Amphibians and Climate Change

Science on a Sphere Workshop
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Amphibians in Crisis
Amphibians in Decline

7660 Species

6,760 Frogs and Toads

695 Salamanders and Newts

205 Caecilians
Amphibians in Decline

 Declining: 42%
 Increasing: <1%
 Threatened by Order:
 - Frogs/Toads: 32%
 - Newts/Salamand ers: 50%
 - Caecilians: 6%
 - 65% Data Deficient

STATE OF AMPHIBIANS

- Least Concern: 30%
- Threatened/Endangered: 41%
- Extinct: 1%
- Data Deficient: 28%

IUCN 2015
IUCN estimates as of 2016
Amphibians in Decline: Why do we care?
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Amphibians in Decline: Why is it happening?

- Habitat Fragmentation
- Disease
- Pollution
- Climate Change
Climate Change and Amphibians
Amphibians and Climate Change

- Late hibernation
- Early emergence
Amphibians and Climate Change

- **Diseases**
  - **Fungus**
    - *Batrachochytrium dendrobatidis*
    - *Batrachochytrium salamandrivorans*
    - *Saprolegnia spp.*
  - **Virus**
    - *Ranaviruses*
  - **Others**
    - Misc. bacteria
    - Parasites
Amphibians and Climate Change

- Reproduction
  - Seasonal breeders
  - Rainfall dependency
  - Vernal pools
Helping the Problem
Conservation to help

- Disease
  - Treatments
  - Disease resistant animals
Conservation to help

Disease
  - Treatments
  - Disease resistant animals
Conservation to help

- Reproduction
  - Land management
  - Assurance colonies
  - Population monitoring
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National Amphibian Conservation Center

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