

Interdisciplinary Creativity and Mobile Technologies in Changing Climates



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Noosa Biosphere Reserve & Great Sandy Biosphere Reserve Queensland, Australia





Noosa Biosphere Reserve, Australia

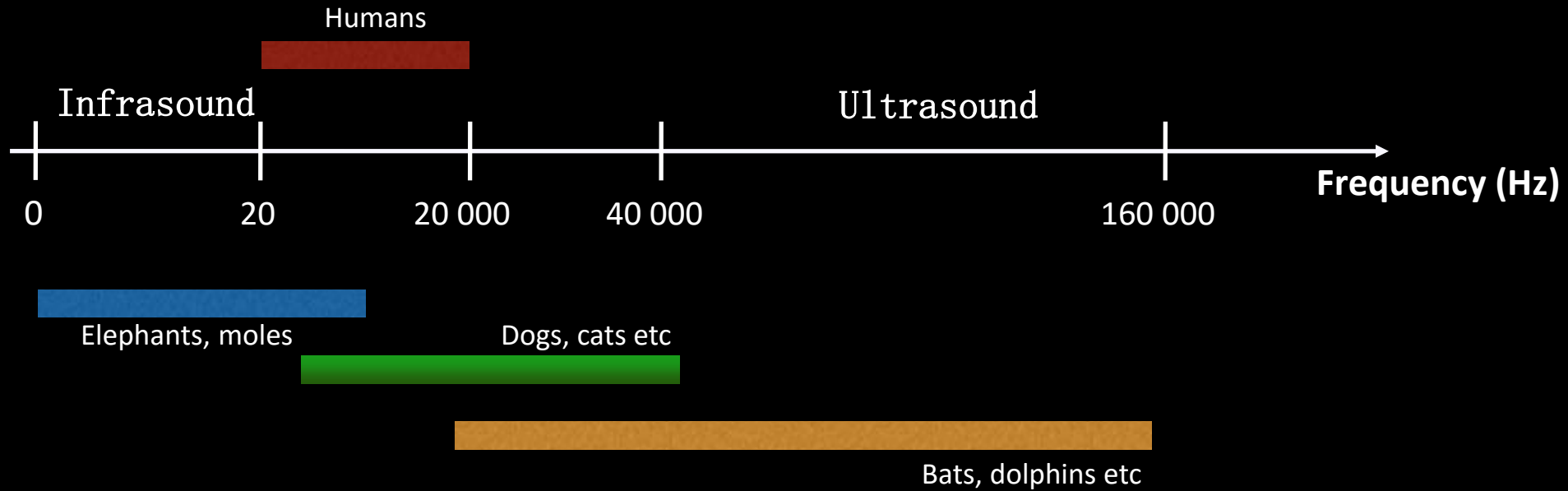


