

IDDS 2017: Climate Change Adaptation Final Data Summary

Fusagasuga, Colombia
June 30 – July 17

Organized by:



Supported by:



UDEC
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What was IDDS Climate Change Adaptation (IDDS ACC)?



IDDS ACC Details



Time: 2.5 weeks

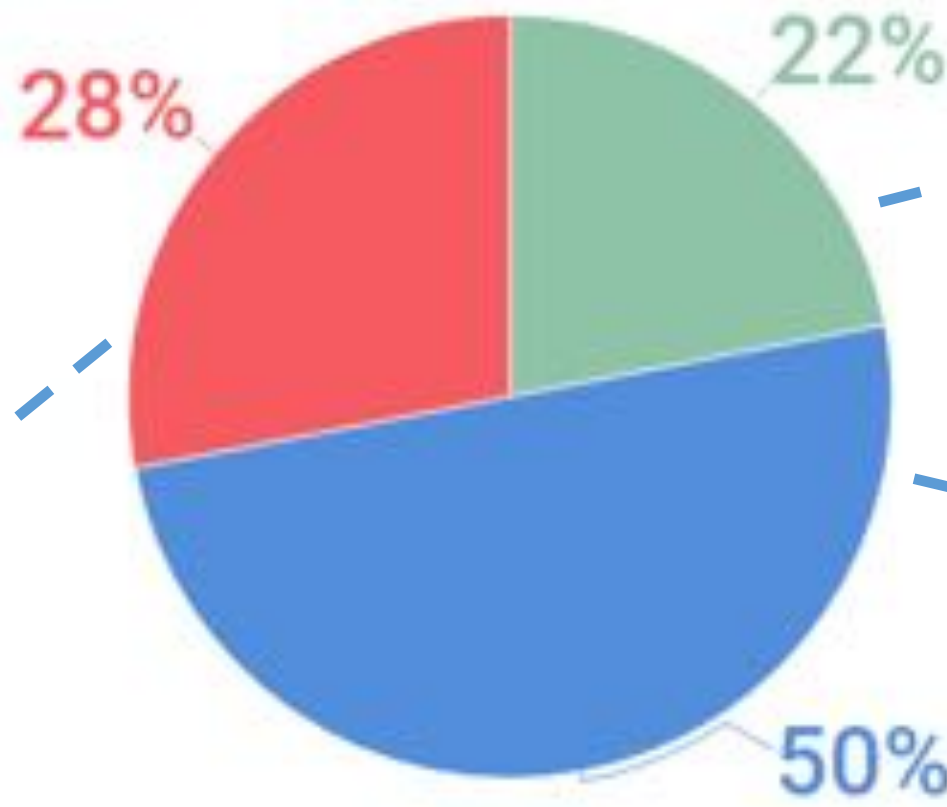
Who: 58 participants

Where: Fusagasuga, Colombia

What: 10 prototypes

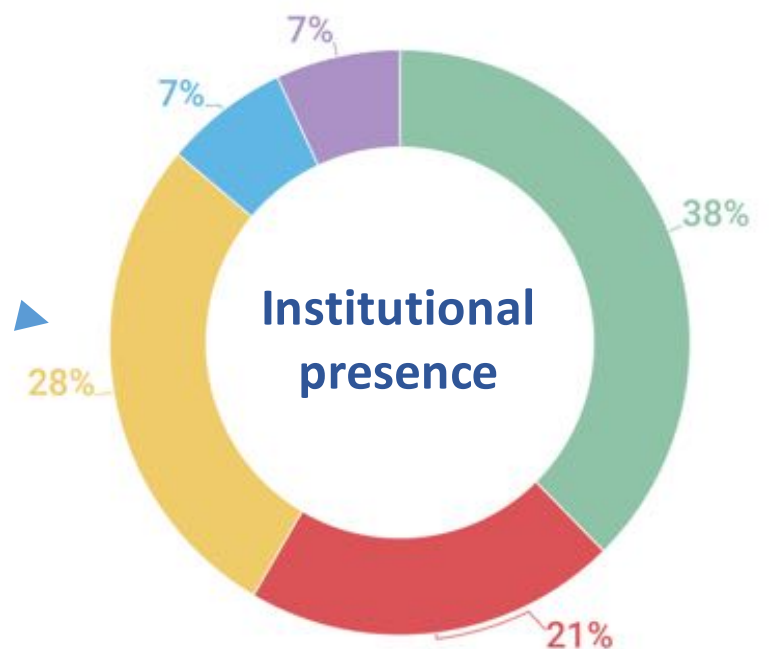
Who were the participants?!

11 countries



Local (Community) National International

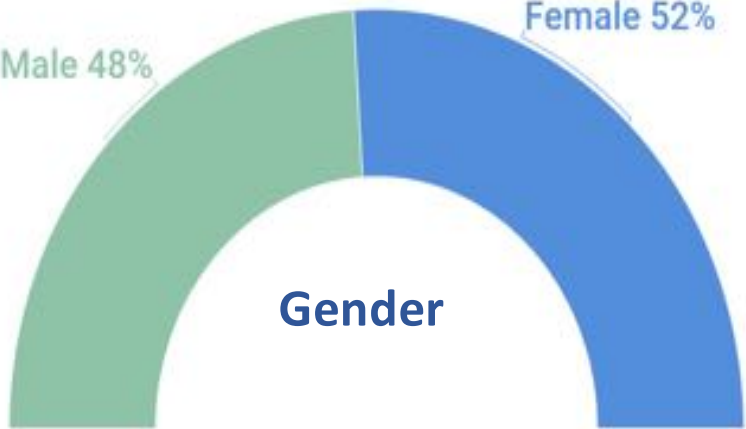
10 different communities (at least **1** representative per team)



National University Other Uni. of Cundinamarca Uni. of Antioquia Uni. of the Valle

n=58

Who were the participants?!



Youngest Age → **21**

Median Age → **29**

Oldest Age → **60**

n=58

Occupation/Profession



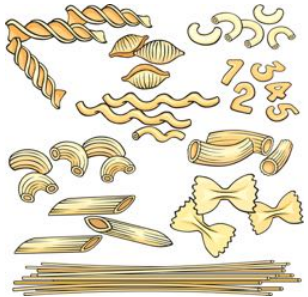
- Designers
- Engineers
- Social scientists
- Environmentalists
- Business/entrepreneurs
- Agriculturalists/farmers
- Fisherman/sanders
- Hard sciences

Who *really* were the participants?!

