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Project Background

Introduction and Purpose of the Sustainable Favela Network

120 years after the first favela emerged in Rio de Janeiro, today the city has 1,000 communities—each with its own unique experiences and organic development—offering housing to 24% of the population. From an urban planning perspective, Catalytic Communities (CatComm) conceives of favelas as simply:

- Neighborhoods that develop out of an unmet need for affordable housing;
- Established and developed with no outside or governmental regulation;
- Established and developed by individual residents ('every brick, every tile' laid by residents; no centralized or outside 'developers');
- Continuously evolving based on culture and access to resources, jobs, knowledge, and the city.

Favelas are home to countless community initiatives through which residents themselves tackle a wide range of challenges, including access to: waste management, sewerage, childcare, literacy, senior care, art, literature, sports, community organizing, soup kitchens, nutrition, hygiene, dance, and numerous others. All these initiatives serve to raise awareness among residents who benefit from them, even while they are made necessary due to missing public investment.

Furthermore, many qualities of urban sustainability can be found in the city's favelas—qualities which are difficult to develop through centralized planning and which urban planners around the world are trying with great difficulty to stimulate, too little, too late. Thus far, CatComm has identified the following characteristics:

- Affordable housing in central areas.
- Modest density enough to facilitate access to public services, but without excessive verticality which breeds isolation.
- Streetscape that prioritizes pedestrians, stimulating a higher degree of socialization and exchange.
- High usage of bicycles and public transport
 benefiting both the local urban and global environment.
- 'Mixed-use' residential and commercial establishments (homes above shops)
 reducing the need to commute and stimulating local liveability.
- Housing near employment reducing the

- time and financial costs of transportation while alleviating pressure on the city's transportation networks.
- Organic architecture which evolves over time and can be easily adapted to the needs of the residents.
- A high degree of collective action which besides strengthening support networks, also provides cost savings on certain materials and services.
- Intricate solidarity networks.
- A high degree of cultural production.
- Stimulating entrepreneurship via the constant exchange among residents, ability to establish home-run businesses, and flexibility afforded as a result of a lack of regulation.

Yet society sees favelas as an intrinsic problem.

However, as much in their origins (addressing a lack of housing) as in their evolution (responding to diverse life challenges arising from state negligence through individual action and local collective projects), favelas are not a problem at their core. Rather, we see favelas as solution factories. Given their history, we view favelas as areas of the city that require their own development processes based on their assets, and tackling their challenges with these positive qualities as a starting point, without following the all-too-common unsustainable development model characteristic of formal areas of the city.

Favelas represent an opportunity for sustainable development outside of traditional formal principles, based in the innumerable assets of the favelas themselves.

Working towards an alternative sustainable development paradigm for favelas, one based on their already existing assets, will reveal favelas to be positive references within the city, whereby they will increasingly be seen as models even for formal areas in terms of flexibility, creativity, strategies for resilience, collective sensibility, etc.

Favelas constitute a large portion of the city that has been historically neglected and whose assets have not been recognized, their population consequently subjected to systematic stigmatization for residing informally on problematic land. However, given that development in these areas is necessary, and that favelas already display elements of New Urbanism, there is ample opportunity for a new approach to urban development to replace the current model, which is characterized by globalization, and is highly predatory, speculative, and competitive in nature.

In contrast to that current model, we can generate a new approach through which favelas are developed sustainably, fortifying their status as sites of resilience, creativity, and solutions by strengthening the sustainability initiatives that are already increasingly common in Rio's favelas. This form of development also addresses the historical reparation owed to these neglected populations by recognizing that the assets of these territories have always been essential to the city, and continue to be as we move forward in guaranteeing a new and more equitable society.

Informed by these fundamental ideas and championing the potential of favelas, CatComm is committed to developing, promoting, and encouraging dialogue around sustainable development in favelas and creating support networks to bring this dream ever closer to reality. With this in mind, this report marks the start of a series of actions to create and strengthen the Sustainable Favela Network.

General Objectives of the Sustainable Favela Network

- To recognize initiatives and characteristics that already exist in Rio's favelas which represent socioenvironmental sustainability and resilience;
- To provide visibility for these initiatives and make their models accessible;
- To create networks for the exchange of knowledge, information and strategies among different sustainability initiatives;
- To provide training and develop partnerships that strengthen the Network, to make such a model of development possible;
- To extend this conversation beyond Rio.

Initiatives Planned for the Sustainable Favela Network

- Sustainable Favela Network Map (started in 2017 and the focus of this report)
- Profiles and documentation of Network initiatives on RioOnWatch (2017-)



- Exchanges (intensive and holistic) within the Sustainable Favela Network (2018-)
- Development of a 'sustainable favela indicator' (2018-2019)
- Strategic training to strengthen the Network and its members (2018-)
- Promotion of collective projects among participants in the Sustainable Favela Network (2019-)
- Advocacy on behalf of the movement for sustainability and resilience in Rio favelas (2019-)



Sustainable Favela Network

Surveying / Mapping

Introduction and Purpose of Mapping the Sustainable Favela Network (2017 Project Focus)

While the term 'favela' is often translated in English to 'slum' or other terms that characterize them as marginal communities housing marginal individuals, such renderings—besides being false and counterproductive—ignore the vital contributions that favela residents have contributed to their communities and their city, as well as the model of sustainability and resilience they offer. The goal of the mapping project is to highlight the sustainability and resilience of residents and organizations working in and with favelas in Greater Rio. One of the most efficient and practical ways of demonstrating this is visually, through a map showing where such initiatives are taking place.

Technical Considerations

Any attempt to map favelas will be limited both in its capacity to reflect the dynamic nature of these communities, and in its ability to resolve differences regarding boundary lines between official and community accounts. In the municipality of Rio de Janeiro alone, the Pereira Passos Institute (IPP) recognizes over 1,000 favelas. Meanwhile, the federal government, through the Brazilian Institute of Geography and Statistics (IBGE)—which uses the term 'subnormal agglomerations' (aglomerados subnormais, or AGSN)—counts 1,332 favelas in the state of Rio de Janeiro (753 in the municipality of Rio de Janeiro and 579 elsewhere).² Both the IPP and the IBGE collect and publish data about the communities represented by the projects we have mapped. Since more information was available through the IPP, we chose to utilize their data and digitized boundaries to reflect the location and scope of the favelas in the city of Rio de Janeiro. However, for areas outside the municipality, in Greater Rio, we have used the boundaries defined by the IBGE.

The IBGE and IPP designate areas as AGSN and favelas, respectively, where the majority of dwellings do not have formal title or were only regularized in the last decade,³ and where

1. Armazém de Dados - Informações Sobre a Cidade do Rio de Janeiro, http://portalgeo.rio.rj.gov.br/portalgeo/index.asp

the infrastructure is considered precarious or does not adhere to legal standards. Both the designation 'favela' and AGSN identify areas with narrow or uneven streets, as well as those with insufficient basic services including water, sanitation, electricity, or garbage collection. The two designations differ in that the IPP recognizes the majority of favela residents as being low-income while the IBGE doesn't consider socioeconomic status. Furthermore, the designation AGSN only applies to groupings of more than 51 houses while the IPP designation does not require a minimum number of dwellings to constitute a 'favela.'

