

Identification of opportunities for nature- inclusive business cases

Results of the workshops on Positive Health and Living
Environment (project Healthy Dutch Caribbean Islands)

Sjef Staps, Herman van Wietmarschen,
Martin Kershaw



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Summary

Nature is crucial to the Dutch Caribbean islands, providing a livable environment for the people who live on the various islands, and the islands' unique ecosystems attract tourists from all over the world. The project "Healthy Dutch Caribbean Islands - Nature conservation, business improvement and a resilient community by an integral approach" aims to support the development of a nature-inclusive economy on St. Eustatius, together with the local stakeholders. This report presents the results of stakeholder workshops to explore a preliminary list of business models for nature conservation. The approach taken in the workshops is a translation of the Bolk model for positive health and living environment (Van Wietmarschen et al., 2022) to the characteristics of this project,

The starting point for the stakeholder workshops was the 'health' of St Eustatius, translated as 'a healthy island'; a system with a sustainable balance between People (community), Planet (nature) and Prosperity (economy) (PPP). The focus for developing business models was on the resilience of the island, represented by the balance between People, Planet and Prosperity. The workshop results can be regarded as an assessment by the workshop participants.

Four themes were selected as overarching themes for the various workshops:

- Nature and agriculture
- Marine and water
- Waste management
- Social and health.

Building on these 4 themes, the following potential business cases emerged from the workshops. All cases complied with the boundary conditions of including an enthusiastic leader, stakeholders, a perspective for a financially positive business case and a subject that fits within the project scope.

They will be further developed in the next phase of the project:

- Food Security & Care farming ('zorgboerderij')
- Tourist tax for environment, agriculture and fishery
- Nature Awareness Festival
- Bird Watching Tours
- Community Dialogue
- Sustainable grazing management / livestock farming.

Background

The Public Private Partnership (PPS) project 'Healthy Dutch Caribbean Islands - Nature conservation, business improvement and a resilient community by an integral approach' is

being implemented within the framework of the 'Topsectors Agri & Food, Water and Maritiem and Tuinbouw en Uitgangsmaterialen'. The project runs from 2021 to 2024. The project is focused on the island of St. Eustatius. In September 2022, workshops have been organized for this project as a tool to define nature-inclusive pilots that fit the project scope and goal, and that are supported by local people and organisations. The workshops are the first phase of Work Package 2, Opportunity Assessment.

1. Introduction and background

The PPS-project 'Healthy Dutch Caribbean Islands – Nature conservation, business improvement and a resilient community by an integral approach' is carried out within the framework of the 'Topsectors Agri & Food, Water and Maritiem and Tuinbouw en Uitgangsmaterialen'. The project runs in the period of 2021 through 2024.

The project focuses on the island of St Eustatius. The project goal is to develop resilient and sustainable business models, with a strong connection to nature conservation.

Within this project, workshops have been organized aimed at exploring nature inclusive pilots/business models that fit in the project scope and -goal, and that are supported by local people and organizations.

The principal objective of this report is to identify potential business cases that can be defined in collaboration with local communities and organizations. This report assesses the opportunities for further developing pilots for nature-inclusive solutions. The subsequent step is to select four nature-inclusive pilot projects, which will be implemented in the subsequent phase of the project.

Following this introduction, the report will proceed to present the methodology employed in this study (chapter 2). The results will be presented in chapter 3. The report will conclude with a discussion of the conclusions and recommendations in chapter 4.

2. Methodology

2.1 The translation of the Bolk-model for Positive Health and Living Environment to this project

Positive Health was developed as a new integral health concept at the Louis Bolk Institute by Huber et al. (2014). It contains six domains: bodily functions, mental functions and perception, spiritual / existential dimension, quality of life, social & societal participation and daily functioning. In the last period of more than a decade, this concept has been broadly accepted, implemented and further developed in the Netherlands. One of the developments was the extension of the concept to the integral Bolk-model for Positive Health and Living Environment (Van Wietmarschen et al., 2022), see figure below.



Figure: Bolk-model for Positive Health and Living Environment.

Together with residents and other stakeholders such as for example municipal health services (GGD), municipal officials and district coordinators, housing corporations and project developers, researchers of the Louis Bolk Institute apply this model for community dialogues about which improvements in the living environment can contribute to public health. Structured and interactive action research with stakeholders, results in completing the Bolk-model for each specific case, for example in residential or rural areas. Amongst others, the model was successfully applied at a new residential area at the island of Texel. The process already led to increased social cohesion and an increase of public health, together with a decrease of health care costs. This has been monitored in the period of 2019-2022 (Staps and Hoefnagels, 2023).

