

CERMES Technical Report No 103

## **REGENERATE BARBADOS WITH DOUGHNUT ECONOMICS: REPORT ON ACTION SCOPING**

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## Abstract

This report documents the two Action Scoping sessions conducted by the Regenerate Barbados with Doughnut Economics Initiative. Building on the Doughnut Economics Action Lab (DEAL) City Doughnuts initiative, two questions were pursued in two sessions:

Session 1: What could allow Barbados to thrive with more social justice, fairness and safety for all?

Session 2: What could allow the Barbados economy and society to thrive within natural ecosystem limits?

The objective of these scoping sessions was to generate a broad spectrum of ideas for a regenerative approach to the Barbados economy. From these ideas it is hoped that groups of likeminded individuals will take up specific areas, develop plans and pursue them. One of the main expected benefits of this approach is developing communities of practice around specific issues where organizations and individuals can share experiences and align their activities to support each other. These communities may even come to speak on these issues with a common voice and influence government policy in the desired enabling direction. An overarching question put to participants was:

“Can Regenerate Barbados provide a space where civil society can contribute and also enhance their own initiatives by being part of something larger?”

Four areas of focus for Regenerate Barbados that emerged from the sessions are:

- Monitoring pesticide and fertilizer use nationally and lobbying for transparent implementation of practices as well as reforms in permitted use of pesticides. Impacts on the nearshore ecosystems.
- Working with women within existing networks of fisherfolk and vegetable vendors to enable them to reflect on and elaborate projects to manage their multiple roles.
- Supporting the development of formal trails (especially The Barbados Trailway), as an integrating component of the Open Space System, and implementation of the Open Space System as a whole.
- Recycling in general, including construction waste by working with contractors. Sharing economy.

# Contents

Abstract .....	ii
Contents .....	iii
Acronyms .....	iiv
1 Introduction .....	1
1.1 Doughnut economics .....	1
1.2 Doughnut economics for Barbados.....	2
1.3 The Regenerate Barbados with Doughnut Economics Initiative .....	2
2 The action scoping sessions .....	4
2.1 Session 1: The Social Justice Foundation .....	5
2.1.1 Breakout 1: Healthy people (health, housing, water, food) .....	5
2.1.2 Breakout 2: Connected people (connectivity, community, mobility, arts and culture, parks and playgrounds) .....	7
2.1.3 Breakout 3: Enabled people (jobs, income, education, energy) .....	8
2.1.4 Breakout 4: Empowered people (peace and justice, social equity, political voice, equality in diversity) .....	9
2.2 Session 2: The ecosystem limits .....	10
2.2.1 Breakout 1: Pollution (litter, solid waste, sewage, pesticides, fertilizer) .....	11
2.2.2 Breakout 2: Open Space (National Park, conservation areas, trails, beaches) .....	13
2.2.3 Breakout 3: Habitats and biodiversity (on land and in the sea) .....	14
3 Putting it all together .....	14
4 The way forward .....	17
Appendix 1: Presentations from Session 1 .....	18
Appendix 2: Presentations from Session 2 .....	29
Appendix 3. Results tables from breakout sessions .....	38
Table A3.1. Breakout group results for healthy people (health, housing, water, food) .....	38
Table A3.2. Breakout group results for connected people (connectivity, community, mobility, arts and culture, parks and playgrounds) .....	42
Table A3.3. Breakout group results for Enabled people (jobs, income, education, energy) .....	44
Table A3.4. Breakout group results for empowered people (peace and justice, social equity, political voice, equality in diversity) .....	46
Table A3.5. Breakout group results for Pollution (litter, solid waste, sewage, pesticides, fertilizer) .....	48
Table A3.6. Breakout group results for Open Space for people (National Park, conservation areas, trails, beaches) .....	51
Table A3.7. Breakout group results for Habitats and biodiversity (on land and in the sea) .....	54

## Acronyms

CERMES	Centre for Resource Management and Environmental Studies
CORALL	Coral Reef Restoration Alliance
CYEN	Caribbean Youth Environment Network
FCT	Future Centre Trust
CARICOM	Caribbean Community
UWI	University of the West Indies
HCC	Healthy Caribbean Commission
NIS	National Insurance Scheme
EPD	Environmental Protection Department
BAS	Barbados Agricultural Society
ECCO	East Coast Conservation Organisation
GoB	Government of Barbados
JURIS	Association of Judges
CIWiL	Caribbean Women in Leadership
GHNS	Graeme Hall Nature Sanctuary
PDP	Physical Development Plan
NCC	National Conservation Commission
CZMU	Coastal Zone Management Unit
BDF	Barbados Defense Force
POP	Persistent organic pollutants
MMABE	Ministry of Marine Affairs and the Blue Economy
IGDS:NBU	Institute for Gender and Development Studies: Nita Barrow Unit
OS	Open Space
BIDC	Barbados Investment and Development Corporation
BARVEN	Barbados Association of Retailers, Vendors and Entrepreneurs
BAMC	Barbados Agricultural Management Company
BADMC	Barbados Agricultural Development & Marketing Corporation
MOE	Ministry of Environment
CPRI	Caribbean Permaculture Research Institute
WIRRED	Walkers Institute for Regeneration Research Education and Design

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# 1 Introduction

## 1.1 Doughnut economics

Nothing can grow forever. Early economics did not concern itself much with what to do when growth was no longer possible. That was too far into the future to worry about. Well, we are in that future now, globally and probably even right here in Barbados. We are the first generation to have a whole Earth perspective with the data to see that there are limits to how much longer we can continue to grow, and that indeed, we have probably exceeded several of these limits already. Most of these limits are environmental or ecological and are the simple reality of living on a finite planet or island. So where does this leave us? It leaves us with the need for a new perspective on economics for the world as it now is. The picture is one of needing to dial back in many areas, but at the same time there are many people who still do not have enough for basic existence; so how can we dial back while they are still in need?

Many are thinking and working on what these challenges mean in development. Kate Raworth's perspective takes the form of a Doughnut (Figure 1)<sup>1</sup>. On the inside of the Doughnut is the space where we are falling short in thriving; in providing what every person needs and deserves, from nutritious food and safe housing to meaningful political voice and social equity. On the outside of the Doughnut are the areas where, if we overshoot, we potentially undermine critical ecological processes, such as a stable climate and healthy oceans. We must avoid both the inside and the outside of the Doughnut and seek to find that 'sweet spot', as Raworth calls it, where there is a 'safe and just space for humanity' between the social foundation and ecological ceiling.

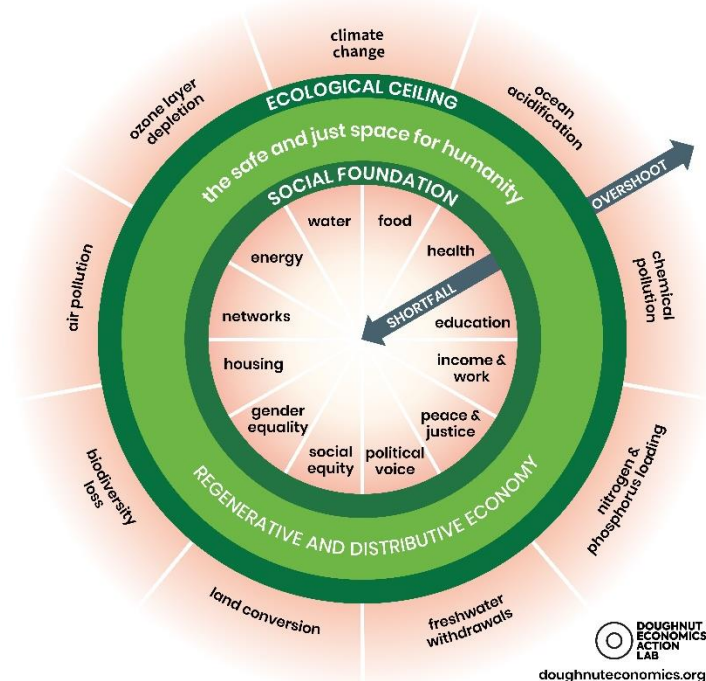


Figure 1. Doughnut of Social and Planetary Boundaries by Kate Raworth (source <https://doughnuteconomics.org/tools-and-stories/65>)

<sup>1</sup> Watch Kate Raworth's [TED talk](#), or read Raworth, K. (2017), *Doughnut Economics: seven ways to think like a 21st century economist*. London: Penguin Random House



## 1.2 Doughnut economics for Barbados

What might this perspective mean for Barbados. Looking at the social foundation of the Doughnut, just about all the topics are of concern. Also, this is where the government of Barbados invests a lot of its time and effort, as it should. But, do we have a clear view of what those foundational values are and where we are in relation to them? Do we know how, or even if, we can measure where we are? Management thinker Peter Drucker tells us that, "you can't manage what you can't measure." This means that you cannot know whether or not you are successful unless success is defined and then tracked. We can probably find existing data for some of those values that we need to know, but there are several important ones for which we almost certainly cannot find the necessary data. For example, the Gini coefficient can be used to measure income or wealth inequality and if we are really concerned about that in our society we should be tracking it, or something like it. But we are not tracking it. Why not?

With regard to the ecological ceiling, some issues, such as ocean acidification and ozone layer depletion, are clearly global problems, and as a very small country, Barbados has neither contributed much to them, nor can it do much about them. Of course, we can, and must play our small part in not making things worse while influencing the bigger countries to play their part. However, several other aspects of this ecological ceiling probably are directly relevant to our island system. For example, chemical pollution, land conversion, biodiversity loss, nutrient loading, freshwater withdrawals, and even air pollution are all serious matters for Barbados. Indeed, there may be other limits that are not listed that may be important to ensuring that we thrive in Barbados, such as availability of natural spaces for recreation and renewal.

The challenge will be to identify which of those social foundation and ecological ceiling limits are key to Barbados, including any not shown in the figure, and make a Barbados Doughnut. This will require specificity about these limits in ways that pertain directly to well-being in Barbados and prioritising them for action. Then, policies and practices for each area that will move us into the Doughnut are needed. Finally, there is the need to determine what we will measure and monitor to know where we are in relation to these inner and outer limits. This measuring and monitoring must be transparent and shared with the public, not just the domain of technocrats behind closed doors at ministries.

Ultimately, whose responsibility is it to take up these challenges and move us in the direction of the Doughnut? It is everyone's, but especially those who are organized and active around the various topics where there are shortfalls or the danger of overshoots. Those who are working in these areas in civil society and the private sector will be best able to advise the government on the most appropriate policies and targets to get us into that 'safe and just space' for us all in Barbados. They will also be key in making it happen. The Doughnut idea gives all these stakeholders an easy way to talk to each other about the Barbados that is wanted by all, one in which everyone can thrive sustainably.

## 1.3 The Regenerate Barbados with Doughnut Economics Initiative

In late 2020 several persons with an interest in promoting Doughnut Economics In Barbados formed a Core Group and began discussions under the auspices of the Centre for Resource Management and Environmental Studies (CERMES), University of the West Indies, Cave Hill Campus<sup>2</sup>. A programmatic approach to developing Doughnut Economics for Barbados was developed (Figure 2). On February 2,

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<sup>2</sup> Check out Barbados Doughnut articles in Barbados Today ([first](#), [second](#), [third](#), [fourth](#)) and watch [Crystal Drakes' lecture](#)

2021, the Barbados Doughnut Economics Initiative was launched<sup>3</sup>. In May 2021, the Initiative was renamed 'Regenerate Barbados with Doughnut Economics' (Regenerate Barbados for short), retaining the link to Doughnut Economics since we are part of this worldwide process.



Figure 2. Barbados Doughnut Programme

The Core Group scoped the stakeholders involved in the areas of interest and learned about many important projects and programmes in Barbados, all inspired by the same impulse that led to the Barbados Doughnut Initiative - a wish to work toward making Barbados a safer and fairer place in which ALL the people can thrive within the limits of the natural environment while respecting the health and wellbeing of all people and the whole planet. The Group also recognized the Barbados public sector's continuing efforts toward the achievement of the Sustainable Development Goals despite the pandemic. It noted that, as devastating as the pandemic is, the 'pause' that it has occasioned provides an opportunity to "build back differently", addressing issues such as inequality and the damage to the natural environment.