While we use the data from both the IBGE and IPP jointly on our maps, it is not our intention that these boundaries should be seen as definitive, nor do we suggest that they are necessarily correct from either our perspective or that of our community partners. The locations of several of the initiatives we feature reflect some of these incongruencies, with some projects located outside of the official boundaries. We have worked with our community partners to verify our mapped representation of their projects, first using geocodes based on the addresses they provided, and then asking them to submit more precise coordinates using WhatsApp.

Target Audiences / Mapping Objectives

The Sustainable Favela Network Map serves various audiences and objectives:

^{2.} Instituto Brasileiro de Geografia e Estatística (IBGE) website (http://www.censo2010.ibge.gov.br/)

^{3.} Instituto Brasileiro de Geografia e Estatística: Censo Demográfico 2010: Aglomerados Subnormais Primeiros Resultados. Rio Jan. Minist. Planej. Orçamento e Gestão Inst. Bras. Geogr. E Estat.-IBGE. 201, 1–259 (2010)

- Project coordinators. To allow the leaders
 of local sustainability and resilience initiatives
 to identify, locate, and contact their peers
 with initiatives in other communities and to
 connect, exchange strategies, and provide
 mutual support in order to collectively
 strengthen their projects as well as others
 throughout the metropolitan region.
- Eco-citizens. To allow individuals wishing to support community initiatives working with local sustainability and resilience to identify, locate, and contact existing projects at various stages of development, covering diverse domains and with different needs, offering them volunteer, research, visibility or strategic support, or networking in some other way with these initiatives with the goal of a more sustainable city.
- Supporting organizations. To allow organizations—such as CatComm itself—wishing to support community initiatives focused on sustainable practices and resilience, to get a better idea and deeper understanding of how different activities and stages of organization are geospatially distributed, in order to analyze and leverage critical areas of action and recognize future potentials to support with training, as well as to organize collective actions, coordinate projects among various communities, and create support networks across communities.
- Researchers and policymakers. To serve as an instrument to compare data generated directly by the communities themselves regarding their initiatives, vulnerabilities, and

- more—with official health, demographic, and environmental indicators for those areas, in order to identify and recommend critical areas for action as well as local partners with the capability to respond.
- The general public. To provide greater visibility and recognition for favelas' qualities and sustainability efforts by using efficient mapping visuals to show the number and diversity of favela-based socio-environmental initiatives across the metropolitan region, and documenting this movement and its growth over time.

Methodology

1. Data Collection

Our data collection consisted of a three-part online survey using Google Forms. Catalytic Communities distributed the survey by email and on social media networks (Facebook and Twitter) as well as through direct contact with community groups by team members (through WhatsApp, Facebook and telephone).

In the First Part of the survey, we collected basic data about the respondents in order to register each person in the Sustainable Favela Network contact list. In the Second Part, we collected information about the sustainability and resilience initiatives the respondents have developed and which form the basis of the Sustainable Favela Network Map. Finally, in the Third Part of the survey, we requested data about the

communities in which the initiatives are located in order to better understand the activities as well as challenges faced within the specific context of each favela.

We collected data from July through September, 2017. We initially intended to close the registration form on August 31, however the deadline was extended in order to allow initiatives that had thus far only filled out the first survey form to respond to the second survey form.

The team was made up of nine members: two general coordinators tasked with publishing the general call for participants widely among the communities—Theresa Williamson and Roseli Franco of CatComm; a team of mapping volunteers coordinated by Dr. Guillermo Douglass-Jaimes from Pomona College with the principal mapping tasks fulfilled by Raine Robichaud from the University of California, Berkeley, and critical support from Rafael Chaves of the Federal University of Rio de Janeiro and Ava Hoffman of Princeton University; coding and data analysis were done principally by Ava Hoffman; and the articles profiling projects on RioOnWatch were coordinated by Ava Hoffman with the critical involvement of CatComm interns Lucas Smolcic-Larson, Sophie Pizzimenti and Juliana Torres.

2. Mapping

With clear goals for the mapping project (section II.C. above), the team decided that Google Maps would provide the necessary information along with a friendly and familiar interface which would be easiest to update, at least as far as the initial

2017 map is concerned. Other software we considered included ArcGIS Online, CartoDB, and GoogleAPI. Since ArcGIS is a paid software relying on use offline, we felt it would be less familiar to our users, harder for future CatComm collaborators to update, and less sustainable due to built-in costs. Both CartoDB and GoogleAPI, while free, required a high degree of skill to keep up-to-date, and even more to change the format if and when necessary. CartoDB and ArcGIS have different designs and formats from GoogleMaps, so the team decided to maintain the visuals of Google which are more comfortable and recognizable for users. That said, Pomona College is investigating the possibility of hosting the Sustainable Favela Network Map in partnership with CatComm using the university's ESRI Online licence and engaging the help of students in future courses. We are exploring this possibility in 2018.

After deciding on a platform, the team started gathering data from the IPP, IBGE, and our three survey forms in order to create the digital datasets for the map.

The resulting map, therefore, includes the boundaries provided by the IPP (for favelas in the municipality of Rio) and the IBGE (for favelas in Greater Rio), as well as two other datasets collected by the study: (1) Resilience—the principal theme of resilience addressed by each participating initiative; and (2) Sustainability—the principal theme of sustainability addressed by each initiative. The map enables users to switch between initiatives based on "social resilience" and "environmental sustainability" in order to locate

projects related to their area of interest. For the purposes of this study, we defined actions promoting "environmental sustainability" as those efforts attempting to provide for current human needs without compromising future generations; and we defined actions promoting "social resilience" as those that determine and support our human ability to adapt when environmental changes occur.

Besides the boundary lines of mapped favelas, the map also contains population estimates in each area to provide context. This gives the user an idea of the population served by each initiative, in addition to opportunities for expansion and collaboration.

Some challenges encountered during the mapping process included the need to remodel data that initially conflicted with those used by GoogleMaps, in addition to the need to accurately

convert zip codes (obtained from responses to the survey) into map points using the program BatchGeo. We were able to provide another option for initiatives to send their location data using WhatsApp in order to provide a more accurate location for their project. Using Google we were able to update our data for the projects online, which meant different team members could easily make adjustments while we collected more information about other initiatives.

Other challenges with the Google mapping software included the visualization of the projects—MyMaps has a limited capacity to display data gradients, which precluded us from including an important dataset showing the temporal phase of each project. We responded to this limitation by including the relevant data in the side panel providing information for each project.





Results

Network Participants

158 people completed the **first survey** form in order to participate in the Sustainable Favela Network. These individuals constitute the initial members of the Sustainable Favela Network, which is distinct from the map since the latter contains the initiatives that were registered in the second survey form. Anyone interested in the Network's mission may participate as a member, with or without a community initiative.

The public document with the Network contacts is available at: http://bit.ly/RFSContatos.

Initiatives

The **second survey** form gave participants the opportunity to describe their initiatives. One person could register more than one initiative.

In the original proposal sent to the Heinrich Böll Foundation Brazil, we set objectives to guarantee geographic, gender, and thematic diversity across the mapped initiatives, as well as a minimum number of initiatives that would make up the initial Network.

