



Science Voices
Annual Report
2024



To Our Valued Partners and Supporters,

For 2024, Science Voices had an ambitious plan of bringing our software projects to fruition, launching a number of local initiatives with our partners around the world, and expanding our partnership network. Unfortunately, despite making progress on all our projects, we fell short of reaching the goals we had laid out for ourselves. As a result, we are re-evaluating our processes to better understand where we are succeeding and where we are falling short. Nevertheless, behind the scenes we have been making great progress, the results of which we are hoping will become visible in 2025.

Our flagship project, Greenworks, has shown some early successes. In the first half of 2024, we once again ran the "Project Design" curriculum with approximately 40 students at Universidade Estadual de Campinas in Brazil. This curriculum was part of a course about "extension", a field of work that blends research and learning and takes it to the broader community who may not have an opportunity to engage in college studies. The students once again wrote a series of well-developed project proposals to address challenges they identified in their communities. Additionally, we disbursed small grants to four teams to implement local projects with their students. Two teams, in Ukraine and Brazil, were able to begin implementing their projects and send back results (we recaptured the grants from the unsuccessful teams to use on other Greenworks projects in 2025). We have used data and feedback from these initial implementations to adjust the grants program for future years. We had planned on onboarding Cohort 2 in 2024, but the struggles of the Cohort 1 teams resulted in us delaying this plan so that we could focus on supporting our existing partners, which we will continue to do into 2025.

Agavi and Sustainable States continued their development, but did not make nearly as much progress as we had anticipated. For 2025, we are looking to expand the teams and develop incentives to help meet milestones more consistently.

This summer we once again hosted students from the Blue Marble Space Institute of Science Young Scientist Program. Sebastián (Guatemala) and Deivy (Argentina) assisted with bee projects in the Greenworks program through prototyping sensors for monitoring bees and developing social media strategies for promoting our projects. Both successfully graduated from the program. We also worked with 180 Degrees Consulting operating out of Georgia Tech to help develop some of the infrastructure around the Greenworks program. This partnership has provided a valuable opportunity for students to develop their consulting skills while working in the nonprofit sector.

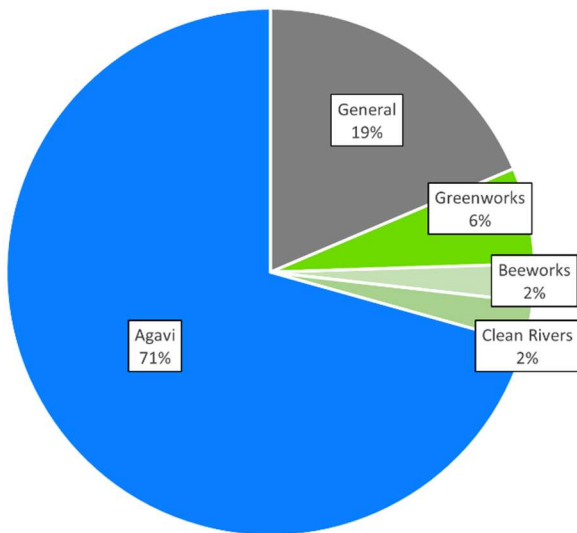
Looking forward towards 2025, we will be narrowing our focus to our existing portfolio of projects to provide them with the resources and attention they need to thrive. Your generous contributions, whether through interest, attention, time, or money, are invaluable in helping us achieve our aims. We aim to report some phenomenal successes in the new year!