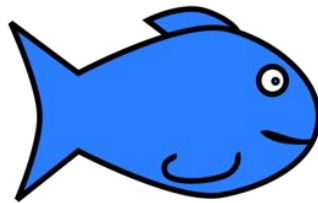
Favorite Food??

Three-way tie between:

Pastas



Fish



**Ajiaco
(traditional soup)**



n=52

Favorite Superpower??

Teleportation



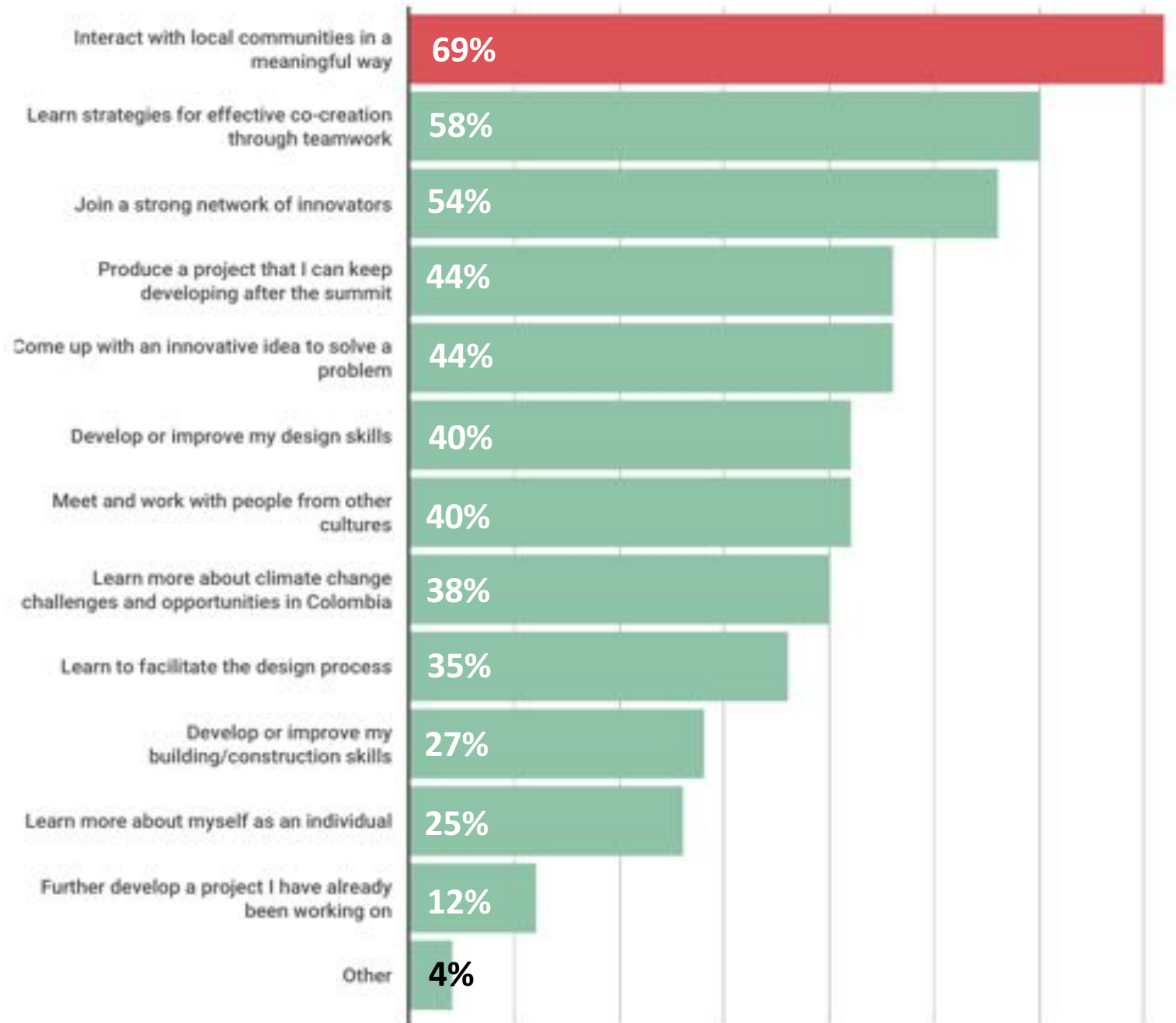
What were their short-term goals?

Between now and the end of IDDS, what do you MOST hope to accomplish?

Amongst Locals and Internationals, both most wanted to accomplish:
Interacting with local communities in a meaningful way

Amongst Nationals, they most wanted to accomplish:
Joining a strong network of innovators

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Which were their favorite activities?

Activities



Note: this is only a qualification of the activities up until the halfway point (the 2nd survey)



