Contaminants of Emerging Concern in Hawai‘i

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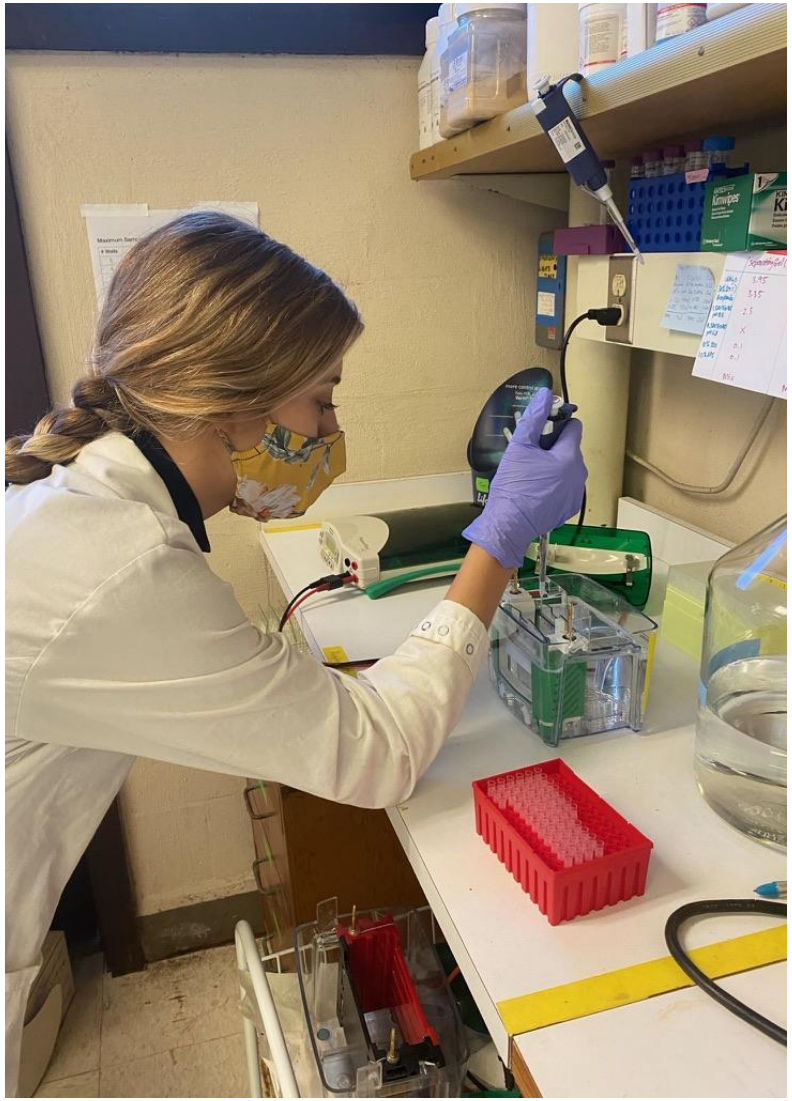
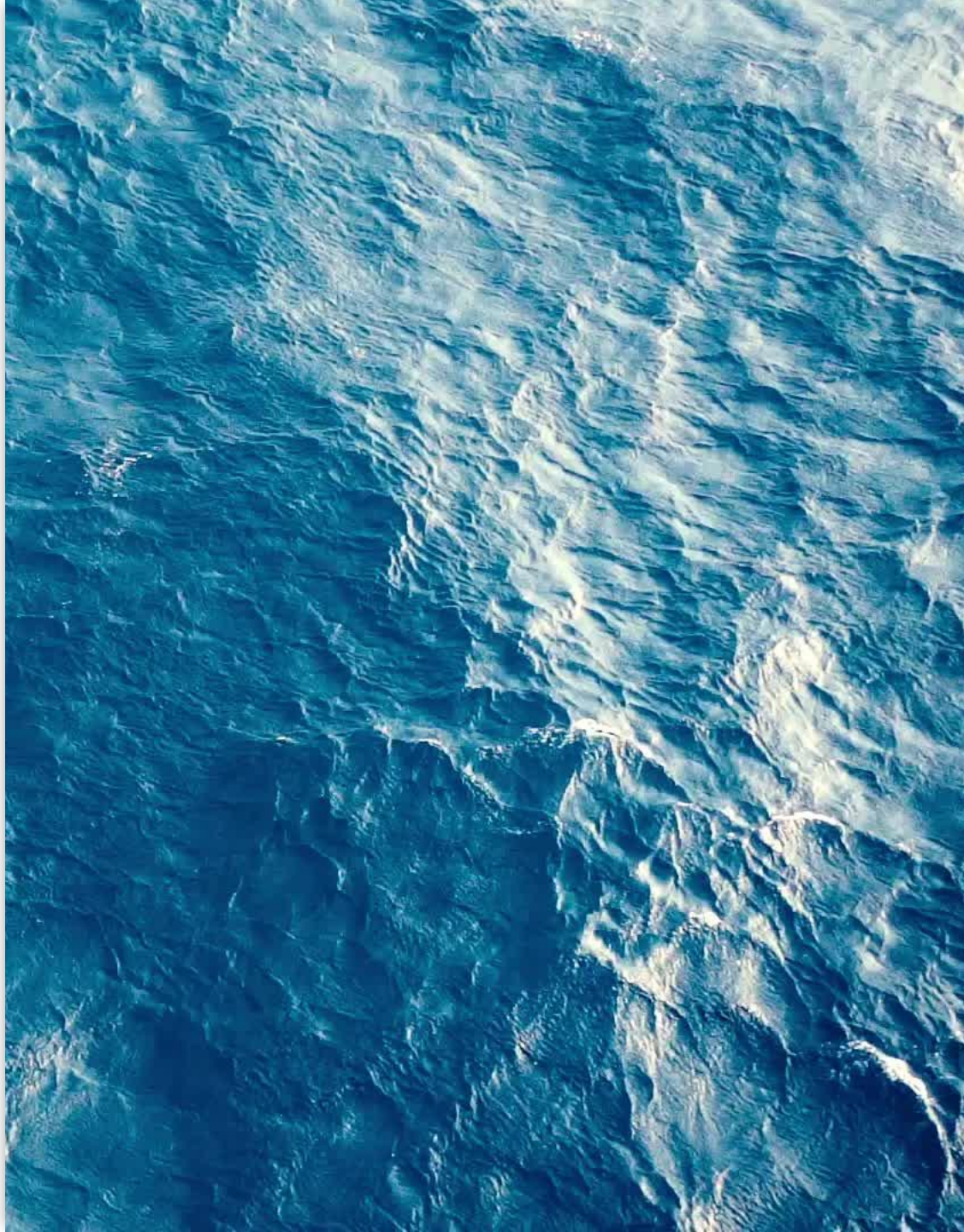


