



KJIP MONITORING, EVALUATION AND LEARNING FRAMEWORK:

ANNEX 4: EXAMPLE 1: DRAFT SECTOR SCORECARD FOR THE KEY POLICY THEMES OF FOOD SECURITY



Component 1: Risk and vulnerability context
How Kiribati is changing – risks and vulnerabilities

Date completed

July 2020 (draft)

Key Policy Theme	Food Security
Most relevant KJIP strategies	Strategy 4: Increasing water and food security with integrated and sector-specific approaches and promoting healthy and resilient ecosystems Strategy 5: Strengthening health-service delivery to address climate change impacts

Key climate change impacts faced in this Policy Theme

- Drought, linked to strengthened ENSO → reduced crop yields
- Sea level rise, storm surge → coastal inundation leading to loss of agricultural land and reduced soil quality
- Sea surface temperature increase → coral bleaching and reduced near-shore fish catch
- Ocean acidification → reduced productivity of fisheries
- Climate change impacts elsewhere in the world → increased cost of imported food supplies
- Cyclone impacts → damage to agricultural lands and infrastructure, reducing food security

Future climate change context

Sea level rise: The sea level in Kiribati has risen and will continue to rise throughout this century. Satellite data indicate the sea level has risen across Kiribati by 1–4 mm per year since 1993, compared to the global average of 2.8–3.6 mm per year (PACCSAP, 2011). More recent data on SLR (IPCC, 2019) under a medium-emissions scenario (close to “business as usual”) estimates an increase in global mean sea level of 43 cm by 2100 (0.29–0.59 m likely range) and 84 cm (0.61–1.10 m, likely range) under a high-emissions scenario. Critically for Kiribati, the IPCC (2019) also report that “Many low-lying megacities and small islands (including SIDS) are projected to experience historical centennial events at least annually by 2050” under all scenarios.

Temperatures have warmed and will continue to warm with more very hot days in the future. By 2030, under a high-emissions scenario, this increase in temperature is projected to be in the range of 0.3–1.3°C for the Gilbert and 0.4–1.2°C for the Phoenix and Line Islands. There will also be an increase in extreme heat (very hot days and warm nights) (PACCSAP, 2011).

Rainfall: There is some uncertainty in the rainfall projections, and not all models show consistent results. Droughts are projected to become less frequent throughout this century, while there will likely be an increase in the number of extreme rainfall days.

Ocean acidification has been increasing in Kiribati’s waters. It will continue to increase and threaten coral reef ecosystems (PACCSAP, 2011), as will a likely increase in sea surface temperatures and marine heatwave events.

Cyclones: Globally there is evidence that in the future there will be higher proportions of Category 4 and 5 tropical cyclones and more intense rainfall during cyclone events (Thomas et al., 2020).

Vulnerability situation report for the sector (national level)		
Climate change drivers of food insecurity		
Data	Data and year	Comment/source
		Tips for comments: Comments may cover: <i>Definitions</i> of the data, including how it is <i>broken down</i> (disaggregated). It may include <i>assumptions</i> and/or <i>Interpretations</i> of data and/or discussions of its <i>relevance</i> to the Key Policy Theme. It may also cover the <i>availability</i> of the data, either regarding its current or future availability.
Percentage of population affected by agricultural drought in the last 12 months	0% (2019)	<i>Source:</i> Kiribati Meteorological Service Division (KMS) (2020a) Provides at-a-glance rainfall status for past two years broken down into island groups
Occurrence of coral bleaching warning level 1 or 2 in an island group	1 (May–July 2020)	<i>Source:</i> KMS (2020b) Kiribati Met get their data from the Climate and Oceans Support Program in the Pacific (COSPPac) Pacific Oceans Portal . The data is only accessible on a “daily” timeframe, discussions required with the Secretariat of the Pacific Community (SPC) to access historical data and at island level.
Prevalence of IVA issue: “Prolonged droughts/Irregular/unpredictable rainfall distribution affecting agricultural production recently”	70% of villages reporting this issue. (2019)	<i>Definition.</i> This measure uses the data from the Kiribati IVA (15% of villages) as a proxy for Kiribati. <i>Source.</i> Kiribati Integrated Vulnerability Assessment (KIVA) (2019)
Prevalence of IVA issue: “Increased incidence of storms & strong wind affecting agricultural production recently”	7% of villages reporting this issue. (based on data gathered between 2018 and 2020)	<i>Definition.</i> This measure uses the data from the KIVA database (currently representing 15% of all villages) as a proxy for Kiribati. <i>Source.</i> KIVA (2019) via the KIVA Database
Prevalence of IVA issue: “Decline in fish stocks (e.g., indicated by size of fish decreasing/or catch per unit decreasing)”	81% of villages reporting this issue. (based on data gathered between 2018 and 2020)	<i>Definition.</i> This measure uses the data from the Kiribati IVA (currently representing 15% of all villages) as a proxy for Kiribati. <i>Source.</i> KIVA (2019) via the KIVA Database
Prevalence of IVA issue: “inability to grow food due to saltwater intrusion (e.g., king tides/intrusion into lens/storm surge/overtopping)”	37% of villages reported this as an issue (based on data gathered between 2018 and 2020)	<i>Definition.</i> This measure uses the data from the Kiribati IVA (currently representing 15% of all villages) as a proxy for Kiribati. <i>Source.</i> KIVA (2019) via the KIVA Database
Agricultural damage/losses from extreme events: 1) Storm surge and coastal inundation 2) Cyclone 3) Drought	No data found. Further discussions required to examine whether data is available at the national level	<i>Availability & Interpretation.</i> Indicator can combine quantitative data with a qualitative description, especially if data is sparse. Any available data may not fully capture the situation where losses relate to incremental change.