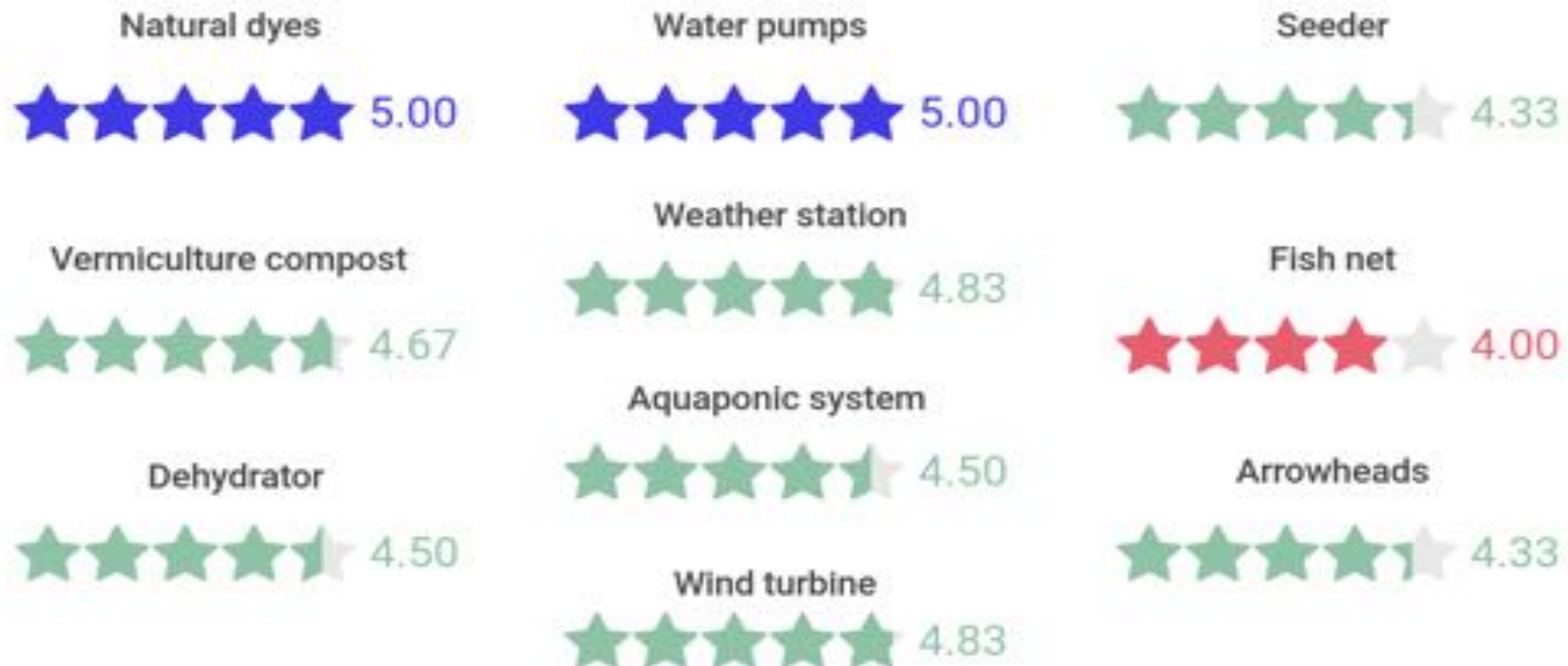
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Which were their favorite Build-its?

Build-its



In total: ★★★★★ 4.67



What was built?

APRENAT: 51 organic coffee producing *campesino* families, located in the municipality of Tibacuy, alongside of mountain of Quinini. They believe that their production of coffee should be based on the conservation of their land's unique biodiversity and the interactions of these systems.

Erratic rains: 30% of the association does not have access to reliable and consistent sources of water. This leads to difficulties in the cultivation, production and transformation of coffee.

Prototype: A system of rainwater collection and storage, that harvests rainwater for both production purposes and family consumption.

Rainwater collection and storage system



What was built?

Areneros: Sand extractors/sellers from the Island of the Sun, alongside the Magdalena River in Girardot, Colombia.

Erratic rising/falling of the river: During high season, the sand extraction (their main economic activity) becomes unreliable.

Prototype: A detachable and retractable covering system that lightly transforms their canoes (one of their assets) to promote ecological tourism during the summer seasons. It uses aluminum poles and a protective, light covering.

Canoe repair and transformation



What was built?

Areneros Jr: 20 young members of the Areneros (*see slide before*) community

Erratic rising/falling of the river: During high season, the sand extraction (their main economic activity) becomes unreliable.

Prototypes: A floating device made from guadua bamboo, hermetic tanks and threads from recycled plastic bottles to promote ecological tourism. The floating devices are able to withstand an approximate weight of 1,500 pounds and have dimensions of 67 square feet – meaning that multiple people can embark upon them at a time.

Floating platform



What was built?

ASOPROMES: A cooperative of 26 families of agro-ecological producers who bring their organic and ecologically friendly products to market every Saturday in the nearby city of Fusagasuga.

Excessive weed growth: The best alternative is to use agrochemicals to deal with the weeds, however the association stands firm with their organic means of production.

Prototype: A weed excavator that consists of a jagged cyclone with an adaptable handle, and is designed for comfortable use over extended period of time.

Weed excavator



What was built?

Finca el Dorado: A small single-family farm that is primarily dedicated to the cultivation of coffee.

Inconsistent rains: Resulting in lower yields

Prototypes: An alternative agricultural production system that optimizes the use of water, inhabits a small space and uses appropriate low-cost technologies in efficient ways to improve food security and resilience to climate change. The prototype consists of a covered modular system of vertical orchards, which collects rainwater, and distributes the water thorough drip irrigation. Using such a system increases yields by approximately 2.7 – 4.4 times as much in comparison to traditional farming practices for the same area.

*Vertical farming with
rainwater drip-irrigation*



What was built?

Local fishermen: Located by the river Magdalena in Girardot, Colombia.

Bait: Socio-environmental changes in the river has led to decreased cultivations of bait

Prototype: Home-based bait cultivation system incorporating the principles of aquaponics and vermiculture to ensure that provision of bait can be consistent throughout the year – and non-reliant upon the river. The system allows for various forms of bait – including small fish, worms and larvae.

Bait cultivation system



What was built?

Punto Verde: A family-owned organic restaurant, influenced by the concept of agroecology, that helps promote an agro-eco-tour where they highlight other farms and services in the area.

Bochashi: An interesting alternative to agrochemical fertilizer for the community. However it is quite difficult to produce – requiring a lot of rotating, at certain temperatures and humidity, thereby exerting a lot of physical effort.

Prototype: A device that facilitates the processing of bochashi. It can hold a capacity of up to approximately 440 pounds, and more importantly, it can be used easily by anyone, including minors – thereby mitigating the difficult physical effort associated with its production.

Tumbling fertilizer producer



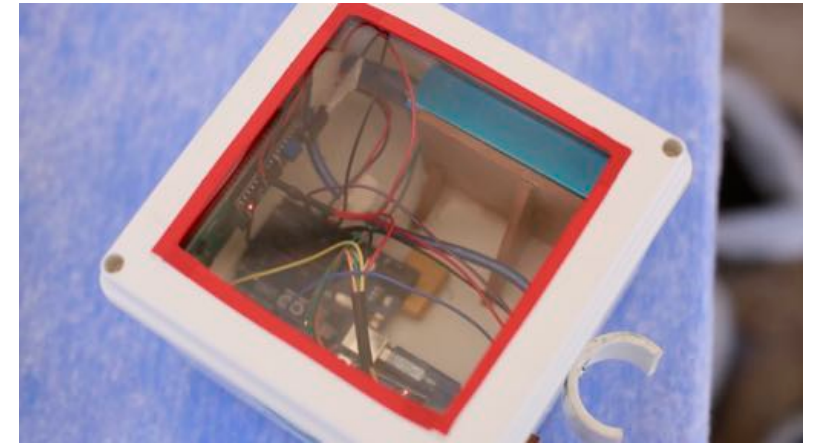
What was built?