Barbados has come a long way. It has come from a past framed by one of the greatest social injustices ever on the planet, slavery, a crime against humanity, through a colonial era where much of this injustice was institutionalized in such a way as to perpetrate inequity and disenfranchisement, to independence and the promise of opportunity to create a new society free of those injustices. It has made great strides, but the journey is far from over. Old injustices linger and remain to be eradicated while new ones imposed by an inappropriate and unsustainable global economic order have taken their place alongside the old. Barbados is a small country embedded in a global environment of corporate greed, destructive extraction, and consumerism. Even globally this model is being challenged but change will be slow as major powers have too much to lose. Barbados cannot disconnect from this global environment, and it will continue to influence our society, but it does not have to adopt it either. Barbados can determine its own approach to a different future that is based on human wellbeing and thriving. There is plenty of evidence from government, private sector, and civil society that the country is ready for this change.

To make this long overdue transition, we in Barbados must first develop our own perspective on what we think constitutes a "safe and just space" in which we can thrive. Then we must have the conversations about how to get there from where we currently are. This is not a quick fix, but rather a long transition that needs to gather pace now. We are already taking many of the necessary steps, but others appear to be missing. We need stock-taking of where we are, and the development of a 'big picture' of where we want to go. This picture must include all Barbadians so that there is a shared vision and a collective determination of where we are heading. It is too important to be left to a small group of leaders.

<sup>3</sup> Watch the [Barbados Doughnut launch](#) on YouTube (90 mins, includes the TED talk)

## 2 The action scoping sessions

The Core Group is of the view that Regenerate Barbados can provide a space where civil society, NGOs, businesses and individuals can come together to enhance their own initiatives by being part of something larger than the separate efforts. The next step in this direction was to hold two action scoping sessions to generate ideas for what to do and who would be willing to join the process. These sessions were based on the four questions developed by the DEAL Creating City Portraits initiative, adapted as shown in Figure 3. The Core Group concluded that questions 1 and 2 were priority for moving forward with Regenerate Barbados and that questions 3 and 4, while important, could be considered later.

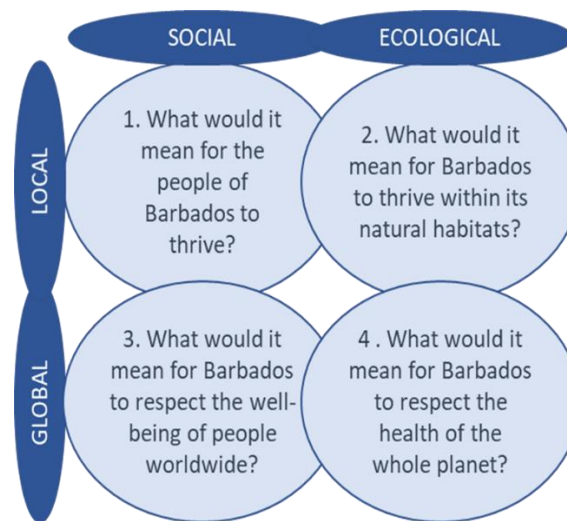


Figure 3. The key questions for creating a Doughnut Economics portrait for Barbados (adapted from Creating City Portraits<sup>4</sup>)

Two action scoping sessions were held on June 8th and 15<sup>th</sup>, 2021 to determine a way forward for Regenerate Barbados. The sessions were held virtually on the Zoom platform and used participatory breakout discussions. They addressed the following interconnected questions.

Session 1: What could allow Barbados to thrive with more social justice, fairness and safety for all?

Session 2: What could allow the Barbados economy and society to thrive within natural ecosystem limits?

The objective of these scoping sessions was to generate a broad spectrum of ideas for a regenerative approach to the Barbados economy. From these ideas it is hoped that groups of likeminded individuals will take up specific areas, develop plans and pursue them along a trajectory such as the one shown in Figure 2. One of the main expected benefits of this approach is developing communities of practice around specific issues where organizations and individuals can share experiences and align their activities to support each other. These communities may even come to speak on these issues with a common voice

<sup>4</sup> Doughnut Economics Action Lab, Biomimicry 3.8, C40 Cities, and Circle Economy. 2020. Creating City Portraits: A methodological guide from The Thriving Cities Initiative. <https://doughnuteconomics.org/Creating-City-Portraits-Methodology.pdf>



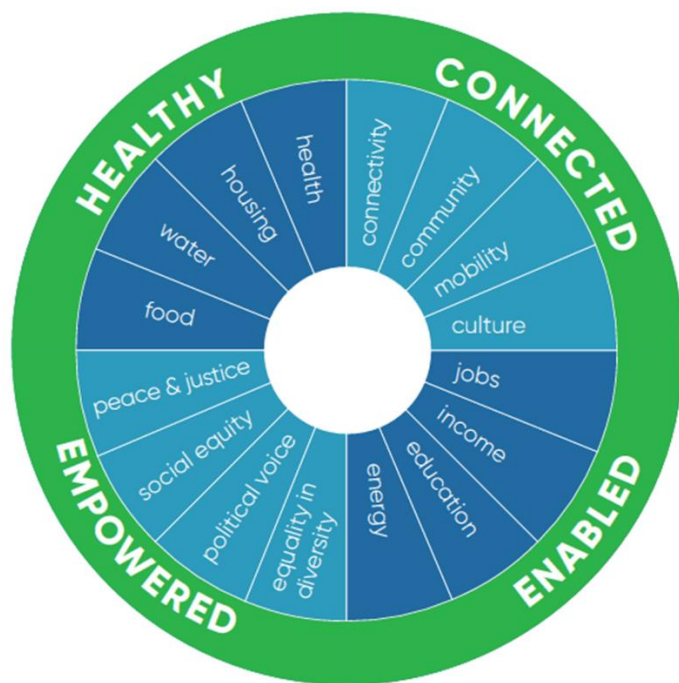
and influence government policy in the desired enabling direction. An overarching question put to participants was:

“Can Regenerate Barbados provide a space where civil society can contribute and also enhance their own initiatives by being part of something larger?”

Each session began with introductory presentations which can be found in Appendices 1 and 2.

## 2.1 Session 1: The Social Justice Foundation

The overall focus question for this session was ‘What could allow Barbados to thrive with more social justice, fairness and safety for all?’. The approach to the session was to use the classification of the elements of the social foundation into four categories as a basis for four breakout discussion groups (Figure 4):



- Healthy people (health, housing, water, food);
- Connected people (connectivity, community, mobility, arts and culture, parks and playgrounds);
- Enabled people (jobs, income, education, energy);
- Empowered people (peace and justice, social equity, political voice, equality in diversity).

There were 28 participants plus the nine Core Group members in attendance.

Figure 4. Classification of the social justice foundation elements of the Doughnut into four categories.

### 2.1.1 Breakout 1: Healthy people (health, housing, water, food)

Moderator Kathy Gibbs, Rapporteur Sharon Almerigi

Participants: Matthew Armstrong, Emiliano Artusi, Sheena Griffith, Mechell Marshall, Christopher Moore, Tara Lisa Persaud

The moderator addressed the breakout topics in parentheses above sequentially. The details of the discussions can be found in Appendix Table A3.1. The group agreed that it would be healthier and more

economically advantageous for Barbados to grow most of its food rather than rely as it does on imported products that may be cheaper but are often of poorer quality. Many vendors prefer imported fruits and vegetables because they are less expensive and yield a better profit plus they are more consistently available than locally grown products. Despite being cheaper than local, imported food prices are still high due to the high cost of shipping. If cost were not the main driver, vendors could promote produce that is good for health.

Healthier plant-based, organic foods are not widely available in Barbados. Persons in the meeting who live outside Barbados stated that foods that cannot be traded in North America are imported to Barbados. Samples taken at the Bridgetown Port revealed pesticides in the fruits and vegetables. Barbados should have food importation standards that are at least consistent with North America. The MSC Cruise Ships Company that operates in Barbados<sup>5</sup> is organizing a group of local farmers to provide healthy foods for cruise ships. BIDC, BAMC, and the Ministry of Agriculture are also involved in this effort. This type of organizing should also be carried out for popular consumption and incentives used to encourage provision of healthy foods and discouraging use of those that are known to contribute to illness including diabetes.

There could be an activity to monitor food quality and promote standards for both locally produced and imported foods. Increasing public awareness regarding these issues would be a complementary activity. There are many organizations that are active in this area in Barbados that could consider if improved interaction and networking among themselves would add value, and how that could be achieved.

Barbados is characterized as a water scarce country due to persistent development and the prevalence of damaged leaky water pipes. Potable water is widely used for everything including farming. Spring water accessed through wells that remain from the colonial era are being tapped by some farmers. There are no regulations regarding these uses. Rainwater, however, is not seen as a resource. Therefore, incentives for the use of grey water in secondary uses such as farming, gardens, toilet flushing, etc. are needed. Persons installing water tanks must cover all the costs without any incentives. When rainwater is accepted as a valuable economic asset, incentives and practical guidance could be provided by the government and projects such as water catchment in areas that naturally collect water could be carried out by BWA. At various times of the year BWA rations water. There needs to be a balance between rationing, desalination and importing for uses such as provision to cruise ships.

There are many organisations and businesses engaged in addressing water use problems. However, it seems that an activity to promote local water harvesting and use, as well as reuse of grey water at the household level would be valuable.

Building or owning a house in Barbados is becoming ever more difficult for Barbadians. The cost of land and materials are high, and density is often not optimal. Many people appear to be living in overcrowded and substandard conditions due to poverty and sometimes end up homeless when no longer able to pay rent. Mental illness is prevalent in the homeless and such persons may not even be stable enough to maintain a home. There is one organization in Barbados, for the homeless that offers shelter and some food.

The group agreed that adopting housing standards for size and quality would ensure appropriate use of space and a proper density that would provide safe, healthy living situations.

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<sup>5</sup> MSC Cruises is a global cruise line registered in Switzerland and based in Geneva. It was founded in Naples, Italy, in 1989. It is part of the Mediterranean Shipping Company S.A., the world's second-biggest container shipping operator. [Wikipedia](https://en.wikipedia.org/wiki/MSC_Cruises)

Universal health care allows a person to put their attention and resources toward areas in life that are important to them versus expensive health costs. In Barbados, while there is universal health care, the speed of services is such that many opt for private health insurance. The current system focuses primarily on illness and treatment of symptoms versus prevention and wellness. Healthy living should be promoted island-wide to avoid high health costs and be included in schools to give young people a good foundation.

### 2.1.2 Breakout 2: Connected people (connectivity, community, mobility, arts and culture, parks and playgrounds)

Moderator: Patrick McConney; Rapporteur: Michelle Barrow

Participants: Barney Gibbs, Andrew Fanning, Annalee Davis, Corrie Scott, Kayla Archer, Nan Peacocke, Susan Mahon

There were several group members with an interest in arts and culture and others with an interest in mobility and active transportation and trails. The details of the discussions can be found in Appendix Table A3.2. Several of the proposed actions related to ways to engage the community through arts and culture and at the same time make the arts accessible at the community level. Actions included the development of cultural hubs in communities. These could include public spaces such as empty shops, churches, Harrison's Cave and community centres. The latter can be used if permission is granted to use them. Other ways of bringing the arts into communities and at the same time providing a platform for artists are the use of intergenerational spaces for events such as fairs, farmers markets, craft markets, art exhibits, etc. It was lamented that the theatre and art gallery in Queens Park which are highly accessible spaces have been out of commission for a long time. Promoting the use of innovative spaces for connectivity was also discussed. There are several current examples such as The Gap Theatre, Theatre on a bus/bar, Variations Theatre Company and school spaces. Techniques such as storytelling as a means of conveying information about social and environmental aspects of sustainability while exposing communities to cultural values were thought to be needed and worthy of pursuit.

