

CAR.Committee

From: Christopher Warren <chris@mauiforestbirds.org>
Sent: Friday, February 21, 2020 2:50 PM
To: CAR.Committee
Subject: CAR-1(4) Presentation for the 2/25 CAR Committee Meeting
Attachments: Climate Resilience_MFBRP_2020.pdf

Please see the attached presentation.

Mahalo!
Chris

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CLIMATE RESILIENCE: SAVING MAUI'S NATIVE BIRDS

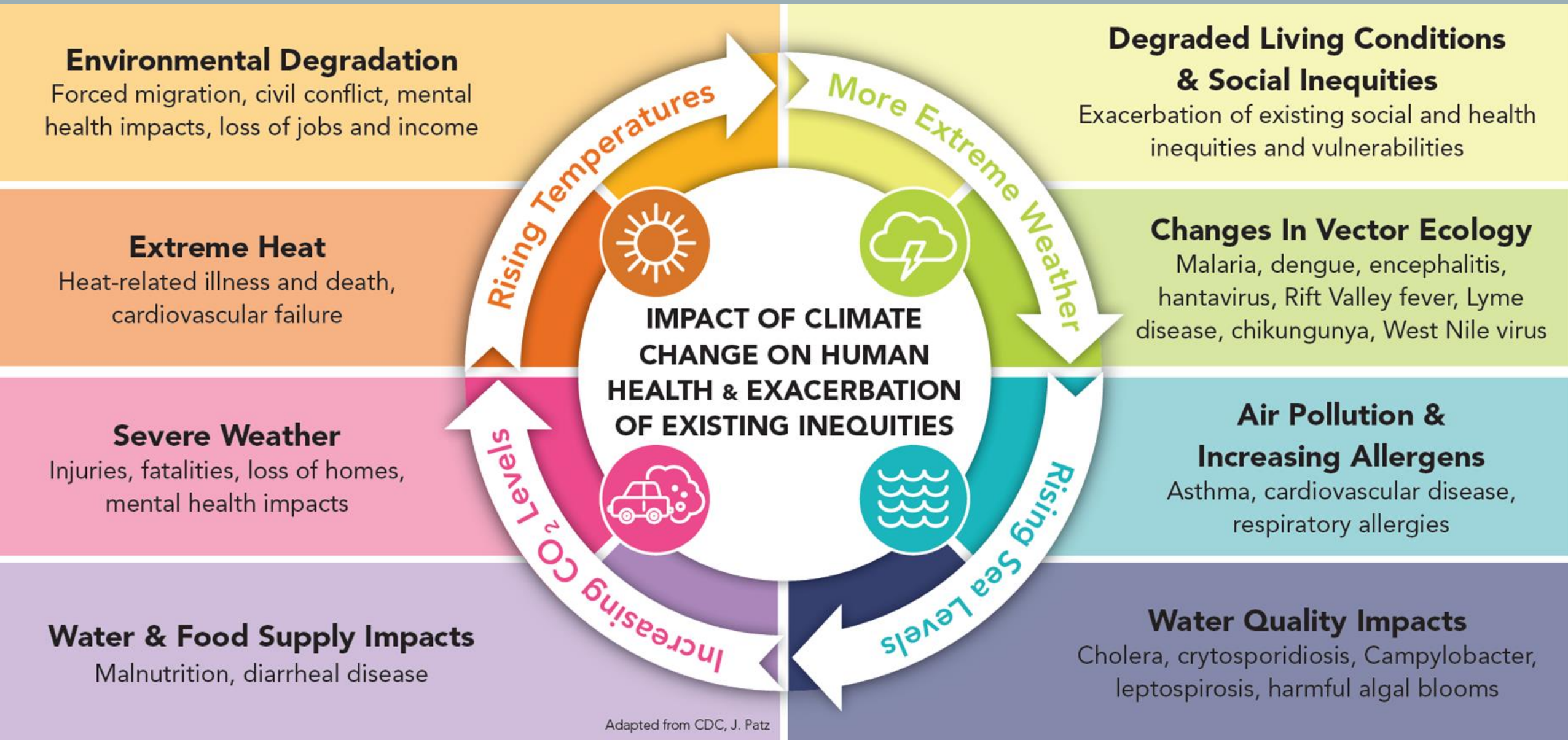
February 25, 2020

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Climate Change is more than just sea-level rise



MAUI'S MOST AT-RISK RESIDENTS



- Maui's On-going Mass Extinction
 - 6 out of 20 native forest birds remain
 - 2 are critically endangered, <1500 individuals
- Avian Malaria
 - Transmitted by non-native mosquitoes
 - Mosquitoes 1826 – Lahaina harbor
 - Malaria parasite 1920s-1930s
- Mosquitoes and Climate Change
 - Birds only survive high-elevation, cold forests
 - Mosquitoes moving higher every year
 - Nowhere left to run
- Kiwikiu – 150 individuals, only found on Maui

REBUILDING HALEAKALĀ'S LEI

- Maui is a forest island, broken watersheds
- Restoring a “lei” of forest around Haleakalā
- >250,000 trees on Leeward Haleakalā
- Thousands of acres of private and public lands slated for restoration

This means

- Habitat for native organisms
- Soil Retention
- Water for all



PREVENTING LOSS



- Reforesting high-elevations
- Creating new populations
- Safe-guard species in captivity
- Landscape-scale mosquito control

PREVENTING LOSS



- Reforesting high-elevations
 - Controlling feral animals
 - Planting seedlings
- Creating new populations
- Safe-guard species in captivity
- Landscape-scale mosquito control

PREVENTING LOSS



- Reforesting high-elevations
- Creating new populations
 - Translocations
 - Mosquitoes have swamped out many of these areas
- Safe-guard species in captivity
- Landscape-scale mosquito control

PREVENTING LOSS



- Reforesting high-elevations
- Creating new populations
- Safe-guard species in captivity
 - Last-ditch effort
 - Temporary
- Landscape-scale mosquito control

PREVENTING LOSS



- Reforesting high-elevations
- Creating new populations
- Safe-guard species in captivity
- Landscape-scale mosquito control
 - Upcoming in next few years
 - Need new techniques



“...as a few lost letters may make a sentence unintelligible, so the extinction of the numerous forms of life ...will necessarily render obscure this invaluable record of the past.” – Alfred Russell Wallace