Number of cases of ciguatera poisoning ¹	No data found. Further discussions required to examine whether data is available at the national level	<p><i>Source.</i> SPC/Division of Fisheries, Aquaculture and Marine Ecosystems (FAME)</p> <p><i>Assumptions.</i> This is a secondary climate change impact on food security and may not be considered significant.</p>
---	--	--

Socio-economic drivers of food insecurity

Food Price volatility	Variety of sources	
Households experiencing moderate or severe food insecurity	X% (2020)	<i>Source:</i> Food Insecurity Experience Scale (FIES) within the Kiribati Household Income and Expenditure Survey (HIES) (2019). Analysis forthcoming.
Household poverty: households living below the national minimum cost of living or basic needs poverty line (BNPL)	17% (2006)	<p><i>Source.</i> National Statistics Office Kiribati (2006)</p> <p><i>Definition and assumptions.</i> Poverty in the Kiribati context does not mean hunger or destitution in the conventional sense of understanding. It means rather that many households are struggling to meet their basic living expenses on a daily or weekly basis, particularly those expenses that require cash payments (Kiribati: Analysis of Poverty of 2006 HIES)</p>
Household: Poverty Gap Index	7.2% (2006)	<p><i>Source.</i> National Statistics Office Kiribati (2006)</p> <p><i>Definition.</i> An index of the percentage by which the average expenditure of poor households falls below the BNPL.</p> <p><i>Relevance & assumptions.</i> It shows that in 2006 in Kiribati, those households falling below the BNPL have on average, expenditure about seven percent below the level of the poverty line. This compares to Fiji (11.2) and FSM (9.3) where there was a greater disparity of expenditure.</p>

Vulnerability situation report for the sector (sub-national level)

Island grouping	Vulnerability situation (with evidence and sources)	Data	Comment and comparison with national picture
South Tarawa			
North Gilbert Group			
South Gilbert Group			
Line and Phoenix islands			

¹ The prevalence of ciguatera in the South Pacific increases dramatically where average sea surface temperatures are at least 28 to 29C (Llewellyn, 2010)

Sub-national vulnerability hotspots (Example text below: not a detailed analysis!)

Location (based on geographical definitions used in HEIS 2006, but tbc)	Reason for concern (consider exposure, sensitivity and adaptive capacity)	Evidence
South Tarawa	High population, high relative dependency on food imports (internal and international), lack of agricultural land	South Tarawa recorded the highest incidence of basic needs poverty of 18.3% of households and 24.2% of the population (HIES, 2006) Historical dependence on the northern “Garden Islands” (e.g., Butaritari) and international food imports; however, as a key import centre, its food distribution costs may be lower. The Proportion of Own Production in Food Consumption (30%) in S Tarawa is lower than elsewhere (53% for the Rest of Gilberts)

Summary narrative report of key vulnerabilities for the sector

Consider:

- Vulnerability assessment data and indicators (above)
- Underlying vulnerabilities (including social, economic, or health issues that might affect climate-related vulnerability, e.g., is current economic situation likely to negatively affect food security responses?)
- Adaptive capacity – do government and/or communities have access to the knowledge, resources, and skills to reduce vulnerability?


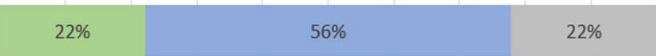
Forecasts from recent scientific studies show that climate change is likely to have substantial impacts on Kiribati coastal and oceanic fisheries, their habitats and reefs, and the little land available to I-Kiribati (Kiribati National Fisheries Policy 2013–2025). There are close links between climate change, food security, and health: for example, a reliance on food imports can affect diet and worsen non-communicable diseases (NCDs), while NCDs can increase vulnerability to climate change.