In relation to developing the role of arts and culture in promoting healthy (in the widest sense) and sustainable living, the group noted the need for policies to make inter-regional participation of artistes easier. Previous initiatives such as free movement of artistes and their art within CARICOM should be revisited by policy makers.

The potential role of hiking and cycling trails in contributing to healthy living through sustainable activities for locals and visitors was discussed. The Barbados Trailway<sup>6</sup>, a paved bicycle and pedestrian path located primarily on right-of-way lands of the former Barbados Railway was flagged as a pioneer project in this regard. There is the need to promote and support this under-appreciated aspect of recreational and functional transport. Furthermore, there does not seem to be a full appreciation of the potential of trails to generate income and employment for communities adjacent to the trails. The need ultimately is for a network of trails throughout the island that can connect key attractions.

Overall, the group noted the need for increased emphasis on charitable organizations/NGOs focused on environmental stewardship and community engagement. Organizations such as Future Centre Trust, Eco-Rebel, Caribbean Youth Environmental Network and CORALL were given as examples. The importance of interaction among these and of developing examples of building communities of practice through

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<sup>6</sup> The Barbados Trailway is a Future Centre Trust Project. <https://www.futurecentretrust.org/>

doing, especially at the community level were considered to be needed. The need to focus on children and youth was underscored, but it was noted that the potential role of the elderly as mentors should be kept in mind.

### 2.1.3 Breakout 3: Enabled people (jobs, income, education, energy)

Moderator: Crystal Drakes; Rapporteur: Lucia Fanning

Participants: Miguel Quinones, Rosina Wiltshire and Kathy Harris

The moderator began the discussion by focusing on the education category, asking participants to comment on the role of education in enabling Barbadians and to suggest actions needed to create a fair and just level of education in Barbados. The details of the discussions can be found in Appendix Table A3.3.

The current education system is failing some  $\frac{2}{3}$  of Barbados' children due to its emphasis on academic performance at the expense of other life skills that children need to learn to function in society. These include exposure to creative components (e.g. music, art, theatre); conflict resolution skills; importance of self-respect, mutual respect, kindness, discipline, etc. There is the need to put programs in place that serve not only to engage all children, but to ensure that those who were being marginalized by the current system had alternative programs that helped them to be engaged and provided the tools and tips needed to learn and to prosper, regardless of academic ability. Currently, much of the effort aimed at addressing this is informal, voluntary and at the local community level, with little support and resources. For example, KH is involved in a reading club that arose from concerned parents filling the gap to help children to read and develop their emotional intelligence.

The point was made that it was unjust to expect volunteer groups with no support and resources to address the needs of  $\frac{2}{3}$  of Barbados's children that are being failed by the educational system such that they become further marginalized as young adults. Additionally, with education expenditure being among the highest budget items for the government, it was seen as inequitable and unjust for these funds to be privileging only the  $\frac{1}{3}$  of the children in Barbados who are academically able. As such, a radical reform of the educational system was recommended in which success is measured in terms of maximizing each child's potential, be it creative, vocational, academic or otherwise. For this, all actors, from the parents, church groups and community organizations to teachers, policy makers and the Ministry of Education need to be involved. Examples of how to do this included looking at the Japanese and Scandinavian educational systems as possible models that Barbados could draw on in developing a holistic educational approach.

MQ shared his knowledge and experience on how energy could play a role in enabling Barbadians and to suggest ways that accessing energy could contribute to a fair and just Barbados. The inefficiencies associated with centralized distribution systems especially in hurricane-prone regions were noted. The need to preserve the vernacular design of Caribbean buildings was stressed, rather than designing buildings that were enclosed and needed air conditioning to be livable. Financing to ensure renewable energy is accessible was also considered important. A more just and equitable energy system would promote an integrated approach to a residence's renewable energy production and use, collection of rainwater, and support home gardening efforts for the household. Regarding the first suggestion, the costs associated with solar hot water and for household electricity were prohibitive for many in Barbados. However, in addition to recommending access to government-provided funds for solar energy through

the available housing program, it was noted that Barbados has an incentivized system for solar energy. Solutions for addressing needs for cost-effective and efficient energy have been discussed for decades, including at the 1981 UN Conference on new and renewable energy but the region has mostly failed to act on these. What is needed is to build on what has been done and is being done in the region and to share the knowledge and solutions. These include adopting the criteria developed by the Living Building Challenge (International Living Building Institute) for buildings in the region, implementing the recently developed CARICOM-supported Caribbean Regional Energy Efficiency Building code throughout the region.

The group agreed, regarding jobs and income for Barbadians, that when meaningful solutions to the education and energy issues above are found, jobs and income will follow. By identifying our strengths and weaknesses, including our environmental strengths, we can put the pieces together for a just and safe Barbados that is appropriately enabled. The consensus to end the session was that if we focus on the right things and use what we have to their full potential, jobs and income will follow.

#### 2.1.4 Breakout 4: Empowered people (peace and justice, social equity, political voice, equality in diversity)

Moderator: Peggy Antrobus; Rapporteur: Diane Cummins

Participants: Joy Workman, Denise Noel-De Bique, Farmala Jacobs, Jamaal Roach, Leigh-Ann Worrell, Norma Shorey, June Parris, Nicholas Roach

The components of 'Empowered' - Peace and Justice (including personal security and access to justice), Social equity, Political Voice and Equality in Diversity - are all intrinsically linked so the discussion encompassed all elements while focusing on specific areas. The details of the discussions can be found in Appendix Table A3.4.

Gender-based violence: This continues to be a major area of concern in Barbados. There are various programmes, including those supported by the government, UNW and NGOs. However, a comprehensive approach is needed. The Anglican Church (Rev. Sonia Hinds, 'Women at the Well') has a programme that could be supported.

Access to Justice: Issues related to the length of time it takes to get cases to court are being addressed by a number of initiatives, including work by the organization 'Juris'

Diversity (Social Equity): the LIVITY Project (DNB Unit, UWI) addresses issues related to the LGBTQ and Disabilities communities.

Political Voice: The advocacy of women in certain key communities in the informal sector of the economy - e.g. Fisherfolk and Vendors (Social Equity) - need to be strengthened so that issues related to their dual roles (in production and social reproduction) are addressed.

Research is needed to identify specific issues (e.g. access to facilities for women at fish markets) as well as work with roadside vendors and others in the informal sector of the economy to formulate programmes and policies that could provide more economic security (e.g. changes in the NIS so that it could meet the needs of people whose incomes are precarious).

It was also agreed that while traditional social science research was important, meeting the immediate needs of marginalized groups required the use of methodologies that are participatory so that in the process of identifying their needs, participants are being empowered with the consciousness and skills to engage in formulating projects of their own to meet these needs.

Going forward, the work within the Social Foundation will focus on social justice issues. We will do this by working with women within existing networks of Fisherfolk and Vegetable Vendors to reflect on and elaborate projects to manage their multiple roles.

These projects could include both those that address practical needs such as facilities for women and children at markets as well as policies related to the National Insurance Scheme (NIS).

Working with the women in these networks would amplify their political voice and enable them to strengthen the capacity of the networks to address issues of gender and in that way the wider issues of social justice.

## 2.2 Session 2: The ecosystem limits

The theme for this session was ‘What could allow the Barbados economy and society to thrive within natural ecosystem limits?’ The approach was to divide the outer circle of the doughnut into four discussion categories as shown in Figure 5.

- Pollution (litter, solid waste, sewage, pesticides, fertilizer)
- Open Space for people (National Park, conservation areas, trails, beaches)
- Habitats and biodiversity (on land and in the sea)
- Water resources

Ultimately, there was no breakout group on water resources as too few registrants indicated an interest in this topic.

In each case the following question was asked: What actions could we undertake collectively to add value to what is currently being done?

There were 24 participants and 8 Core Group members in attendance.



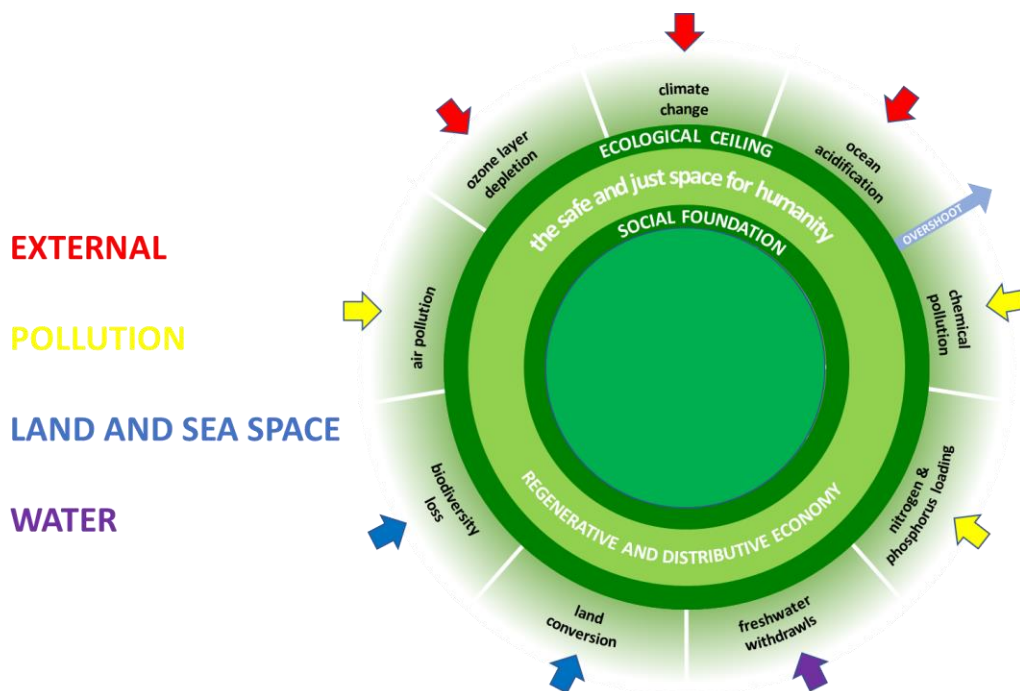


Figure 5. Grouping the ecosystem limits elements of the Doughnut for the breakout discussions

#### 2.2.1 Breakout 1: Pollution (litter, solid waste, sewage, pesticides, fertilizer)

Moderator: Crystal Drakes; Rapporteur: Lucia Fanning

Participants: Adrian Cashman, Alicia Mondesire, Christopher Moore, Derek Connell, George Gill, Jamaal Roach, Kathy Gibbs, Peter Boos, Sheena Griffith, Thora Lorde

Following a brief introduction by each participant, Crystal began by reminding participants that this breakout session on pollution focused on issues surrounding litter, solid waste, sewage, pesticides and fertilizers. Specifically, she invited participants to discuss what actions could be undertaken collectively to add value to what is already being done to address these issues. The details of the discussions can be found in Appendix Table A3.5.

The session began with a focus on pesticides and fertilizer usage in Barbados. Nonetheless, it was noted that if we focused on monitoring the receiving environment, including groundwater, there were significant challenges. First, the Pesticide Board had a limited remit with little to no technical ability to monitor for specific pesticides and fertilizers. Second, while EPD was thought to monitor groundwater twice a month, accessing the data would be difficult as would be considered sensitive. One participant mentioned that it was likely that most ground water sources would contain levels of pesticides and fertilizers as his ground water source, which is at a high elevation level, was found to contain these compounds following testing. As an alternative, it was suggested that looking at where the pesticides and fertilizers are sold, who are buying them, how they are applied and what policies and regulations surround their sale and application might prove more fruitful in getting a better understanding of pesticide and fertilizer usage in Barbados. In addition to a focus on farmers, who looked to the companies selling the products to provide the application regime necessary to address their problems, it was suggested that a

potential source of information might be golf course managers. In terms of actions needed, given the provided regime for application by companies to farmers, the cheaper cost, better effectiveness and less spraying of chemicals as compared to organic fertilizers and pesticides, better outreach education of the negative impacts of chemicals along with improvements in the policies and regulations for chemical usage were suggested. It was also suggested that assistance from the government in matching soil type to crops and sharing this information with farmers could help minimize pesticide and fertilizer use as well as reduce downstream effects of these chemicals.