Important related questions for the joined process were:

1. what do you think can improve the quality of the neighborhood and which amendments can improve public health?
2. Which qualities do you bring with you, or do other people or organizations bring in?
3. Who in the residential group will take the lead for which of the actions mentioned?

This approach has many advantages, as during the process, stakeholders build on a shared support base in a co-operative way. The approach enables an integral approach and shared plans and execution. Research, interviews, execution and evaluations are carried out in coherence. The Bolk model has successfully been applied in many cases, such as existing or developing neighborhoods in residential areas, and cases in rural areas where there are tensions between residents and intensive livestock farming.

In the original case of Positive Health, the individual health holds the central position in the scheme and the process. For the application of the Bolk model for Positive Health and Living

Environment at St Eustatius, the 'health' of St Eustatius is in the central position, explained as 'a healthy island'; a system with a sustainable balance between People (community), Planet (nature) and Prosperity (business) (PPP).

While in the original model the centre of the model is given by the resilience of the individual, in this case the resilience of the island, represented by the balance between People, Planet and Prosperity, is in the central position. This is the basis of the conceptual model as used for the workshops.

Furthermore, the six domains of Positive Health will be exchanged for domains that are at stake at St Eustatius. Based on PPP, this will be community, nature and business, but these three can be supplemented or further detailed with other issues. The eventual group of domains will be determined by the outcome of the interviews and exchange with the stakeholders. The final amendment for application at St Eustatius is the replacement of the scales 'street', 'neighbourhood' and 'district' in appropriate scales for St Eustatius. These can be replaced by, for example, respectively local business in the village and connections in the terrestrial and marine area.

In-depth assessment of solutions for increased nature-inclusivity

The innovations for nature-inclusivity identified in Task 2.1 are further scrutinized by the project team, in collaboration with students of van Hall and Wageningen University. Each of the innovations is evaluated from three angles (see figure below

- People: social acceptability, knowledge, skills, support
- Profit: economic and financial feasibility, business modelling and potential impact
- Planet: ecological impact and benefits.

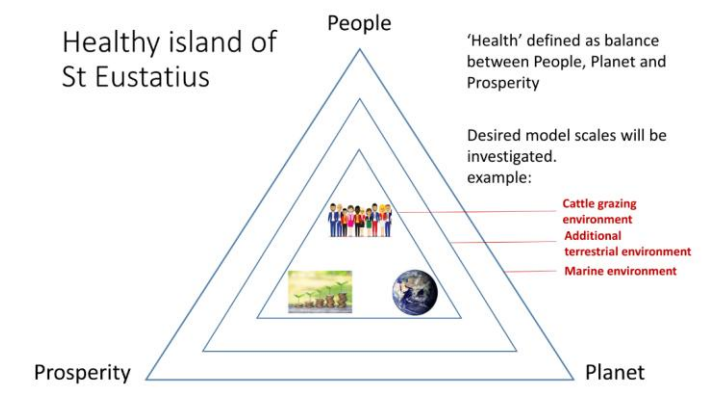


Figure: Use of People, Planet and Prosperity as domains, comparable with the domains of Positive Health in the Bolk-model for Positive Health and Living Environment.

The information collected in WP1 is a starting point for these in-depth assessments. Additional information was collected through field-work, interviews and surveys.

In a later stage and in a following report, the business cases will be schematized to Canvas business models (Ostwalder and Pigneur, 2010). This approach is applied in individual and group/regional settings to develop new nature inclusive business models for local people and organizations. It will be a building block towards new business models for St Eustatius. It is a tool for mapping and testing different business ideas building on the Bolk-model for Positive Health and Living Environment for valuing a product or service. This is done by displaying all business activities in a visible and visual way. The model provides insight into the most important opportunities for realizing an idea and helps in thinking about testing the assumptions. Canvas can be used individually or in a group process as a handle to develop, test and ultimately realize opportunities.

2.2 Plan of approach workshops

The plan of approach of the Workshops with the Bolk-model was as follows:

- The workshops were organized by the Louis Bolk Institute during a one-week visit to Statia in September 2022. A series of workshops was held on different themes and attended by different people and organizations.
- Primary goal of this series of workshops is to reach four business cases for nature conservation
- Starting point for the workshops is the Bolk-model with People, Planet and Prosperity (instead of the six domains of Positive Health); if appropriate, this can be amended during the workshops
- The workshops included different phases with the following questions:
 - What do you judge of value at St Eustatius; what is for you at stake and what do you want to preserve or regain for sure?
 - What is your dream, to be realized for St Eustatius?
 - Which bottlenecks can you identify?
 - Which qualities can you identify within this playfield (individuals, organizations, the island itself)?
What can you bring in yourself? What do need to do so?
 - Which opportunities can you identify for business cases?
- Based on the answers of the questions above, The result of each workshop should possibly be a description of one or more pilots for business cases, including:
 - An enthusiastic leader
 - A group of stakeholders
 - A subject that fits within the project scope
 - A perspective for a financially positive business case.

