
NASA

1
00:00:04,170 --> 00:00:07,850
[Music]

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00:00:07,850 --> 00:00:26,090
Let's talk with NAAMES' principle investigator
Mike Behrenfeld from Oregon State University.

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00:00:26,090 --> 00:00:28,539
Mike, why do you go out in the field?

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00:00:28,539 --> 00:00:31,980
Sometimes you can't simulate natural conditions
in a lab.

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00:00:31,980 --> 00:00:36,050
And so, what you do is you take your lab to
sea so that you can actually measure natural

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communities, natural conditions that you can't
get in the lab.

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So, is just a shift in aircraft working on
this project?

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This project that we're doing on the Atlantis
is not an isolated event, right?

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It's part of a much bigger picture.

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So, we have satellites.

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00:00:51,809 --> 00:00:53,730
We have the work that's done on the ship.

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00:00:53,730 --> 00:00:57,670
We have modelers, and it's all these different components that bring the whole story together.

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00:00:57,670 --> 00:01:03,489
So, you can't necessarily do a global science project from a single standpoint.

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But, every element is critical to coming up with the answers that you're looking for.

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How many field campaigns are involved in NAAMES?

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00:01:09,580 --> 00:01:13,299
It involves four field campaigns, not just this one.

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00:01:13,299 --> 00:01:17,781
And each one is targeting a specific time of the year, specific set of events, in the

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00:01:17,781 --> 00:01:19,600
ocean as well as in the atmosphere.

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00:01:19,600 --> 00:01:21,960
We're leading a little bit of us behind in each one of these cruises.

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00:01:21,960 --> 00:01:27,509
So, we have what are called drifters, and we deploy those at different locations in

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the North Atlantic here.

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00:01:29,020 --> 00:01:33,770
And those drifters will follow a piece of

water for up to years.

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00:01:33,770 --> 00:01:38,880
And we're also deploying what are called floats,
which ironically sink, and they go up and

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down through the water column.

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00:01:40,329 --> 00:01:43,649
And they can often stay in a single spot for
a couple of years.

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00:01:43,649 --> 00:01:46,409
And they take measurements continuously, up
and down through the water column, looking

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00:01:46,409 --> 00:01:49,409
at the biology, looking at the chemistry and
the optics.

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00:01:49,409 --> 00:01:53,579
And that continues to give us data of what's
happening with those ecosystems that we studied

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00:01:53,579 --> 00:01:54,950
on the ship and then left behind.

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00:01:54,950 --> 00:01:56,520
How did this project start?

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00:01:56,520 --> 00:01:59,930
You know, the NAAMES project started from
space and worked its way down to the ocean,

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00:01:59,930 --> 00:02:01,689
which is not often the case.

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One of the reasons, as I mentioned, that the field research is really important is because

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it provides a level of detail that we can't get from robots and satellites, right?

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00:02:10,290 --> 00:02:12,400
There's a lot of detail in there.

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00:02:12,400 --> 00:02:14,500
And so, the satellite data would kind of kick this off.

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00:02:14,500 --> 00:02:19,190
It's looking at the full annual cycle of the plankton and bringing up some ideas that were

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kind of contrary to what we had thought was driving blooms.