Moving onto the sewage category, problems surrounding domestic sewage were noted. While it was noted that new developments are now required to install package treatment plants, they potentially pose operational challenges for EPD in terms of who would operate, manage and monitor these plants. Additionally, the legacy issues arising from pit latrines and sunk wells still remain. In terms of identifying potential by-products from waste, it was noted that the volumes available do not make it cost-effective for energy capture, treated water use or nutrient recovery. However, there could be potential for sludge to be treated for garden agriculture. Concern was raised as to whether the development was outstripping the capacity of the Bridgetown and South coast treatment plants but this was noted to not be the case as they had a capacity of 6000 and 9000 meters<sup>3</sup> per day respectively and current usage was estimated to be 3000 and 4000 meters<sup>3</sup>.

The discussion of other wastes focused on construction waste and the question was posed as to what happens with these waste materials in Barbados and whether anyone was looking at reuse/upcycling of these construction wastes. It was noted that while policies and regulations for this matter fell to the Ministry of Environment, there was no dedicated group addressing this issue. However, participants noted the potential for developing technological solutions that matched waste construction material with potential users. It was suggested that for this to work, there needs to be a number of actions taken. First, awareness raising of secondary use of building materials. Second, full separation of waste at construction sites so that garbage and food wastes were not included in the skips holding materials waste. Third, establishment of waste yards throughout the country rather than one centralized location so as to minimize the carbon footprint associated with transporting construction wastes. Fourth, provide incentives, including a forum for large and small contractors, architects and the industry to provide the leadership needed to move this initiative forward, along with the government playing a role in setting the playing field. It was noted that models already exist, e.g. matching excess food from suppliers (restaurants, groceries, etc.) with food banks and other social enterprises that could use and distribute the food so that it was not wasted. A similar approach for construction wastes could also be incentivized given the high costs associated with getting new construction materials in Barbados.

The session concluded with a brief discussion on the issue of solid waste in Barbados where it was noted that the ideas offered for other wastes could also be applied to this topic. Challenges were noted in the value chain associated with solid waste as it appeared that while waste separation has been touted for some time, it seems to fall into a catch-22 trap, linking the separation needs with the trucks needed. Instead, it was suggested to first start with the separation and depending on the data related to volumes, use that to estimate the infrastructure needed, including trucks. Ultimately, the participants agreed that there needs to be investments in communities and people and that these need to be decentralized to help build community buy-in and reduce carbon footprint.

## 2.2.2 Breakout 2: Open Space (National Park, conservation areas, trails, beaches)

Moderator: Robin Mahon; Rapporteur: Sharon Almerigi

Participants: Peggy Antrobus, Kayla Archer, Olivia Chase, Lani Edghill, Barney Gibbs, Nan Peacock, Maria Pena, Leisa Perch, Peter Thompson, David Yawson

The discussion focused on several aspects of Open Space (Appendix Table A3.6). The first aspect was the coast and issues of coastal development and its implications for beaches and nearshore habitats. The group explored how coastal development is monitored and the role of TCPD in that. Ideas were that while TCPD has primary responsibility there is the need for closer and more transparent monitoring of those processes and a role for civil society in ensuring that regulations are followed. In other places there are measures such as grievance redress mechanisms for the public to use and landowner/development public notification of what is being proposed. These mechanisms and responses to grievances are made public for transparency. These processes also need to be supported by more access to monitoring data so that citizens can be informed and even become involved in monitoring. To avoid new coastal construction where possible, existing structures should be repurposed. It was noted that Marine Spatial Planning of Barbados' waters is underway but not widely known. Overall there is a role for civil society in promoting these ideas and in monitoring application of policies and regulations. This could be approached in a coordinated fashion if led by a civil society organization.

The second major focus was on the importance of trails (hiking and cycling) as a means of linking Barbados' Open Spaces. The example of the [Barbados Trailway](#) now under development by FCT led by Barney Gibbs was discussed. It is planned and ready but in need of funding. It was thought that the many potential benefits of trails were under appreciated by the GoB and the community at large. These include health benefits, low-carbon transportation, and jobs and revenue from supporting services (bicycle rental and repair, food and drink, accommodation, tour guides, etc.). There is the need to promote a system of trails in Barbados. These would be enjoyed by both residents and visitors. One way of developing trail facilities would be to promote them being added on to larger infrastructure projects whether by GoB or by private developers.

Many of the things that could be done to promote trails will be more feasible if there is public demand for them. Therefore, activities that promote public awareness of the potential benefits of trails could be a starting point for Regenerate Barbados. Similarly, there appears to be limited data, information and awareness on what current plans (e.g., PDP 2017, National Park Plan, Tourism Development Master Plan) have to say about Open Space and trails. Making this information available to the public could be a useful component of the proposed Regenerate Barbados' Open Space awareness activity.

The idea of promoting awareness through open farms that could be visited for educational purposes (a kind of Open Space) was also discussed. It was noted that Slow Food is considering activities of this sort.

Overall it can be concluded that there is support for promotional, lobbying and monitoring activity by civil society for better management of coastal development and for pursuit of more proactive and coordinated development of Open Space with a focus on trail development and benefits.

### 2.2.3 Breakout 3: Habitats and biodiversity (on land and in the sea)

Moderator: Patrick McConney. Rapporteur: Michelle Barrow

Participants: Ariel McCaskie, Catrina Hinds, Kennedy Marshall, Lalu Hanuman, Marcia Brandon, Tara Lisa Persaud

The group discussed a range of topics (see Appendix Table A3.7 for details). Much of the discussion was around the direct impacts of pesticides and other commercial products on biodiversity, habitats and human health, and their indirect effects through their impacts on soils and food security. In particular there was concern about impacts on bees and other pollinators of food crops, flowers and plants in general, as these form the basis of ecosystems that support biodiversity. Efforts to monitor and reduce inorganic pesticide use would be worthwhile activities. Promoting use of natural pest control measures and pesticides would be complementary.

Soil habitats of all types are being impacted by the above contaminants as well as by e-waste. Greater attention is needed to soils, their quality and erosion. A focus on this with an emphasis on reducing contamination by e-waste and other pollutants generated by inappropriate handling of waste would be an appropriate action.

Food security in terms of better use of habitats was also discussed. This is of course linked to soils and chemical use discussed above. In terms of space, there is unused agricultural land, and also unused lots within built up areas. The use of these through community based initiatives for growing food (shared plots and/or greenhouses) can also contribute to building social cohesion and stewardship.

Coastal wetlands were thought to require a lot more attention as habitats in need of conservation. GHNS/swamp, and other wetlands were considered to be underappreciated and their designation as conservation areas under global schemes such as World Heritage Sites and Ramsar Convention sites needs to be pursued while better use should be made of existing designations. Coastal wetlands are often neglected unless there is a problem, such as the sewage dumping at Graeme Hall. Gully habitats face similar issues (see the GoB Gully Ecosystems Management Study). An activity that focuses on policies and practices for protecting coastal wetlands would be a useful contribution to habitat conservation.

A focus on the role of field education in schools and communities in promoting care of trees, and habitat conservation in general as a concern among citizens were noted as areas needing action. New and different ways of communication for engaging youth, communities and citizens in general through techniques such as storytelling should be explored.

## 3 Putting it all together

A wide diversity of topics and potential activities was discussed in the seven breakout sessions. It was noted that there is a considerable interconnectivity among the topics within and between sessions 1 and 2 as can be seen in Table 1. Participants noted that there should be a focus on activities that bring outcomes to the communities that need them. Activities are needed that will get people to care, to overcome the apathy that seems to prevail. There are many ideas throughout the breakout sessions for engaging with communities. Community does not necessarily mean a village or town as schools and churches are known and respected communities of interest that could be worked with. It was noted that

many of the ideas that emerged will lead to jobs. Some of them require significant funding. This raises the question of whether current activities by various groups could be combined under Regenerate Barbados to develop a larger project to attract funding for civil society initiatives under the chapeau of employment generation.

Table 1. The coverage of topics in breakout sessions, in order of frequency of appearance

Topics discussed	Social justice foundation				Ecosystem limits		
	Healthy	Connected	Enabled	Empower- ed	Pollution	Open Space	Habitats
Community engagement	✓	✓	✓	✓	✓	✓	✓
Monitoring GoB commitments	✓				✓	✓	✓
NGO strengthening	✓	✓				✓	
Pesticides	✓				✓		✓
Food quality	✓				✓		
Water reuse	✓				✓		
Promoting healthy activity - trails		✓				✓	
Holistic education			✓			✓	
Community support	✓			✓			
E-waste impact on soil					✓		✓
Soil quality					✓		✓
Conservation areas						✓	✓
Gullies						✓	✓
Food security	✓						✓
Health care	✓						
Local production	✓						
Production costs	✓						
Water scarcity	✓						
Water for agriculture	✓						
Affordable housing	✓						
Homelessness	✓						
Cultural hubs		✓					
Community activism		✓					
Space for cultural activities events		✓					
Storytelling for communication		✓					
Engagement of youth			✓				
Programme for boys on block			✓				
Conflict resolution skills			✓				
Distributed energy production			✓				
Financing for sustainable living			✓				
Jobs and income			✓				
Holistic approach to sustainability			✓				
Informal sector				✓			
Inclusivity and diversity				✓			
Access to justice				✓			
Marginal/precarious livelihoods				✓			
Domestic violence				✓			
Construction waste reuse					✓		
Natural fertilizer/pesticides					✓		
Domestic waste separation and recycling					✓		
Coastal development impacts						✓	
Public awareness of development issues						✓	
Trails for employment						✓	
Open farms						✓	
Open space policy						✓	
Wetlands							✓
Biodiversity							✓
Sargassum							✓

One prominent area of interconnectivity is in relation to healthy food. This is connected with pollution, soil quality, water quality and quantity, pollinators, availability of land for farming, agro-processing, community gardens, backyard gardens and reducing imported food by growing food locally. While most of these topics relate to ensuring quality of life, several also relate to staying within ecosystem limits by reducing use of pesticides/artificial fertilizers and protecting the integrity and viability of natural ecosystems that sustain life in Barbados.

The sustainable use of natural ecosystems through a system of Open Space areas as prescribed in the Barbados 2017 Physical Development Plan<sup>7</sup> also has many interconnections with health, conservation and employment. Closer citizen-led monitoring of impacts of development on our marine and terrestrial ecosystems was flagged several times. These ecosystems can and do sustain healthful activity for locals and visitors and generate employment. This is more obvious in the sea, but attention to amenities such as hiking and cycling trails can also generate jobs on land.

Dealing with waste in all its forms was a recurrent topic with a high degree of connectivity. Waste is crosscutting for healthy food, water quality, agriculture, open space amenities, biodiversity conservation and more. Addressing it has the potential to create jobs, reduce imports and generate foreign exchange. Perhaps more than any other topic, attitudes and behaviours pertaining to waste must be addressed via community action.

Doughnut Economics' foundational question, "How can (Barbados) be a place where all the people thrive" within ecological boundaries? draws attention to those people who are not thriving. The focus of our work within the circle of the Social Foundation must therefore be on Social Justice. In Barbados, despite the country's high ranking (54th in the world and among the highest of Developing countries) in terms of the UN's Human Development Index (HDI), there are pockets of poverty that contribute to poor health and education and access to other basic needs. Because of traditional gender roles, women are overwhelmingly responsible for caring for children, the elderly, the sick and those with disabilities. In addition, levels of domestic violence and the sexual abuse of children are as high as they are anywhere in the region and the world.

These realities have been exacerbated by the pandemic, which has seen the tourism-based economy collapse, schools closed and the increased exposure of women and children to their abusers because of the necessity of 'stay at home' orders. At the same time, it is the care economy, and reciprocal social relations of family, friends and neighbors that, along with government cash transfers (through the National Insurance Scheme, the NIS) to meet basic needs that have allowed people to survive.