Half of the I-Kiribati population is located in the urbanized centre of South Tawara. Imports aside, South Tarawa is dependent on local fisheries for protein and increase trade from the northern “Garden Islands” (e.g., Butaritari), and this must be accounted for in assessing food security.

Kiribati is often excluded from global food security indices (e.g., the Global Food Security Index) (Economist Intelligence Unit, 2020), or ongoing monitoring systems (e.g., FEWSNET) because of its small size, lack of data, and the fact that other countries are considered more food insecure. Data is often incomplete, with “no data” frequently evident for country-level analyses within international reports by the WHO, FAO [51,53] and data which contributes to SDGs. This means that an ad hoc approach may be required when building up a picture of adaptation progress for the policy theme of food security, using what data is available and exploring what this may mean through analysis and discussion.

Component 2: KJIP implementation progress

Are we implementing adaptation as planned?

Progress in implementing the KJIP	
Progress indicator for the implementation of relevant KJIP Strategies (extracted from KJIP first Implementation Progress Report, 2020)	<p>Strategy 4: increasing water and food security with integrated and sector-specific approaches and promoting healthy and resilient ecosystems</p> <p>The responsible lead agencies for Strategy 4 reported that 54% of strategy actions “commenced,” “ongoing,” or “completed” and as self-reported by the Responsible Lead Agencies.</p> <p>Strategy 04: Increasing water & food security with integrated & sector-specific approaches & promoting healthy & resilient ecosystems</p> 
	<p>Strategy 5: Strengthening health-service delivery to address climate change impacts</p> <p>The responsible lead agencies for Strategy 5 reported that 56% of strategy actions “commenced,” “ongoing,” or “completed” and as self-reported by the Responsible Lead Agencies.</p> <p>Strategy 05: Strengthening health service delivery to address climate change impacts</p> 

Brief narrative report of KJIP implementation

Strategy 4 has an above-average proportion of actions that have been reported as commenced (13%) or underway/ongoing (38%). There is a below-average proportion of actions reported to be in the early stage of progress (3%), and an above-average number of actions reported to be under review (16%). There is no information for a small proportion (10%) of actions. Further assistance will be required to ensure the ongoing successful implementation of this strategy.

Strategy 5: Nearly 80% of actions are either underway (56%) or have a plan in place, suggesting good progress. 22% of actions are under review, and further analysis is required to understand which actions are reviewed and the likely next steps.

High-level Policy Theme indicators (KJIP indicators and high-level indicators)

The following section identifies a number of high-level indicators from various sources. In time, KNAP indicators would also be integrated; however, many of these do not yet have a methodology for quantification.

Indicator	Source	Baseline and date (if available)	Measure and date	Direction of Change (if possible)
KIVA Total Food Security score	KIVA database	2.3 (2019)	<i>Definition.</i> This measure uses the data from the Kiribati IVA (15% of villages) as a proxy for Kiribati. (1 = high reported vulnerability and 5 = not reported as vulnerable.) <i>Source.</i> Kiribati Integrated Vulnerability Assessment (IVA) (2019)	
Proportion of households with per capita expenditure below the minimum level of dietary energy consumption (FPL) %	Kiribati HIES 2006	5.3% (2006)	<i>Relevance & interpretation.</i> This is a useful indicator of affordability and sensitivity to food security issues. It would be worth considering a regional baseline comparator if available or even a “nearest neighbour comparison” (How is Kiribati comparing to PSIDS in similar situations?). This is not always politically attractive but can be useful.	

