



GLOBAL HIGH SCHOOLS

Entrant Details

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Submission Details

Submission ID	2119
Activities	Education & Public Awareness
Where did you hear about the Prize?	Received a letter of Invitation from the Prize

Executive summary

1. First, tell us about your school. Please introduce yourselves to us, and include details such as the school's size, location, a brief history and any special focus.

The Buenaventura Jáuregui school is a private school located in the Zipaquira city, Colombia. to 50 Kilometers of Bogota. It Is a small community of 300 students of elementary and high school, founded 30 years ago. It differs in the region for developing successful school environmental projects, by it better category has been distinguished by the award of the Foundation FUNZIPA 2014 environmental and ecological school, and the Policarpa Salavarrieta Order of the Deputies' Assembly of the Cundinamarca Department, between other distinctions. At present it develops the project "let's Save the Mountain of Macondo" There the Educational Farm the scholl,

2. How did you learn about the Zayed Future Energy Prize?

By MET Community foundation, whom with the privates schools organization share the prize with our community, and motivate to subscribe in this prize. Specially Camila Rios, Andrea Acosta and Yanire Braña.

3. Gives us a brief summary of your proposed project.

The Macondo mountain has the function to reload of aquifers. It is in danger for the deforestation and the bad use that its inhabitants give him to the land. The young people of our school proposes to produce and sow trees; to use renewable energies and to motivate the farmers.

4. Have you applied before? If Yes, what changes have you made since your last submission (change of project scope, etc.)

No. This is the first time we introduce ourselves.

Impact - 30%

For this section we want to know the technical details of the project, educational objectives and practical aspects like costs and feasibility.

5. Project Description:

a. What benefits will the project give? Please include goals of the project, the expected effect on school sustainability and educational benefits

1. We develop playful-pedagogic activities, to sensitize and to know the environmental problems and to take part in the solutions formulation. 2. we include in the contents curriculum of the school and activities related to the Project, of an interdisciplinary way, to achieve the appropriation of knowledges, attitudes and environmental values. 3. we lead with the young people an organization with the residents, owners and entities in the Macondo Mountain, for the ecosystem defense. 6. we produce and sow in the Project 22 native trees for each person straight involved in the project (966 persons), like contribution to the remnant of carbon inside the Macondo Mountain, that is approximately 21. 252 between trees and proper native, aromatic and ornamental own of the ecosystem. 7. we build a forestry vivarium to produce the vegetable material. 8. we gather the rain water, adapting the covering of the constructions for irrigation and sanitary

b. Please give data to show what results and targets you hope to achieve, for example energy or emissions reduction in the table below. NOTE: Please include metrics such as Watts of renewable energy capacity, or kilowatt-hours saved, and help us put this in perspective, for example by indicating the percentage of the school's total energy consumption to come from renewables before and after the project.

Table 1: Project impact

Component	Goal (improvement)	Metric	Current level	Target
Building a Forest vivarium	Production of native vegetable material, like trees shrubs, vegetable, fruit trees, to sow inside the Mountain of Macondo.	Produce 22000 seedlings of native trees	N/A	to produce and to sow 22 trees for every member of the community.
water Compilation Rains system	Reduce the potable water consume	Cubic meters of potable water in the Aqueduct system	139 cubic meters per month to potable water	80% reduction
Environmental awareness workshops between the community	Change of mentality opposite to the handling of the territory	996 persons aprox.	N/A	A workshop every three month directed to 100 persons approximately

Curricular innovation	To achieve the inclusion of the environmental project in the curriculum of the biggest number of areas or subjects of the school	Signature number	2 signatures	10 signatures
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6. Please describe the educational outcomes of the project. How will the project enhance the students' knowledge, understanding and skills? Does the project involve other schools or the wider public in some way? Answers may include outcomes relevant to critical thinking, creativity, collaboration and communication.