Work on Social Justice will therefore focus on linkages between the 4 categories of Healthy, Enabled, Connected and Empowered. These categories are economically fundamental to sources of food, water and livelihoods drawn from the natural environment. By engaging Doughnut Economics methodology women in low income communities can identify and articulate the services needed to help them cope with the demands of their responsibilities in the household - all unwaged - as they try to earn an income. At the level of policy, the conversations with these women - a source of empowerment - will importantly also contribute to policy shifts, including suggesting ways in which the NIS, basically designed for people with regular or sufficient incomes, can be adjusted to meet the needs of all Barbadians.

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<sup>7</sup> <http://townplanning.gov.bb/pdp/>



## 4 The way forward

The two Action Scoping sessions have generated many ideas for actions that align with the interests of a wide range of civil society organizations in Barbados as well as those of individual activists. The challenge will be to avoid overlapping or competing with existing initiatives. This could be achieved by filling gaps in activities and by facilitating synergies among actors, particularly by promoting some of the interconnections noted in the previous section.

One of the gaps that appeared to recur in discussion was availability of information on GoB policies, regulations and implementation efforts across several areas, e.g., in relation to pesticides, conservation areas, water recycling, education reform. Acquiring such information and sharing it with the public in connection with related activities appears to be a much-needed component of a regenerative approach to Barbados society and economy. As previously noted, we cannot properly manage what we do not measure. Therefore, any Regenerate Barbados initiative will include policy review, targets, and monitoring.

The Action Scoping exercise was not just looking for actions; it was also seeking leaders for actions. Four areas that appear to be of broad interest and that also have persons who are willing to take the lead in coordinating these initiatives are:


- Monitoring pesticide and fertilizer use nationally and lobbying for transparent implementation of practices as well as reforms in permitted use of pesticides. Impacts on the nearshore ecosystems (coordinators Crystal Drakes, Sharon Almerigi).
- Working with women within existing networks of fisherfolk and vegetable vendors to enable them to reflect on and elaborate projects to manage their multiple roles (coordinators Peggy Antrobus, Michelle Barrow).
- Supporting the development of formal trails (especially The Barbados Trailway), as an integrating component of the Open Space System, and implementation of the Open Space System as a whole (coordinator Robin Mahon).
- Recycling in general, including construction waste by working with contractors. Sharing economy (coordinators Kathy Gibbs, Lucia Fanning).

## Appendix 1: Presentations from Session 1



### REGENERATE BARBADOS WITH DOUGHNUT ECONOMICS

Rethinking social and economic development in Barbados



### Action Scoping Session 1

WHAT COULD ALLOW BARBADOS TO THRIVE WITH MORE SOCIAL JUSTICE, FAIRNESS AND SAFETY FOR ALL?  
Sen. Crystal Drakes


Tuesday June 8<sup>th</sup>, 5:30-7:00 pm

## Barbados, where we are.....




#### Economy

- Path dependency on tourism
- High rate of unemployment
- High debt levels
- IMF supported policy making




#### Society

- Gun Crime
- Institutional Uncertainty in Education (11 plus/CXC)
- Infringed Workers' right social security benefits
- Access to clean water
- Youth marginalization



#### Environment

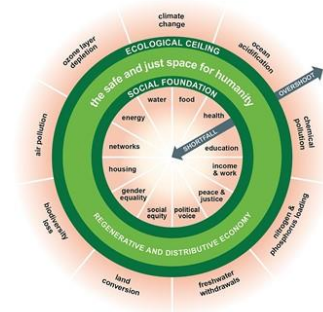
- Climate change impacts
- Stronger more frequent hurricanes
- Degradation of ecosystems (soils, coral reefs)
- Water scarcity
- Waste Management





## REGENERATE BARBADOS

*Doughnut Economics*



## Doughnut Economics Activism



Many countries, cities and communities are putting the doughnut into action.

The Doughnut Economics Action Lab (DEAL) is a global network and platform that assists changemakers in putting doughnut economics into practice.



## Regenerate Barbados, the Doughnut in Action

What would it mean for people in Barbados to thrive?

What would it mean for Barbados to thrive within its natural habitat?

What would it mean for Barbados to respect the well-being of persons worldwide?

What would it mean for Barbados to respect the health of the whole planet?



### REGENERATE BARBADOS WITH DOUGHNUT ECONOMICS

Rethinking social and economic development in Barbados



### Action Scoping Session 1

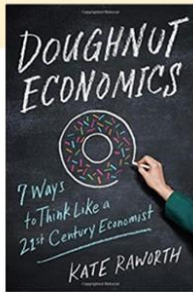
What could allow Barbados to thrive with more social justice, fairness and safety for all?

THE REGENERATE BARBADOS PROGRAMME

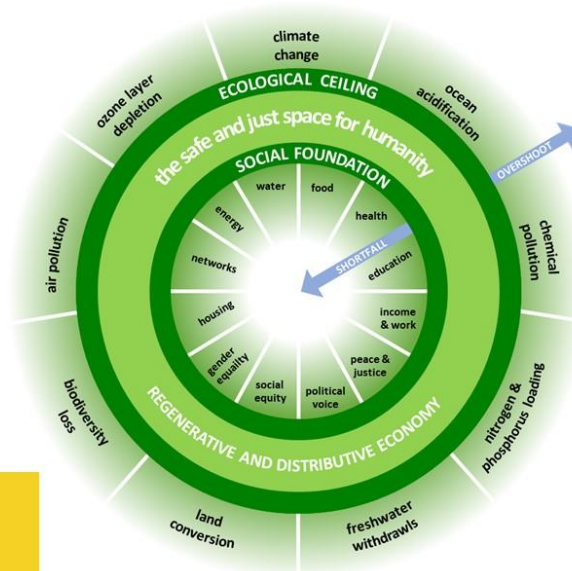
Robin Mahon

Tuesday June 8<sup>th</sup>, 5:30-7:00 pm

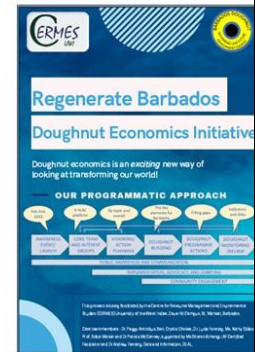




## THE DOUGHNUT ECONOMICS CONCEPT



- Focus on well-being not growth
- Indicators other than GDP
- What does this mean for Barbados?

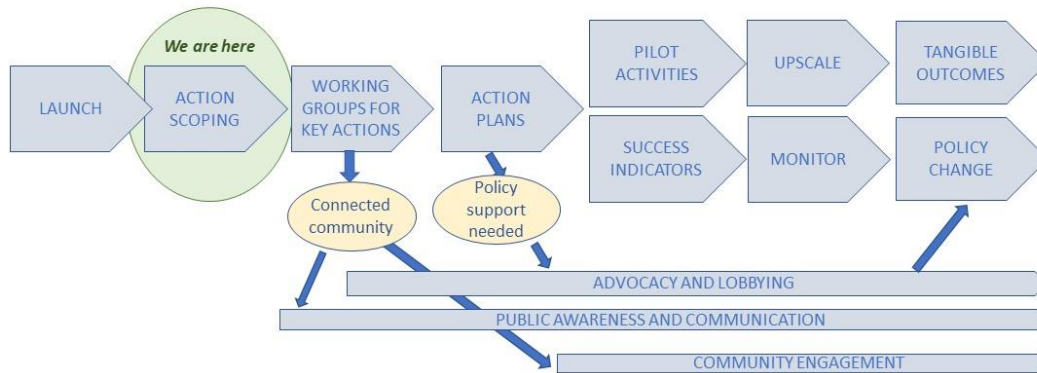


## REGENERATE BARBADOS WITH DOUGHNUT ECONOMICS

- Barbados Doughnut Economics Initiative launch February 2, 2021
- Recognize public sector's continuing efforts toward achieving the Sustainable Development Goals despite the pandemic
- Aware of the many important projects and programmes in Barbados, all inspired by the same impulse that led to our Initiative
- Can Regenerate Barbados provide a space where civil society can contribute and also enhance their own initiatives by being part of something larger?

## REGENERATE BARBADOS DOUGHNUT ECONOMICS PROGRAMME

*Can it add value to what is already being done?*



### Regenerate Barbados engagement ladder

I would like to...	Mode
Learn about what Doughnut economics could mean for Barbados	Interested
Stay abreast of what is happening with the Barbados Doughnut	Tuned in
Apply the Doughnut in what I do in Barbados	Active in area of interest
Work with others to apply the Doughnut concept	Leading in area of interest



## ACTION SCOPING SESSIONS

Where can we add value to what is being done, especially by working together?

### Session 1: Today

*What could allow Barbados to thrive with more social justice, fairness and safety for all?*

Session 2: Tuesday June 15<sup>th</sup>, 5:30-7:00 pm

*What could allow the Barbados economy and society to thrive within natural ecosystem limits?*



### REGENERATE BARBADOS WITH DOUGHNUT ECONOMICS

Rethinking social and economic development in Barbados



### Action Scoping Session 1

What could allow Barbados to thrive with more social justice, fairness and safety for all?

## THE SOCIAL FOUNDATION

Peggy Antrobus

Tuesday June 8<sup>th</sup>, 5:30-7:00 pm

# INTRODUCTION

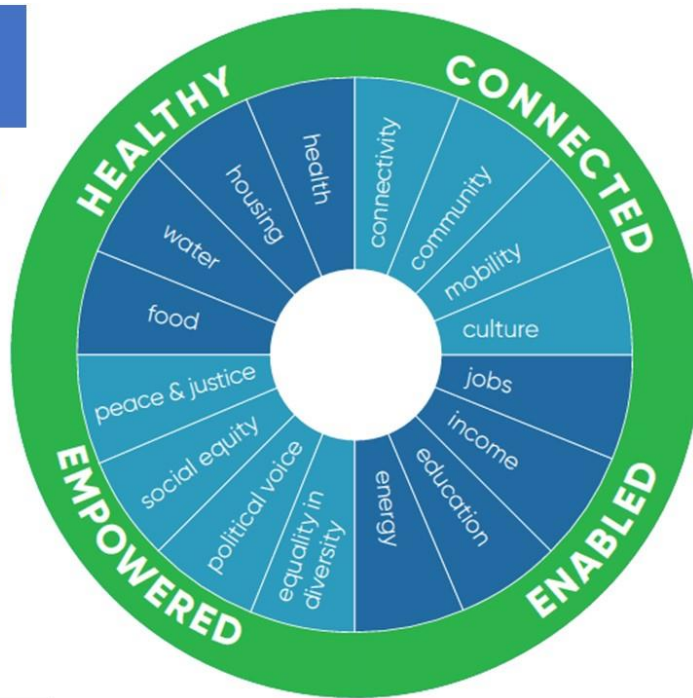
Today's meeting will set the stage for the work to follow.

Our central question is:

*How can Barbados be a fairer and safer place for everyone?*

## THE SOCIAL FOUNDATION

Classified the components of "fairer and safer" into four categories



## THE BREAKOUT PROCESS

- You indicated which topics you were interested in
- We allocated you to groups based on that, taking into account the need to balance the groups
- Each group has been assigned a moderator and a rapporteur
- You have 40 minutes to discuss and report on actions and who will take leadership in moving them forward

## BREAKOUT GROUP QUESTIONS

1. Actions and sub-actions needed?
2. Who in the group is already working on this, and is there anything you want to add to it?
3. Who else should be involved?
4. Is anyone interested in becoming involved in addressing any of the actions identified?

