Kupu's Natural Resources Professional Development (NRPD) Program made a triumphant return after a two year hiatus in the Spring 2023 semester. The Spring 2023 cohort was composed of 12 educators. Two educators returned to the Program from veteran school Kapolei High School alongside 10 new educators from six schools new to the NRPD Program: Waianae High School, McKinley High School, Leilehua High School, Highlands Intermediate School, Kailua Intermediate School, and Waianae Elementary School. Six of our 12 Spring 2023 cohort were educators from 2022-2023 GEAR Up schools. Additionally, we piloted an ‘Āina-Based Education Certification for participants, increasing the rigor of lesson planning and reflections on ‘āina-based education. Through the program, these 12 educators enhanced their knowledge of different natural resource careers and topics, with each educator's journey individually curated to expand on their interests and help fill knowledge gaps.

**Program Goals**

1. Expose educators to different careers in natural resources so they are more informed and prepared to educate and excite their students about the range of natural resource careers that exist in Hawai‘i

2. Build connections between educators and community partners to support future learning through guest speakers, field trips, student internships, etc.

3. Increase educator knowledge of natural resource topics and issues within their ahupua'a and the wider environment that can be integrated into their classroom curricula

4. Develop publicly available lesson plans that increase student knowledge of NR careers and topics

5. Provide educators with an opportunity to receive an ‘Āina-Based Education Certification (ABEC)*

**Experiential Learning Requirements**

- Attend 12 hours of externships to engage in hands-on learning experiences with community partners
- Conduct 2 one-on-one informational interviews with professionals in different natural resource careers
- Review 2 post-secondary panels to learn about different areas of study in natural resources within 4-year and community college programs
- Watch and reflect on 3 hours of self-selected webinars and videos across 7 content areas

*In partnership with Mālama Learning Center, this pilot cohort is on track to receive their ABEC following successful implementation of and reflection on their lessons in Fall 2023.

For more information about Kupu’s Natural Resource Profession Development Program, please visit: www.kupuhawaii.org/nrpd
The Spring 2023 Program included our most multidisciplinary cohort to date. Spanning elementary to high school, our educators teach a range of disciplines including ʻĀina Education, Biology, Mathematics, English as a Second Language (ESL), and Business. Kupu’s NRPD Program is designed to engage educators across all disciplines and Natural Resources knowledge levels. Based on a comparison of the level of knowledge, comfort, and/or experience across 30 varying natural resource topics that were self-reported on by participants at the start of the program and again following the program’s completion, there was a 30% increase in knowledge across all topics. This knowledge increase held for educators regardless of participant’s experience teaching or the subjects taught, showcasing the effectiveness of Kupu’s NRPD Program across a wide range of the education sector.

**Topic mastery**

Participants showed knowledge increases across 29 of 30 natural resource topics.

- 50% increase in knowledge of stream ecosystems
- 46% increase in knowledge of natural resource production
- 47% increase in knowledge of environmental resource management
- 43% increase in knowledge of ʻo‘i and fishponds

**Program effectiveness**

100% of participants felt that the webinars, informational interviews, and college panels were effective components of the program.

100% of participants felt that the externships were relevant to their classroom content and student population.

**Building relationships**

100% of participants felt the program was effective at helping to build connections with community partners and increasing knowledge of natural resource topics and issues.

94% of participants plan on keeping relationships with partners and organizations met during the program.

“This was a great way to understand current science taking place here in Hawaii to bring life to the concepts we need to teach in our curriculum.”

Kristen Gagesch, Kailua Intermediate School

For more information about Kupu’s Natural Resource Profession Development Program, please visit: [www.kupuhawaii.org/nrpd](http://www.kupuhawaii.org/nrpd)
Kupu's NRPD program offers a host of resources for participating educators. Participants receive access to past lesson plans, hundreds of hours of instructional videos, and, most favored, a Natural Resources Career Tree. Kupu's Career Tree is a tool for educators that illustrates the wide-range of natural resources careers available in Hawai‘i, closely mapping on to the current job market and the DOE's Career and Technical Education Pathways. 100% of participants felt that the Career Tree was a useful support tool for the program and for developing curricula for their students. As careers in Natural Resources in Hawai‘i increase at a rate of 7% annually, it is more important than ever to help educators bridge the gap for their students - from knowing about these careers to getting the experience and tools they need to enter the NR workforce. Scan the QR code below to check out Kupu's Natural Resources Career Tree!

**NR Career Tree**

| **It was enlightening to see all the research that is going on behind the scenes. I wouldn't have thought anything that extensive took place there. By talking with the scientist I experienced their passion for the ‘āina.**
| Lorrie Ito, Highlands Intermediate School

| **There are so many pathways and supports for students interested in natural resources careers.**
| Katie Kealoha, Waianae High School

| **I believe that this type of education is important. Not only for students, but teachers as well. We should be learning and growing just as much as our keiki.**
| Kacie Fujino, Waianae Elementary School

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MAHALO TO OUR PARTNERS!

Externship Sites
Bishop Museum ● Hawai‘i Institute of Marine Biology (HIMB) ● Mālama Pūpūkea-Waimea
Mālama Learning Center ● Papahana Kualoa ● Kalaeloa Heritage Park and Legacy Foundation
Mālama Maunalua ● University of Hawai‘i ● Army Natural Resources Program, O‘ahu

Informational Interviews
Pauline Sato, Executive Director, Mālama Learning Center ● Susan Ching, Botanist, Department of Land and Natural Resources ● Andi Charuk, Community Science Specialist, Pa‘ėpa’e o Waikolu ● Ignacio Fleishour, CEO, Chef, Hunter, Makana Provisions ● Kristine Aiko Kawakami, Nursery and Restoration Technician, Mālama Learning Center ● David Cohen, Sea Urchin Hatchery Manager, Sand Island Urchin Hatchery Malia Heimuli, Limu Hui Coordinator, Kua‘āina Ulu ‘Auamo ● Angelina Elido, Community Huki Leader, Mālama Maunalua ● Kai (Bradley) Fox, UH Seagrant Aquaculture Extension Specialist, UH Seagrant Fred Reppun, Education Coordinator, He‘eia National Estuarine Research Reserve ● Sandy Ward, Co-Founder, Mālama Pu‘uloa ● Michael Kaufmann, Research Station Farms Manager, Hawai‘i Agricultural Research Center Adam Hanoiano, Ola Nā Kini Alaka‘i ‘Āina, Mālama Learning Center ● Victoria Assad, Research Assistant, UH Mānoa Deep Sea Ecology Research Lab ● Elia Herman, Senior Program Manager, Kupu ● Alicia Higa, Director of Health Promotion, Waianae Coast Comprehensive Health Center ● Lauren Cheape Matsumoto, State Representative, Hawai‘i House of Representatives ● David Hoppe-Cruz, Natural Resources Field Supervisor, Army Natural Resources Program, O‘ahu

Leeward Community College Panel
Donn Viviani, Professor ● Heather Takamatsu, STEM Counselor ● Daniella Elliott, Assistant Professor and Sustainable Agriculture Program Coordinator ● Alyssa McDonald, Assistant Professor and Marine Option Program Coordinator

UH System Panel
Albie Miles, Assistant Professor, UH West O‘ahu ● Mehana Vaughn, Associate Professor, UH Mānoa
Melissa Price, Assistant Professor, UH Mānoa ● Patrick Hart, Professor, UH Hilo ● Adam Pack, Professor and Chair of Psychology, UH Hilo

MAHALO TO OUR FUNDERS!

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