We want by means of innovation to the pedagogic model, the project inhales to Include inside the mesh curricular of the School, contents and activities related to the School Environmental Project, of a transverse and multidisciplinary way, to achieve the appropriation of knowledges, attitudes and values directed to the fulfillment of the general objective. we involve teaching family parents, and to the community of the Ricon Santo lane and to the owners and inhabitants of the Macondo Mountain, who will receive training from the students and teachers, accompaniment and vegetable material to improve environmental each of its properties. By means at investigation action the children and young people develop the skill for qualifying the peasants achieving in them a change of mentality on the territory, up to understanding that the production of water, air and meal can be achieved sustainable way. we have already managed to sow with parents and inhabitants a considerable forest portion, but the biggest obstacle is the absence of resources to buy

seedlings, therefore we propose to use part of the resources obtained in Zayed Future Energy Prize in the construction of a vivarium in Bamboo or guadua that produces the seedlings, between others.

7. Costs and feasibility:

a. What will be the total cost of implementing the project, and how much of this will come from the Zayed Future Energy Prize? If the ZFEP is not likely to cover the full costs of the project, please indicate what components are covered by ZFEP, where the shortfall will come from, and the timeframe for when this will be secured.

The cost of the project is COP \$ 772. 756. 000 that's equivalent to USD \$ 264. 316 approximately. Which we aspire to finance USD\$100. 000 with the resources of ZFEP and the other resources of the school. To the date, the school already invested in buy of areas for USD \$119. 000 in 2 properties that add 17. 000 square meters aprox. to USD \$7. 000 per square meter. LEGAL PERMISSIONS USD\$1. 026 aprox. (executed) and some constructions like the environmental classroom (executed) per USD \$14. 000. We projected for the next two years: CONSTRUCTIONS: Footpaths and vivarium USD\$16. 418 approximately. WATER HANDLING RAINS SYSTEM: USD \$11. 971, BUY THE PROPERTY per 5. 500 square meters value USD \$34. 204. SOLAR ENERGY SYSTEM (panels) USD \$2. 565. TRAINING, TRANSPORT AND INPUTS: USD \$65. 132. That is to, say to the date has executed with own funds the value for USD\$134. 026 that is the 50. 7 % and it is missing for executing 130. 290 USD. If it is not probable to obtain the resources of ZFEP, the term of the project happens from 2 to 5 years and there will be obtained the resources of the school and donations

b. Please give an outline project plan with the cost and approximate length of each of the main steps in the table below:

Table 2: Project plan outline

Task	Cost (\$)	Description	Who does the work?	Impact	Milestone	Duration (weeks)
Forest Vivarium Build	14.200 USD	Construction with structure in bamboo and 90 square meters polyshade	craftsman Construction	Build in friendly materials with the environment of a place to produce vegetable material for seed or layering. These seedlings will be used in the Macondo mountain	VIVARIUM WORKING	8
Solar panels	2.565 USD	250 W SOLAR PHOTOVOLTAIC SOLAR PLANT for energy production of the educational farm	CONTRATISTA	Generation of clean energy	Project completion	6

Build of ecological Footpath	2.418 USD	Construction in material of the region of a footpath 1 meter wide for 210m of length	Students, Parents and architect constructor	Conservation of the relicto of forest by means of, with the possibility of passive contemplation across the footpath	ecological Footpath	18
WATER COMPILATION RAINS SYSTEM FOR USE	11.971 USD	To construct and to adapt the covering of the constructions of the farm to gather you water down rains and to use it in irrigations, sanitary ware, cleaning and like animals water trough.	Contractor	Reduce in a 80% the water consume in the farm school	Funtion system	10
buy Property in danger	34.204 USD	Buy of a 5.500 square meters property that is in deforestation danger	school	It extends the perimeter of the educational and demonstrative farm towards other owners of the mountain.	Buy and legal titulation	15

sows of native trees	5.132USD	sow 22. 000 trees inside the macondo mountain because of 22 trees for every person of the community	The whole community, students, family, parents of peasants and inhabitants of the mountain	Restitution of the ecological function of reload of aquifers of the Macondo mountain	22,000 trees planted	80
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Total duration in number of weeks:

137

c. Please upload professional cost estimates from third party contractors or suppliers under the supporting documentation, along with any other important information.