Tierra Libre: A farm school that promotes knowledge sharing, agro-ecological training, environmental education and participatory action research. The community has a bio-factory where production and research of organic resources makes it easier to transition from conventional farming to organic farming

Soil degradation: Approximately 40% of the surrounding territories have some degree of soil and nutrient degradation, thereby decreasing productivity.

Prototype: A low-cost, user friendly measurement kit that measures the temperature and humidity in soil, bio-fertilizers, liquids and solids (such as bocashi or mountain microorganisms). Using a simple, micro-computer and copper fibers, the prototype allows for monitoring and controlling of the multiple variables which affect soil degradation.

Soil and bio-fertilizer measurement kit



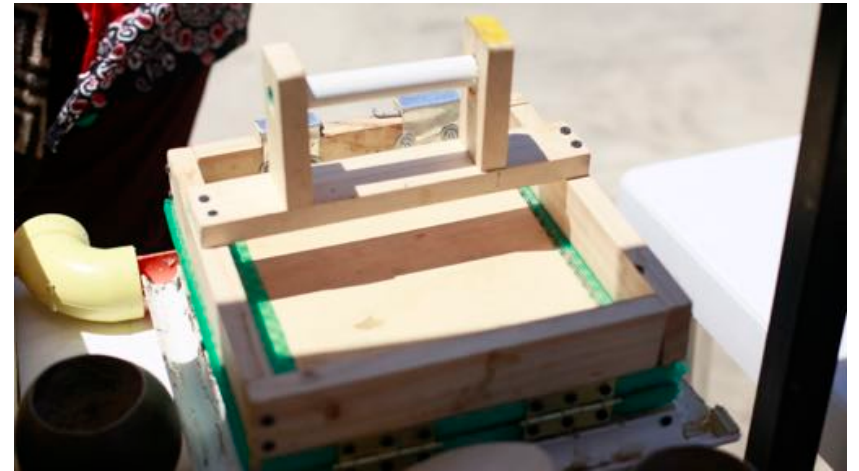
What was built?

Totumos: ASOMACREGYR is an association of creative artisans in the Girardot region of Colombia, consisting of fifteen female heads of household. They mainly work with the totumo fruit, transforming the outside shell into cups, bowls and other handicrafts.

Pulp and seeds: Accounts for about 95% of the fresh weight and is usually dumped without any treatment, generating methane in its degradation.

Prototypes: Two different tools that attempt to reuse the insides of the totumo fruit. The first machine works as a press that extracts the fiber from the pulp and guts. The second machine maneuvers the fiber into a functional paper-like material.

Diversifying the insides of the totumo fruit



What was built?

Waia Sie: An agro-ecological reserve in Silvania, Colombia. It consists of 6 families that promote agroecology, permaculture and biodiversity restoration (particularly in regards to the Bosque de Niebla).

Ojo de Poeta: An invasive weed species increasingly affecting their territories

Prototypes: Two different tools to facilitate in the control and extermination of Ojo de Poeta (they extract more of it, over less time and with less effort). The tools have extendable hooks, and different systems of retraction (through strings and belts).

Versatile weed-whacking tools for Ojo de Poeta

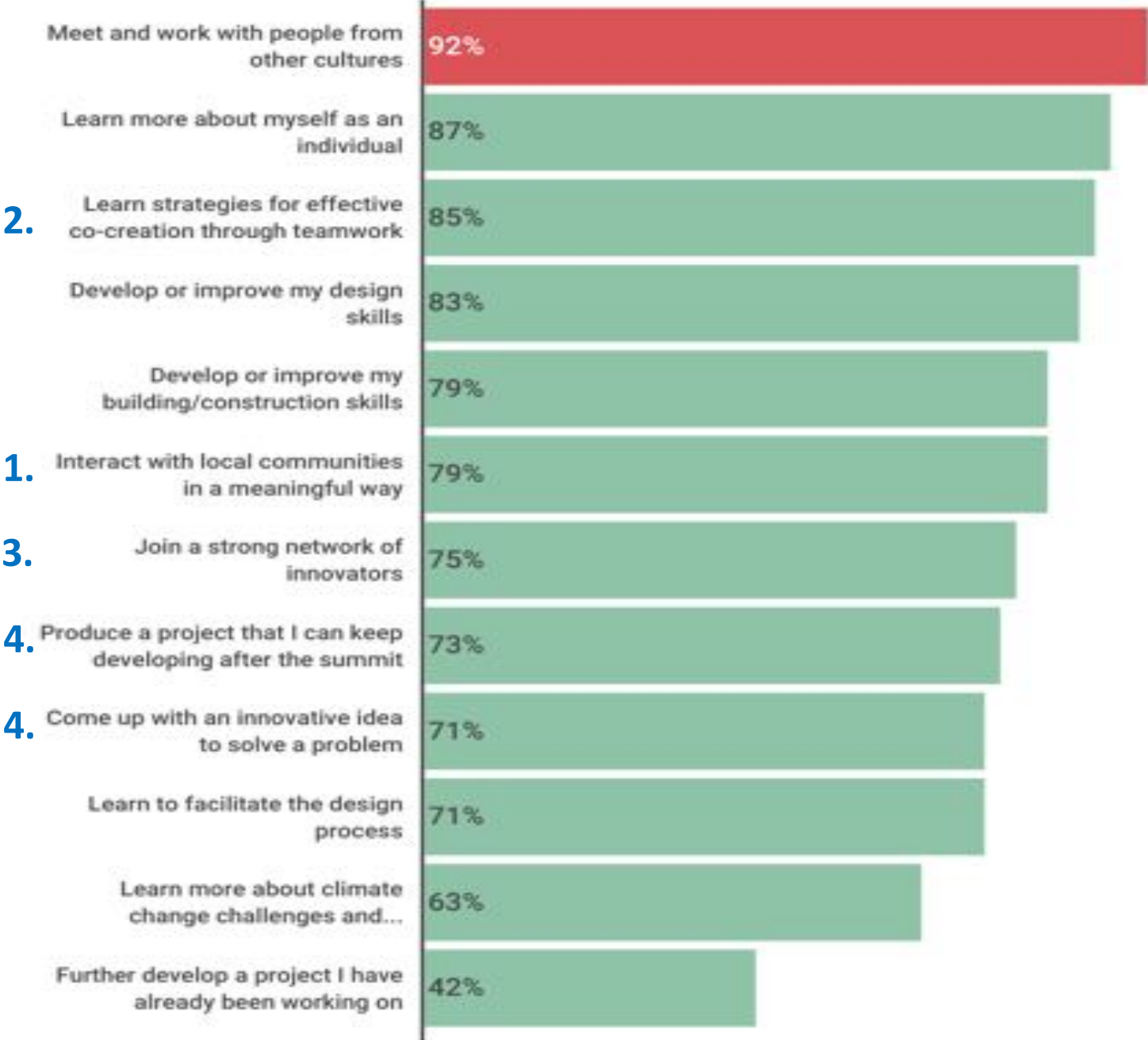


Did they achieve their short term goals?