Great Sandy Biosphere Reserve, Australia

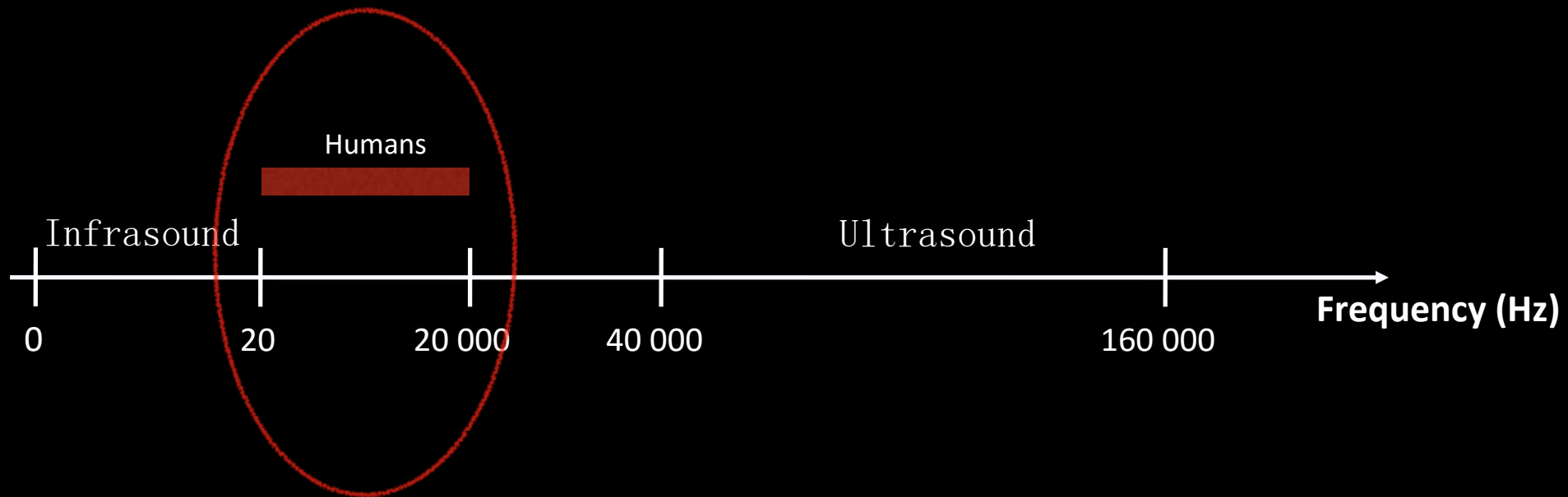


Tonlé Sap Biosphere Reserve, Cambodia

Auditory Range



Auditory Range





Bioacoustics / Ecoacoustics



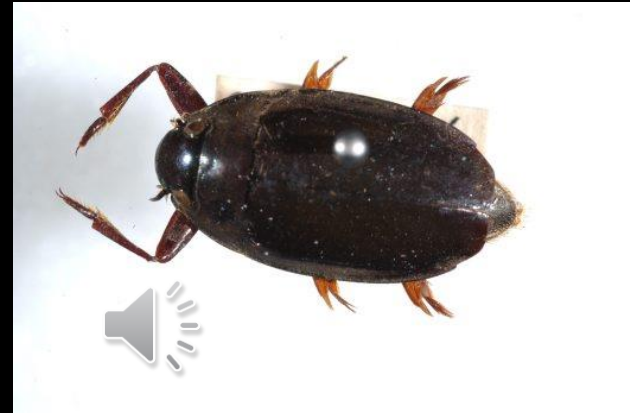
Classic methods do not reflect reality



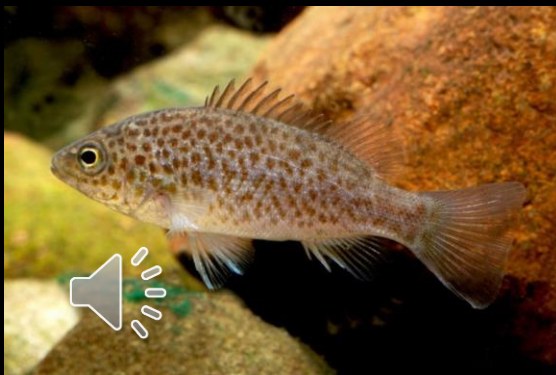