SUMMARY OF NETWORK CONTACTS:

INDICATOR	OBJECTIVE'	ACTUAL
Members of the Sustainable Favela Network	100	158
Planning areas represented (out of 5)	5	5
Administrative regions of RJ represented (out of 34)	17	26
Greater Rio municipalities (out of 21)	21	14**
Favela residents***	n/a	62% (95)
Women	50%	52% (82)

^{*} Objectives stipulated in the original proposal accepted by the Heinrich Böll Foundation Brazil.

^{**} The fourteen municipalities in Greater Rio where members of the Sustainable Favela Network are located include: Cachoeiras de Macacu, Duque de Caxias, Itaboraí, Itaguaí, Japeri, Magé, Maricá, Niterói, Nova Iguaçu, Queimados, Rio de Janeiro, São Gonçalo, São João de Meriti, and Tanguá. We also had one individual register from São Pedro da Aldeia, in the state of Rio, and another from Favela da Paz, in São Paulo.

^{***} Of the 153 people who answered the question, 62% were current favela residents or had been favela residents for much of their lives

RESULTS IN RELATION TO THE INITIAL OBJECTIVES:

INDICATOR	OBJECTIVE	ACTUAL
Mapped initiatives	100	111
Planning areas represented (out of 5)	5	5
Administrative regions of RJ represented (out of 34)	17	23
Greater Rio Municípalities (out of 21)	21	12*
Macro-topics represented by the initiatives (i.e., water, empowerment, health, waste, etc.)	20	20**
Women-led initiatives	50%	53%***

^{*} The twelve municipalities in Greater Rio where projects of the Sustainable Favela Network are located are: Cachoeiras de Macacu, Duque de Caxias, Itaboraí, Itaguaí, Japeri, Magé, Niterói, Nova Iguaçu, Queimados, Rio de Janeiro, São Gonçalo, and São João de Meriti. We also had one initiative sign up in São Pedro da Aldeia, in the state of Rio, and another in Favela da Paz, in São Paulo.

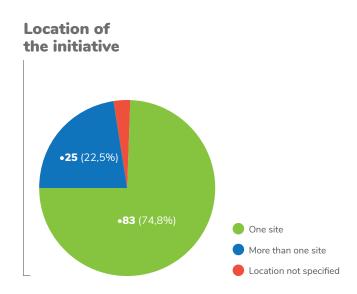
^{**} The nine macro-topics represented that relate to environmental sustainability are: urban agriculture/agroecology/healthy eating; reforestation; recycling/reuse; environmental education; clean energy; environmental clean-up/conservation; mobility; sanitation; environmental technologies. The eleven macro-topics represented related to social resilience are: art, culture, and sport; youth; solidarity economy/income generation; education/capacity-building; empowerment/destigmatization; urban infrastructure interventions; struggle for housing; museology/community tourism; quality of life; health; and valuing culture/local heritage.

^{***} The second part of the survey form included a question about the gender of the leaders for each project. According to their responses, of the 111 initiatives, 18 are led by women alone, while 6 are led by men alone; the vast majority (87) are led by both. The result cited above (that 53% of the initiatives are led by women) was calculated based on the (female) names of the leaders who filled out the form on behalf of the initiative. We believe this to be a relatively accurate approximation since the questionnaire tended to be completed by a key person responsible for the initiative.

We received data from **111 distinct initiatives** in response to the second survey form, from 98 different respondents.⁴

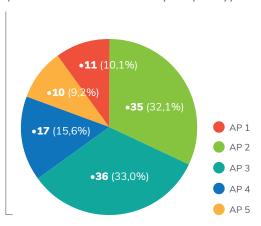
The only objective we did not reach was the number of Municipalities within Greater Rio represented, despite several attempts at focused outreach in this region and dissemination through regional partners. We will continue with these efforts to achieve the objective.

1. Geographic Location of the Initiatives



Initiatives by planning area (AP)

(in Rio de Janeiro municipality only)



^{4.} Twelve individuals registered two or more initiatives, and one initiative was registered by two different people.

Communities Represented in the Sustainable Favela Network Map

Rio communities represented by Planning Area (AP):

AP 1 (Centro): Complexo de Santa Tereza, Escondidinho, Morro dos Prazeres, Pereira da Silva/Morro do Pereirão, Providência, São Carlos

AP 2 (South Zone): Agrícola, Babilônia/Chapéu Mangueira, Cantagalo/Pavão-Pavãozinho, Cerro Corá, Guarapes, Morro Azul, Santa Marta, Tavares Bastos, Vale Encantado, Vidigal, Vila Laboriaux, Vila Parque da Cidade

AP 3 (North Zone): Acari, Aldeia Maracanã, Bairros da Sub-Bacia do Canal do Cunha, Complexo da Maré, Complexo da Pedreira, Complexo da Penha, Complexo do Alemão, Complexo do Lins de Vasconcelos, Comunidade Luís Carlos Prestes, Honório Gurgel/Rocha Miranda, Jamelão, Lagartixa, Manguinhos, Morro da Esperança, Morro do Alemão, Morro do Boogie Woogie, Morro do Dendê, Nova Holanda, Parque Arará, Parque Colúmbia, Parque Nova Maracá/Juramentinho, Pavuna, Pica-Pau/Cordovil, Piscinão de Ramos, Praia de Ramos, Quitanda, Rocinha, Roquete Pinto, Samora Machel, Sérgio Silva, Tubiacanga, Vila Cruzeiro



AP 4 (Inner West Zone):

Asa Branca, Camorim, Canal do Anil, Cidade de Deus, communities around Maciço da Pedra Branca, Guarany, Rio das Pedras, Vila Autódromo

AP 5 (Outer West Zone):

Ap de Bangu, Bangu, Campo Grande, Guaratiba, Nova Sepetiba, Portelinha (Antares), Sepetiba/Brisa, Vila Kennedy

MUNICIPALITIES AND THEIR COMMUNITIES REPRESENTED WHICH ARE LOCATED OUTSIDE THE RIO DE JANEIRO MUNICIPALITY:

Cachoeiras de Macacu

Duque de Caxias: Campo Elíseos, Chatuba, Jardim Gramacho, Mangueirinha, Morro do Sossego, Lixão, Parque das Missões, São Bento, Vila Beira Mar