Do you feel that you have accomplished any of the following? (Select all that apply)

Note: The numbered ones represent the top 5 original desired short-term goals for the participants, according to the first-survey data

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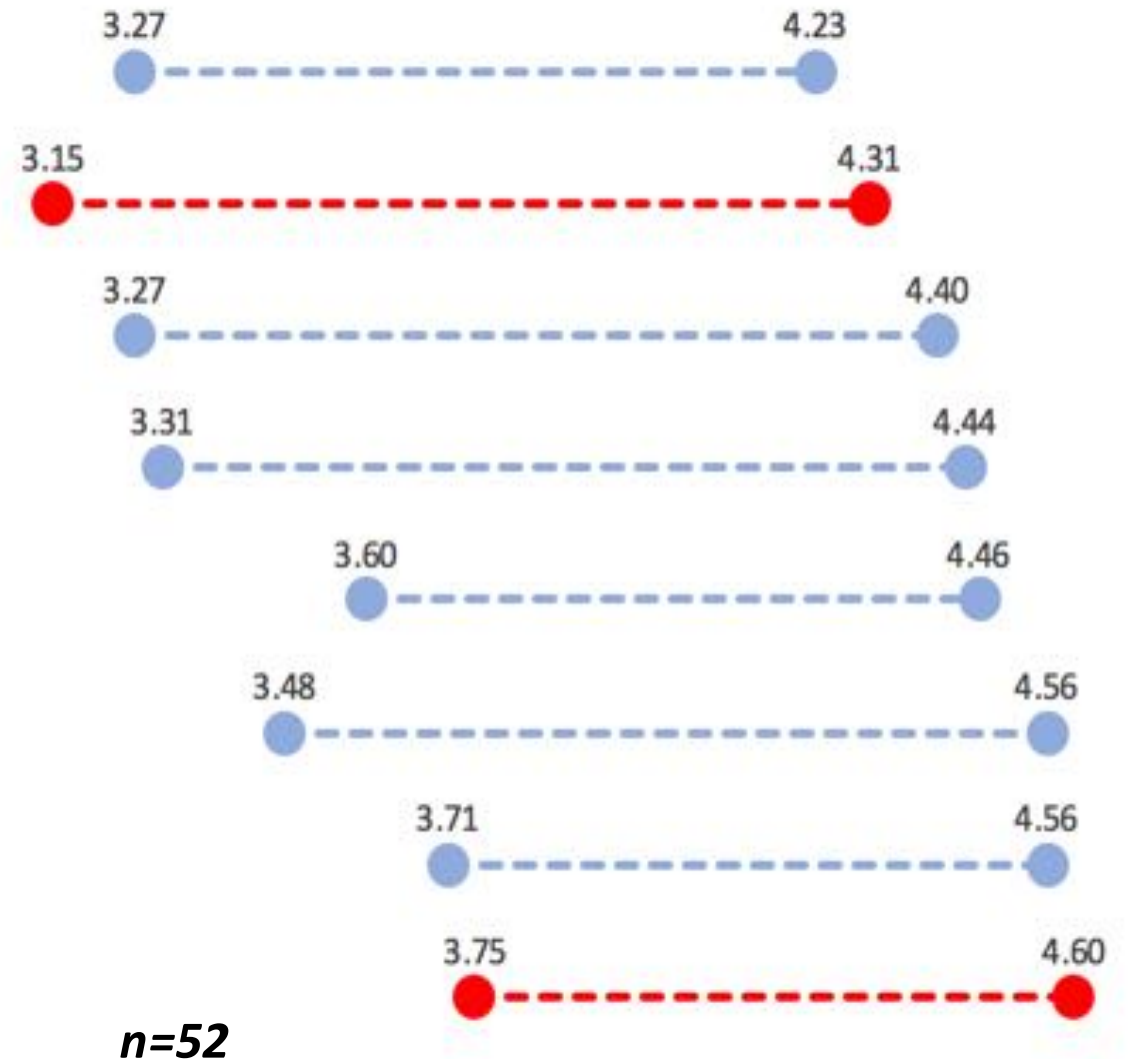
Improvements and Growth

Largest growth

How confident do you feel doing the following activities? (before vs. after IDDS)

Most confident

Designing for my own wellbeing
Using tools for wood, metal or other materials
Working creatively with locally available materials
Problem Framing
Working in teams with people different types of people
Living and working in an unknown environment
Gathering information and feedback from the community
Co-creation