### Template

What could allow Barbados to thrive with more social justice, fairness and safety for all?			
Group 1.a - Healthy people (health, housing, water, food)			
Main action/Sub-actions	Who in this group is already doing it?	Who else should be involved?	Rationale, Comments

## WHO WE ARE

At least four categories of people among us:

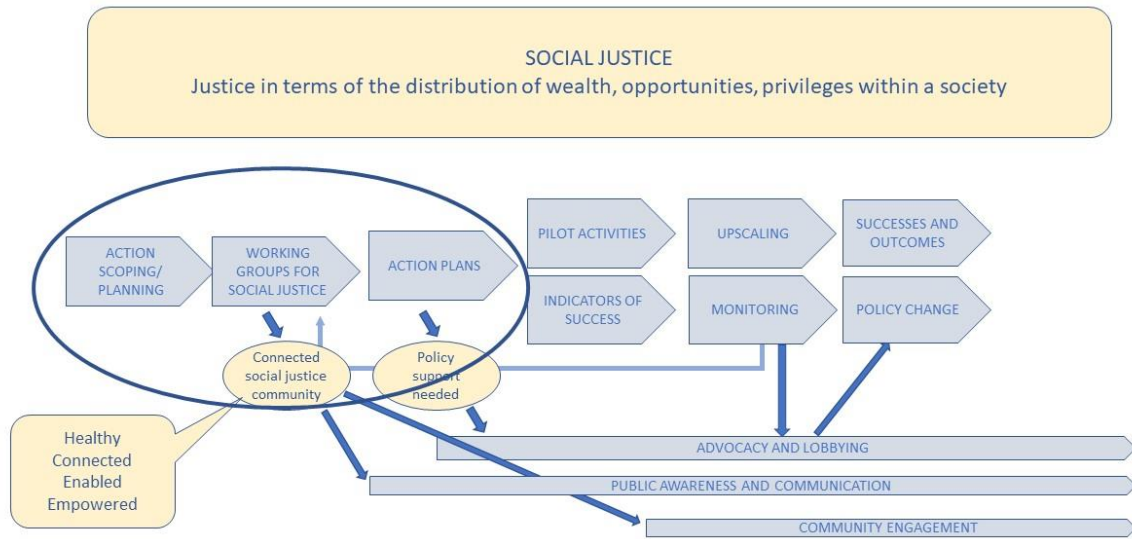
1. Those who have already initiated programmes and projects that contribute to achieving the goal,
2. Those who feel passionately about the need for other initiatives that can contribute to that goal, & want to work on it,
3. Those unable to take on anything new at this stage, but willing to help with something specific as the project develops,
4. Those who just want to stay informed.

## WHAT COMES NEXT?

1. A WORKING GROUP ON SOCIAL JUSTICE made up of the people who have indicated that they want to move the actions forward.
2. SUB-GROUPS for each action/sub-action
3. PLANS AND PROJECTS (seek funding if necessary)
4. Ultimately, we want to discuss POLICY that support our efforts.



## BARBADOS DOUGHNUT SCENARIO: SOCIAL JUSTICE



## LESSONS FROM MY OWN EXPERIENCE

1. **SOCIAL CHANGE IS DIFFICULT**, especially when challenging structures of power and privilege.
2. **POWER OVER**, can only be countered by **COLLECTIVE POWER**, recognizing the **POWER WITHIN** each of us. Therefore alliance/coalition-building is essential.
3. **THREE Dimensions of SOCIAL CHANGE**: professional/technical, political and cultural. All are necessary and need to work together (Regenerate Barbados is an example of this approach)
4. **LEADERSHIP** is key. Nothing will change unless people step forward to make it happen. People who **LIVE** the problem must **TAKE** leadership.
5. **NO CHANGE IS PERMANENT**. I've helped achieve major change and seen everything I worked for reversed because the context changed.
6. Given the above, **WE NEED LEADERSHIP IN EVERY GENERATION** to address the problems of the day **WITHIN THE CONTEXT OF THE MOMENT**.

# THE COVID-MOMENT

## THIS IS A SPECIAL MOMENT

- The pandemic,
- The collapse of the economy and
- Climate change
- A government whose statements speak to Social Justice, open to new ideas, or old ideas whose time has come/or come again...
- An international community – including progressive forces within the business/corporate world and international institutions – increasingly open to listening and learning

ALL COMBINE to create a Moment that offers special opportunities for changes that some of us have dreamed of for a long time.

*This is OUR MOMENT, if we want to make a difference!*

## FOUR BREAKOUT GROUPS

### HEALTHY

- Healthy Food
- Safe drinking water
- Affordable housing
- Accessible health services

### CONNECTED

- Connectivity (telephones, internet)
- Mobility (transportation)
- Community
- Culture

### ENABLED

- Education & Training
- Income
- Jobs
- Energy

### EMPOWERED

- Justice/ Personal safety
- Social equity
- Political voice
- Respect for diversity



## Appendix 2: Presentations from Session 2



### REGENERATE BARBADOS WITH DOUGHNUT ECONOMICS

Rethinking social and economic development in Barbados





## Action Scoping Session 2

What could allow the Barbados economy and society to thrive within natural ecosystem limits?  
Sen. Crystal Drakes

Tuesday June 15th, 5:30-7:00 pm

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## Barbados, where we are.....



Economy

- Path dependency on tourism
- High rate of unemployment
- High debt levels
- IMF supported policy making



Society

- Gun Crime
- Institutional Uncertainty in Education (11 plus/CXC)
- Infringed Workers' right social security benefits
- Clean access to water
- Youth marginalization



Environment

- Climate change impacts
- Stronger more frequent hurricanes
- Degradation of ecosystems (soils, coral reefs)
- Water scarcity
- Waste Management

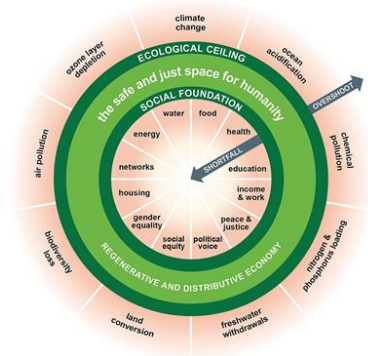




We need to work towards a more sustainable future.....

## REGENERATE BARBADOS

*Doughnut Economics*



Second California DEAL Meetup



Amsterdam City Doughnut

## Doughnut Economics Activism

Many countries, cities and communities are putting the doughnut into action.

The Doughnut Economics Action Lab (DEAL) is a global network and platform that assists changemakers in putting doughnut economics into practice.



Introducing the Devon Doughnut



Towards a Regenerative Melbourne

Let's regenerate  
together....



## REGENERATE BARBADOS WITH DOUGHNUT ECONOMICS

Rethinking social and economic development in Barbados



### Action Scoping Session 2

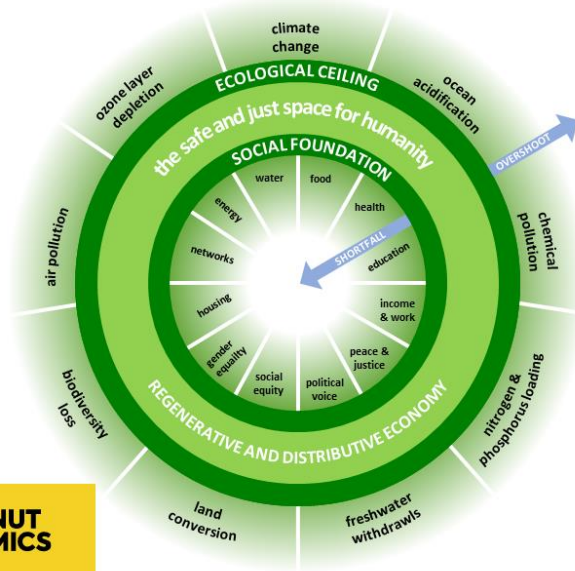
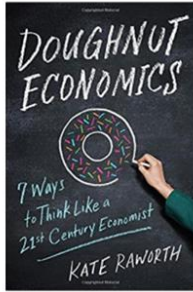
What could allow the Barbados economy and society to thrive within natural ecosystem limits?

THE REGENERATE BARBADOS PROGRAMME

Patrick McConney

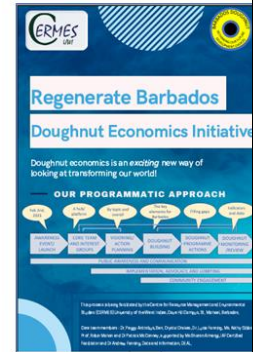
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## The Doughnut Economics concept

- Focus on well-being not growth
- Indicators other than GDP
- What does this mean for Barbados?

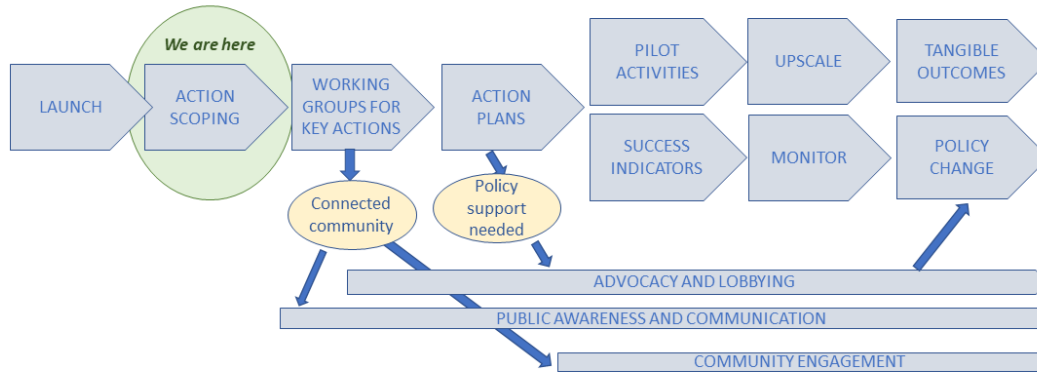


## REGENERATE BARBADOS WITH DOUGHNUT ECONOMICS

- Barbados Doughnut Economics Initiative launched February 2, 2021
- Recognize public sector's continuing efforts toward achieving the Sustainable Development Goals despite the pandemic
- Aware of the many important projects and programmes in Barbados, all inspired by the same impulse that led to our Initiative
- Can Regenerate Barbados provide a space where civil society can contribute and also enhance their own initiatives by being part of something larger?

## REGENERATE BARBADOS DOUGHNUT ECONOMICS PROGRAMME

*Can we add value to what is already being done?*



## REGENERATE BARBADOS WITH DOUGHNUT ECONOMICS

Rethinking social and economic development in Barbados



### Action Scoping Session 2

What could allow the Barbados economy and society to thrive within natural ecosystem limits?

## THE ECOLOGICAL CEILING

Robin Mahon

Tuesday June 15<sup>th</sup>, 5:30-7:00 pm

# INTRODUCTION

Today's meeting will set the stage for the work to follow.

The theme is:

*What could allow the Barbados economy and society to thrive within natural ecosystem limits?*

The focus question is

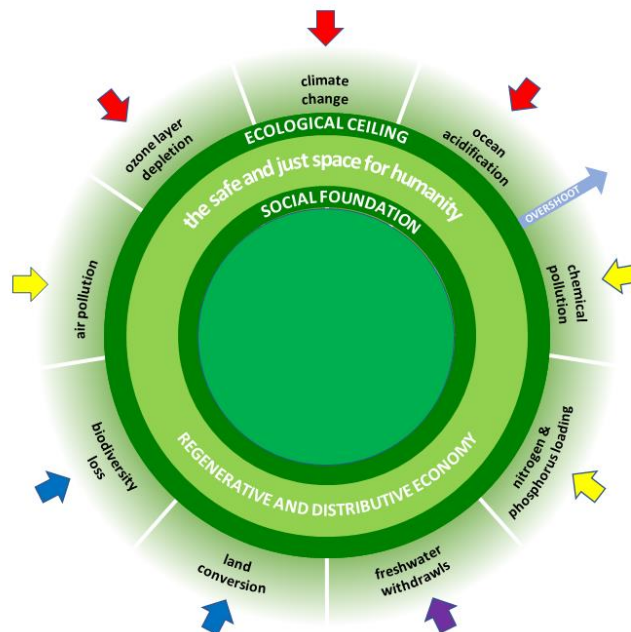
*What actions could we undertake collectively to add value to what is currently being done?*

## THE ECOLOGICAL CEILING

EXTERNAL

POLLUTION

LAND AND SEA  
SPACE





## THREE BREAKOUT GROUPS

### **POLLUTION**

- Litter
- Solid Waste
- Sewage
- Pesticides
- Fertilizer

### **OPEN SPACE**

- National Park
- OS Zones
- Trails
- Beaches

### **HABITATS AND BIODIVERSITY**

- Terrestrial and marine
- Natural Heritage  
Conservation Areas (OS  
category 2)

## THE BREAKOUT PROCESS

- You indicated your interests
- We allocated you to groups based on that, taking into account the need to balance the groups
- Each group has been assigned a moderator and a rapporteur
- You have 50 minutes to:
  - discuss collective actions and who will take leadership in moving them forward (45 mins)
  - decide which three key topics to report back to plenary (5 mins)

## BREAKOUT GROUP QUESTIONS

1. Group actions needed?
2. Who in the group is already working on this, and is there anything you want to add to it?
3. Who else should be involved?
4. Is anyone interested in becoming part of the actions identified?