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Cotizacion planta solar Jauregui.pdf

Scan.jpg

Cotización cubierta.pdf

d. Why would your project be successful? Please support your answer with available capacity (manpower/expertise) and availability (ease of obtaining) of necessary material? What are the challenges/risks you expect to encounter and how you intend to deal with it?

The project has the support of the community, family parents, teachers, students and mountain residents, approximately 980 persons directly, who should contribute workforce and the professional knowledge, technical and popular knowledges that allow the success of the project. The challenge is change the mentality and action front to use of the soil in the mountain, the learning and conscience of the community about the appropriate practices in the water handling, energy and soil, as well as of the appropriate disposition of the liquid and solid residues that community produces. The main intention is environmental conservation, restoration and regeneration of the ecosystem particularly in the Reload function of aquifers, which is in danger, for the excessive enlargement of the agricultural and especially for indiscriminate cattle pasture. We generate conscience and environmental education between the students and the families, by means actions inside and outside the school, which there allow the care and preservation of the natural resources. We contribute to the restoration of Ecosystem to Andean High Forest in the Macondo Mountain of the Cogua city, by means actions that allow the restoration of the forest and the appropriate use of agricultural skills. The project is viable because the school has a property, in the Macondo Mountain, on the Northeastern side of the city and provided with 27. 000 square meters in a proper ecosystem of Andean High Forest between 2650 msnm in the lowest part of the property and 2730 msnm in the highest of the property; between those that there finds a relict of native forest of approximately 7. 000 square meters defined as the Territorial Arranging as Area of Reload of Aquifers. The risk of the difficulty of obtaining the resources in the due time.

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PRAES JAUREGUISTA 2016.pdf

cronograma PRAES 2017.xlsx

INDICADORES DE METAS.pdf

Innovation - 20%

Here we are looking for the project to show how it is different from others, and how it is a creative and practical solution to a well-researched problem.

8. What problem does your project solve for the school, the students or the community? What research have you done into alternative solutions (for example others in your country or area), and how did you decide on this one? Please give evidence of a feasibility study, if you have one

The problems that our Project, we have located, it is possible to synthesize from the student ambience and from the ambience to the area to be taken control. From the student ambience is possible to perceive that despite the efforts to take part actively in environmental actions permanently from the school, still there exist students and families that do not know the problems and have not acquired sufficiently conscience on the role that every human being has in the planet, for improvement of the Environment. The problems on the area to be taking control, it is possible to summarize by:

- The property where is located the farm of the school is inside an area that presents an imminent danger of ecosystem deterioration, since its main function of recharge to aquifers in the mountain known as Macondo, is threatened by the enlargement of the agricultural border, but especially by the indiscriminate chopping of the forest and the soil compression due to inadequate use of the pasture of cattle. This fact generates the reduction of torrents process and water production, air and soil necessary for this area corresponding to the Andean High Forest of the Savanna of Bogota. In the same way, the farm is inside the delimited areas on the high Cuenca of the Bogota river, which characterization establishes the POMCA, and needs to be protected, looking a balance between the uses of conservation and agricultural activity and in this case of Environmental

education and contemplative recreation. The other problem ones is the clay development in nearby properties that it's needed of an environmental handling that delimits its expansion. Bearing in mind that the biophysical components of ambience are given by the biotic factors (fauna and flora), the abiotic ones (air, water, soil, energy, climate) and the chemical, physical and

9. What are the particular attributes and strengths of your school, its location and the region, that will be used to make the project work effectively? How will the project use local resources cost-effectively and creatively? In addition to technical or geographical factors, feel free to describe any innovative partnerships with groups outside the school that will be important in developing the project. How will the project help the school and students to do things differently in the future? Aside from technologies, is there something creative about the organisation / design of this project?