2.3 Starting themes workshops

Preparations for the workshops included describing an overview of relevant stakeholders, as could be formulated based on the earlier project interviews and activities. The list of stakeholders is presented in Annex 4. The workshop started with a preliminary overview of pilot themes:

3. Nature conservation
 - o nature fees / taxes
 - o reforestation
 - o coral reef; e.g. coral production
 - o protection dam
 - o bird watch tourism / fees / marketing / improving consciousness of nature (values)
 - o monitoring corals a.o.
- Agriculture, erosion, local food, food quality
 - o agriculture, made in Statia
 - o erosion
 - o water supply
 - o high food prices
 - o roaming cattle (with necessary prudence because of high sensitivity)
 - o carbon credits / sequestration
 - o regenerative agriculture / composting
 - o water management en nutrients runoff
 - o water desalination
 - o local market (centre of town)
 - o healthy food
 - o saline cultivation
- Waste & Energy management
 - o waste management; a ban single use bags, cups etc
- Schools and social- and health aspects
 - o drugs abuse
 - o training courses
 - o mental health, prevention
 - o well being,
 - o poverty.

In this chapter we discuss the workshop preparations in Section 3.2

2.4 Workshops: practical issues

For the preparation of these workshops, the following issues were addressed:

- Workshops in which certain people and organizations were invited. In addition, the workshops were broadly announced for additional attendance.
- A list of organizations and contact persons was produced together with a local employee from CNSI (Lyshandra Smith)
- Workshop attendees were invited in advance, in agreement with Lyshandra Smith. Used media were posters, emails and Facebook. For an example of a workshop invitation see appendix 1.
- Consideration of the most appropriate day and facilities (lunch, snacks, etc.)
- Consideration of attendance allowance.

- How to reach the relevant stakeholders.
- Appropriate combinations of themes and stakeholders
- The presence of someone who can translate when necessary during the workshops
- A clear framework for the workshop subjects: what can and what cannot be a dialogue subject?
- The preconditions for the pilots. Besides preconditions from the project (e.g., nature conservation and a nature-inclusive approach for the purpose of well-being, additional preconditions can be formulated by the stakeholders of each business case.
- The workshops were managed by Sjef Staps and Herman van Wietmarschen of the Louis Bolk Institute. Also present from the project team is Marin Kershaw of Van Oord Dredging.
- Besides the financial contribution from the project, in potential it is possible to look for additional financial support for the business cases from other sources.

The table below gives an overview of stakeholders, relevant themes and selected workshop themes. Based on the experiences of the earlier project phases, a relevant themes were described (see first row in table above). In the table, crosses indicate which themes are relevant for the different stakeholders.

Table: Stakeholders, themes and selected workshop themes (stakeholders in first column, themes in first row, the last four themes are the selected workshop themes)

	Nature fees / Leas	Relocation	High food prices	Carbon Credits	Competition / (local) market share	Ecological transition	Legal matters	Healthy food	Sustainable (local) industry	Coral monitoring, protection, production	Water supply	Waste management / nutrient load	Dredging	Mental health and prevention	Poverty and well-being	Nature and agriculture	Coral monitoring, protection, production	Waste management / plastic ban	Social and health
STENAPA	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
Government	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Made in Statia			X	X	X														
Hazel, Farmer			X	X	X		X	X											
Ms Brooks, Farmer			X	X	X		X	X											
Farmers cooperative																			
Fishermen repr.						X		X	X										
Chamber of commerce						X													
Van Oord			X	X				X	X										
LNV	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CNSI						(X)			X	X	X								
Futree Coral Reefs								X											
Veterinary						X	X	X											
Schools												X	X	X					
Oil Terminal																			
Harbor																			
Statia /business ass.																			
DCNA	X	X			X	X	X	X	X										
Children / future generations	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Tourist industry*	X	X			X		X	X											
Waste management plant											X						X		

* department, dive shops, hotels, new resort

Legenda:

Nature and agriculture
Marine and water
Waste
Social and health

The table was also the base for the selection of stakeholders for the different workshops. Finally, four themes were selected as overall-themes for the different workshops:

1. Nature and agriculture
2. Marine and water
3. Waste management
4. Social and health.

3. Results and discussion

3.1 Business Cases as outcome of the workshops

The following business cases were the outcome of the workshops (see appendix 5 for an extensive description):

1. Food Security & Zorgboerderij
2. Tourist tax for environment, agriculture and fishery
3. Nature Awareness Festival
4. Bird Watching Tours
5. Community Dialogue
6. Sustainable grazing management / livestock farming. A heritage walk
7. A cultural walkthrough (a heritage walk)
8. Nature, culture and ecology education for children
9. Debt prevention and poverty
10. Sale of alternative disposables
11. Water treatment plant

For the business cases 7-11, there turned out to be no leader available. Therefore, these topics have not been selected to be worked out extensively. The group of six will be worked out for the following project phase, and finally the goal is to select four cases to be carried out in a pilot setting.

