities, a more robust infrastructural platform of service provision, and the adaptation of digitalization.

Kiribati's revenues depend in large part on tuna stocks which are facing climate change-related challenges. Without diversifying revenue sources, Kiribati will face a declining trend in revenue sources quite soon. In this context, the private sector – including micro, small and medium-sized enterprises (MSMEs) – should serve as an additional engine of sustainable economic growth in Kiribati, bringing various positive effects. These potentially include (but are not necessarily limited to): (i) job creation; (ii) increased competition in the provision of products and services that then benefit consumers and make firms more productive and efficient; (iii) diversification of the economy for increased resilience; and (iv) greater innovation and creativity. But this requires a conducive business-enabling environment in which private sector firms can readily operate, which in Kiribati's case entails several key areas of reform, including those pertaining to land ownership and streamlining government bureaucracy, amongst others. Attracting FDI also requires a long-term strategy to back-stop Kiribati as an investment destination. Such a strategy also requires (i) an enabling environment with a supportive legal and regulatory framework; (ii) institutional capacity building; and (iii) communications and outreach. Developing a skilled and educated workforce and streamlining the regulatory processes are also essential.

Infrastructure and utility provisions also require the private sector's involvement and investment. For example, the need for improved processing of solid waste and recycling capacity might contain a private sector component, as might solar and offshore (wind and tidal) electricity generation. Improving transport and communications connectivity in Kiribati could also have a significant impact on its economic growth, social development and citizens' livelihoods. In contrast, investment in disaster preparedness (e.g., monitoring and early warning systems) will likely need funding exclusively from public and development partner sources. The infrastructural investments made in support of Kiribati's fishery and tourism sectors also need to support other fields of economic activities, so that a more diversified and resilient economy can be developed. That, in turn, can help attract and retain Kiribati citizens with jobs and other sources of income that advance the quality of livelihoods in the country. One of the strategies that can boost the private sector's participation in infrastructure projects is the PPP model in support of (public) development partners and (private) FDI inputs. There may also be scope for the use of blended finance.

The increasing adaptation of digitalization, in business and across the global economy, also means that the kinds of infrastructure in demand are also evolving into new fields, such as Internet connectivity (both the cost of its service provision and the quality of bandwidth). This is one area where private capital and technical support are active, and Kiribati should be able to leverage increasing private sector interest for its benefit. Crucially, the kinds of improvements being made in providing a range of business and consumer services, as a function of advances in ICT, have the potential to lessen some of the constraints that have traditionally put Kiribati and other PICTs at a distinct disadvantage. For example, advances in ICT are creating business models where economies of scale are much less critical, and where operating costs and transaction costs are lowered, so services previously deemed unviable for a small economy like Kiribati's are for the first time commercially viable prospects. If advances in digitalization can mitigate at least some of the economies of scale that have traditionally served to constrain economic development in Kiribati and other PICTs and virtually

lessen their geographic remoteness, that would be a very significant "win". Improved internet connectivity is likely to be a critical element for sustainable economic growth in the years ahead, which means prioritizing undersea cable connections that can allow Kiribati to stop depending on expensive and unreliable satellite connections.

To facilitate the strategies described above, the government, with support from development partners, should seek to:

(i) Focusing on greater domestic value creation and retention so that the capital stock, capacities and core skills of the private sector in Kiribati could develop in the long-term, thereby bringing about a more resilient and less asymmetric economic profile in Kiribati;
(ii) Attracting and retaining quality FDI inputs in support of Kiribati's economic diversification and growth, using a range of established tried and tested initiatives, from basic promotion activities, through to PPP and blended finance that could help de-risk larger investments;
(iii) Developing labour force skills through a range of educational initiatives that are well aligned with the needs of businesses, and bringing in foreign expertise to assist in this process where there is currently a lack of a domestic pool in those skills;
(iv) Increasing remittances and other inflows of capital from sources currently untapped (including foreign investors);
(v) Coordinating with the banks to provide access to finance for local investors and support the development of private equity;
(vi) Developing human capital by investing in education and TVET, promoting lifelong learning and skill development;
(vii) Setting up a department dedicated to promoting investment and providing incentives for foreign investors;
(viii) Implementing local entrepreneurship programmes for low-income individuals such as the "One Island One Product (OIOP)" scheme, which promotes traditional handicrafts, pottery, fashion accessories, household items and food items;[243]
(ix) Improving infrastructure including transportation, electricity and water access;
(x) Finding solutions for the land rent and ownership problems;
(xi) Expanding digitalization by increasing the affordability of the Internet and enhancing digital literacy; and
(xii) Accelerating the submarine Internet cable connection project with the donors.

9.8. Prosperity (3): Fight poverty and unemployment and enhance food security through sustainable rural development

At present, agriculture in Kiribati is mainly for subsistence, except for the government-led copra production. However, it has high growth potential and can significantly help to decrease poverty, enhance food security and limit dependency on imports. The sector can create new jobs, decrease unemployment and boost women's inclusion if the right policies are promoted. Therefore, the following recommendations are proposed:

(i) Promoting agricultural diversification which increases food security, creates job opportunities and enhances healthy nutrition in the NCD fight;
(ii) Training women in rural areas on creating income from the land to enhance inclusion, equality and employment;
(iii) Helping farmers with low water security and frequent droughts;

[243] Opportunities to employ OIOP, especially in Yap, are analyzed in: Schumann, F. (2016). "One Village One Product (OVOP) Strategy and Workforce Development: Lessons for Small Islands and Rural Communities", *Pacific Asia Inquiry*, 7(1).

(iv) Investing in research and development, including developing drought-resistant vegetables and fruits;
(v) Developing cooperatives and other farmers' organizations to help small-scale farmers their market access;
(vi) Developing value-added food supply chains, encouraging investment in local processing facilities;
(vii) Increasing land devoted to agricultural production through land ownership reforms including farm leasing schemes; and
(viii) Creating social enterprises to provide rural jobs for inclusive wealth creation by encouraging the young generation to be responsible for their land and society.

9.9. Planet (1): Maintain Kiribati's ecology, biodiversity and marine resources, including the measures of disaster risk reduction and circular economy

In Kiribati, ongoing climate change and its intensifying impacts, such as rising sea levels, high temperatures and extreme weather events, suggest a clear need to develop various initiatives in adaptation, mitigation and resilience in maintaining Kiribati's ecology, biodiversity and marine resources, as well as disaster risk reduction (DRR) and circular economy advocacy. Kiribati needs technical assistance and funding support to develop sustainable and resilient approaches to infrastructure and utility provision, as well as other interventions intended to protect the country's pristine and ecological system. Activities that could attract international private sector funding and additional support include (but are not limited to): onshore and offshore windfarms; solar energy; energy generation from tidal forces; emission reduction in deforestation and forest degradation; improved forest management; reforestation and sustainable agriculture; biomass and methane from landfills; fuel switching (e.g., shifting land and coastal traffic to EV); waste diversion and recycling; and weatherization. Critical policy options include, among others:

(i) Implementing public awareness programmes and localized technical assistance, providing communities with better early warning systems, preparedness plans, and even the development of long-term livelihood diversification strategies in response to climate change-driven changes in sources of income and well-being;
(ii) Inserting climate change and DRR education curriculum in formal education, which enhances human resource development and institutional capacity-building;
(iii) Designing training programmes for government officials on disaster risk assessments, emergency response planning and post-disaster recovery, as well as establishing emergency protocols among national stakeholders and neighbouring countries; and
(iv) Aligning environmental data-sharing systems with improved ICT infrastructure across multiple countries in the region, as well as government agencies within Kiribati itself;
(v) Developing and integrating comprehensive risk assessments that include assessing hazards, vulnerability, exposure and adaptive capacity risk, along with impact-based forecasting and early-warning systems;
(vi) Increasing global attention towards preserving biodiversity to attract and leverage external support and investment, given its marine life diversity and territorial waters which host an array of rare and endemic species;
(vii) Adopting the "blue economy" approach to achieve a more sustainable use of ocean resources for economic growth and development while preserving the health of marine and land ecosystems.
(viii) Attracting external funding support (including private sector FDI) for promoting more sustainable fishing practices, eco-tourism, sustainable aquaculture and mariculture;