Aquatic Bioacoustics



Waterboatman



Whirling beetle



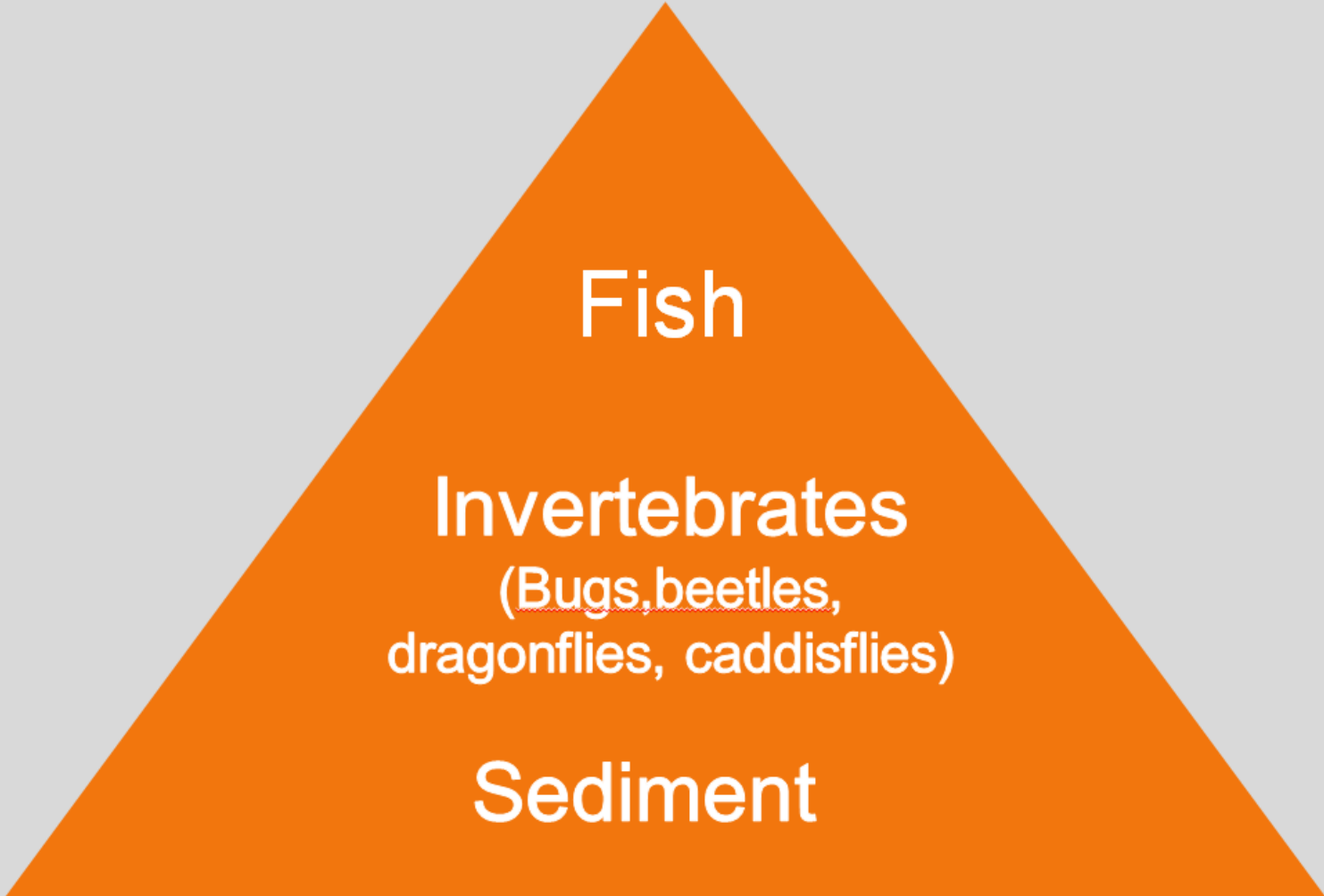
Leiopotherapon unicolor
(Spangled perch)



Australian Catfish



Soniferous elements in the river ecosystem



Fish

Invertebrates
(Bugs, beetles,
dragonflies, caddisflies)