About Me

Organization Goals

- **National Sea Grant Network**: Network of 34 programs across the U.S.
- Hawai‘i Sea Grant: Promote practical use of conservation and sustainable use of coastal resources
- **CEC Objectives:** Develop framework to assess, monitor, and manage contaminants of emerging concern in Hawai‘i and the USAPI
    - **Needs assessment** and **monitoring guide**
    - **Collaborative workshops** with stakeholders
    - Development of outreach products (TBD)



Contaminants of Emerging Concern (CECs)

A range of chemicals that are not routinely monitored in the environment, have a real or suspected threat to human & ecosystem health, and are poorly understood.

- Per-and poly-fluoroalkyl substances (PFAS)
- Pharmaceuticals and Personal Care products (PPCPs) & other EDCs
- Pesticides and biocides
- Industrial chemicals (flame retardants, plasticizers, solvents, etc.)
- Household chemicals (cleaning materials, surfactants)
- Microplastics

Photo: Honolulu Civil Beat (Cory Lum, 2018)

Sources and Pathways of CECs

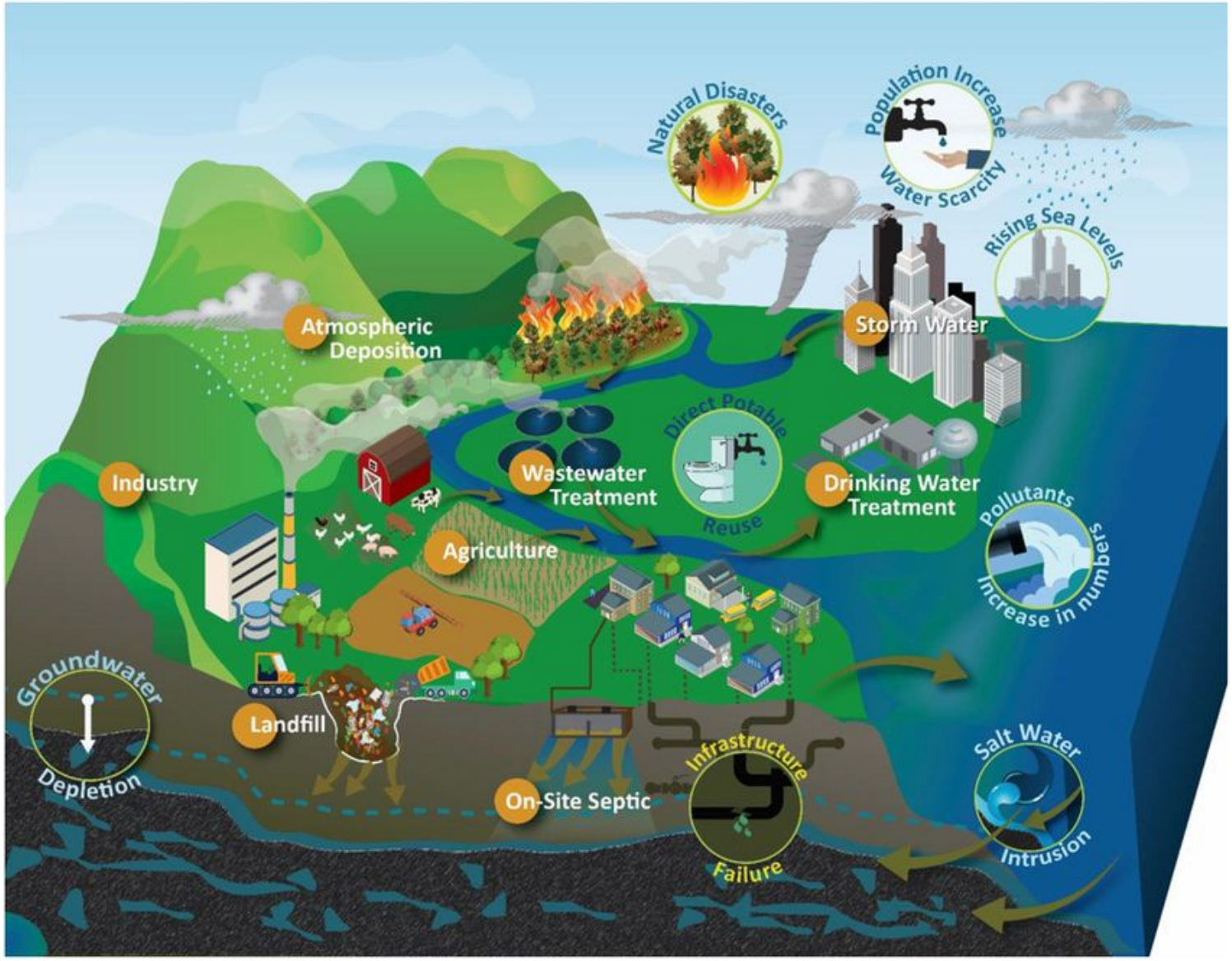


Photo: Glassmyer et al., 2023

Why CECs Matter

- Detected in drinking water in Hawaiʻi & internationally
- Many not evaluated for impacts on ecosystem & human health
- Can be **endocrine disruptors**
  - Disrupt hormone balance
  - Impact reproductive health, immune function, cancers
- Limited regulatory framework & inadequate monitoring in Hawaiʻi