(ix) Promoting various practices of the circular economy to improve water quality, minimize the release of hazardous chemicals and materials and increase recycling and safe reuse; and

(x) Given Kiribati's limited resources and capacities, actively working with development partners and other donors to mobilize resources and expertise to support the above-listed actions.

9.10. Planet (2): Advocate for more substantial international commitments to climate justice

As a nation that is not a significant polluter or emitter of greenhouse gas emissions, but increasingly suffering the consequences of climate change, Kiribati should actively engage in global efforts to ensure the effective implementation of climate justice. In this vein, Kiribati would do well to join forces with other affected nations to demand greater emission reduction targets and increased financial support for its climate change adaptation and mitigation measures. This includes actively participating in climate negotiations and other international forums to ensure that the voices of PICTs are heard. Specific interventions could usefully comprise:

(i) Exploring the possibility of pursuing practical actions against major polluters and greenhouse gas emitters, in line with the International Court of Justice (ICJ)'s advisory opinion on countries' obligations to address climate change, seeking preparations for the environmental, social and economic impacts of climate change on Kiribati, perhaps assessing MVI and supporting efforts to establish an international legal framework for climate justice;[244] and

(ii) Strengthening cooperation with regional organizations such as the PIF and the Secretariat of the Pacific Regional Environment Programme (SPREP) to develop comprehensive regional strategies for climate resilience, adaptation and mitigation, pooling resources, sharing expertise and leveraging regional influence to advocate for more robust global climate action.

9.11. Peace and partnerships (1): Take a pragmatic approach towards geopolitical competition and partnership

To overcome many of the various issues and challenges described in this paper, Kiribati requires continuous support from its partners, while climate change is the major threat to the nation. Doing so, Kiribati should be able to receive much-needed developmental assistance, which is crucial for its sustainable growth. It is imperative for the government to maintain diplomatic and economic relations with all partners and stakeholders to effectively achieve the country's development goals.

9.12. Peace and partnerships (2): Strengthen Kiribati's socio-economic and environmental fundamentals employing a holistic approach: The "BlueEARTH" development model

Navigating a way through increasing geostrategic competition in the Pacific, Kiribati has faced various challenges and conundrums, as profiled in this study, spanning: education, healthcare, food, labour, migration, infrastructure, trade and investment, tourism, finance, the private sector, climate change, natural disaster, blue economy, biodiversity, gender and youth, circular economy and so on. To a lesser or greater extent, all these issues stem in part from one crucial dilemma, that is: Kiribati has come to depend significantly on foreign external inputs, capital and knowledge, while at the same time steadily diminishing its valuable domestic assets (whether they be capital, human, tangible or intangible in form) to others, and particularly Australia, China, Fiji, Japan, New Zealand, the United States and other neighbouring countries, for example, Indonesia, Malaysia, the Philippines and