### Template

Session theme: What could allow the Barbados economy and society to thrive within natural ecosystem limits?				
Group 1. - Pollution (litter, solid waste, sewage, pesticides, fertilizer)				
Focus question: What actions could we undertake collectively to add value to what is currently being done?				
	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
1	Review and monitor pesticide and fertilizer use Propose changes, Lobby for change	UWI, ??	BAS, UWI, Organic Growers Association	There is limited information on regulations pertaining to use of pesticides and fertilizer and on actual usage
2				
3				
4				
5				

## THIS IS A UNIQUE MOMENT

- The pandemic
- Economic hardship
- Climate change
- A government concerned about sustainability and environment, and open to new ideas...
- A supportive international community
- All combine to create a special opportunity for changes that we have wanted for a long time.

## NEXT STEPS FOR REGENERATE BARBADOS

### AFTER THIS (BOTH) SESSIONS

#### US

- Compile inputs and a report
- Keep you updated on Facebook, etc.
- Establish working groups
- Invite you to contribute at your chosen level

#### YOU

- If you like these ideas talk about them with friends and colleagues and send them the brochure

## Appendix 3. Results tables from breakout sessions

Table A3.1. Breakout group results for healthy people (health, housing, water, food)

	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
1	<p>More food should be grown in Barbados. Colin Hudson wrote (and/or spoke) about how Barbados became food self-sufficient in WWII</p> <p>Review regulations and standards for food production and importation as these are currently missing.</p> <p>Incentivize vendors to provide healthier, locally-grown produce</p>	<p>Emiliano from MSC Cruise ships - is putting together a group of local farmers to provide food for cruise ships. BIDC, BAMC, and Ministry of Agric are also involved in this effort.</p> <p>Sheena a grower and seller</p> <p>Barbados Organic Growers Association?</p> <p>Monkey pest issue. Ministry of Agriculture, Bio-diversity Group (Min. of Environment)</p> <p>Healthy Caribbean Commission (HCC) links economic costs and health</p>	<p>Barbados government through regulation of food importation that includes inspection and standards of what can be accepted.</p> <p>Barbados government through subsidies and incentives.</p>	<p>Healthy foods, i.e., plant-based, organic foods not widely available in Barbados. Barbados has a high rate of diabetes and heart disease rate but does little to restrict foods that are known contributors. Tax the "bad" foods and use the revenues to subsidize the "healthy" ones.</p> <p>Food prices are high in BB due to shipping costs, etc.</p> <p>Food that cannot be traded in US and Canada and are not healthy are brought to Barbados and sold here.</p> <p>Pesticides found in imported fruits and vegetables from samples taken at the Port.</p> <p>Trade arrangements with some countries can impact the quality of foods allowed, i.e., meat from Australia to the UK.</p>

	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
				<p>Vendors prefer cheaper produce from overseas. It is more consistent than locally grown produce.</p> <p>Pest problems in Barbados specifically monkeys</p>
WATER				
2	<p>Promote water recycling policies that support the use of greywater for agriculture and gardens.</p> <p>Promote catchment of water in natural water rich areas for use in agriculture.</p> <p>Ascertain the regulation for oversight of wells in Barbados for just access.</p> <p>Investigate Baird USAID project</p>	<p>Land lease project in St. Lucy is using spring water wells vs piped water. There may be other places wells that were from the colonial area. (Many were closed due to safety.)</p> <p>St John Rastafarian farmers accessing spring water from Pot House System</p> <p>Christopher working in this area.</p>		<p>Barbados categorized as water scarce country exacerbated by continuous development and faulty water pipes.</p> <p>Potable drinking water is used in farming.</p> <p>Private water tanks are self-supported in terms of pumping and other equipment. Incentives are not given by the BB Water Authority for water recycling.</p> <p>Rainwater still treated as nuisance rather than a resource.</p> <p>BWA does not support the use of grey water for any uses.</p> <p>There are times when reservoirs have to ration water. Sometimes water is exported, i.e., sold to the cruise ships. There needs to be a balance</p>

	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
				<p>between rationing, desalination and importing.</p> <p>Baird conducted USAID project on water resources in Barbados</p>
HOUSING				
3	Investigate socially backed housing projects.			<p>Price of land prohibitive. There are many plots not optimally used and density could be increased.</p> <p>Price of materials extremely high.</p> <p>There is always some development or other but it is not a holistic system.</p> <p>Barbados lacks standards of housing regarding size and quality such as those that exist in Germany.</p>
4	<p>Ascertain the extent of the homeless problem in Barbados.</p> <p>Consider the drivers to homelessness and who are most vulnerable.</p>	Homeless organization exists "For the Homeless".		<p>Homelessness is an issue in Barbados.</p> <p>Most persons have mental issues. Shelter available but most persons are not stable enough to manage a home.</p> <p>Homelessness also relates to poverty. Some people are put out</p>



	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
				<p>because of inability to pay rent.</p> <p>People are shown to be living in substandard conditions due to poverty. At least 1% of population can be left out of the system.</p> <p>Overcrowding and poor living conditions generate mental health problems.</p>
HEALTH CARE				
5	<p>Promote healthy living to avoid high health costs.</p> <p>Ascertain what groups are working in this area. What gaps exist?</p>	<p>Diabetes Association</p> <p>Heart and Stroke Foundation</p>		<p>Need universal access to health care.</p> <p>So many benefits where this is covered, i.e., Canada. Having this coverage allows you to focus on more important areas in your life. Having free health care is good for the economy.</p> <p>Many medications are covered. Polyclinic system focuses on illness not on wellness, and prevention.</p>

Table A3.2. Breakout group results for connected people (connectivity, community, mobility, arts and culture, parks and playgrounds)

	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
1	Increased emphasis on charitable organizations/NGOs focused on environmental stewardship and community engagement	Future Centre Trust, Eco-Rebel, Caribbean Youth Environmental Network, Sustainable Barbados, CORALL	Children/ Youth/MOE, The Elderly  Monye Anyadike-Danes, Environmental + Human Rights Lawyer  Lalu Hanuman, environmental activist and lawyer  Dr. Sonia Peter, Bio cultural Education + Research	Building a community of practice through doing specific projects e.g. physically restoring the reefs  Focus on informing children about the environment
2	Cultural hubs for people working in the arts	Fresh Milk, Operation Triple Threat, Israel Mapp at Union Cooperative (encompasses all the arts), Corrie Scott social media activism, Mahogany Culture Collective Mustard Seed Productions Inc. CPRI - Caribbean Permaculture Research Institute  Artists Alliance Barbados who curate shows out there in public spaces such as empty shops, churches, Harrison's Cave.  Community centres can be used if	Bonnie Leonce with the Deaf community, Corey Layne with Nature Fun Ranch, Mamood Patel with Coco Hill Forest, Rheanna Chen with Slow Food, Alisha Stoute @ Eco lodge,  Bring in charities that have gone through capacity building with Aspire,  Bring in organic food, Dance for Life, Walkers Reserve and WIRRED, Scotland District  Ireka Jelani, artist, basket maker, farmer, spiritual leader	Not enough spaces to support what people in the arts are doing

	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
		permission is granted to use them. BCC Theatre Arts	Ras IIs, spiritual healer, botanist churches	
3	Multi-purpose trails to encourage active transportation	Barbados Trailway E-Bikes Barbados, CO Williams  Hiking and walking groups, nature enthusiasts	Adjacent property owners, cyclists, public transport authority, Bike Barbados, abutting farmers, bike rental concessions, nearby schools, factories that can be repurposed for art installations (BADMC)	Government owned old railway line being repurposed as a trail with expectation that it will generate associated services and jobs
4	Use intergenerational spaces for events such as fairs, craft markets, art exhibits, etc.	Farmers markets, School halls, community centres	Galleries accessible at ground level e.g. Queens Park Theatre	Existing structures can be used with permissions
5	Use innovative spaces for connectivity	The Gap Theatre, Theatre on a bus/bar, Variations Theatre Company innovative use of school spaces	Varia Williams, David Neilands	
6	Promote policies to make inter-regional participation of artistes easier			Support regional collaboration regarding the arts
7	Storytelling to address social issues	(Michelle Barrow) Variations Theatre, Barbados Community College Theatre Arts	Youth, elderly, communities of people (farmers, fisher folk, women)	

Table A3.3. Breakout group results for Enabled people (jobs, income, education, energy)

	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
1	Education - programs for younger children - book club  Need to get them engaged  Need to look at the "process" of learning	Kathy Harris	Community driven initiatives came out of a need to fill gap	As a community worker, concerned about targeting these persons.
2	Target marginalized members, e.g. Program for the "boys on the block"		Parents, teachers, community groups, church groups	Not everyone can prosper in the academically-focused school system. Need to find ways to engage those who cannot so that they see they are still valued and productive.
4	Radical reform for educational system - rethinking of why and what is the core of the program	Rosina	Policy makers, Min of Education, curriculum developers  Everybody - community needed to pressure politicians, teachers, university	66% of children falling with 1-2 O-levels  33% excel academically but academic skills receive the bulk of the funding
5	National dialogue for education...what are the goals, kind of humans we want?			Balancing of emotional skills - introduce music, arts, sports as part of building of the "whole" person  Recognition that Emotional Intelligence
6				(EQ) is just as essential as IQ

	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
				Build conflict resolution skills  Classification of kids needs to change - holistic approach
7	More distributed energy production more resilient in light of hurricane risks			Centralized system is not resilient
8	Need to preserve Caribbean building design vernacular			Older designs more hurricane resilient
9	Access to financing available to everyone for supplying energy to their own homes			Produce own electricity, water collection, food gardens  How does this get to the community given the costs?
10	Need to have a system's approach to water, energy, waste, food	Caribbean Regional Energy Efficiency Building code - CARICOM		B'dos has a strong incentive for solar energy.  Individual houses are doing well but businesses and Govt buildings need to be more energy efficient
11	Build on what has been done and what is happening in different countries/islands in the region			Link to education - who are we, strengths, weaknesses

	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
12	Jobs and income will come if we have the education and use what we have, we will create jobs			We have the capacity to create jobs if we recognize what we have

Table A3.4. Breakout group results for empowered people (peace and justice, social equity, political voice, equality in diversity)

	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
1	Social Equity  Informal sector/unwaged work - selling on street, homes, children - protection and more information needed, entry points, connections re more community engagement; more daycare facilities, wellness spaces	BARVEN (Barbados Association of Retailers, Vendors and Entrepreneurs) - wayside vendors, institutionalised	Denise Noel-Debique  CERMES - Gender in Fisheries - (Peggy will follow up)	
2	Equity in diversity  Prioritise research on way in which populations are affected differently - e.g. the disabled re peace, justice, equity, having a voice, diversity, possibilities around frameworks to	Livity Project (IGDS:NBU) - Leigh-Ann Worrell		Link with people working on participatory research methodologies incl storytelling - has to be analysed in a form that can lead to policy making