Itaboraí

Itaguaí: Morro do Sase

Japerí Magé

Niterói: Quilombo do Grotão and others

Nova Iguaçu: Comando Soares São Gonçalo: Porto Velho

São João de Meriti: Dique, Parque Araruama

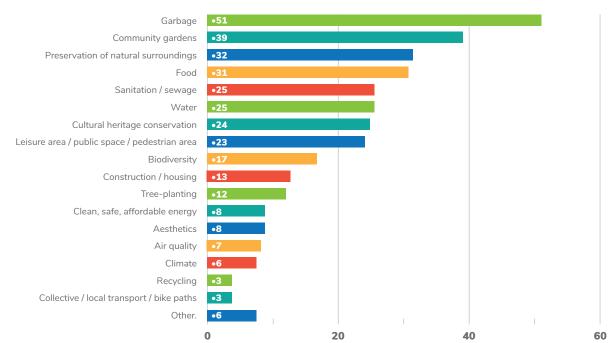
Queimados

2. Themes of Environmental Sustainability and Social Resilience

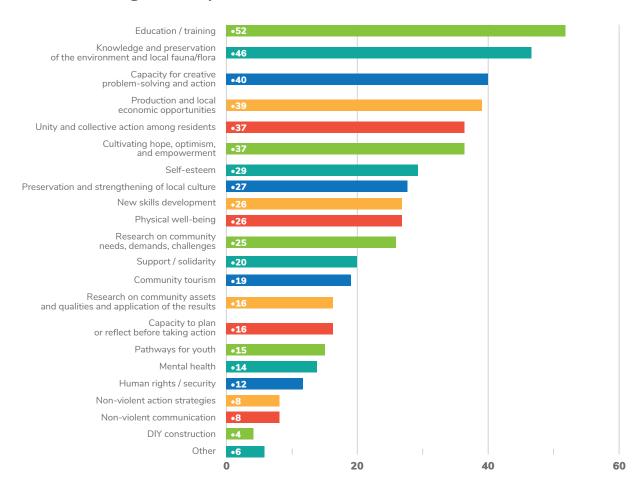
In response to the question about **environmental sustainability** issues tackled, respondents could choose more than one area of action. The graphs below provide a complete summary of the number of initiatives active in each area of environmental sustainability, and provides a snapshot of local priorities, with garbage, gardening, preservation of natural surroundings,

food, sewage, and water at the top of the list. In response to the question about **social resilience** issues tackled, respondents could also select more than one area of action. The graphs below provide a complete summary of the number of initiatives addressing each area of resilience, and a sense of the most common areas of local action, with education, expanding conservation knowledge, ability to think of solutions, creating employment opportunities, unity, and empowerment all a focus.

What is or are the main environmental sustainability issue(s) tackled by the initiative?



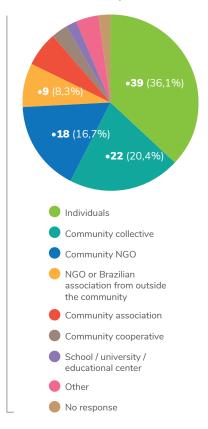
What are the main aspects of social resilience strengthened by the initiative?



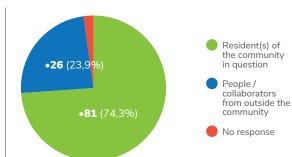
3. Organization, Protagonism, Dedication, and Leadership

In terms of organization, protagonism, dedication, and leadership, we found the following: the vast majority of the initiatives mapped are led by women and men together (78.3%), are led by community residents (72.1%), and are led by individuals or community groups, NGOs, cooperatives, or associations (81.1%) and not by larger NGOs, schools, or other big or government-run institutions.

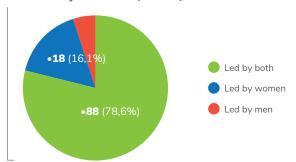
The initiative is/will be led by...



The initiative emerged from the ideas of...



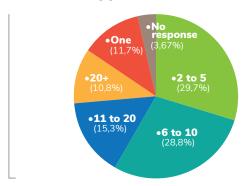
The initiative is / will be led by women, men, or both?



The vast majority of teams implementing the initiatives number from one to ten people (70.2%) and the leaders involved are **highly committed** [70.3% say that this initiative is of the utmost

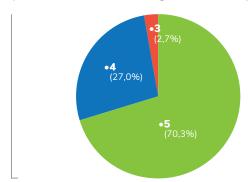
importance in relation to other initiatives and demands in their lives (5 out of 5 in importance) with the remaining respondents rating the initiative as 4 or at least 3 out of 5 in importance]:

Currently, how many people are responsible for making the initiative happen?

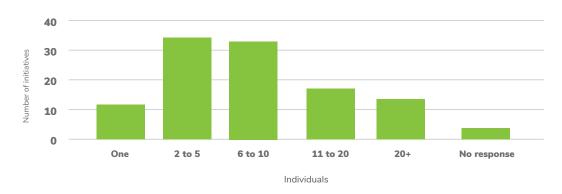


How important is this initiative for you, in relation to other initiatives and demands in your life?

(scaled from 1 to 5, with 5 being of the utmost importance)



Currently, how many people are responsible for making the initiative happen? \neg

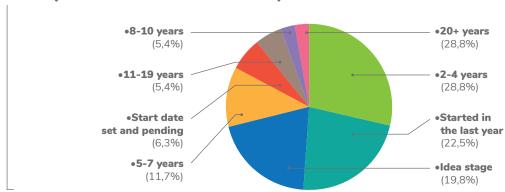


4. Impact, Scale, and Longevity

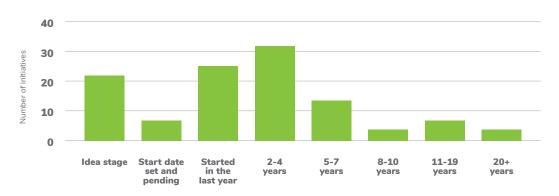
Most of the initiatives are in their early years, having been in operation for between one and four years (51.4%). Another significant portion

of the initiatives are still at the 'idea' stage or have a pending start date (26.1%). Only 22.5% of the initiatives have been running for more than five years:

What phase is the initiative at today?



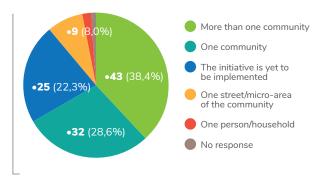
What phase is the initiative at today?



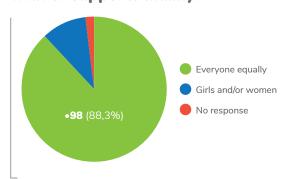
36.6% of the initiatives serve one micro-area or one community, while 38.4% serve more than one community:

In general, the initiatives do not have a focus on serving a particular gender (88.4%), but 11% focus on empowering girls or women:

Currently, what is the scale of your initiative's direct impact?



The initiative works with or supports mainly:

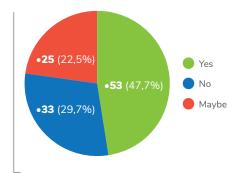


5. Environmental Risks

In partnership with researcher Rafael Chaves of the Federal University of Rio de Janeiro (UFRJ), we also collected data about the perception of environmental risk within communities covered by initiatives in the Network. Only 29.7% run no environmental risk while 47.7% face known risks and 22.5% do not know the precise risks but believe there may be some:

Is the area served by the initiative subject to any environmental risk factors?