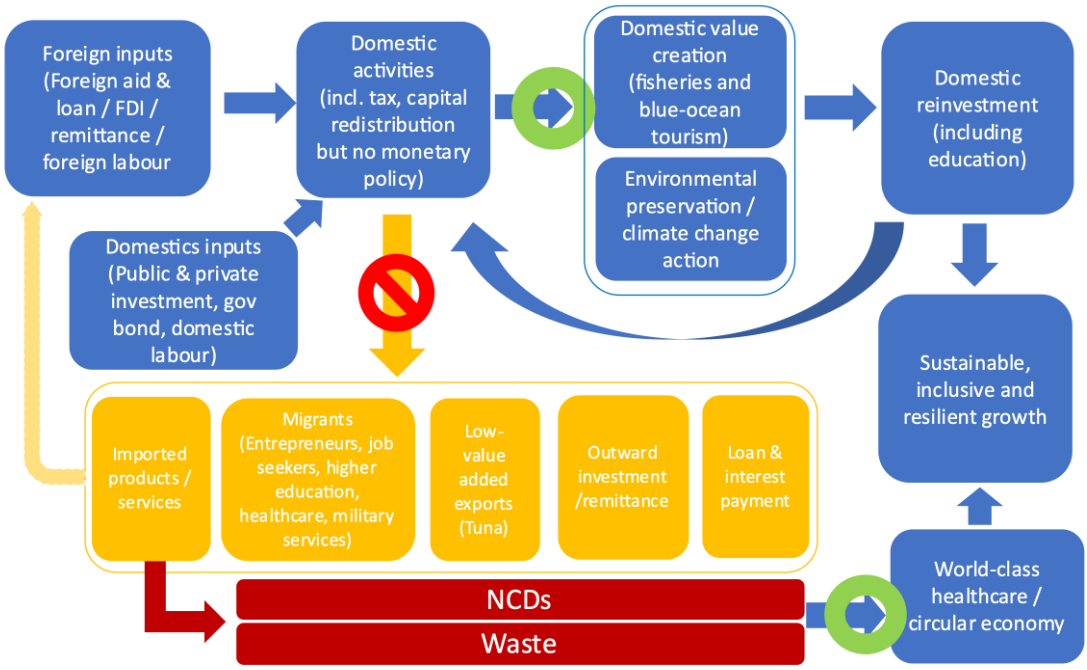
[244] See: https://sdgs.un.org/topics/small-island-developing-states/mvi.

Thailand in South-East Asia. This vicious cycle has resulted from historical sovereign development and geopolitical and socioeconomic settings around Kiribati.

Money flowing into Kiribati or generated within the country can contribute to domestic value creation or be lost through outflows. To foster sustainable growth, it is crucial for the assets to remain within Kiribati, enabling local reinvestment and fuelling a cycle of development. The country should prioritize the value creation process within its borders, which will effectively halt the outflow of assets and promote investments and reinvestments domestically. For instance, significant amounts of money are spent on imported goods and foods. While certain food products, like rice and wheat, may not be producible within the country, there are opportunities to locally produce other goods or seek equivalent substitutes, which are usually better in nutrition and prevent NCDs while reducing healthcare costs. Those imported goods, such as cars, motorcycles, furniture and canned foods and drinks will eventually increase the amount of waste at the very end of value chains, which urgently require the implementation of circular economy practices such as recycling, reuse and environmentally right dumping. Presently, locally caught tuna is also exported without processing, leading to low prices and reduced income for the local economy. Remittances received by foreign immigrants, who play an important role in Kiribati, are often sent back to their home countries. To retain money within the country, it is crucial to develop a self-reliant workforce capable of fulfilling demanding jobs across various fields. This requires sufficient education and healthcare services to citizens and foreigners in all necessary and specialized fields so that the money they earn can circulate within the country. Another significant outflow of money stems from investments made overseas. The lack of a conducive business environment in Kiribati discourages local and foreign investments. The funds lost through these investments in foreign markets should instead be reinvested within local boundaries, fostering sustainable, inclusive and resilient development.

Kiribati should focus on retaining money within the country by emphasizing domestic value-creation processes, reducing outflows and reinvesting lost funds in local markets. This approach will contribute to socio-economic growth and self-reliance. Figure 31, below, depicts the problem in Kiribati as a simplified value chain.

Figure 31
Kiribati's simplified value creation or losing chains



Source: The authors (2023).