Sediment



Bioacoustic Audio Recorder

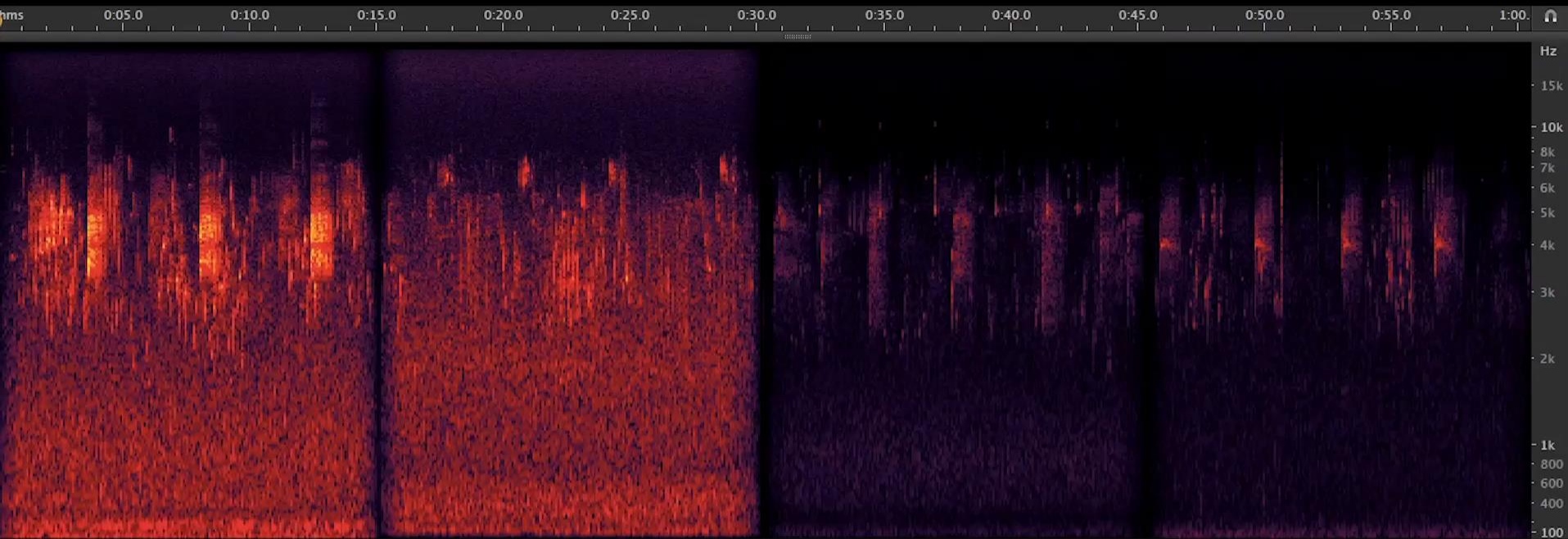
Ready for short or long deployments

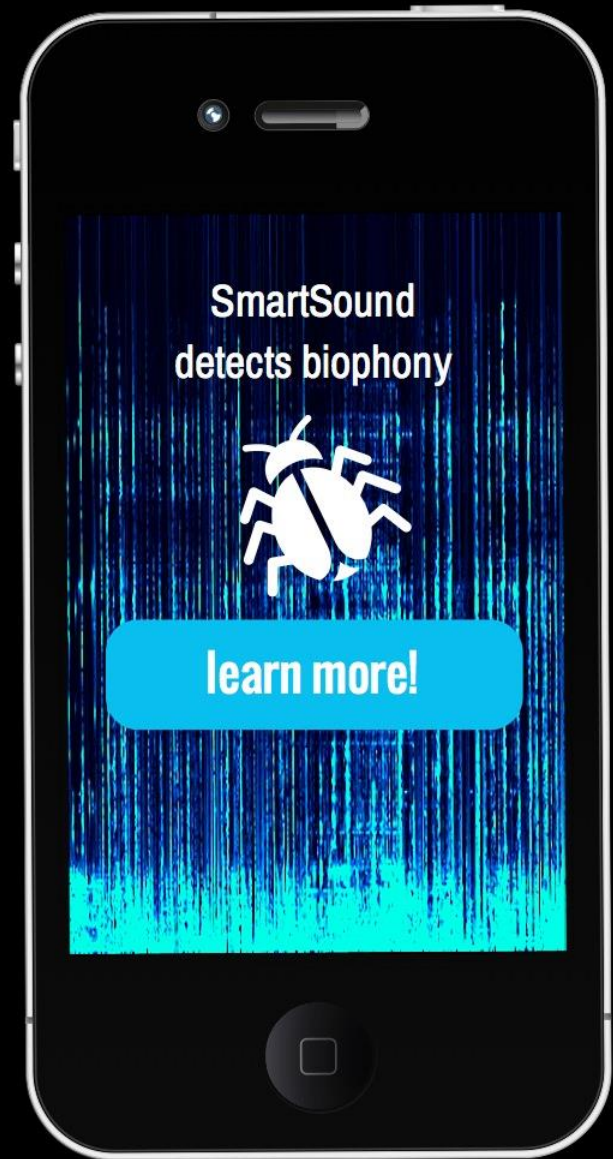
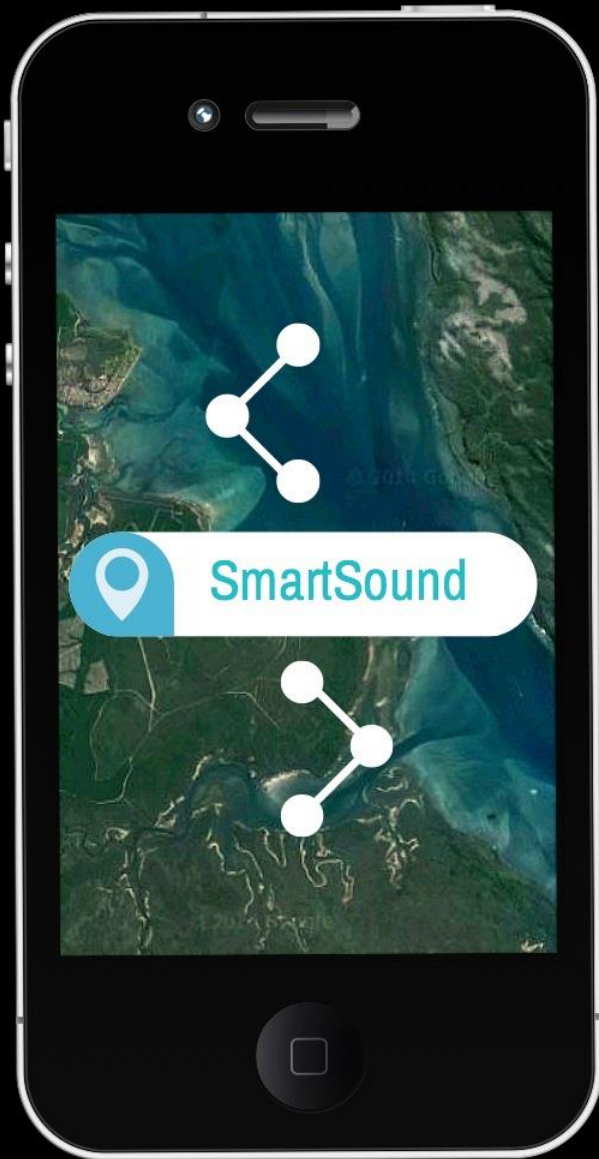
Up to 80 hrs of recording from a single battery,
320 hrs with the extended battery pack or
unlimited with the external power option.

[Learn more >](#)

Climate Change in 60 Seconds

Sugarloaf State Park, California (*An area impacted by the California drought*)





LOCATION RECORDING (A)

- **Entry level community kit for schools and community groups**



Zoom H1



Aquarian H1a Hydrophone



Biosphere Soundscapes

Global digital platform for education, engagement and action

Residencies

International artists,
scientists & researchers

Labs

Short term research
projects

Masterclasses

For local communities
and international students

Internships & Courses

Professional development
opportunities and education
for students and researchers



Projects

Site-specific creative
projects in collaboration
with communities

Global Sound Map

Mapping the changing
soundscapes of Biosphere
Reserves in real-time

A photograph of two researchers, Dr. Ros Bandt and Dr. Daniel Blinkhorn, in a lush green forest. Dr. Ros Bandt, on the left, has long red hair and is wearing a bright red rain jacket and large black headphones. She is holding a black handheld device. Dr. Daniel Blinkhorn, on the right, has dark hair and is wearing a dark blue shirt and headphones. He is holding a long boom microphone with a white fuzzy windscreen. They are both looking towards the right, focused on their work. The background is a dense forest with many green trees and foliage.