Lev Horodyskyj
Founder, Science Voices

Funds Raised by Category (2024)

100% from donations and donation matching



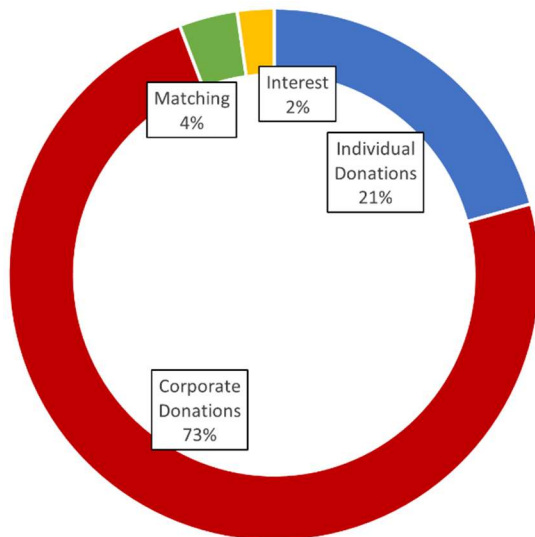
General = funds for operations, company travel, and prototyping

Greenworks, Beeworks, Clean Rivers = funds for Greenworks and Greenworks spin-off projects (Beeworks and Clean Rivers)

Agavi = funds for Agavi platform development

Sustainable States = funds for development of software and hardware for Sustainable States program (no funds raised in 2024)

Incubator = funds for experimental projects (no funds raised in 2024)



Volunteers and Researchers

Greenworks (3 volunteers)



Agavi (5 volunteers)



Sustainable States (3 volunteers)



Instructor Partners



Brazil



Indonesia



S. Korea



Ukraine



USA

University Partnerships



Khairun University (Ternate, Indonesia)
5 Year Memorandum of Understanding

Students Impacted (Greenworks)



Brazil
+40 (Courses,
Fieldwork)



Ukraine
+5 (Courses,
Fieldwork)

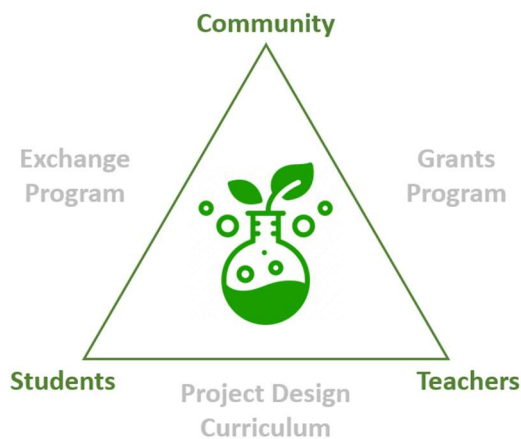
Greenworks

Greenworks is a global environmental stewardship network that supports teachers in project-based teaching and their students in implementing local community projects.



New Vision

The Greenworks label has been host to a number of projects over the years, including the Project Design curriculum, partner collaborations, and what is now Sustainable States. Although we have always envisioned the Greenworks program as a classroom-to-community pipeline program, implementation doesn't always match that vision. Nevertheless, over the past few years, we have observed some commonalities in the way our partners have interacted with the programming materials, our vision, and their own local needs. We are now leaning into these communalities with a new vision for the Greenworks program, which we will be developing in 2025.



Project Design Curriculum

The core of the program was developed to help students better design their projects for a greater chance of success in the real world. In reality, lack of funding and time has prevented these project concepts from being implemented more broadly in local communities. Nevertheless, students and teachers have both emphasized the benefits of learning about project design and doing project-based learning, even if the projects are never implemented. As a result, we are working to break the "Project Design" curriculum off from requirements to implement projects so that we can use it as a vehicle to improve project-based teaching and learning globally.

Grants Program

Originally intended to help students implement their "Project Design" projects, we have found that teachers often didn't have time to mentor and support student projects outside their areas of expertise. The grants program in 2024 instead evolved to support the existing research and outreach efforts of our teacher partners in Cohort 1. To prevent Greenworks from becoming simply supplemental funding for academic research, we emphasized the inclusion of local communities as partners in all funded work. The Beeworks project (Brazil) serves as a model, as it includes the perfect balance of teacher interest, community need, and student ideas. The Clean Rivers project (Ukraine) shifted in the direction of extension as a result of involvement in the grants program, creating for the first time connections between professors at Lviv Polytechnic and communities in the Carpathian Mountains, which has benefited all involved in the project. In 2025, we aim to continue developing this component of Greenworks to increase professional development opportunities in extension research and learning.