The figure may suggest three critical policy implications:

(i) Kiribati should focus on investment in domestic value creation (e.g., industries, education, environmental protection, climate change adaptation) and healthcare and waste management to safeguard against the negative impacts of imported foods and goods;

(ii) Kiribati must discourage value outflows through various leaking channels (e.g., imported goods, foods and fuels, migration, low-value-added exports, outward FDI and loan repayments) by implementing relevant countermeasures (e.g., laws and regulations, taxes and duties, incentives, contracts, institutional capacity building and human resource development); and

(iii) Kiribati has to develop a comprehensive policy package, containing the above two policy streams in a carefully designed mix so that the nation can enhance its interventions' effectiveness and efficiency while reducing their potential cancelling-out effect. The two policy streams may have an opposite effect that, for example, domestic investments targeted households and businesses may choke on drastic import restrictions, reducing the availabilities of essential foods and goods and increasing the living costs.

In partnership with stakeholders, including other SIDS in the Pacific and Micronesia, bilateral donors, multilateral development agencies (MBDs), international finance institutions (IFIs) and others (e.g., CSOs and the private sector), Kiribati should develop and implement a holistic development framework intended to comprehensively break out of the vicious cycle and strengthen its socioeconomic fundamentals. Such a strategy would aim to develop and maintain the domestic value creation systems within Kiribati's borders while encouraging international cooperation with other countries and entities. It should seek to bring about greater economic resilience as well as attain a more environmentally sustainable growth trajectory.

In this context, we humbly propose a new development model, for consideration by Kiribati and other PICTs, and potentially adaptable to other SIDS globally, called "BlueEARTH". The term BlueEARTH denotes an [Blue] economy, [E]ducation, [A]id, [R]emittances, [T]ourism and [H]ealth. The model

builds on some of the key concepts and components of previous SIDS development models, such as MIRAB, TOURAB, ROT, SHIFT and PROFIT (see section 2.2), but expands them to cover other crucial issues and challenges that Kiribati and other PICTs are currently contending with, as depicted in this study (table 9). The aim of the BlueEARTH is to break the vicious cycle of the past and serve as a vehicle to create a more virtuous cycle for the future.

Table 9
The "BlueEARTH" development model

Model	Key elements	Income sources	Enablers
BlueEARTH	[Blue] economy [E]ducation [A]id [R]emittance [T]ourism [H]ealth	Fisheries, foreign development assistance, inward remittances and Blue Ocean tourism	Improved education and healthcare, a more dynamic private sector, environmental preservation, a circular economy, greater international cooperation, better bureaucracy and advances in digitalization

Source: The authors.

The model's merit is in identifying multiple revenue sources for Kiribati, namely: fisheries, foreign development assistance, international remittances and blue ocean tourism. The model also identifies the key enablers: improved education and healthcare, a more dynamic private sector, environmental preservation, a circular economy, greater international cooperation, better bureaucracy and advances derived from increased digitalization. New elements in this model include education, healthcare, environmental preservation and circular economy as key policy issues that Kiribati must tackle, as they have significantly contributed to people's migrations out of the country. This framework can provide the basis for national and international development cooperation for Kiribati among various stakeholders and development partners, as elaborated in this study. Mainstreaming environment sustainability, in the pursuit of a robust domestic blue economy, offers the prospect of genuine sustainability.

