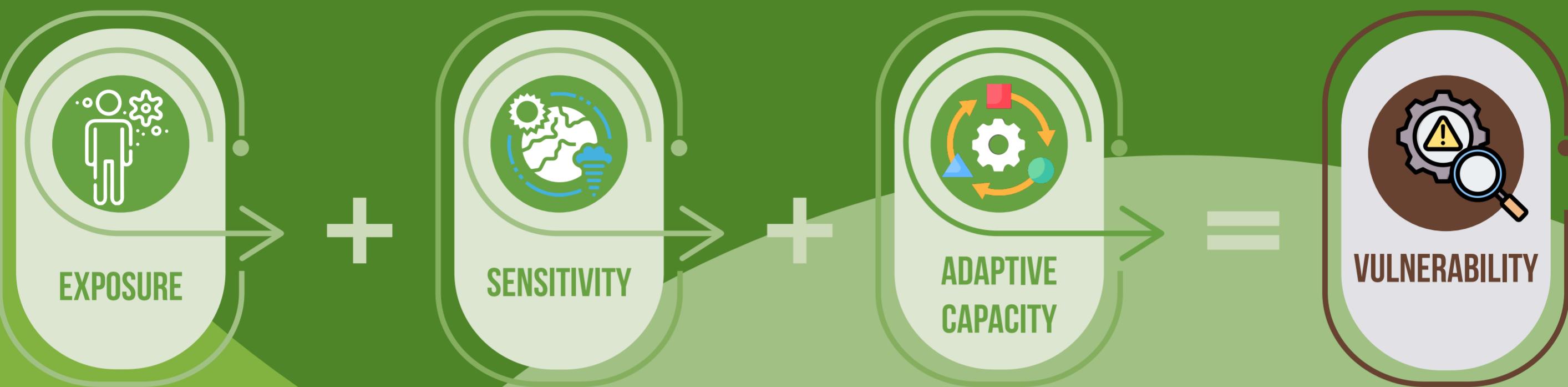
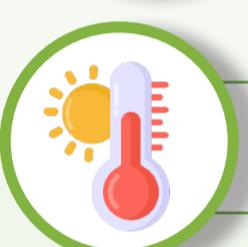


# COMMUNITY FISHERIES' CLIMATE CHANGE VULNERABILITY



## EXPOSURE

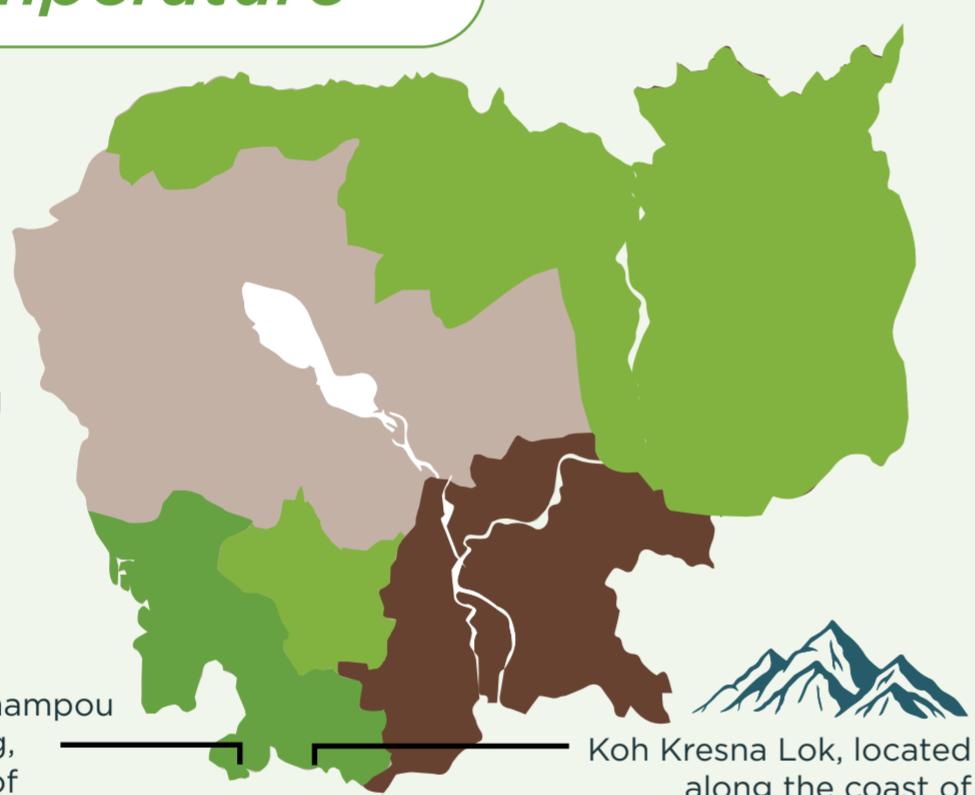


### Temperature

Information and assessment corresponds to five Community Fisheries (CFi) along Cambodia's coast



Bantey Prey, Samrong, Champou Khmao, and Beoung Rang, situated along the coast of Preah Sihanouk Province.