(flooding, landslides, contamination)



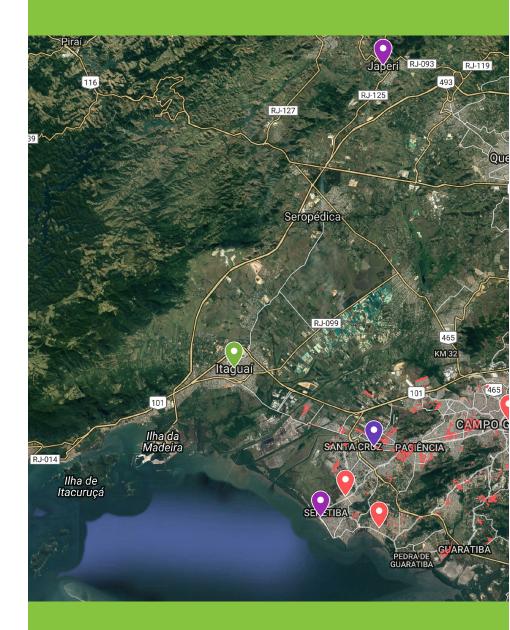
6. Map

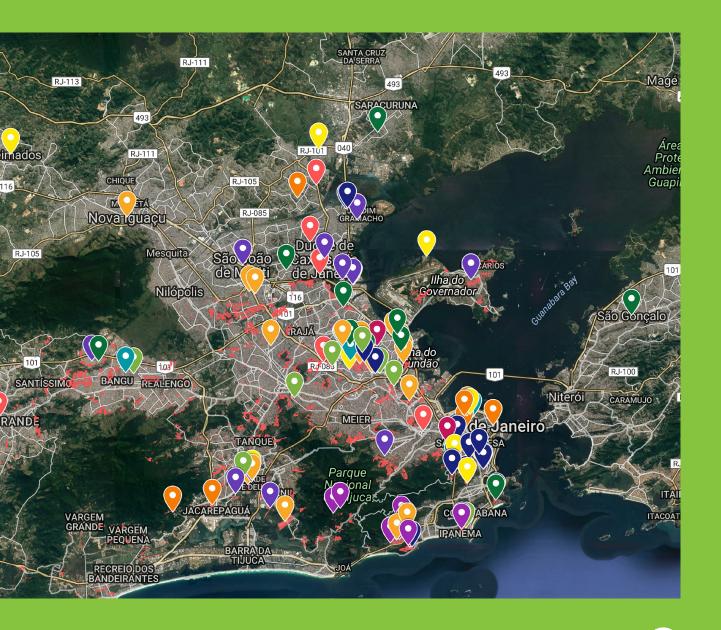
The initiatives analyzed above were mapped, using layers to show both the favelas of the city of Rio de Janeiro as well as those across the state of Rio.



The public map showing the initiatives in the Network is available here:

http://bit.ly/RFSMapa





7. Profiles

Based on the survey data, CatComm identifies and selects active initiatives to visit and profile on our news site RioOnWatch:

Link to Network profiles in English: www.rioonwatch.org/?tag=sustainable-favela-network
Link to Network profiles in Portuguese:
http://rioonwatch.org.br/?tag=rede-favela-sustentavel

Follow the links to profiles produced so far:
The Sepetiba Ecomuseum
http://www.rioonwatch.org/?p=38939 (English)
http://rioonwatch.org.br/?p=28829 (Portuguese)

Frutchá-Workshop for Conscious,
Raw, and Vegan Food in the City of God
http://www.rioonwatch.org/?p=39986 (English)
http://rioonwatch.org.br/?p=26846 (Portuguese)

ReciclAção - RecyclAction - in Prazeres http://www.rioonwatch.org/?p=39154 (English) http://rioonwatch.org.br/?p=29151 (Portuguese)

EDUCAP: Alemão's Democratic

Space of Learning and Coexistence

http://www.rioonwatch.org/?p=39748 (English)

http://rioonwatch.org.br/?p=29760 (Portuguese)

Center for Multicultural Education (CEM) in Penha http://www.rioonwatch.org/?p=39119 (English) http://rioonwatch.org.br/?p=29445 (Portuguese)

Devas—Maré's Women Artisans http://www.rioonwatch.org/?p=39950 (English http://rioonwatch.org.br/?p=30549 (Portuguese)

Cerro Corá Residents in Motion ww.rioonwatch.org/?p=40036 (English)

Communities

The **third survey form** gave participants the opportunity to describe their communities. We received data from 55 communities.

Below are descriptions of sustainable aspects of these communities:

Environment

Gardens, productive plots, agro-ecological planting, tree-planting, air quality, coexisting with nature, proximity to a forest/ecological park, access to forests and trails in preserved areas, fishing, concern for the environment, planting of fruit trees, recycling, water conservation, sewage treatment.

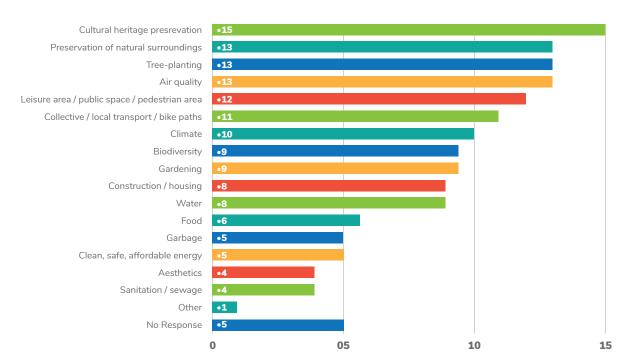
Housing and Mobility

Central location, housing close services and work, pedestrian-oriented streets, pedestrian access, public transport, moto-taxi transport, car-free zones, use of bicycles, bike paths, access to bus stops, leisure areas, public spaces, areas for coexistence and leisure.

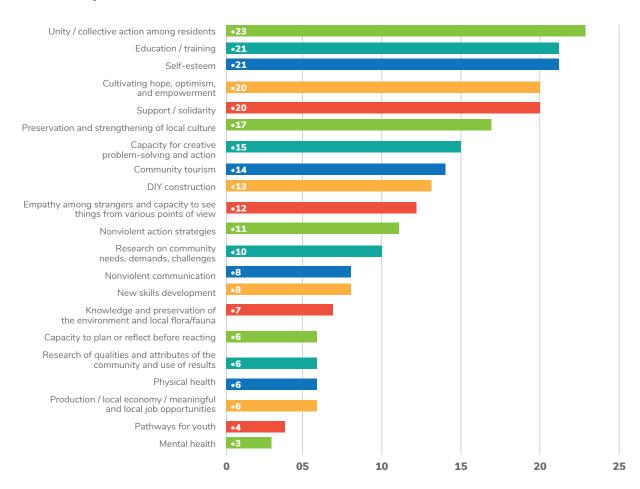
Creativity and Collectivity

Projects generated by residents, training courses, sports projects, sports facilities, youth activities, entrepreneurs, local fairs, cultural diversity, sense of community and solidarity, use of local commerce, unity among residents, community ties, social support networks, communication.

Mark the areas in which the community is most sustainable:



Mark the areas in which the community is most resilient:



Below are descriptions of sustainable aspects of these communities:

Waste

Accumulation of garbage, insufficient collection, irregular disposal leading to piles, lack of separation of organic waste and recycling, waste on hillsides, garbage in the street, uncovered garbage heaps.

Sanitation

Precarious sanitation, open sewers, lack of running water, animal feces, sewage draining into the river, garbage in sewers, polluted water, intermittent water supply, surface drainage along alleys and staircases, water supply depends on individual management (i.e. not a guaranteed public supply), eutrophic and very dirty river canals, contact with polluted and contaminated areas of the Guanabara Bay, ditches alongside houses, polluted rivers.

Infrastructure and Mobility

Locations only accessible by foot, mobility difficulties, some precarious construction, transport, lack of shaded streets, lack of trees, lack of trees provides insufficient protection from summer sun, location in an urban zone that prioritizes the use of a car, buildings are poorly laid out and in areas of risk, lack of solar panels.