Exchange Program

For 2025, we are developing a pilot for an exchange program between the US and Brazil to emphasize student-community connections. These negotiations are on-going.

Cohort 1

- **Beeworks (Guapimel) (Brazil)**
Beeworks got off to a slow start due to a high level of existing commitments for our in-country partners, as well as wildfires that badly impacted the sellers of the hives that were going to be utilized for the project. However, some work was completed by the end of the year, including bee education activities for kids at Guapiruvu and several visits by our in-country partners and their students towards the end of the year. Planned activities in 2025 include hive maintenance and honey harvesting training for adults who are training to be meliponiculturists, hive-painting activities for kids, and general bee education activities with the community of Guapiruvu.
- **Clean Rivers (Чисті Ріки) (Ukraine)**
Our partners in Ukraine made multiple visits to the Sukeľ River in the Bolekhiv region of the Carpathian Mountains throughout the year. Initial visits focused on building community connections with leaders of the town of Bolekhiv, the Precarpathian Professional College of Forestry and Tourism, and local sawmill operators. Additional visits focused on mapping out geotourism locations and illegal dumps, then sampling the river to identify the types and amounts of pollutants. Planned activities in 2025 include offering the "Project Design" curriculum to students and adult learners from the Bolekhiv region and incorporating them into the fieldwork being done on the Sukeľ River.

Greenworks Ternate (Indonesia) and Astrosustainability Incubator (US Virgin Islands) were not able to successfully launch this year. Significant academic program instability in the US Virgin Islands prevented our partners at Etelman Observatory from finding consistent personnel to implement the project. The observatory is safeguarding funds until they are able to spend them on astronomy outreach and sustainability projects in 2025 and 2026. Funds allocated for Greenworks Ternate were recaptured and we are reallocating them to new projects with new partners who are aligned with Beeworks for 2025.

Additional Greenworks Activities

We hosted two students, Sebastián (Guatemala) and Deivy (Argentina), through the Blue Marble Space Institute of Science Young Scientist Program this year. Both worked on supporting the Beeworks project, with Deivy continuing on as a volunteer with Science Voices after the completion of the program. Our work with 180 Degrees Consulting (Georgia Tech) yielded some potential partner connections which we'll be exploring in 2025. Greenworks Junior is still under development at Ivy Collegiate School in South Korea with a potential test deployment in 2025.

Partner Locations



Program Development



Lev Horodyskyj
Co-Lead (Science)
Brazil/USA



Tara Lennon
Co-Lead (Policy)
USA



David Orta
Program
Coordinator
USA



Daniel Orta
Program
Coordinator
USA



D. Deivy Z.
Castellano
Community
Development
Argentina/Ecuador

Faculty Partners



Roberto Greco
In-Country
Facilitator
Brazil (São Paulo)



Halikuddin
Umasangaji
In-Country
Facilitator
Indonesia (North
Maluku)



Lily Ishak
In-Country
Facilitator
Indonesia (North
Maluku)



Ihor Bubniak
In-Country
Facilitator
Ukraine (Lviv)



Brice Orange
In-Country
Facilitator
USA (US Virgin
Islands)



Jim Morgan
Greenworks Junior
Development
South Korea

Looking Forward

Greenworks has performed and developed well in 2024. We are aiming to solidify the connections with and between our existing partners in Brazil, Indonesia, Ukraine, and the US. Our roadmap for 2025 includes:

- Expansion of the Clean Rivers (Ukraine) project to include more students onboarded via Project Design
- Expansion of the Beeworks (Brazil) project to include more students and educational materials developed in and deployed via Agavi
- Beeworks Indonesia spinoff in Indonesia with Khairun University partners
- Additional "extension" professional development activities for teachers receiving Greenworks grants
- Project Design offering to the public in Greenfield, California, with our Hartnell College student volunteers
- Student exchange pilot between students in the US (Hartnell College) and Brazil (UNICAMP) centered on agroecology in Vale do Ribeira, Brazil, and practical work with low-cost electronics
- Development and successful implementation of pilot Greenworks Junior program (South Korea)
- Additional Memoranda of Understanding with partner universities to secure long-term commitments

Agavi

Agavi is an adaptive learning platform designed for smartphones that enables teachers to build innovative new experiences for their students.