Biosphere Soundscapes is a large-scale interdisciplinary project underpinned by the creative possibilities of acoustic ecology and rapidly emerging fields of biology concerned with the study of environmental patterns and changes through sound.

Dr. Ros Bandt & Dr. Daniel Blinkhorn

Biosphere Soundscapes Launch (2012) Noosa Biosphere Reserve, Australia



Sian Ka' an Biosphere Reserve, Mexico, 2015

Why Sound?

Bioacoustics is a dynamic, noninvasive environmental monitoring technique that allows us to learn about environmental changes in new ways.

Listening provides us with more information about our surrounding environment than any other sense.

Sound is inherently an interdisciplinary medium. In the context of Biosphere Reserves that are seeking to reunite the conservation of biological and cultural diversity, it is an ideal medium to test, experiment and implement innovative approaches to sustainability from cultural, scientific and ecological perspectives.

Why Sound?

New mobile technologies for ecosystem monitoring have become increasingly accessible and affordable, so empowering local communities to undertake the fine tuned mapping of environmental change and therefore to challenge encroachment into territorial niches and so to lead, rather than be subject to, advocacy around development, exploitation and protection.

Biosphere Soundscapes sits at the intersection of art and science, with the recordings providing valuable scientific data for biodiversity analysis and incredible source material for creative projects that bring awareness to these environments.



Augmented Reality with Mobile Technologies



Explore the Central Amazon Biosphere Reserve in urban environments across the world





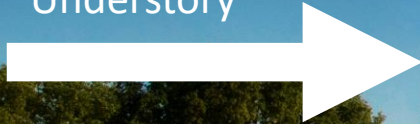
Canopy



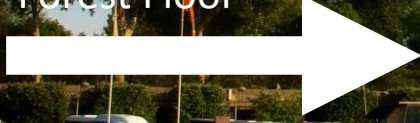
Emergent Layer



Understory



Forest Floor



Each observatory platform of the Eiffel Tower was interpreted as the four distinct layers of tropical rainforest vegetation through immersive soundscapes and original sonic art created exclusively for COP21



Virtual Reality with Mobile Technologies









Boulton (2016) draws upon cognitive science, evolutionary psychology and philosophy, among other fields, to explore the emerging idea that global warming exceeds modern humans' cognitive and sensory abilities.

Engagement and ultimately behavioural change needs to happen at a deeply philosophical and sensory level.