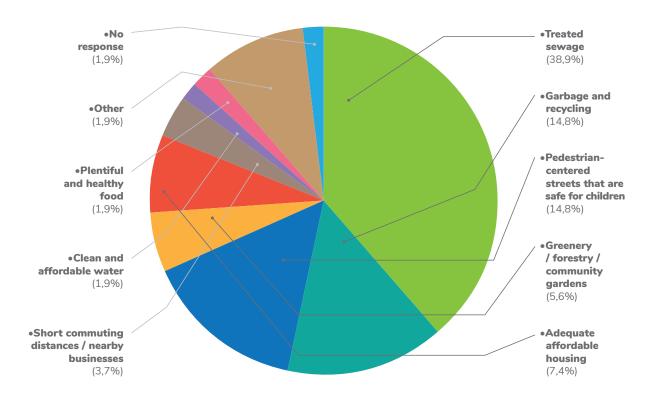
Services and Equipment

Lack of environmental education, lack of sports, health and leisure activities, existing leisure spaces were destroyed by federal program PAC, non-implementation of the Serra da Misericórdia Park, mosquito abatement abandoned, no vaccinations for pets, lack of public health support, lack of access to forests due to violence, poor quality education, underutilized public spaces.

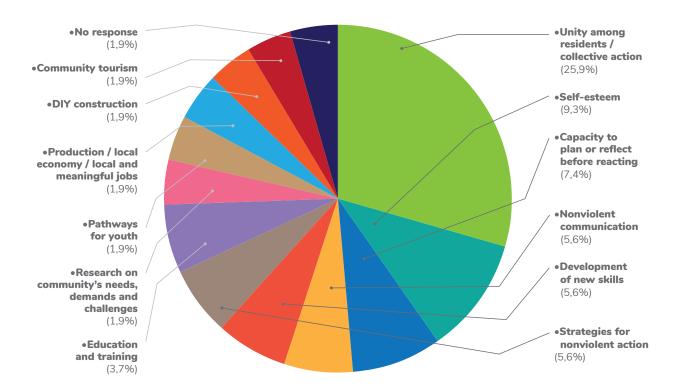
Existing Risks

Environmental hazards, excessive heat (due to lack of trees), accidents on rainy days caused by lack of drainage, violence, human rights violations, young people dying, lack of safe stairways and alleys, low air quality (due to proximity to expressways), environmental degradation left by City Hall, food insecurity, high scrublands around houses, rainwater, uncontrolled animals, insect infestations. residents' health suffering from lack of information around healthy eating (obesity, diabetes, hypertension, cardiac issues), groups (such as paramilitary groups, traffickers, industries in other neighborhoods) polluting the water sources and rivers, deforestation, unofficial electricity connections.

Mark the greatest challenge to the community with regards to the environment:



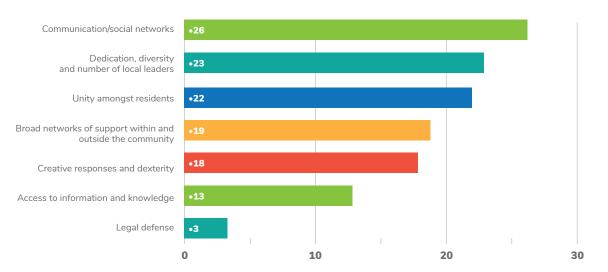
Mark the greatest challenge to the community in respect to resilience:



Finally, we asked which of the following 'keys to resistance' (based on the methodology developed by CatComm after studying successful cases of resistance to removals in pre-Olympic Rio) leaders considered to

be strong in the 55 communities. The three strongest were communication, dedication of leaders, and unity among residents. What was said to be lacking most is legal defense and access to information:

Which of these 'keys to resistance' do you feel are quite strong in your community?





Reflections and Analysis by the Team

To conclude this report on the Sustainable Favela Network, the research team will pause here to analyze and reflect on certain themes and opportunities that have been brought to light over the course of the research:

Environmental Risks

Rafael Chaves, UFRJ

The scientific literature has identified patterns in the locations of favelas for decades. These patterns show that often the self-constructed homes that constitute favelas are built on unoccupied urban areas, and for the most part these areas were previously vacant because of the low real estate value due, in part, to their susceptibility to environmental risk.

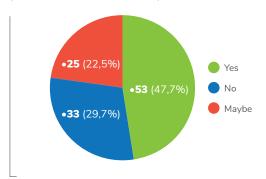
In this section on environmental risk, we are analyzing participants' responses about their perceptions of risk. As such, we see that Graph 1 shows that, of the mapped initiatives, only 29.7% declare that the areas served by the initiatives are not subject to environmental risk.

Among the participants who indicated the presence of environmental risk in the areas where they are active, we can see in Graph 2

that in 63% of cases, the initiatives contribute positively towards increased security in the threatened areas.

Is the area served by the initiative subject to environmental risk?

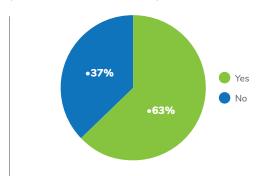
(flood, landslide, contamination)



GRAPH 2

Does your initiative help increase security with regard to environmental risk?

(flood, landslide, contamination)



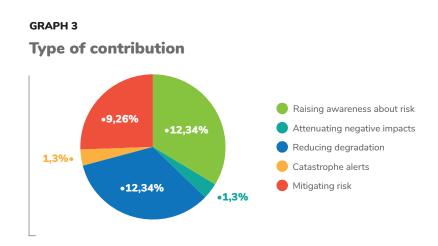
We analyzed the details provided by each initiative that indicated a positive impact on safety. Of the 33 initiatives that contributed directly to safety by mitigating environmental risks, we generated five categories, as shown in Graph 3.

- 1) Raising awareness about risk (34%) the initiative aims to deliver information about possible risks to residents living in these areas, as well as instructions about how to protect themselves in the case of catastrophe, or what to do to mitigate the intensity of the risk;
- 2) Reducing degradation (34%) the initiative involves actions that reduce the ecological pressures generated by a lack of infrastructure (sanitation, garbage collection), both in the areas where houses are constructed and in surrounding areas;
- 3) Mitigating risk (26%) the initiative's activities directly alleviate the factors that make catastrophes possible, such as the reforestation of hillsides with the objective of preventing landslides, the development

of studies on soil contamination in order to construct secure affordable housing, or the treatment of sewage with the aim of avoiding contamination:

4) Attenuating negative impacts (3%) - the initiative seeks solutions to daily problems that result from the lack of urban infrastructure, like the capture of rainwater in places where there is no regular water supply; and

5) Catastrophe alerts (3%) - the initiative creates mechanisms for the rapid propagation of information about eventual catastrophes to potential victims.



Taking these observations into account, we can conclude that the mapped initiatives are important actors in shaping the environmental conditions of the occupied sites, showing significant capacity for resilience and promoting sustainability. We can say that, considered

together, these social organizations fill gaps left by the government. Beyond seeking alternative locations for housing, they work towards improving the population's quality of life through actions that transform the area.