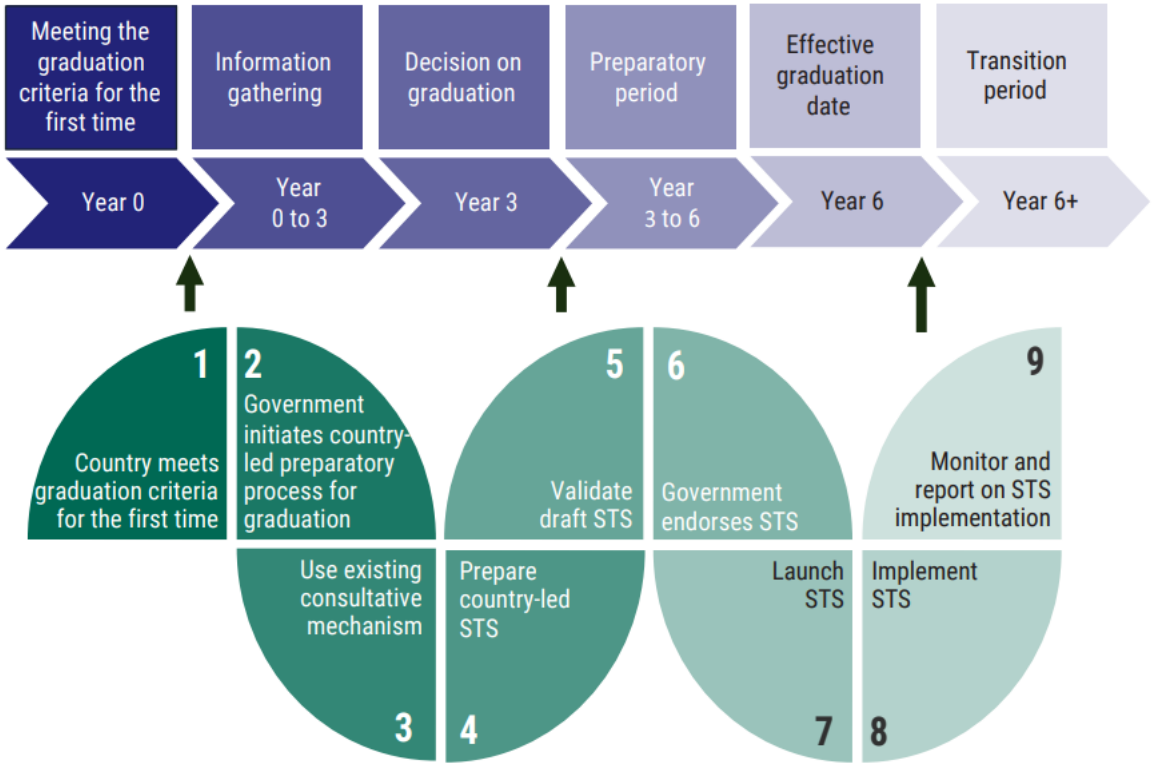
Partnerships with bilateral development partners (such as Australia, China, Japan, New Zealand and the United States), regional and international organizations (such as ESCAP, PIF and SPC), multilateral development banks (MDBs, such as ADB and the World Bank) and IFIs can all help bring about positive impacts. Harnessing the financial and non-financial (technical) capacities of these institutions, and their considerable prior experience, is highly recommended. Within the Pacific, partnering with other PICTs to develop joint approaches to regional socio-economic and environmental issues of mutual concern can also be greatly beneficial, sharing and leveraging resources, and ensuring that "the wheel is not reinvented". Sharing best practices, lessons learned and pursuing innovative approaches to economic development and climate change challenges all help to enhance, not divert, domestic institutional capacity. Further, bilateral and multilateral agreements with neighbouring island countries can help create and strengthen trade and investment ties.

This national study would argue that integrating blue economy principles into Kiribati's development strategy (i.e., the Blue EARTH) would contribute significantly to the island's sustainable growth prospects. Initiatives might usefully include offshore renewable energy; decarbonized shipping and climate-resilient ports; adopting circular economy principles in production, processing and services; and sustainable marine food production and processing, among others.

9.13. Develop strategies for LDC graduation.

The readiness assessment of Kiribati's LDC graduation, as outlined in an earlier section of this national study, recommends that the ECOSOC again defer the decision from 2024 to 2027. It also suggests that the CDP reconduct the country-led preparatory process for graduation from the LDC category, while Kiribati works with the CDP and the international development community through the existing consultative mechanisms (e.g., expert group meetings and ad-hoc consultations) and gathers information, data and statistics from 2024 to 2027. Figure 32 depicts the six stages of the standard process and timeline, where Kiribati is currently at the second stage: information gathering for the decision on graduation. An issue here is that Kiribati needs to reassess the extent to which the country has adequately completed the first two stages of the graduation process under the changed circumstances caused by the unprecedented global socioeconomic shocks during 2020-2023.