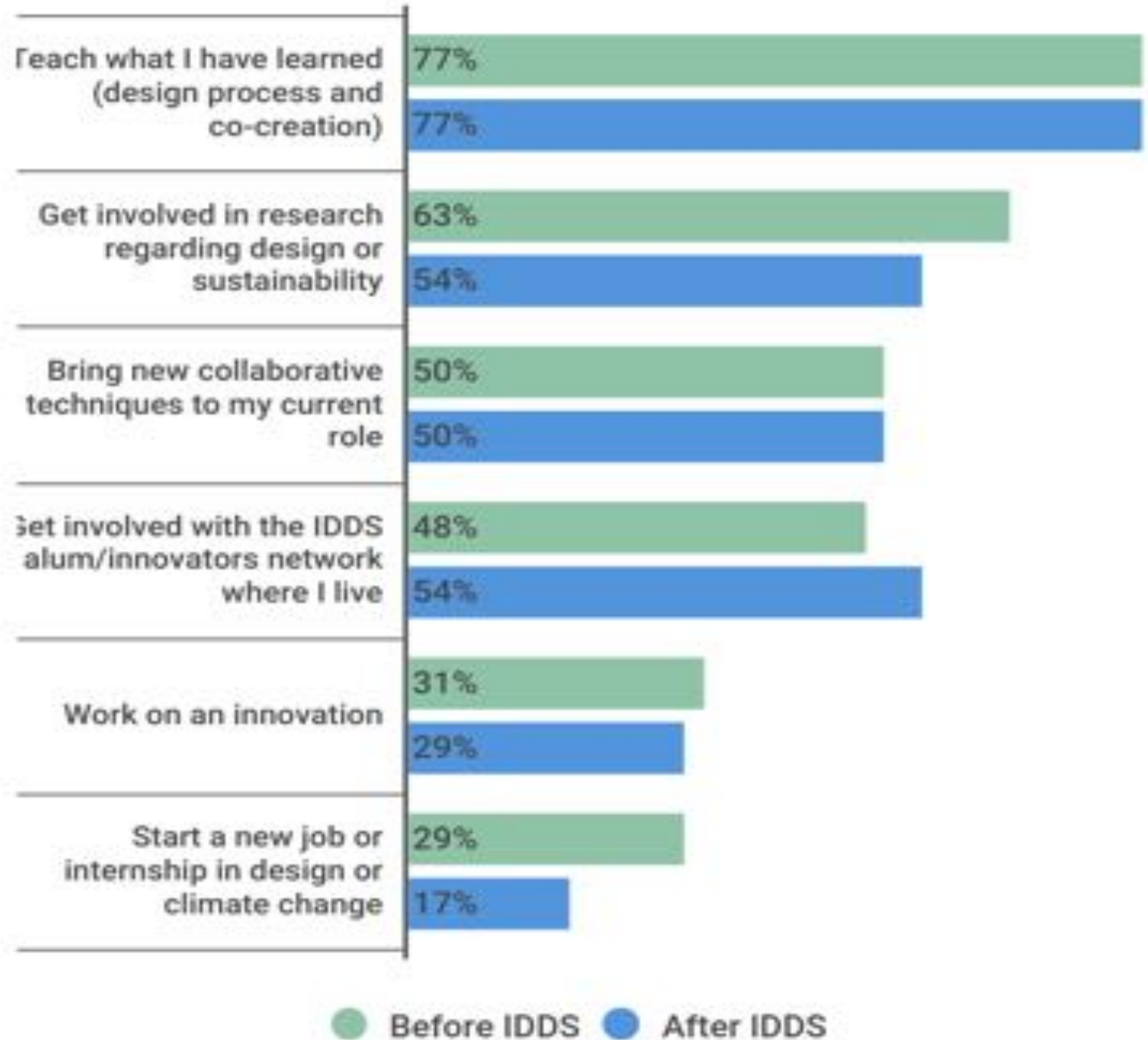
Improvements and Growth Breakdown

Who saw the most growth?

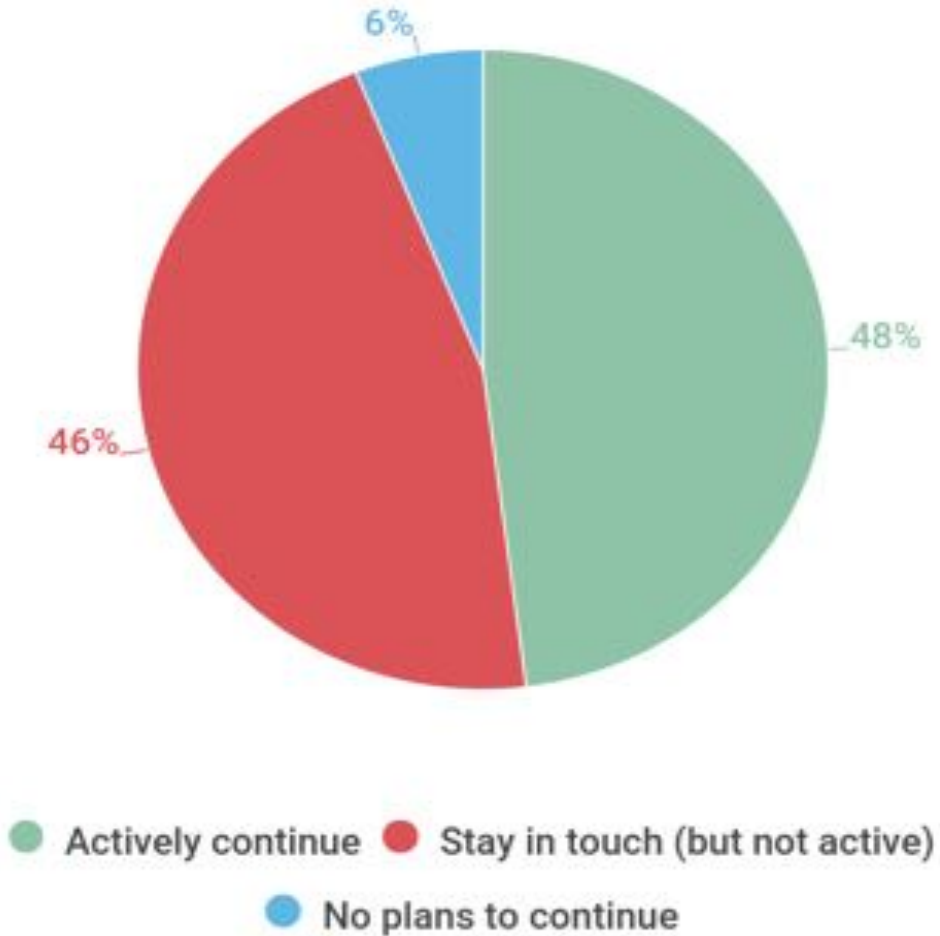
		Largest growth	Highest confidence
1.	Local	Problem Framing	Working in teams with people different types of people
2.	National	Problem Framing	Gathering information and feedback from the community; Co-creation; Living and working in an unknown environment
3.	International	Using tools for wood, metal or other materials	Problem Framing; Co-creation; Living and working in an unknown environment

What are your goals in the 12 months post-IDDS? (Before and After)