Potential for a 'Sustainable Favela Indicator'

Raine Robichaud, University of California, Berkeley

Some years ago CatComm worked with Eliot Allen, one of the original architects of the LEED-ND certification (LEED for Neighborhood Development), in order to develop an initial idea of how a Rio favela would fare according to this international certification. At the time, we published a basic summary of the study on our news site, RioOnWatch (http://www.rioonwatch.org/?p=30968), showing that Asa Branca (a favela in Curicica) was more sustainable than Ilha Pura (a luxury apartment condominium that had received the LEED-ND certification), according to LEED-ND's own parameters.

Now, based on the mapping of the Sustainable Favela Network, and on research into certification systems for green communities around the world (like LEED-ND but also others such as Ecocity Standards, Living Community Challenge, LEED for Cities, ISO standard for cities, Transformative Tools, and EcoDistricts Protocol), we propose to develop a certification system (official or not) that allows favelas to 'measure' their sustainability, their strengths and weaknesses, and systematize this information so that the community itself can then develop and upgrade (attending to its weak points through harnessing its strengths) by prioritizing economic, environmental, and social improvements.

The 'sustainable favela indicator' will be used alongside the map to strengthen the work of the Sustainable Favela Network and other partners, and through trainings members will be able to apply it to their own local projects.

The indicator will complement the map, serving community leaders on another scale. Leaders will be able to use it to identify local assets and challenges and, through these diagnostics, act based on reference data. The measure could also be used to advocate for the most crucial public investments, in contrast to typical favela development programs that result in little more than superficial changes. Measuring the level of local sustainability could also be used in consultation with the local organizations in the Network, among others, to identify which communities are at the vanguard of favela sustainability and understand how they got there.

Sustainable Favela Network Profiles

Lucas Smolcic Larson, Brown University

The process of writing profiles of Sustainable Favela Network initiatives involves attempting to capture the potential of each project and publicize it on a platform where it can inspire, teach, and provoke.

Publishing the profiles on RioOnWatch has the dual benefit of both drawing attention to the sustainable and resilient elements of highly stigmatized favela communities, and sharing

solutions to systemic problems faced in many parts of Rio. Refuting many media outlets' focus on violence and dysfunction, RioOnWatch aims to document favela residents' organizing strategies and resilient forms of collaboration to inform and engage its audience. The idea is not to paint a rosy picture of a complicated and difficult reality, but to highlight the dynamic ways favela residents find to engage that reality in their efforts to improve it.

Before contacting an initiative to profile it, we conduct research to understand what RioOnWatch has already published about the favela it is located in, the residents involved in it, and the project itself. Information provided by local project leaders in the data-gathering process for the Sustainable Favela Network Map informs what questions the reporter will ask upon visiting the community. This process ensures that each reporter will be able to contextualize the initiative within prior RioOnWatch reporting of the community for a broad audience. The interview questions are specific and practical. The idea is to allow the project leaders to speak to their own goals, successes and challenges, and the values that guide their work, no matter at what stage of development the project finds itself.

The themes of sustainability and resilience guide the work of the Sustainable Favela Network, but in varying ways. CatComm interviewers ask what these words mean to project leaders and how that definition plays into specific actions they have taken with their initiatives. For example, Sepetiba resident Bianca Wild, founder of the Sepetiba Ecomuseum, spoke in her interview about how her project understands sustainability. She said, "sustainability for us is... learning to deal with adversity, transforming the negative into positive and working for the preservation of what we consider important." Wild explained that this philosophy guided the Ecomuseum to fight for the protection of Sepetiba's mangrove forests by lobbying the municipality and creating educational programs in local schools, actions that transformed the popular perception of these ecosystems as unimportant "mud." Questions like these help connect the macro-level positive thinking project leaders engage in with the specific solutions they find to reach their goals.

The Sustainable Favela Network profiles, then, have great potential to share solutions across borders, connecting members of different communities within Rio and around the world engaged in similar struggles. The profiles give visibility to the great deal of learning that residents do in establishing their projects, which is not always obvious to the outside eve. In writing the profiles, CatComm collaborators and volunteers have found that the project leaders see the process as an opportunity to increase their visibility and online presence. Complexo da Penha resident Ana Santos, co-founder of the Center of Multicultural Education (CEM), told CatComm that CEM's agroecological community center benefits greatly from international visitors and volunteers. She saw the profile as a way to reach those interested in coming to the center to teach foreign

languages, share agricultural knowledge, or just spend time with Penha's youth.

Each of the projects profiled thus far grew through networking with other initiatives around the city and the world. The profiles help formalize an online presence for the projects and facilitate this exchange. They also have the potential to serve as documentation of the initiative's assets and achievements. Wild commented after reading the profile of the Ecomuseum that she thought it "very complete," which, according to her, would contribute to the project's ability to promote itself. This function often involves the telling of the personal stories of the initiative's founders. The personal nature of the profiles makes them more than purely logistical and puts faces behind the work being described.

Sustainable Favela Network profiles work to affect positive change on several levels. They give visibility to important work being developed across Rio's favelas, combat the historical stigmas that surround these communities, and highlight community voices. With each initiative that joins, the size of this Network and the potential of the "sustainable favela" to bring about transformation in our society becomes an ever more powerful reality.

Follow these links for profiles completed so far:

The Sepetiba Ecomuseum
http://www.rioonwatch.org/?p=38939 (English)
http://rioonwatch.org.br/?p=28829 (Portuguese)

ReciclAção - RecylAction - in Prazeres http://www.rioonwatch.org/?p=39154 (English) http://rioonwatch.org.br/?p=29151 (Portuguese)

EDUCAP: Alemão's Democratic Space of Learning and Coexistence http://www.rioonwatch.org/?p=39748 (English) http://rioonwatch.org.br/?p=29760 (Portuguese)

Center for Multicultural Education (CEM) in Penha http://www.rioonwatch.org/?p=39119 (English) http://rioonwatch.org.br/?p=29445 (Portuguese)

Frutchá-Workshop for Conscious, Raw, and Vegan Food in City of God http://www.rioonwatch.org/?p=39986 (English) http://rioonwatch.org.br/?p=26846 (português)

Devas - Maré's Women Artisans http://www.rioonwatch.org/?p=39950 (English) http://rioonwatch.org.br/?p=30549 (Portuguese)

Cerro Corá Residents in Motion ww.rioonwatch.org/?p=40036 (English)

The Role of Solutions Journalism

Sophie Pizzimenti, University of Leiden

Through its series of profile articles, the new Sustainable Favela Network focuses on positive socioenvironmental initiatives led by favela residents in Rio de Janeiro, joining the new wave of media that highlight positive news. This series offers an alternative to constant negative coverage of favelas and Rio de Janeiro's urban context.

In the last decade, a new tendency has appeared in the media: the sharing of solution-oriented news as an answer to the public's growing desire to read something different than the constant negativity that dominates

traditional media. This wave has influenced some mainstream media outlets such as The Guardian, AI Jazeera, the BBC, and others, but is more frequently visible in the rise of new types of magazines, documentaries, and websites that are influenced by a growing body of research and focus explicitly on positive news. Research by Professor Denise Baden of the University of Southampton's Business School shows how a constant bombardment of negative news discourages and desensitizes audiences, leading them to disengage from the problem being discussed.