Food expenditure as a proportion of Household Food & Non-Food Expenditure	Kiribati HIES 2006	46.8% (2006)	<i>Relevance & interpretation.</i> This is a useful indicator of affordability and sensitivity to food security issues. It would be worth considering a regional baseline comparator if available or even a “nearest neighbour comparison” (how is Kiribati comparing to PSIDS in similar situations?). This is not always politically attractive but can be useful.
Percent of the available dietary energy supply (calories) from imported goods	World Bank (2011)	35% (2009)	<i>Source.</i> World Bank (2011)
Prevalence of undernourishment (%) (3-year average)	FAO et al. (2019)	2.7%	<i>Source:</i> FAO, IFAD, UNICEF, WFP and WHO (2019)
Change in the average number of crop species households have access to (food crop diversity)	KNSO Census 2010–2015	3.5 (-1.5)	<i>Definition.</i> National average calculated from island averages. <i>Source:</i> NSO census 2010, 2015 prepared by Ministry of Environment, Lands and Agriculture Development (MELAD) Agriculture and Livestock Division, 2017 via KIVA Database (2019)
Prevalence of IVA issue: “No/ limited knowledge of climate-resilient crops ”	Kiribati IVA survey	52%% of villages reporting this issue. (based on data gathered between 2018 and 2020)	<i>Definition.</i> This measure uses the data from the Kiribati IVA (15% of villages) as a proxy for Kiribati. <i>Source.</i> KIVA (2019) via the KIVA Database (2020)
Prevalence of IVA issue: “no/limited engagement/visitation by fisheries specialists (e.g., FA – Fisheries Assistants)”	Kiribati IVA survey	44% of villages reporting this issue. (based on data gathered between 2018 and 2020)	<i>Definition.</i> This measure uses the data from the Kiribati IVA (15% of villages) as a proxy for Kiribati. <i>Source.</i> KIVA (2019) via the KIVA Database (2020)
Increase in # and % of organisations in key sectors that have the knowledge, skills, and resources required to implement coordinated approaches on local food production and imported food commodities each year.	KJIP indicator		There is currently no agreed methodology to measure this; however, a survey could be used to generate data.
Agricultural output per capita	Currently no date source		<i>Relevance.</i> Selected on the basis that the agricultural output of Kiribati in decline especially in relation to its population growth (Cauchi et al., 2019)
Preparedness: policies in place			<i>Definition.</i> Qualitative indicator. Would require an assessment of the extent to which food and agriculture policies consider climate change.
Access to finance: Value of projects addressing climate change and food security	Tbc		<i>Definition.</i> Total secured/Total utilised/year-on-year increase

Narrative report of high-level sectoral indicators

What is the overall picture? What do the indicators tell us? What do they not tell us? Where is there insufficient data?

The data above establishes a baseline for the first time, and as such, it is hard to determine change over time. This will become clearer when data from HIES 2019 is available. The data suggests that undernourishment (2.7%) and levels of households unable to access sufficient food (proportion of households with per capita expenditure below the minimum level of dietary energy consumption – 5.3%) is relatively low but not insignificant. More discussion is needed to understand who this highly vulnerable population is and where they are located, as these people will be most vulnerable to climate-related food insecurity in absolute terms.

Reliance on food imports varies from island to island and needs to be considered in terms of relative poverty and context (i.e., does a higher level of food import reliance represent greater wealth or an inability to source food locally?). Higher levels of food imports (and the purchasing power to access these goods) may provide greater flexibility in times of local food shortages; however, in the long term, increases in the price of food imports (and in some cases a lack of locally produced food) may expose Kiribati to climate-related risks in other countries, for example, through a spike in grain prices.

A critical aspect of managing food security in the context of climate change is preparedness, in particular, the extent to which food production (agriculture and fisheries) and economic development (including import-export) policies take into account short-, medium-, and long-term climate change impacts. A further aspect of preparedness is the availability of data to make assessments of the changing food security situation in a timely manner and at appropriate spatial scales. The data gathered for this scorecard suggests more work is needed in this area. The lack of up-to-date data for this sector highlights the need for HIES data to be made available as soon as possible and also the need for key actors working in food security to incorporate their own working knowledge into this scorecard in order to fill gaps where data is missing and to contextualize the data which is available.

Component 3: Understanding the impact of KJIP policies and actions (Are we making a difference?)

Component 3 looks to bring together the findings from Components 1 and 2 to critically review the relationship between climate change vulnerability, KJIP implementation, and desired outcomes for the sector theme of food security. This will help us to understand the overarching question, “Are we making a difference?”

This section should be completed after consultations and ideally, a workshop with key stakeholders working in the policy theme of food security.

Situation overview – Component 1

- How is climate change affecting the policy theme of food security, and what do the indicators and narrative in Component 1 tell us?
- How are non-climate-related vulnerabilities affecting the policy theme of food security (e.g., the socio-economic context)?
- Is there evidence of vulnerability hotspots?

Situation overview – Component 2

- Is KJIP implementation on track? What challenges have been experienced in the context of food security?
- Are high-level indicators changing (positively or negatively)?

Component 3: Understanding the impact of KJIP policies and actions (Are we making a difference?)

- Is the KJIP able to respond to the changing vulnerability context outlined in Component 1, including addressing vulnerability hotspots?
- Are KJIP actions contributing positively to high-level indicators for this policy theme (food security) identified in Component 2?
- What are the barriers to doing this? In particular, are there gaps in adaptive capacity, including in government, civil society, and private sector?
- Do key food security policies and plans (a) connect effectively with the KJIP and (b) take into account the changing vulnerability context outlined
- What is working well, and what could work better in relation to this policy theme (lessons learned from KJIP implementation)?