The Buenaventura Jauregui School chooses for: • we work from the local reality, in the social, economic and cultural environment and the values formation towards the ambience defense. A curricular design open that allows to give an educational answer to the environmental context of Zipaquira and Cogua. The general planning of the school year, with the areas and contents planning, and how to will be employed like team from the disciplines towards the environmental education, inserts at the curricular. The subject-matters and contents selection, so much of the concepts, facts and present beginning in our school, as of the procedures, attitudes, values and behaviors to work. The didactic orientations and the evaluation that there gathers the beginning significant the learnings, planning and problem solving, motivation, significant relation between what it is known and what is learned, the activity student as base of the construction of any learning. The project proposes five phases that

develop simultaneously, so: The first Phase: Reforestation and conservation of the relict of Native forest. although this practice implies usurping the function that corresponds to the same nature as the human being's natural regeneration. The second Phase: Vegetables cultivation with organic skills and environmental balance, and productive agricultural projects inside the Farm. The composting and Californian Red earthworm cultivation is the beginning of the production of humus used in the sowing of vegetables and trees. The proper sowing of vegetables of the region, by means of organic skills, it has been an experience for the smallest children of the school, which in addition to achieving the sensitization with the life, there are learned the basic skills of sowing, production and harvest of lettuce, onion, cabbage, spinach beet, spinach, etc. Third Phase: The Cultivation of fruit-bearing, ornamental, medicinal and aromatic own of the ecosystem. The fourth Phase: the Institutional action for the decrease of chopping of trees by means of processes of material recycling and paper recycling, with activities inside and outside of school as: Material recycling across the Festival of the Environment (to retrain, Basurama day without bundle, EcoModa, etc.). Fifth Phase: thrust the owners organization and neighbors of properties that do part of the Macondo mountain .

Leadership - 20%

10. How were students involved in the planning for this project? How much of the final plan is the result of staff versus student input?

The project is a direct proposal of the students organized in the school environmental patrol with the leadership of young people and children environmental monitors of every grade and with the active participation of the family parents. Our jaureguista Model like institutional initiative, we will develop concerning one or several projects with call capacity; that from the evaluation of the community affect its interests in a positive or negative sense, in such a way that you encouraged its participation for acceptance or for rejection. It is a question, consequently, of spreading, from an environmental perspective; from beginning and knowledge, in obtain a promoting dynamic of personal and social change that are constituted in a real contribution to the construction of a Nation founded worthily on their own values of identity. One step there will be seen the importance of valuing the oral word - the sacred art of the word - its authentically ontological dimension, like an unavoidable way of propitiating a real communication, which, in turn, is the food of the peace. The project spreads not only in an oral way but across the information Technologies, website of the school, social media, etc. In such a way that all the community members interact, take part, propose and contribute with solutions. The students investigate and act in all the phases of the project, highlighting its leadership especially when they must qualify the farmers of the mountain and the family parents.

11. What will the students' role be in implementing the project? What will be the roles of staff and students in collaborating to run the project-in particular, how will staff provide support?

The students take part in the execution of all the phases in the project. especially in: a. investigation. B. Planning C. Organization of sub productive projects D. they sowing of trees, shrubs, vegetables, aromatic, etc. E. They Operate and functioning of the vivarium. F. They participate in the Pedagogic assembly of solar system energy and the handling water rains, socialization towards the community of its functioning, advantages, etc. The family parents contribute to labor and its technical and professional knowledge. The local authorities do donation vegetable material and technical training. The teachers and managers articulate the project from the ambience curricular and academic. The Rector manages the resources of private sector for the project. Today one it is provided with sponsorship of some local companies that donations make small in kind. The develop of this project not only benefits to the educational community that by means of the environmental awareness to production and the proposed actions would be delivering an important legacy to humanity not only with the contribution of the trace of carbon but in the new generations training, compromised with our planet. WHOLE (966 influenced persons straight) Men 493 Women 473. (to see picture documented).