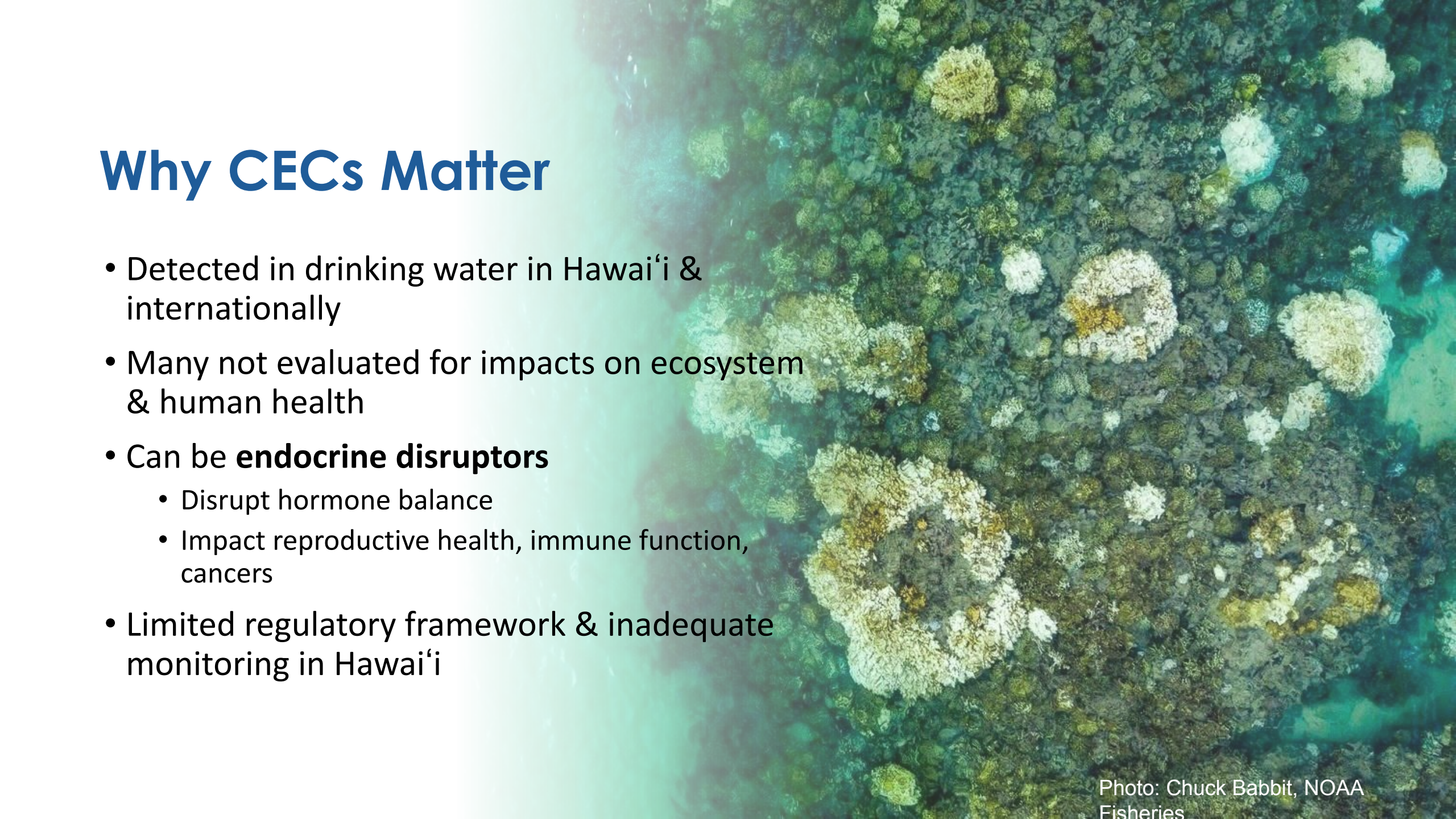


Photo: Chuck Babbit, NOAA Fisheries

Monitoring Efforts in Hawai‘i

- Hawai‘i Department of Health
  - Hazard Evaluation and Emergency Response
    - Pesticide contamination projects
    - Risk assessment, toxicity evaluation, remediation
- NOAA Mussel Watch Program (with DLNR-DAR)
- United States Geologic Survey (USGS)
  - Statewide Pesticide Monitoring
  - CEC Monitoring (West Maui)
- Red Hill monitoring
  - Department of the Navy & USEPA
- Water Quality Reports
  - Board of Water Supply/County Water Supply
- West Maui Water Quality (DLNR)

Photo: Island News,

Inspiration from National & Global Models

Other US States

- **USGS**: National Water Quality Assessment Program & Toxic Substances Hydrology Program
- Collaborative Sea Grant Networks: Mid-Atlantic, Southeast, and Great Lakes Programs

European Union

- Water Framework Directive (WFD) and Marine Strategy Framework Directive (MSFD)
    - **Norman Network:** Coordinated CEC monitoring and risk assessment for data sharing across EU countries

Photo: Griffith University

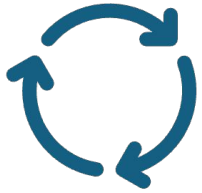
Short Term Goals

- Identify monitoring and knowledge gaps on CECs in Hawai‘i
- Develop early collaborations and facilitate conversations
- Leverage existing resources & support policy development
- Create a network of agency leaders to share CEC information

How Can You Contribute?

Help Compile Resources

Share resources on water quality reports and other monitoring efforts



Share Insights

Identify gaps in CEC work, share further points of contact among agencies

Next steps

Partner engagement, feedback & collaboration opportunities

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