3.4 Discussion

The basis for the workshops was the participative, action-research-approach with the Bolk-model for Positive Health and Living Environment. With this approach, the project (members) facilitate the process in which ideas and business cases can be generated from the people and organizations of the island of St Eustatius. The selected business cases can both content-related and financially be supported by the project.

From the workshops it became once more clear, that there is only a limited number of entrepreneurs at the island. Most workshops were dominated by a larger group of civil

servants from the government of St Eustatius. Besides, it turned out to be difficult to involve the entrepreneurs. For example, although invited, diving schools did not attend the workshops. It became not clear what the reason was for their absence. The researchers, from the European Netherlands, experienced reserves from the islanders. This can at least partially be explained by the historical and cultural background and relation between the European and Caribbean Netherlands (Oostindie en Veenendaal, 2022). Moreover, the Dutch government intervened in the administration of St Eustatius in 2018. Under the Temporary Act on Neglect of Duty in St Eustatius, a Government Commissioner was appointed after an advisory committee spoke of gross neglect of duty by the island administration (Algemene Rekenkamer, 2023).

The reach from the local of CNSI to recruit participants for the workshops turned out to be limited; announcements via radio were intended but eventually not executed without reason. When this became clear, it was too late for corrective actions.

The workshop approach with the basis of the six domains of Positive Health (bodily functions, mental functions and perception, spiritual / existential dimension, quality of life, social & societal participation and daily functioning) implied an integrated process. Furthermore, the starting point of values and qualities worked very well and stressed the participative action research. Although present in all business cases, this was especially recognizable in the business cases of food security, nature awareness festival and community dialogue as the values, holistic approach and broad participation are essential elements of these business cases.

Other as observations by the researchers are:

- Related to nature conservation:
at Statia there seems to be not much consciousness about the effects of humans on nature. Meanwhile the degradation of nature at the island is considerable. For example, in the last two decades the quantity of fish decreased with 90%.
- Related to entrepreneurship:
young people at Statia generally choose for white collar jobs instead of jobs in agriculture; the first (like of the government) are higher valued by their parents. Many youngsters who have gone studying abroad find a job outside Statia, thus causing a brain drain at the island, which also effects the extent of entrepreneurship at the island.
- Related to agriculture and fishery:
while Statia in earlier days exported agricultural products, nowadays it is difficult for local agriculture to be concurrent with imported food, mainly because the local production is insufficiently stable. This can mainly be caused by land degradation because of roaming animals. Besides, it is also said that in earlier days the island

received more rain and was much greener.

An important concern is the availability of cheap drinking water and water for irrigation.

Also the raising of an oil terminal at the island can play a role, since employees were distracted from agriculture to the terminal.

Besides, the anchor zone of the terminal used to be a major fishing zone.

- Related legislation and the relation between government and citizens: communication between government and inhabitants is experienced as rather poor. One of the reasons mentioned is the intervention by the Dutch government in the administration of St Eustatius in 2018.

At St Eustatius, much is interconnected between organizations and persons (relatives, families, religious communities, political parties) which can both support and counteract. Six families own the larger part of the island and thus play an important role in land use.

Enforcement (e.g. in relation with illegal waste dumping and building permits) is difficult because everybody knows each other. Therefore enforcement is mainly carried out by employees who are acquired from outside the island.

- Although we cooperated with the local NCIS-staff, it turned out to be not easy to get the workshop announcements and communication very well disseminated over the island. This might have had an effect on the participation of certain groups at the workshops. Groups that had relatively little attendance were for example fishermen, school delegates and citizens.
- We were able to organize these workshops and get involvement of a broad group of organizations and people. However, some workshops were dominated by the participation of delegates from the government.
- The participation by entrepreneurs was limited, which reflects the small extent of entrepreneurship on the island. This is an effect of the brain drain that takes place at the island.
- In general there was enthusiasm to attend the meetings and participate in an active way
- The approach of the workshops starting with the Bolk-model for Positive Health and Living Environment and questions based on values, dreams, bottle-necks and opportunities for improvements worked out very well. The impression is that several business cases are directly derived from this approach
- Six business cases were defined that fit well within the project scope.
- Within the framework of this project phase, we have organized workshops at Statia,

based on the Bolk-model for Positive Health and Living Environment. We were able to organize the following workshops that were attended by local people, largely from local organizations:

- Nature and agriculture
- Water and marine environment
- Waste management
- Social and health.