Figure 32
Six stages graduation process and timeline



Source: UN DESA (2021). *Handbook on the Least Developed Country Category: Inclusion, Graduation and Special Support Measures*. New York: The United Nations Committee for Development Policy.
Note: STS stands for the "smooth transition strategy".

Kiribati's capacity to gather necessary information and to prepare for graduation was significantly disrupted by the impact of COVID-19, the consequences of the war in Ukraine and other external and internal shocks, such as frequent droughts and global commodity price hikes. It resulted in a loss of more than three critical years (2019-2023) for graduation assessments, leaving less than one year's preparation for the triennial review and ECOSOC's decision in 2024. The present graduation process and schedule were decided based on information gathered prior to the pandemic, in 2018 or before.

Kiribati still feels the pandemic's impact, as its supply chains with the neighbouring Pacific SIDS and other trade partners have yet to recover fully from the unprecedented global shocks. The government may use this situation to support its request to extend an equivalent number of years to the 'lost three

years', to allow it time to gather necessary information for the proper graduation assessments in a post-COVID era.

Under this changed situation, Kiribati is also recommended to request the CDP to re-conduct the vulnerability, impact and graduation assessments with UNCTAD, UNDESA and other United Nations system entities. This process should fully incorporate COVID-19 and other external shocks' total impact on the socio-economic development in Kiribati from 2020 to 2023, also considering the findings of the CDP's study on the impact of COVID-19 on the LDC category.[245] Neither the supplementary graduation indicators nor the MVI indicators proposed in 2020 have been fully reflected in Kiribati's LDC graduation assessments and reviews. This study suggests incorporating both results in the new graduation assessments and reviews. In particular, the MVI covers both vulnerabilities and structural issues more profoundly and comprehensively (e.g., in terms of social aspects and national capacities).

Kiribati also requires more technical assistance in support of the government's capacity building. To work with the CDP and other cooperating United Nations system entities (e.g., OHRLLS, UN DESA and UNCTAD), Kiribati is recommended to request various technical assistance in support of LDC graduation, including institutional capacity building, policy advocacy, research and training. Such assistance could also be sought from MBDs and IFIs. The government could take advantage of the available graduation support from its main development and trading partners, including the iGRAD; a measure of support under the Doha Programme of Action for LDCs.[246]

Finally, this study strongly suggests Kiribati collaborate with two other Pacific LDCs, namely the Solomon Islands and Tuvalu, on their respective LDC graduation strategies. Those neighbouring SIDS share many common characteristics and development needs that would be valuable for Kiribati to learn from, working together for effective LDC graduation. Table 10 presents a proposed new timeline for Kiribati's LDC graduation process, based on this study's recommendations, and in conformity with the CDP's future events and activities.

Table 10
Kiribati's new graduation process timeframe

Years	Steps	Outputs
2024	Information gathering (restart for the second round)	Data collection and analysis, consultation and training on implications of LDC graduation, including loss assessment of LDC-specific international support measures (LDC-ISMS)
2025	Information gathering	Ibid.
2026	Ibid	Ibid.
2027	Decision on graduation: a preparatory meeting and consultations (January-February), the 2027 triennial review (February), ECOSOC decision, or further deferral (June-July).	Vulnerability profiles, ex-ante impact assessments, graduation assessments, supplementary indicators, MVI, country-specific information (country statements and presentations)

Source: The authors.

[245] The United Nations (2021). *Comprehensive Study on the Impact of COVID-19 on the Least Developed Country Category*. New York: The Committee of Development Policy.

[246] Visit: https://www.igrad.com/.