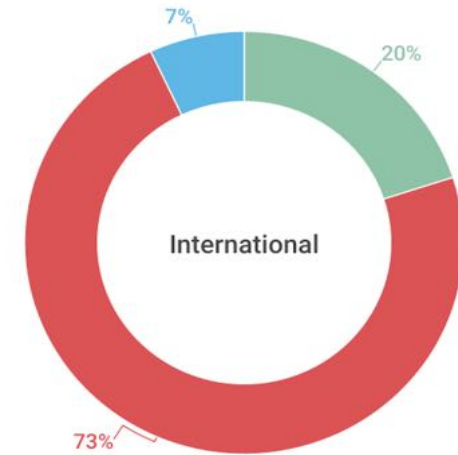
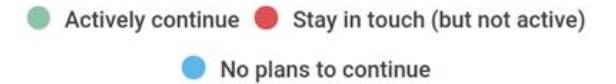
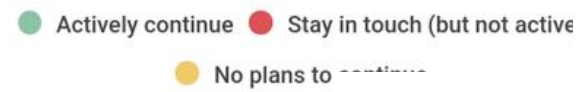
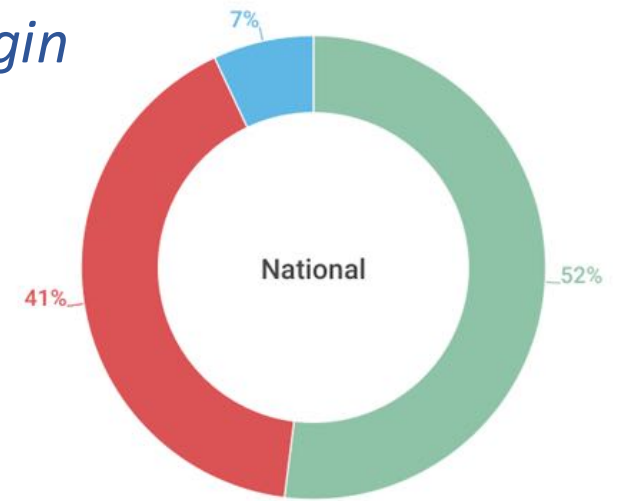
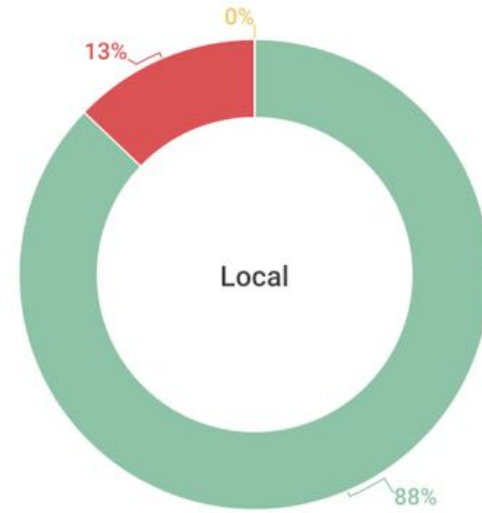
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Will they continue working on the projects?

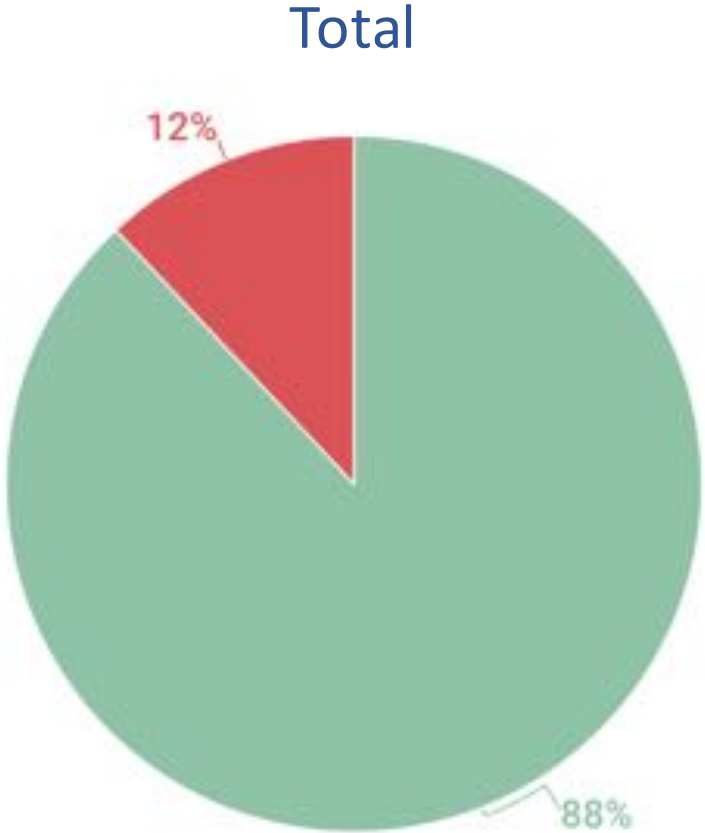


Breakdown by origin



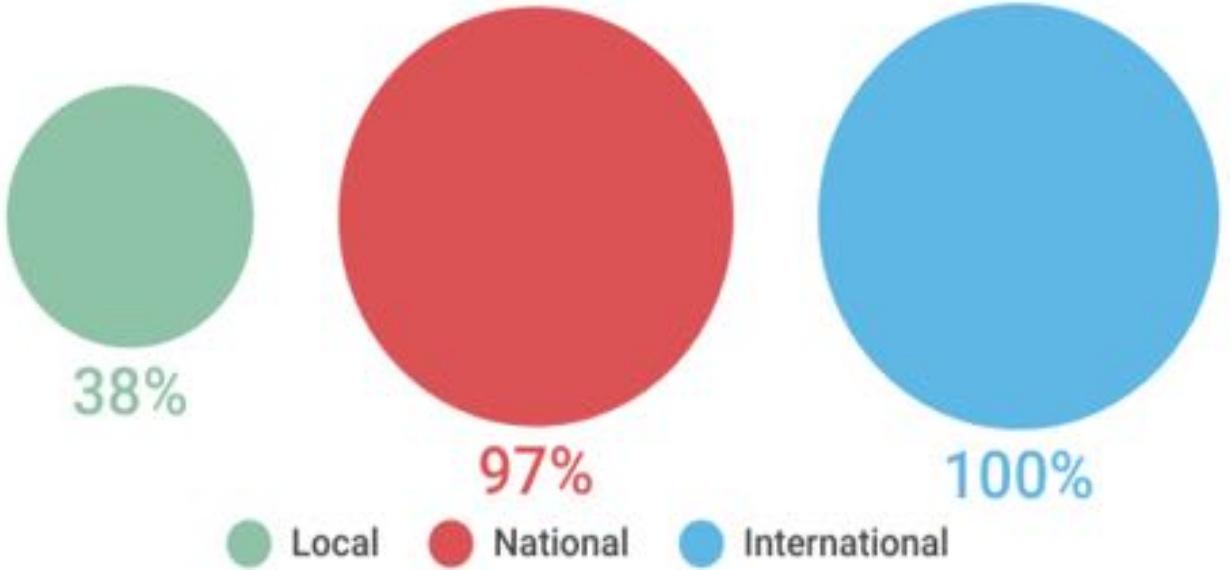
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Do they have steady access to internet?