4. Conclusions and recommendations

4.1 Conclusions

Our conclusions are as follows:

The outcome of the workshops are following business cases (see appendix 5 for an extensive description):

1. Food Security & Zorgboerderij
2. Tourist tax for environment, agriculture and fishery
3. Nature Awareness Festival
4. Bird Watching Tours
5. Community Dialogue
6. Sustainable grazing management / livestock farming.

This group of six will be worked out for the following project phase, and finally the goal is to select four of these cases to be carried out in a pilot setting.

4.2 Recommendations

The six selected business cases have the potential to be developed in the next phase of the project. The following issues need to be addressed during the development and implementation of the business cases:

- The training of local stakeholders and their involvement in the implementation of solutions
- The economical feasibility of the solutions
- If necessary: the leverage of additional funding
- The potential involvement of local entrepreneurs.

Literature

- Algemene Rekenkamer. Intervention in St Eustatius. 17 mei 2023.
- Dutch Ministries of Agriculture, Nature and Food Quality, Infrastructure and Water Management and Interior and Kingdom Relations. Nature and Environment Policy Plan (NEPP) for 2020-2030 for the Caribbean Netherlands. 2020.
- Hal, O. van, & Staps, S. An integral overview of ecological problems on St. Eustatius. Internal report. 2022.
- Huber, Machtel, André Knottnerus, Lawrence Green, Henriëtte van der Horst, Alejandro R Jadad, Daan Kromhout, Brian Leonard, Kate Lorig, Maria Isabel Loureiro, Jos W M van der Meer, Paul Schnabel, Richard Smith, Chris van Weel, Henk Smid. How should we define health? *BMJ* 2011, Jul 26.
- Oostindie, Gert en Wouter Veenendaal: Ongemak. Zes Caribische eilanden en Nederland. 291 pages. Uitgeverij Prometheus. 2022.
- Ostwalder, A. and Y. Pigneur. *Business Model Generation*. 278 p. 2010
- Staps and Hoefnagels. Met gerichte wijkopzet kiezen voor Positieve Gezondheid: Eindrapportage. 33 p. 2022
- Van Wietmarschen, H., S. Staps, J. Meijer, F. Flinterman, M.C. Jong. The use of the Bolk model for positive health and living environment in the development of an integrated health promotion approach: a case study in a socioeconomically deprived neighborhood in The Netherlands. *International Journal of Environmental Research and Public Health*. 19 (2748). 18 p. 2022

Appendix 1: Example of a workshop invitation by email

Invitation to participate in the workshop of the project Healthy Dutch Caribbean Islands Nature conservation, business improvement and a resilient community

In the period of September 12 -19, 2022, partners of the project 'Healthy Dutch Caribbean Islands' will organize a range of workshops at CNSI. The goal is to support the local community and organisations in the development of nature-based business cases that will increase well-being at Statia.

Last May, a project delegation visited Statia and interviewed a wide range of different organisations and people. We learned about your visions of opportunities for improvements. In September, we will invite you for workshops and give you an opportunity to combine your ideas for developing promising business cases. If possible, different themes will be combined. The project team will offer you experience, tools and guidance throughout this process. For the next two years, the project can support four business cases.

The main goal of the workshops is to develop business cases for that contribute to nature, community well-being and business. The workshops will be carried out together with Statia's people and stakeholders. Input and contribution from stakeholders is crucial to define and develop the business cases. They should be sustainable, socially acceptable and economically feasible.

Different workshops will be focusing on different themes, such as

- reforestation
- erosion limitation
- local markets
- healthy food
- coral protection
- water- and waste management
- poverty, health and well-being.

We gladly invite you to join the workshop Coral & Water that will be held at CNSI on Wednesday, September 14, 9-12 a.m.

Please send your confirmation of participation (or absence) before Tuesday, September 6, to: s.staps@louisbolk.nl

For more information, please use the email-adress above.

Background information

Nature is crucial for St Eustatius. Sustainable nature conservation is necessary to prevent further decay and an economical decrease to 40-70% within the next 10-30 years. Our project goal is nature recovery, business recovery and the development of a healthy community.

We do this by applying an integral approach.

Together with the local community and local stakeholders, we will use a model for Positive Health and Living Environment to inventory the bottle-necks, desires and opportunities for business models for nature conservation. The aim is to develop self-sustaining systems. This is done in an interactive way, together with the local community and local stakeholders whereby all interrelating building blocks of a business model are described in a single overview. New business models and funding opportunities will be jointly explored and developed with the stakeholders involved, both private, public, NGO's and linked to the people's community. The results should be resilient and sustainable business models, with a strong connection to nature conservation.