Long-Term Vision - 30%

Here we are looking for a strong long-term vision in terms of past, present and future achievements, and how the project fits into the vision. We also want to see a project with clearly defined roles that will make sure it maintains its impact long into the future.

12. What is the school's long-term sustainability goal? In addition to the project mentioned, how are you working towards this, and what past achievements have you made?

Our project guarantees the long-term sustainability not only because we established in the mesh curricular and an environmental pedagogic model in Buenaventura Jauregui The School to be reply by other local schools but it guarantees the care and preservation of an ecosystem that today is in danger and that in fulfillment of the project it guarantees in the long term its conservation. This way the Buenaventura Jauregui School undertakes the commitment to contribute with the planet, starting from the institution and the household, because joined it is possible to reduce the environmental impact, by small actions that are very significant to preserve our valued planet. Already from 2001 we initiate the implementation of Environmental Projects in the School. Initially it formulated the project of “environmental characterization of the sub basin of the Cold River” and of the micro basins shaped by 20 gorges of the high and average part of the Cold River. There interfered the Aqueduct Company of the City (EAAAZ), the CAR (Regional autonomous corporation) and the office of environmental matters of FEDEPAPA. In practice, the project achieved that our students were characterizing property to property each of the lands from the birth up to the mouth in the Cold River, doing wealth’s measurement, water chemical analysis, diagnosing the environmental and social problems of the area of the warrior's moorland. We

Done the diagnosis initiated to the education process to The communities on the part of the student of the top grades, by means of chats and leaflets

13. Project continuity and management:

a. How will you ensure the long-term benefit of the project? How will you continue to engage student groups and the broader community? For example, has a permanent student committee been created to focus on sustainability initiatives? If so, what are its duties, and what has it done already?

The project is thought for sustainable in long term not alone because the curricular contents, the methodology and the proposed school activities, remain incorporated in the Institutional Educational Project, so for the study plan and the curricular of the school incorporate it in a transverse way in all the subjects and activities of the school. The form of permanent committees, the lodger's association of Macondo and the implementation of the environmental school patrols guarantees the continuity under the leadership of the students. The conservation of ecosystem is guaranteed by the due training of the owners and inhabitants of the mountain and the juridical shielding that we were achieved by means of the incorporation of the mountain how of ecological interest in the Territorial Plan arranging that soon the authorities were decreeing, for the management of the Macondo lodgers association, led for ours students and teachers. we want generate conscience and environmental education between the students and the jaureguistas families, by means actions inside and outside of the school, which there allow the care and preservation of the natural resources. 2. we want to contribute in the restoration of the Andean High Forest Ecosystem in the Reservation of Macondo on Cagua city, by means of actions that allows the restoration of the relict of forest and the appropriate use of agricultural skills in the Educational

Farm. 3. we participate of the education and raise public awareness campaign of the inhabitants in the area, about the agricultural, cattle practices, handling of solid

b. What are your plans for maintaining the project once it is completed?

1. Juridical protection for the conservation in the territorial Plan Arranging. 2. Build and maintenance of vivarium for production of vegetable material to the region. 3. formal implementation of the environmental curriculum in the school and projection to other schools in the region. 4. implementation of renewable and innovation energies in all the mountain and region. 5. To establish in the nearby properties, auto sufficient farms with sustainable environmental practices. 6. Buy other properties for the conservation and enlargement of environmental project. 7. Annual festival of the institutionalized environment Eco - fashion, basurama and to retrain. 8. Build of environmental classrooms friendly with environment, materials for community education. 9. To maintain productive projects in agricultural, cattle and educational to obtain economic resources that guarantee the continuity of the project.

c. Please provide a list of people and responsibilities in the following table.
[include relationship to the school, eg. staff, student, parent, neighbour, local elected officials]