Progress Report

Development on Agavi has continued at a slow and steady pace over the past year. We are inching towards a prototype, but have discovered the limits of the volunteer-only model for a major software project. We are looking at restructuring the team and incentives so that we can hit our milestones more quickly, including a working prototype that is actively testing in the field by the end of 2025. Towards that end, major project partners Lev, Alex, and Giane, met in Cluj-Napoca, Romania, at the end of the year to review progress, complete some in-person work, and strategize for the upcoming year.



Alex (Romania), Giane (Brazil), and Lev (Brazil/USA) meet in person to review project progress and strategize for 2025 (Cluj-Napoca, Romania, December 2024)

Team Members



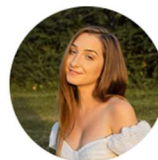
Lev Horodyskyj
Co-Lead
Brazil/USA



Alexandru
Gazdac
Co-Lead
Romania



Giane Galhard
Programming
Brazil



Iulia Toma
UI/UX
Romania



Jonathan
Oribello
Data Analytics and
Research
USA



Wayne
Parkhurst
Programming
USA

Looking Forward

Our only goal for 2025 is to complete the Agavi prototype and begin testing with teachers so that we can take the software to market.

Sustainable States

Sustainable States is a role-playing game that trains teachers and students in game-based learning through environmental diplomacy.

Progress Report

Sustainable States has continued at a slow and steady pace as well. Miguel has taken over the software development for the program and has been actively prototyping in Unity, with a basic resource generation, transport, and consumption model operational, and an incipient law model in development as well. We will continue developing the software throughout 2025 with potential renewed offerings of the game in late 2025. David and Daniel stepped back from work on Sustainable States to focus on new Greenworks offerings through Hartnell College.



Team Members



Lev Horodyskyj
Co-Lead (Science)
Brazil/USA



Tara Lennon
Co-Lead (Policy)
USA



Miguel Puga
Programming
Brazil



David Orta
Programming and
Game Design
USA



Daniel Orta
Programming and
Game Design
USA

Looking Forward

We are working on completing an operational prototype of the Sustainable States software that we can test with players later this year.

Incubator

We are continuing to explore the feasibility of developing a Brazilian spin-off of Science Voices that can help us develop and implement projects in Brazil. We've recruited partners for the proposed organization, outlined the vision, and had discussions with lawyers about setting up the institution. If the spin-off is successful, as well as the student exchange program to Vale do Ribeira, Brazil, we are looking at developing art-science exchanges in the northeast of Brazil for 2026.



Daniel and David presenting their work with Greenworks to the greater Hartnell College (Salinas, California, USA) community.



Beeworks educational activities with the Guapiruvu (São Paulo, Brazil) forest community.



Field and community work for the Clean Rivers project with Lviv Polytechnic professors and students and the Bolekhiv community in the Carpathian Mountains, Ukraine.

Partners and Major Supporters

Long-Term Partners

Blue Marble Space Institute of Science
Khairun University
Orange Wave Innovative Science, LLC

Dr. Roberto Greco (University of Campinas, Brazil)
Dr. Halikuddin Umasangaji and Dr. Lily Ishak (Khairun University, Indonesia)
Jim Morgan (Ivy Collegiate School, South Korea)
Dr. Ihor Bubniak (Lviv Polytechnic, Ukraine)
Dr. Brice Orange (University of the Virgin Islands, USA)

Major Supporters

H.B. Fuller Company
Lev Horodyskyj
Anonymous

Join Our Journey

A heartfelt thank you to all the donors and volunteers who have contributed their time, expertise, and money to our cause. If you would like to join us on this journey, you can contact us at <https://sciencevoices.org/get-involved/>. Additionally, you can follow us at our websites and social media channels.

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