### Rainfall

100 mm

Mean annual rainfall decrease from 2000 to 2024.

- ▶ Projections in coastal areas indicate a slight decrease in annual rainfall in the coming future, with an increase in maximum one-day extreme rainfall, while maximum five-day totals are expected to decrease.
- ▶ In coastal areas, agricultural land is particularly exposed to changes in rainfall.



### Sea Level Rise



60 cm

Estimated sea level increase by the 2090s

- ▶ High risk of antecedent sea level rise (between 1993 and 2015).
- ▶ High risk for future sea level rise, with projections estimating an increase in local sea level of approximately 60 cm above 1986-2005 baseline by the 2090s.
- ▶ Freshwater bodies and various coastal habitats are the most exposed to sea level rise.

### Mean annual temperature increase

0.45°C  
from 2000 to 2024

### Projected mean annual temperature increase in coastal areas

0.7 to 2.7°C by the 2060s  
1.4 to 4.3°C by the 2090s

In coastal areas, the open sea is the most exposed to rising temperatures.



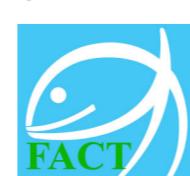
### Extreme Weather Events

- ▶ Mangrove forests and seagrass beds are particularly exposed to storm damage.

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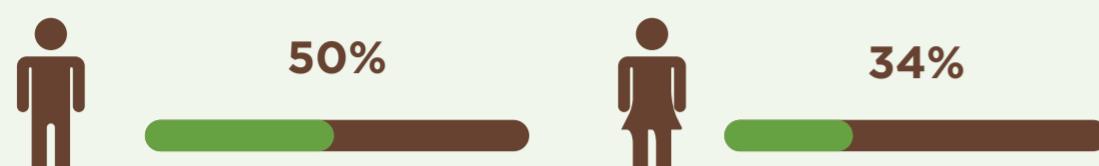


## SENSITIVITY



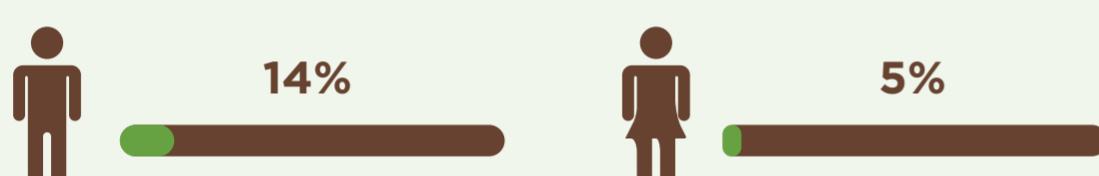
### CFi Livelihoods

- Fishing, fish processing, farming, and animal husbandry account for 50% of CFi men's and 34% of CFi women's main occupation.



### Agriculture

- Climate change is expected to have severe adverse effects on crop production by increasing the likelihood of salinization of land surfaces, increasing evapotranspiration rates, and increased frequency and intensity of floods and droughts.
- CFi members' agricultural activities are sensitive to climate change, potentially jeopardizing approximately 14% of CFi men's primary occupations and 5% of CFi women's primary occupations.



### Forestry

- Climate variability can adversely impact mangrove composition and productivity, negatively affecting the community's collection of forest products and non-timber forest products for personal or household consumption.



### Fishing

**12% to 98%**

- Overall catch potential expected decline to range from 12% to as much as 98% by the 2090s, due to increased sea surface temperature and ocean acidification.
- Fishing and fish processing are highly sensitive to climate change, posing a potential risk to approximately 32% of men's and 20% of women's main occupations.



- On average, climate-related impacts could negatively affect 57% of fishermen's and 60% of fisherwomen's individual incomes.



### Animal Husbandry

- Climate change will increase the likelihood of pest outbreaks, as well as the casualties of small-scale livestock due to climate-related disasters.
- CFi members' animal husbandry activities are sensitive to climate change, potentially jeopardizing approximately 4% of CFi men's primary occupations and 8% of CFi women's primary occupations.



## ADAPTIVE CAPACITY

- Challenges to diversifying CFi members' livelihoods as a mechanism for adaptation:
  - Differing opinions among CFi committee members and low levels of community participation and engagement, leading to slow decision-making processes.
  - The need to enhance knowledge and technical skills, strengthen fundraising efforts, and address environmental issues such as mangrove forest encroachment and waste discharge.



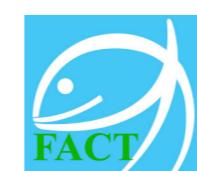
## VULNERABILITY

- As a result of exposure to climate change, key sectoral sensitivities, and challenges to promoting alternative livelihood options, the Community Fisheries' livelihoods are **HIGHLY** vulnerable to climate change, aligned with findings for Cambodia and Cambodian coastal areas.

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