An important project aspect is the inclusion of stakeholders and their experience of the current situation, bottle-necks and opportunities with benefits for the local stakeholders. Which role can stakeholders take and how can they benefit? What is the role of local community and entrepreneurs?

The project is carried out by the Louis Bolk Institute for sustainable agriculture, nutrition and health and WUR (Wageningen Economic Research) together with a group of supporting organisations such as St Eustatius National Parks Foundation (STENAPA), Royal NIOZ - Caribbean Netherlands Science Institute (CNSI), Dutch Caribbean Nature Alliance DCNA, the Government of St Eustatius, Van Oord Offshore, Foundation Future Coral Reefs and HBO-University Van Hall Larenstein.

The project runs for four years in the period of 2021-2024.

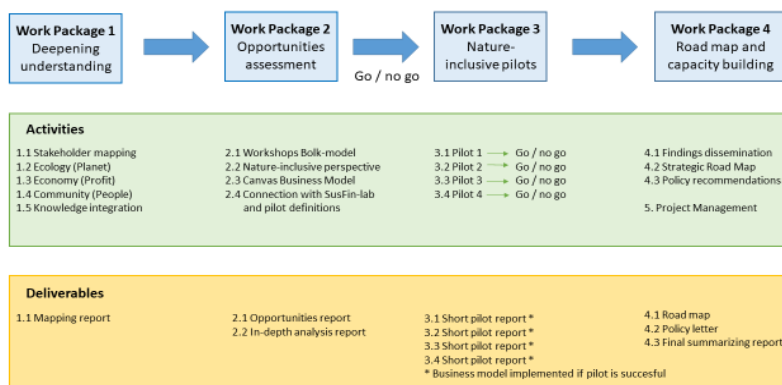


Figure: Work Packages, activities and deliverables

Table: Stakeholders: foreseen activities and benefits

Stakeholder	Foreseen activities	Foreseen benefits
<i>Population of St Eustatius</i>	Invited to participate in workshops. Information through local news outlets. Target group for final dissemination conference.	Healthy Island of St Eustatius; sustainable balance between People, Planet and Prosperity. Nature conservation, economic development and community support
<i>Local entrepreneurs</i>	Actively involved in project, including workshop with Bolk model and the four pilots. Target group for final dissemination conference.	Sustainable nature conservation and economic development, role in pilots and business cases
<i>Nature conservation organisations</i>	Consortium partner. Actively involved in project, including workshop with Bolk model and the four pilots. Target group for final dissemination conference.	Sustainable nature conservation. Active participation in pilots and business cases
<i>Policy-makers and governmental organisations</i>	Invited to participate in workshops. Recommendations for policy-makers as dedicated deliverable. Target group for final dissemination conference.	Healthy Island of St Eustatius; sustainable balance between People, Planet and Prosperity. Nature conservation, economic development and community support
<i>Non-governmental organisations</i>	Invited to participate in workshops. Target group for final dissemination conference.	Healthy Island of St Eustatius; sustainable balance between People, Planet and Prosperity. Nature conservation, economic development and community support
Global entrepreneurs	Consortium partner.	Active participation in pilots and business cases.
Scientific community	Dissemination of results at scientific conferences and through publications.	Knowledge development and – exchange.

For more information, please contact:

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Appendix 2: Poster announcement workshops



PLEASE JOIN ONE OF OUR WORKSHOPS AND COMBINE YOUR IDEAS
for promising business cases for

NATURE CONSERVATION, BUSINESS IMPROVEMENT AND A RESILIENT COMMUNITY

Sustainable, socially acceptable and economically feasible solutions

COMBINE YOUR IDEAS
The contribution as stakeholders is crucial to define and develop business cases.

FOCUSING ON THEMES SUCH AS:

- ✓ reforestation
- ✓ erosion prevention
- ✓ local markets
- ✓ healthy food
- ✓ coral protection
- ✓ water- and waste management
- ✓ poverty, health and well-being

SEPT 14-19TH

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Appendix 3: Impressions of the workshops



Picture: Presentation business case Food Security



Picture: Work shop Nature and agriculture



Pictures: workshop Nature and agriculture



Picture: workshop Social and health.