● Yes ● No

*Breakdown by origin
(% yes)*



● Local ● National ● International

n=52

How to improve

Community involvement/role

“More thorough pre-communication so that they feel and understand the goal of the summit; have them try to attend the whole summit (come at the beginning and stay until the end; however, I understand the difficulty in this), have longer visits, and share the previous IDDS work before the summit with the groups.”

n=52

“In our case, I felt as if the community was not as committed given that the problem/opportunity identified was not directly aiding them. I feel as if they viewed this summit as more of an opportunity to receive something, rather than to co-create.”

“The first visit was very disorganized because the community was not prepared to received us; it could be improved by having better communication and organization with the community leaders.”

How to improve

Learning and curriculum

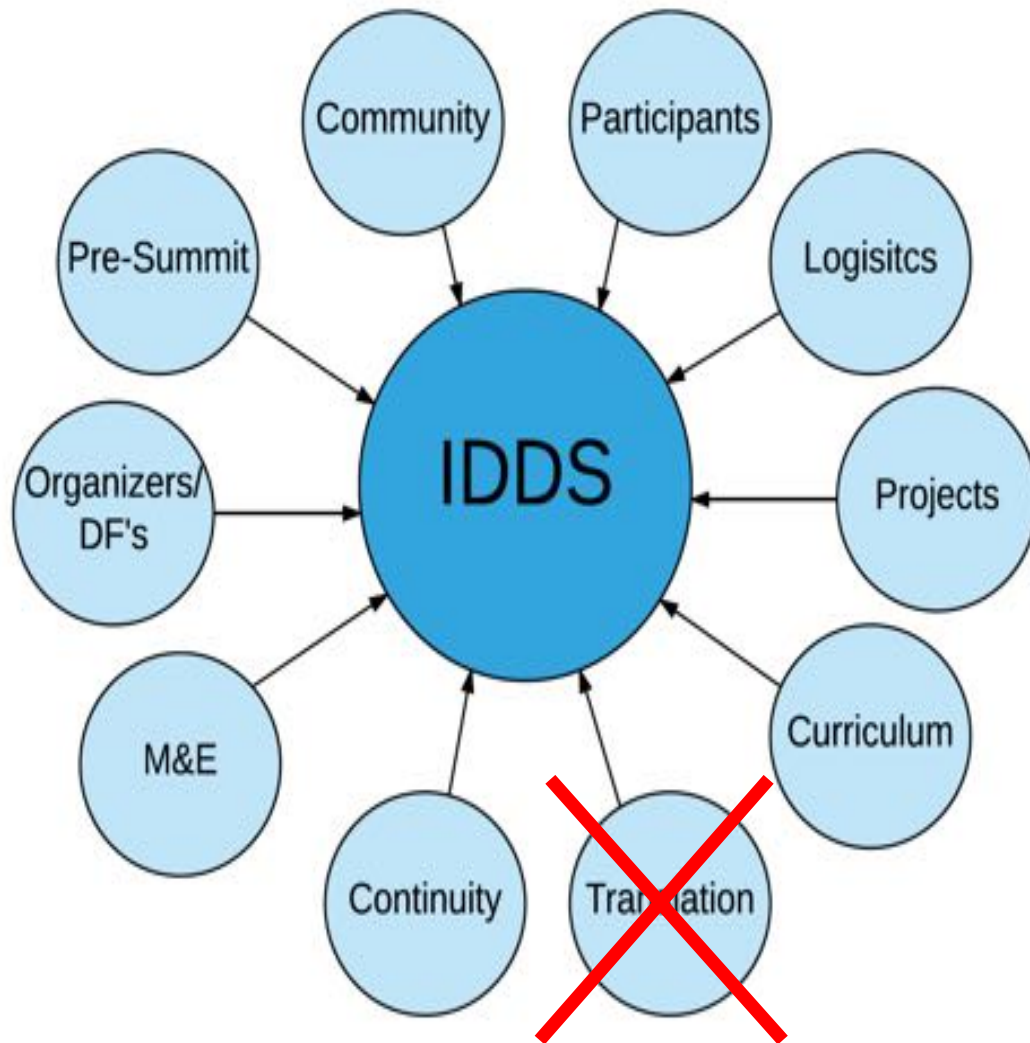
“To improve, I believe that it is possible to **better integrate the theoretical learning with what physical thing we are working on at the moment** – looking for better ways to connect the two.”

“The **order and tidiness of the workshop is something that becomes disastrous** as the days pass, so there should be a **strategy for the participants to keep it in order** whenever they can.”

“In terms of methodology, given time constraints, **we were not able to work in depth on the design book**, so it became a tool (that although useful) that we weren't able to work on properly.”

n=52

How to improve



Organizer De-brief:

Based on the ten themes that were identified in the analysis of 11 previous IDDS organizer de-briefs, the organizers at IDDS ACC, at the end of the summit, went through each theme and wrote down their “best practices. Given that Spanish was a requirement for this IDDS, *Translation* was omitted. Process (minus Translation)

After that, their comments and recommendations were incorporated into a step-by-step *manual*, in both Spanish and English. Both files are available through IDIN.

IDIN Colombia: How do long term goals continue post-IDDS?

*What are your goals in the 12 months post-IDDS?
(Before and 2 years post)*



n=7

PRE

2-year

1. Get involved in research or studies regarding design, development or trash waste
2. Teach what I have learned (design process and co-creation)
3. Get involved with the IDDS alum/innovators network where I live
4. Start a new job or internship in design, development or trash waste

86%

100%

71%

86%

C-Innova (Hub of IDIN Network in Colombia)

Next IDDS: *IDDS Territorios Costeros*

- **Theme:** New settlements for land restitution and economic development post-conflict
- **Dates:** June-July, 2018
- **Where:** Santa Marta, Colombia



Thank you! Gracias!