Table 3: Project roles

Name	Relationship to the school	Role
Jorge Ariza Morales	Rector	Main project oversight and ZPEF contact

Felipe Gutierrez	student	Head of environmental committee;
Luisa Fernanda Garzon	In charge Teacher, scouter	Main Guide and project oversight
Mateo Ariza	student	Coordinator of the environmental patrol
Faride Cortes	teacher	financial director of project
Luz Mery Uriza	Family mother	environmental leader to family members
Diana Bernal	teacher	Coordinating committee of environmental curriculum
Samuel Lara	neighborhood in the mountain	Project neighborhood leader

14. In what way is the project expected to encourage responsible global citizenship and sustainability among students, staff, parents and the wider community? What steps will be taken to ensure this?

The educational community are conscience the world problematics, ones caused by the bad use and the waste of the resources that the nature offers us, for it we conforms the commits in addition to informing actively in the planning, execution, socialization and evaluation of present environmental project with the following concrete actions in the newspaper to live:

- To contribute with the saving of natural resources
- To diminish the bath time
- Not to throw garbage in the streets
- Use of the recyclable packings more than once time
- Not to start sheets unnecessarily of the notebooks
- To re-use publicity boards and other materials used in the development of the teaching practices.
- To keep the school areas clean
- Not to wrinkle the role sheets
- To Collect the plastic covers to do a community work
- To select the garbages
- To use in Photocopies and documents both faces of the sheet or recycled role.
- Turn off lights and disconnect the domestic appliances
- Take care of the plants and animal
- to help to generate conscience on the environmental

changes. And in this way manage a favorable impact in our environment minimizing partly the harmful effects that stay for the human activity. In public act the community promised to take part actively in the planning, execution and sustentabilidad from the project "let's Save the Macondo mountain" proposed for ours young environmental leaders. In this way the Buenaventura Jauregui School undertakes the commitment to contribute with the planet, starting from the institution and the household, because joined it is possible to reduce the environmental impact, by means of small actions that are very significant to preserve our valued planet.

Principal Details

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Cost guidelines for different technologies

The Prize team provides benchmarks to help applicants in the Global High Schools category give realistic cost estimates for their project. Applicants are encouraged to check their cost estimates against these benchmarks. Some project costs may be higher than the ranges given here (eg, in off-grid, rural locations). The table does not represent a full list of all energy technologies - your project will be considered even if it does not use the four technologies in the table. We strongly recommend that entrants seek quotes from local equipment providers before applying to help give more accurate cost estimates, which are important to demonstrate the feasibility of the project. Please give technology costs in detail and if possible please break out to individual components (eg, for solar, this could include module, inverter and installation costs).

Table 4: Cost benchmarks

Technology	Range	Explanation
Solar	\$1,710-3,000/kW	The lower end of the range is for a project in a developed country context. The higher end of the range will apply to developing countries and off-grid applications. As a rough guide to components, the global estimate for modules is \$600/kW (although this may be higher in countries that have to import equipment especially) and other costs (inverters, balance of plant and installation) would be in the range of \$1,110/kW upwards.
Battery storage	\$500-2,500/kWh	The wide range is based on different energy storage technologies. A central estimate for developed countries is \$1,300/kWh.
Micro-hydro	\$1,500-8,000/kW	This range varies from developed countries at the lower end to developing countries at the higher end. One example from Indonesia shows on-grid at \$4,000/kW and off-grid at \$8,000/kW

Small wind

\$4,000–7,000/kW

Small wind turbines at less than 100kW have a broad cost range, owing to differences in technology.

Attachments

Files uploaded:

INDICADORES DE METAS.pdf

LOGO PRAES MACONDO.jpg

SINTESIS PRAES 2016.pdf

Videos uploaded:

<https://buenaventurajauregui.jimdo.com/nuestra-granja-nuestro-prae>

<https://www.youtube.com/watch?v=CY1FKKCwmik&feature=youtu.be>