Appendix 4: List of stakeholders

Below, the list of stakeholders and contact persons is given:

- STENAPA (part of DCNA), Eric Boman
- DCNA, Tadzio Bervoets
- CNSI, Caribbean Netherlands Science Institute, Johan Stapel
- Van Oord dredging, Martin Kershaw
- Future Coral Reefs, Han Lindeboom
- Government, Anthony Reid and others
- Oil Terminal, Erik Twiest
- Schools, Remy, Fleur, Olivia, Gudrun, Bebora Kingsman, Jamilah
- Veterinary, Sharon Veira
- Made in Statia, Whinston Fleming
- Farmer, Mr. Hazel
- Farmer, Miss Brooks
- Fishermen-representative (Friday- conference)
- Chamber of commerce, P. Lara Reyes (Gisela)
- Acting Harbor Master; Mr. Gilberto Maduro
- Statia Business Association, Winston Fleming
- Ministry of LNV, Hayo Haanstra and Yoeri de Vries.

Met opmerkingen [PN1]: It is not clear which organisation this is

Appendix 5: Long-list business cases

1. Food Security and Zorgboerderij

- Leader: Gregory Melfor (Government)
- Stakeholders: Government, livestock farmers, arable land farmers
- Goal: Food security for the future.
- Finances: first draft is available at the Government.
- Result:
 - environmental health, ensured food production without compromising the land, air, water, etc. Land will be dedicated for farming.
 - Economic vitality, people can earn a decent living from growing food.
 - Human health and social equity, community development, availability of healthy foods.

Short explanation: the idea is to develop a policy, do data collection in farming (what is produced on the island, how much is consumed), planting local fruits and vegetables (seed conservation) and tree conservation, education, to assist with technical expertise, fertilization, pest management, production, distribution, commercialization, animal feed, water management, backyard gardening.

2. Tourist tax for environment, agriculture and fishery

- Leader: Erik Boman (STENAPA)
- Stakeholders: STENAPA, farmers, fishermen, tourist authority, government
- Goal: to support environment protection, agriculture and fishery together
- Finances: a rough estimate of 10,000 tourists a year and \$ 10 per tourist gives \$ 100,000 per year.
- Result: in 2024 there would be increased support for nature protected areas, larger benefits to stakeholders from nature protected areas, a well organised agriculture and fishery sector. More connection between nature organisations and the farmers and fisheries. In 2023 the plan needs to be organised with all the stakeholders. In 2024 it could be carried out.

Short explanation: fishermen and farmers have to give up something to protect nature. And they also need to see something back for that. The tourist tax is partly given back to the fishermen and farmers. Some areas of nature and sea need to be protected for nature. From the tax income, the farmers could receive subsidized feed for animals, or subsidised fuel for the fishermen, more in kind. This would also be an incentive to get the farmers collective and the fishery foundation up and running. a different way of animal husbandry can be organized by penning animals and providing feed. There are around 20 fishermen of which half work part time, around 10 will live of it. The idea can also include giving some money to the cultural heritage.

3. Nature awareness festival

- Leaders: Kimani Kitson-Walters and Achsah Mitchell
- Potential Stakeholders for this project include:
 - Tourism Department – Charles Lindo
 - Department of Economy, Nature, and Infrastructure – Director Anthony Reid
 - Culture Department
 - St. Eustatius National Parks Foundation
 - Golden Rock Dive Center and ScubAqua Dive Center
 - Primary and High Schools
 - Fishermen and Farmers
- Rough financial Picture: Revenue must be enough to organise the following year. 250 persons attending on the first execution.
- Goal: to increase the awareness of the local population in a fun and entertainment using edu-tainment. Attending patrons will learn about the importance of Statia's nature and promote an additional festivity in the island's calendar to boost tourism in a sustainable way. Target groups for this festival include the local population, tourists, scientists, and other stakeholders.

Short explanation: nature and environment are crucial concepts that are beneficial to the people of St. Eustatius, however the average Statian is not completely aware of these benefits and thus underestimates the value of nature. Due to the limited natural resources available on land and in the sea and in the wake of climate change. It is important that the people of Statia become aware of the benefits these limited resources provide along with the need to protect and use them sustainably. To stimulate this awareness in the local people in a fun and entertaining way, we propose the hosting of an annual Nature Awareness Festival. This additional festivity in the island's entertainment calendar would focus on the importance of Statia's nature, showcasing its beauty and the benefits derived. Activities during the festival will highlight various aspects of nature including coral reefs and forests to name a few. These activities can include a seafood culinary competition, science fairs, snorkel tours, scavenger hunts, etc. The festival could take place over 2-3 days with each day focused on a specific concept. An example of one such festival is the Maldives Coral festival.