In contrast, the implementation of positive news and solutions journalism seems to lead the reader in another direction: toward interest and engagement. This new approach of positive reporting is like a breath of fresh air to readers who—various studies conducted in recent years show—are more likely to respond to and share positive news than negative news. Not only are response and sharing rates higher, but the readers also show a greater desire to take positive action, as explained by Jessica Prois, editor of Good News and Impact hosted by the Huffington Post.

Furthermore, positive news seems to have a direct impact on a reader's perception of self-efficacy (that is, the reader of this type of news sees themselves as more capable of confronting challenges, problems, and choices), as Christoph Klimmt explains in his book, The Routledge Handbook of Media Use and Well-being. In the book, Klimmt cites research that shows the

significant link between the type of news shared by individuals and their levels of well-being and engagement. Studies show that a constant 'dose' of news that is positive and oriented around action contributes to a sense of capacity to act and confront (daily) challenges with resilience. Similarly, the Solutions Journalism Network shows how journalism based around solutions increases the public's feelings of efficacy and the likelihood of engagement in the topic being discussed. For the majority of editors, journalists, and readers involved in this wave of journalism, the principal objective is to stimulate a positive response from the public that effects positive change (in society). As Jessica Prois said: "My favorite pieces are the ones in which we guide our readers to take a concrete action."

Following this movement, our work to construct a series of reports based on the projects in the Sustainable Favela Network has the potential to enhance the public's positive perceptions of and engagement with the initiatives described, encouraging readers to take action of their own towards sustainability with inspiration from these projects.

Rio de Janeiro's favelas are parts of the city that primarily receive coverage in news items about violence, or in the best of cases, State negligence. Yet, as stated by Lidiane Malanquini from the Maré Development Network (Redes de Desenvolvimento da Maré), it is necessary to change this violenceoriented narrative and underline the positive actions and initiatives that exist in these communities. By bringing a spotlight to a wide range of community projects that are making favelas all the more sustainable and resilient, RioOnWatch's Sustainable Favela Network profile series helps to respond to this demand and need.





Conclusion and Next Steps

From the survey and mapping processes described in this report, one fact is obvious: there is a clear interest and dedication on the part of favela residents to tackle socioenvionmental challenges. Furthermore, the responses we received clearly underscored the inherent connection between the social and the environmental. Over the course of the research we saw that although initiatives could be registered in the areas of 'environmental sustainability' or 'social resilience,' practically all leaders registered their projects in both camps, perceiving the immediate and direct link between the two topics. For the members of the Sustainable Favela Network, the environment in which they live and social resilience constitute integral parts of the ecosystem of life in the favela.

Due to the fact that over 50% of the initiatives are ideas or proposals, with only 17% active for longer than five years, we can see in the data that this area is expanding, and rapidly. There is an insurgent movement of actors concentrated on strengthening sustainable and resilient

elements and finding solutions to Rio's favelas' socioenvironmental challenges.

We also discovered through analyzing the data that of the 118 people who responded to the question, "How important is this initiative for you, in relation to other initiatives and demands in your life?" 70% (82) chose the maximum value of 5, 27% chose 4, and 3% chose 3. In other words, the founding members of the Sustainable Favela Network have an extremely high level of dedication to their actions and commitment to these themes.

With all of this in mind, we enter into the next phase of the Sustainable Favela Network project with even more energy and inspiration: in 2018 we will dedicate ourselves to bringing this map to life, visiting the initiatives one by one and producing more profiles in order to understand the projects' realities, challenges, and perspectives, and promoting opportunities for exchange and strategic learning between the members.

As outlined in the "Project Background" section, the Sustainable Favela Network is so far based on a proposal for seven initiatives:

- Mapping (presented in this 2017 report and to be updated annually)
- Profiles and documentation of the initiatives on RioOnWatch (2017-)
- Exchanges (intensive and holistic) within the Sustainable Favela Network (in 2018)
- Development of a 'sustainable favela indicator' (2018-2019)

- Strategic training to strengthen the Network and its members (2018-)
- Promotion of collective projects among Network members (2019-)
- Advocacy on behalf of the movement for sustainability and resilience in Rio favelas (2019-)

Having completed the mapping phase and Network analysis in this report, and with the profile articles already underway, in 2018 we plan to move onto the third initiative: Exchanges within the Sustainable Fayela Network.

The purpose of the exchanges is to launch and establish the Network in-person, through two events:

 A week of exchanges between eight diverse, established, and cutting-edge initiatives, that will become reference points for the Network. As well as visiting all eight initiatives, these members will participate in training and strategic exchanges to strengthen their initiatives. The week will be filmed in order to produce an update to the film Favela as a Sustainable Model:

(http://www.bit.ly/FavelaModelo).

 Intensive day marking the official launch of the Network with presentations and contributions from all members to strengthen all participants and create a sense of belonging, exchange, and strategy. The eight projects selected for the first exchange will be at the forefront of this broader exchange, serving as examples and leaders in the process. During all the activities of the Network (mapping, profiles, exchanges, etc.), we will remain focused on identifying future areas of action for the Network, potential steps and opportunities through which we will develop new activities.

For example, we have identified 10 actors representing communities from the four zones of Rio and the Baixada Fluminense that are involved in developing solar energy. We have also discovered three communities which have or which are contemplating biodigesters.

Over the next few months, we will speak with the individuals involved in order to better understand these demands and seek possible partnerships between them and/or with sources of funding or materials that can advance their initiatives.

As with these cases, we see many other potential actionable approaches from the data presented by the mapping project, apart from the seven initiatives already outlined. We will continue to analyze the data presented here as well as further information discovered over the course of the project, in order to implement some of the innumerable possible activities over the coming years.





Appendix

Links

Survey Form 1:

http://bit.ly/FavelaSustentavelNoMapa

Survey Form 2:

http://bit.ly/QFavSust2

Survey Form 3:

http://bit.ly/QFavSust3

Outreach materials:

- Site: comcat.org/rfs-questionario
- Facebook: www.facebook.com/FavelaSustentavel

http://bit.ly/2yx869p reached 1273 people

• CatComm's Facebook page

http://bit.ly/2vYgu30 reached 4235 people

http://bit.ly/2sGypHureached 3063 people

http://bit.ly/2v56N45 reached 3466 people

http://bit.ly/2wXYc2i reached 1608 people

http://bit.ly/2vbAE6P reached 1967 people

http://bit.ly/2x63UR3 reached 4532 people

• RioOnWatch's Facebook page:

http://bit.ly/2vFy74v reached 4514 people

http://bit.ly/2xvSliT reached 5842 people

 Twitter (incipient): www.twitter.com/sustentafavela

Public materials:

- Map: www.bit.ly/RFSMapa
- Contact list: www.bit.ly/RFSContatos
- Public report www.bit.ly/RFSReport
- Profiles of Sustainable Favela Network Initiatives

The Sepetiba Ecomuseum http://rioonwatch.org.br/?p=28829 (Portuguese) http://www.rioonwatch.org/?p=38939 (English)

Frutchá-Workshop for Conscious, Raw, and Vegan Food in City of God http://rioonwatch.org.br/?p=26846 (Portuguese) http://www.rioonwatch.org/?p=39986 (English)

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