1
00:00:00,001 --> 00:00:00,937
[Music]

2
00:00:00,937 --> 00:00:06,469
Scientist at the University of Idaho are using Landsat data to save endangered birds.

3
00:00:06,800 --> 00:00:11,840
We took freely available Landsat imagery, and\h
we developed this range-wide model that covers\h\h

4
00:00:12,560 --> 00:00:19,280
a vast spatial extent and a really wide temporal\h
window. To develop these fine scale maps of\h\h

5
00:00:19,280 --> 00:00:26,129
habitat suitability, for an endangered species\h
in an environment that's changing all the time.

6
00:00:26,129 --> 00:00:32,387
Technology Meets Conservation: Mapping Habitat for Endangered Species

7
00:00:32,480 --> 00:00:38,160
So I'm a research biologist, slash project manager\h
for the University of Idaho, and i work on this\h\h

8
00:00:38,160 --> 00:00:44,160
endangered Ridgway's Rail in the southwestern\h
United States. It's a species that needs\h\h

9
00:00:44,160 --> 00:00:50,080
attention. It is an indicator species of marsh\h
condition throughout the whole Colorado river\h\h

10
00:00:50,080 --> 00:00:53,520
system. I know they're a marsh bird.
They're they're like the size of a chicken,\h\h

11
00:00:54,080 --> 00:00:56,640
but they're high up the food\h

chain in these marshes. And so\h\h

12
00:00:57,280 --> 00:01:03,760
if Rails are doing well it's indicative of a\h
healthy system. So if we can develop products that\h\h

13
00:01:03,760 --> 00:01:09,522
help us manage marshes for the Rails, it's also\h
going to help protect habitats for other species.\h\h

14
00:01:09,522 --> 00:01:13,680
In 2020, Harrity and coauthors published a research paper discussing the habitat suitability models.

15
00:01:13,680 --> 00:01:19,680
And we are really focusing on, okay how\h
do we take effective tools and apply them\h\h

16
00:01:20,400 --> 00:01:25,840
in space and time to maximize their benefit to\h
the species? So we paired this spatially extensive\h\h

17
00:01:26,960 --> 00:01:35,120
on-the-ground sampling data, with really extensive\h
satellite imagery, to develop range-wide habitat\h\h

18
00:01:35,120 --> 00:01:40,960
suitability models, that can inform management\h
actions throughout the range of this species.

19
00:01:41,338 --> 00:01:45,600
Harrity turned to Landsat for the satellite imagery he needed.

20
00:01:45,600 --> 00:01:50,240
We needed a product that was accessible,\h
available, covered our area of interest,\h\h

21
00:01:50,960 --> 00:01:55,760
and our time frame of interest, and\h
Landsat really fit that perfectly for us.

22
00:01:56,553 --> 00:02:01,697
And with this Landsat data, the Yuma Ridgway's Rail suitability model was born

23
00:02:01,760 --> 00:02:04,880
And we built this tool that\h
is accessible to managers,\h\h

24
00:02:04,880 --> 00:02:08,880
and they can view it, and it's\h
updated annually so they'll have\h\h

25
00:02:09,760 --> 00:02:15,120
up-to-date predictions of habitat suitability\h
throughout the entire range of the species. So\h\h

26
00:02:15,120 --> 00:02:19,360
they can really focus in on the areas that\h
need management, that don't need management,\h\h

27
00:02:19,360 --> 00:02:24,960
that perhaps need on the ground confirmation. It\h
should be a powerful tool to more effectively\h\h

28
00:02:24,960 --> 00:02:31,950
and efficiently allocate limited resources, to\h
ideally one day get the species fully recovered!