4. Bird watching tours

- Leader: Ingrid Houtman
- Stakeholders: Tourist board, STENAPA, hotels
- Subject: Organizing bird watching tours
- Goal:
- Rough Financial Picture: Package deals with hotels, tours, possible photography, combination with St Maarten (to be elaborated)

Short explanation: someone from Statia can attend a course to become a bird watcher. There is training available at Sint Maarten, someone which can certify people to become bird guides. Hotels could advertise it and a website set up. Unique species of birds are very interesting for bird watchers. There is expected to be a market in the US and The Netherlands / Europe. Co-operation with Sint Maarten.

5. Community Dialogue

- Leader: Monica Smith
- Stakeholders: Statia Pride, government, community
- Subject: to conduct civil dialogues with the people.
- Goal: To develop citizens to their full potential and to stimulate the community to work towards a shared vision about an issue of general concern.
- Rough Financial Picture: 1 year 1 dialogue per month, would roughly cost 40.000 per year.
- Outcomes: exchange of information and ideas. This could facilitate peacebuilding and conflict transformation. Reduce violence. Increase the connection between community and government.

Short explanation: drivers are inclusiveness, joint ownership, humanity, confidentiality, a sustainable long perspective, good faith. There could be a zpp consultant that organizes the dialogue meetings.

Examples of possible session subjects:

- Outdoor space and play area
- use of solar energy,
- parking,
- landscaping.

A community dialogue is a forum that draws participants from different sections of a community.

The dialogue is meant as a flow of meaning and a forum that allows exchange of information. It is a process that involves a variety of people. Dialogues differs from debate, dialogue is about understanding, collaboration, active listening, two way communication, having pieces of the answers. Participants listen to each other to understand perspectives and needs.

The dialogues are connected to projects that are going to be carried out on the island. There should be a possibility that the opinions of people are then taken into account in the decision making. This is really important for generating community support for projects. This would improve the ownership of people for projects.

6. Sustainable livestock farming / grazing management.

Leader: Erik Boman

Stakeholders: STENAPA, farmers, government

Subject: Pilot to prove advantages of sustainable livestock farming

Goal: To prove advantages of sustainable livestock farming

Sustainable grazing management is connected with the current initiative of the shooting of goats. According to STENAPA, at least 30% of the roaming goats should be shot on a yearly base to prevent increase of numbers. For reduction, each year at least 70% should be shot. This initiative connects with the Nature and Environment Policy Plan (2020-2030).

The present free grazing of goats at Statia leads to overgrazing of grasses and shrubs, but also to soil capping, reduced water infiltration, increased water run-off and soil erosion. The primary reaction to solve this problem is often to reduce the number of animals or even to stop grazing. However, this not only influences negatively the livelihood of the livestock keepers/owners but also can have a negative impact on the environment. Complete banning of animals can in brittle environments result in the same process of soil capping, decreased water infiltration, increased run-off and soil erosion.

A pilot can be set-up to demonstrate the advantages of sustainable grazing management for example in three or four enclosures of 1 ha each Monitoring of soil cover, soil organic matter, water infiltration, run-off and vegetation. This can be compared with control areas with free grazing and small enclosures (10 x 10 m) without any grazing.

7. A heritage walk

A cultural walkthrough (a heritage walk), by which people walk through areas on the island where the history of the island is shown. Stakeholders would be the Governmental culture department and tourist office.

Young people need to see things in action, see what they could do. On the island or somewhere else. Including a field trip, maybe to Holland.

8. Nature, culture and ecology education for children

Primary education at Statia is not up to standards. This could include teaching about nature and ecology by adding information. Themes for the schools could be introduced about nature and agriculture. Excursions can be added in. An opportunity is to tie this into the *zorgboerderij* at some point.

9. Debt prevention and poverty

A meeting about poverty, debt and financial social work, that teaches about a spending pattern and how to change this so that people don't get into debts anymore. A pilot project could be started among the community about debt prevention. This ties in with well-being and prevention of medication use.

10. Sale of alternative disposables

Some years ago, plastics bags were banned from the island, but this backfired. The market for alternative materials turned out to be not sufficient. The question is now how to continue this program while alternatives are not available.

Some other islands have carried out this transition successfully. However, at Statia there was no good informing of the public about this issue and then people couldn't get the alternatives. There needs to be a business case for implementing these alternatives. There needs to be a vendor for good material on the island, and then it is expected to work. What is needed is to find someone who wants to fill this hole in the market and want to sell these alternatives.

Now everyone is buying from different vendors the single use plastics.

11. Water treatment plant

There is policy at Statia on waste water management. The building of a waste water treatment plant will be tendered in a couple of years to the private sector. The goal is to manage waste water of the whole island and retain as much rain water as possible, and thus prevent erosion and save the corals.

The leader could be the government, as it is responsible for waste management.

Stakeholders could be STENAPA, the coral protection program of the government, and EIJ services (a waste management company at Statia) .