VALEN'S REEF

from

CONSERVATION
INTERNATIONAL





OFFICIAL SELECTION 2016
Celebrating 35 Years of New Frontier
sundance
institute



TRIBECA
FILM
FESTIVAL
2016
OFFICIAL SELECTION

THE CLICK EFFECT

BY SANDY SMOLAN & JAMES NESTOR

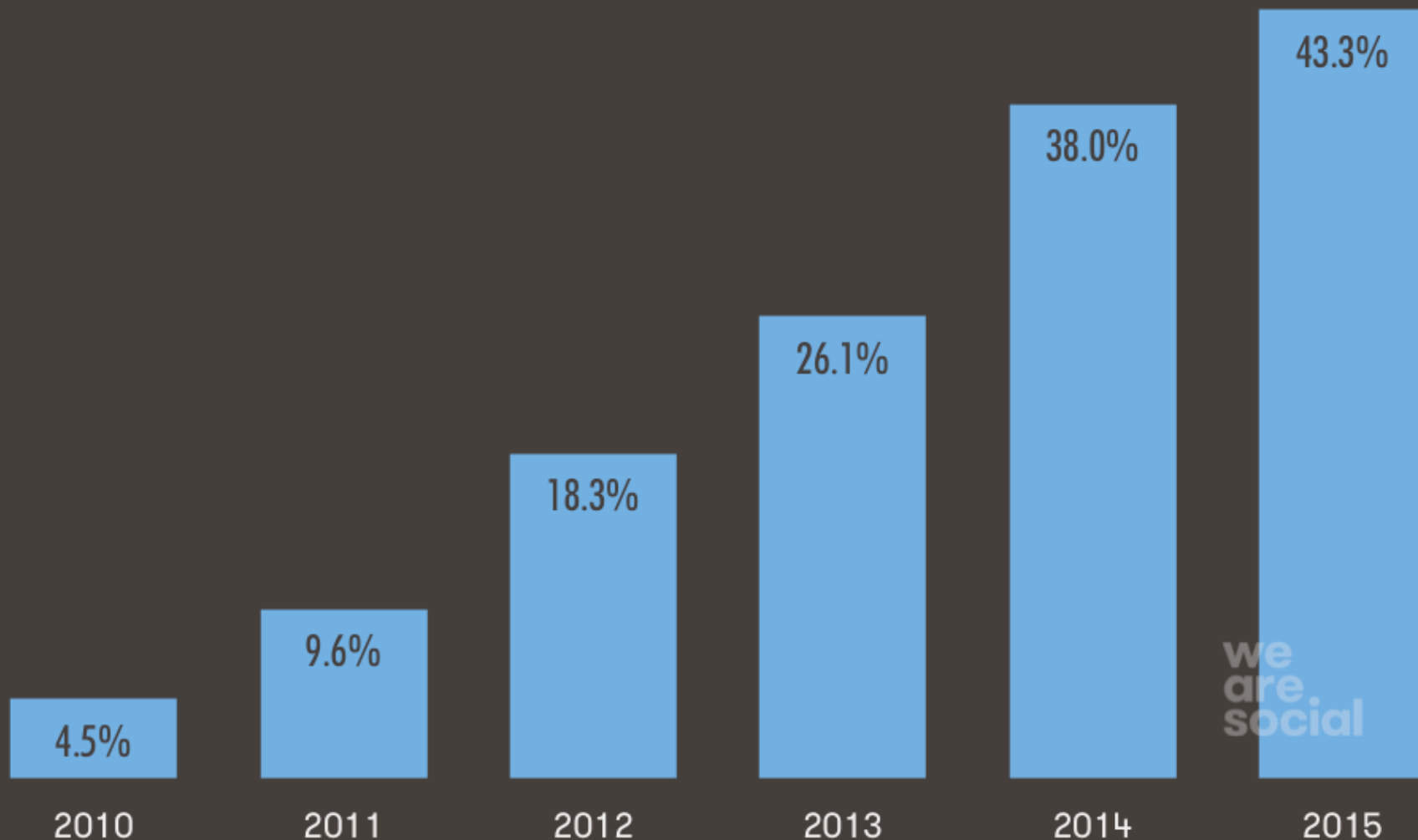
“The next billion people will come online in the next 5 years through accessible android devices”

UN Foundation, Climate Week 2015

**MAR
2015**

MOBILE'S SHARE OF WEB: ASIA

PERCENTAGE OF TOTAL WEB PAGES SERVED TO MOBILE PHONES



we
are
social

**AUG
2015**

MOBILE CONNECTIONS vs. PEOPLE

ACTIVE MOBILE
SUBSCRIPTIONS



**7.529
BILLION**



TOTAL WORLD
POPULATION



we
are
social

**7.357
BILLION**

- UNESCO sites are highly critical as we move towards a future of ecological uncertainty. This network could have a significant impact in shaping local, national and international climate adaptation responses.
- In order to have this impact, the communities of UNESCO sites must be aware of their value, engaged in participatory projects and inspired to take action in community collaborations.
- Accessible mobile technologies open up the possibilities for connected communities who are empowered to take action and think creatively in response to climate change. **Communities must feel inspired, motivated and supported in the face of adversity.**



THANK YOU

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BIOSPHERE SOUNDSCAPES

biospheresoundscapes.org