	A. Main action/Sub-actions	B. Who in this group is already doing it?	C. Who else should be involved?	D. Rationale, Comments
	promote greater inclusion, Covid impact			
3	Peace and justice Improving access to justice	JURIS - Association of Judges, Impact Justice, UWI, UN Women	Farmala Jacobs	
4	Political voice  Create more space within communities for voices to be heard, space on agenda  Enabling them to becoming self organised  Validate experiences of people who live on the margins - conducting empowering research	CIWiL (Cbean Women in Leadership)		
5	<b>Personal Security</b> (Domestic Violence)	Women at the Well Centre - Denise Noel-Debique	BPW - Shelter  Advocates against Domestic Abuse  Bdos Assoc of Muslim Ladies	
6	Develop and implement pilot projects that can be upscaled if successful		Jamaal Roach	

Table A3.5. Breakout group results for Pollution (litter, solid waste, sewage, pesticides, fertilizer)

	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
	Pesticides and Fertilizers			
1	Review and monitor pesticide and fertilizer use  Propose changes, Lobby for change	UWI, ??	BAS, UWI, Organic Growers Association	There is limited information on regulations pertaining to use of pesticides and fertilizer and on actual usage
2	Set up a demonstration community watershed management group for a small watershed (Bathsheba? Conset Bay?)		ECCO, FCT	Demonstrates community engagement and links to National Park plan and terminus of Rail Trail
3	Monitoring of pesticides	Pesticide Board's mandate?		Impact on groundwater, requires specific test for specific pesticides and fertilizers but Govt labs not able to do that. Govt has the data on monitoring wells but may not be accessible
4	Look at application - where sold, where coming from	BADMC and other farming associations		
5	Golf courses	managers of courses		Tend to be rigorous in application to control costs
6	Fish silage/emulsion turned into fertilizers	Sheena		Organic fertilizers development
7		Derek		High Concentration of fertilizers in well water likely  Chemical fertilizers cheaper for farmers to use, follow regime from suppliers and belief that organic are not as effective as chemical fertilizers

	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
8	Have farmers test soils to ensure appropriate use of fertilizers			Fertilizers available in B'dos that are generally not allowed in EU  Amendment to Pesticide Act  Removal of POPs
	Sewage			
9		EPD		Developers reluctant to put in package wastewater plants due to costs upfront  Who will manage the plants? All new developments will be required to have them but implementation challenges  Legacy issues - pit latrines
10	Use of treated waste water can be extremely high			Physical Development Plan is being updated
11	Need for joined up thinking - maintenance plan  -review of water and sewage needs as new developments come on line			South Coast works and Bridgetown have capacity in the system  <ul style="list-style-type: none"> <li>- energy requirement, scale too small</li> <li>- treated sludge - gardens</li> <li>- nutrient recovery - scale too small to be cost effective to recover resources</li> </ul>
	Other wastes			
12	Better design and construction  Monitor where packaging waste etc are ending up	Min of Env  Building Industry  George		Construction material wasted before actual use (10% in UK)  Likely no dedicated single group

	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
	<p>Upcycle/recycle - full waste separation needed to avoid wastage due to food waste being mixed with construction waste</p> <p>Establishment of construction wastage yards in Barbados to facilitate secondary use of materials that can be used for schools, churches, etc.</p> <p>Need large contractors to provide leadership</p>			<p>Reduction in carbon footprint would result from secondary use of building materials</p> <p>How to incentivize the contractors to support this</p>
13	Having a forum to bring the small/medium/large contractors with govt leveling the playing field to repurpose material that can be used for other purposes (schools, churches) etc.	Min of Env, Min of Education		
14	Technology solution to link builders to people who may have use for the material that would have been discarded. (Similar to linking food to social enterprise groups)		NGOs?	
	Solid waste			
15	Technology solution needed to be investigated for all types of resources		PS, social networks	
16	Waste separation - catch-22 but can start separation first to determine downstream needs e.g. how many trucks are needed?			

Table A3.6. Breakout group results for Open Space for people (National Park, conservation areas, trails, beaches)

	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
1	Work to develop the protected areas aspect of the OS system	Caribbean Protected Areas Gateway - housed in UWI	CERMES	Work with private and public who would be a good middle ground
2	<p>Address impacts of construction on beaches and adjacent coast</p> <p>Consider promoting the establishment and institutionalization of grievance redress mechanisms to ensure that reporting happens. Make information on reports and responses public.</p> <p>Address data deficiencies regarding state of the reef before and after construction. Need data collection tools</p>	<p>Town Planning has regulations and guidelines, but little capacity for enforcement. They rely on public to notify them. This is not known but it does exist. People should be told that they have this opportunity. How do we get the public to be more involved?</p> <p>Bajan Digital Creations - Project Blue Bot.com - use marine drones to produce terabytes of data.</p> <p>EIA processes do not always do what should be done. Public hearing often not well attended</p>	Public in general – civic participation	<p>Construction has killed the reef near Port Ferdinand. Need policy to prevent the damage, how they execute their work, dispose of waste</p> <p>Grievance redress forms exist (Antigua has one online). Donors often require this reporting process to be institutionalized. This could be managed by the group to work combined with government on this. Stipulate the process, who can report, lead time, public communication, records to be kept</p> <p>How to get public involved. There are several models for how public can be involved in this.</p>
3	Promote the uptake and awareness of new Town Planning regulations that require on site notices.	When submitting to Town Planning you have to put a public notice on the site on the road about particulars of the development. This is	Beach access and many abandoned structures/hotels on the beach that could be repurposed, e.g. Batts Rock - Four Seasons	Small developments can also be problematic, i.e. encroach on a walking path.



	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
		not unprecedented in the Caribbean.  This is in the new Town Planning regulations		These need to be announced early.
4	Lobby Ministry of MABE regarding the protected areas along the coast	Min Humphreys noted that BB cochairing a committee on protected areas with Maldives (international scrutiny)		Marine Spatial planning in process - tried to engage civil society but participation was low
5	Communication and raising awareness of OS. Series of articles use social media, webinars, i.e. Folkestone, Carlisle Bay, South Coast marine management area.	CERMES, Caribbean Youth Environment Network, Future Centre Trust	Media	Promotes human well-being. Share stories of what other islands are doing.  Signage and information on protected areas needed
6	Look at ways to strengthen civil society in Barbados. What is missing what are the gaps, what do they need to be empowered, how they can get involved in issues?			Pedagogical approach to education - top down approach, listen and don't speak is an obstacle to citizen development
7	Consider promoting open farms (agriculture and livestock) that people can visit to observe sustainable techniques. There may also be persons who are willing to lease their land for sustainable and/or initiatives.	Slow Food is currently developing some projects such as an educational bus to involve students directly with farmers and agricultural practices	PEG Farm	Funding is needed. So much energy goes into this. Persons working on these have so support themselves.  Streamline funds to support these projects that help the country.

	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
8	<p>Support and build upon the Rail Trail project that is already in progress and ready to move forward.</p> <p>Lobby for uptake of Open Space as a development focus.</p> <p>Look at ways of Including the Rail Trail as a sustainability component in larger infrastructure project.</p> <p>Regenerate Barbados can help create a collective effort to connect open space projects.</p>	<p>FCT (Barney Gibbs leading)</p> <p>Many civil society and private stakeholders that can take up opportunities by linking to this project</p>	<p>Tourism Plan, PDP, include trails</p> <p>Development of recreational spaces will generate jobs for private stakeholders</p> <p>Ministry of Culture can also re-purpose old structures, i.e. cane processing facilities for art.</p>	<p>There is an appetite for recreational trails and if the Powers that be can see that the public desires open/green spaces and active transport options funding might be more available.</p> <p>Trojan Horse way - Try to piggy-back green space projects on other projects.</p> <p>Trails can provide connectivity among conservation areas and other attractions.</p>
9	<p>Might be good to do stakeholder mapping of open space development and management as different open spaces come under different management agencies.</p> <p>Advocacy on just access via spatial distribution and quality is needed</p> <p>Could also advocate for official/formal protection of some spaces as they seem to be informally protected (e.g. Farley Hill)</p>	<p>CERMES can assist with mapping of open spaces</p>	<p>May be useful to request data from Town Planning on what was the state of open spaces from 2017? (4)</p> <p>We can map the relevant open spaces (including trails, etc.).</p>	<p>George Alleyne Chronic Disease Research Centre might be doing work on walkability of streets and access to open spaces as it relates to health</p> <p>We should also be clear on what we want: the existence of open spaces? access and usage? quality?</p>

Table A3.7. Breakout group results for Habitats and biodiversity (on land and in the sea)

	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
1	<p>Making sargassum into a cottage industry.</p> <p>Income generating projects from sargassum, like paper making</p>	<p>NCC, BDF, Fisheries, private citizens including farmers, Barbados Marine Trust (already seeking to have a marine statue park, but planning permission very slow)</p>	<p>Citizens, coastal schools, Tourists CZMU, Town and Country Planning</p>	<p>Locally based/ community managed areas and action is needed and will need coordination</p> <p>Beach conservation</p>
2	<p>Issue of not enough non-chemical pesticides available for people to use on kitchen gardens, etc.</p> <p>Roundup seems to be popular</p>	<p>Real Products, Red Diamond are two companies providing such products.</p> <p>Empire Mall used to sell organic products, but they are very expensive and most people cannot afford them.</p>	<p>Farmers and growers,</p> <p>Links to the inner circle of the Doughnuts</p>	<p>Adverse Health outcomes from pesticides</p> <p>While organic cleaning agents are a good idea, the cost of organic cleaners is prohibitive for ordinary citizens.</p> <p>Using indigenous food alternative</p>
3	<p>Soil protection and care is critical to maintaining habitats. E-waste is toxic to soil.</p> <p>Waste disposal and reuse in general. Movements like the Right to repair</p>	<p>Caribbean E-Waste Management,</p>	<p>Education within schools/communities</p> <p>Storytellers, habitat griots Rastafarian farming community who are already pursuing this</p>	<p>Computers and other e-products dumped in gullies, etc. and toxic stuff leaches out.</p> <p>How does-waste tie into the circular economy of reuse and recycle and how does this fit to Doughnut economics?</p> <p>The use of new technology and innovation to repurpose waste.</p> <p>Education is key to making progress in these areas</p>

	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
4	<p>How can habitat and biodiversity contribute food security</p> <p>Need for community cooperative gardens and greenhouses (e.g. for hydroponics).</p> <p>Using unused land in innovative ways.</p>	Organic Farmers e.g. John Hunte's Association	<p>Women Farmers Association</p> <p>Land owners could contribute or make available lots for growing food. Role for Town and Country Planning here in how they</p>	<p>Learning how to use local food produce.</p> <p>Using the resources of various habitats for recreation, culture and food production. In particular unused land</p>
5	Nature-based solutions/ Green technology to address issues such as water conservation and disaster risk reduction		Communities/families	Growing food in urban setting such as rooftop gardens
6	The importance of local flowers and their connection with bees and other biodiversity		Beekeepers Association, youth	Pesticides destroy the bees. Spraying needs to be monitored as it is killing wildlife
7	Gullies as a unique habitat	Hikers	<p>Watershed management as an approach to habitat management</p> <p>Storyteller/Habitat Griots, hikers</p> <p>Refer to Gully Ecosystem Management Study done by GoB (some gully sites to be made into conservation areas)</p>	<p>Problem of illegal dumping</p> <p>What else can be done with gullies as a unique habitat?</p> <p>Gully between Tent Bay and Andromeda Gardens can be used for community based tourism development to celebrate Amerindian Heritage/artifacts</p>

	A. Actions	B. Who in this group is already doing it?	C. Who else could be involved?	D. Rationale, Comments
8	Sea turtle conservation	Barbados Sea Turtle Project	Education (schools and communities)  Town and Country Planning  Education	Need for more monitoring and enforcement  How to persuade GoB that soft or green solutions may be as good as engineering solutions
9	Need to make Graeme Hall a wildlife UNESCO World Heritage Site	GHNS is already a Ramsar site.		Need to make fuller use of global designations that we already have