Caribbean Research: a multidisciplinary approach

Call for Programme Chairs | Full proposal form 2019

1. Application details

1a. Applicant

Title(s), initial(s), surname(s):	dr. F. Guadeloupe (UvA/KITLV)

1b. Co-applicant(s)

Title(s), initial(s), surname(s):	Prof. dr. C.L. Hofman (LU/KITLV)
	Prof. dr. A. Carmona Báez (USM)
	Prof. dr. ir. F. A. Marchena (UoC))

1c. Title of research proposal

Island(er)s at the helm: co-creating sustainable and inclusive solutions for social adaptation to climate challenges in the (Dutch) Caribbean

1d. Scientific summary of research proposal

Driven by the increasing public awareness of the impact of hurricanes and the devastation of coastal areas, this program will contribute to equipping (Dutch) Caribbean societies with proficient tools for confronting these challenging climatic phenomena. Such adverse events have significant ecological, social, and cultural implications, affecting the basic living conditions (water, food, shelter-nexus/WFS-nexus) and heritage of the island inhabitants. This research builds on the principle that local-specific practices and ontologies of Caribbean societies are crucial for promoting sustainable WFS-nexus solutions. **Island(er)s at the Helm** brings together researchers and societal partners to employ a mixture of technical, traditional, and contemporary knowledge practices for studying climate change adaptation through a long-term perspective. Five inter-related work packages studying the WFS-nexus of the island(er)s will adopt a transdisciplinary research design including: archaeology, paleoecology, (paleo)ethnobotany, social-cultural anthropology, visual arts, performance arts, political science, urban design, urban planning, governance and policy sciences, legal studies, architecture, and civil engineering.
This program will create a trans-Atlantic academic platform and regional expertise center fostering research-based education and policy advice. The platform and expertise center will be eventually hosted and run by the Universities of St. Martin (USM), Curaçao (UoC), and Aruba (UA), in collaboration with the Caribbean Netherlands Science Institute (CNSI). This initiative will embed this research program and in the long-term strengthen the knowledge infrastructure in the Caribbean and the Netherlands, creating a space for dialogue among different yet equal voices from distant geographical places. The participation of GOs, NGOs, grassroots organizations, and local communities in the research and decision-making processes is a keystone of **Island(er)s at the Helm**. Together, these actors and researchers will co-create informed and tailored Sustainable Development Goals (SDGs)-related recommendations, and, societally embedded, research-based climate adaptation strategies with heritage safeguarding relevant for the (Dutch) Caribbean and other Small Island Developing States.

1e. Keywords

Climate challenges, co-creation, art and cultural heritage, water-food-shelter nexus, sustainable solutions

1f. Thematic focus area

The proposed research is mainly focused on one of the two following broad research areas:

☒ Social sciences and humanities

☐ Natural sciences

1g. Host institution(s)

Host institution	Royal Netherlands Institute of Southeast Asian and Caribbean Studies (KITLV-KNAW)

1h. Popular summary

Since the first occupation of the islands, hurricanes and the devastation of coastal areas have significant ecological and social implications for the (Dutch) Caribbean. These are deeply impacting the basic living conditions (water, food, shelter) and heritage of the island inhabitants. This requires immediate action! **Island(er)s at the Helm** brings together researchers and societal partners to combine technical, traditional, and contemporary knowledge practices to co-create sustainable and inclusive strategies for social adaptation to these climatic challenges. In parallel, a trans-Atlantic academic platform and regional expertise center, will be developed fostering research-based education on climate challenges for the islands.

Sinds de eerste bewoning van de eilanden hebben orkanen en verwoesting aan kustgebieden grote ecologische en sociale gevolgen voor het (Nederlandse) Caribisch gebied. Deze tasten de leefomstandigheden (onderdak, voedsel en water) en het erfgoed van de eilandbewoners aan. Dit vereist onmiddellijke actie! In **Eilande(rs)n aan het Roer** werken onderzoekers en maatschappelijke partners samen om technische, traditionele en hedendaagse kennispraktijken bijeen te brengen. Het doel is om nieuwe duurzame en inclusieve strategieën te ontwikkelen ten aanzien van de huidige klimatologische uitdagingen. Daarnaast wordt een trans-Atlantisch platform en regionaal expertise centrum ontwikkelt om het onderzoek en onderwijs over klimaatproblematiek te bevorderen.

2. Description of the research program

2a. Description of the proposed research program

Island(er)s at the Helm takes in earnest the fact that despite good practices that can be found amongst the island(er)s, today the insular Caribbean is at the center of the vulnerability debate with more than 50% of islands ' population living within 1.5 km of the shoreline. The increase in hurricanes, fluctuating dry-wet seasons, and coastal degradation due to the Anthropocene needs urgent attention on all levels of human-environment interactions (Ingold 2013; Scobie 2019; Subramanian 2019; UN Sixth general assembly 2012). The detrimental effects of droughts and coastal degradation on all six Dutch Leeward and Windward islands—Aruba, Bonaire, Curaçao, St. Maarten, St. Eustatius, and Saba—due to El Niño like events and sea level rise, coupled with the very real possibility of instant devastation wrought by hurricanes that are increasing in frequency and strength, speaks to the urgency of this program for (Dutch) Caribbean island(er)s. Irma's total destruction of St. Maarten and Maria's devastation on Dominica in 2017, and Dorian's demise of the Bahamas in 2019, all in a matter of hours, is a tell-tale sign of the fragility for the island(er)s. There is a growing public awareness as reports commissioned by the government in The Hague (Debrot et al. 2017) and United Nations reports on Small Island Development States (ECLAC 2011; S.A.M.O.A. Pathways 2014) recognize that such adverse events have significant ecological and social implications, affecting the basic living conditions (water, food, shelter) and heritage of the island inhabitants, especially those living below the poverty line. The Dutch Leeward and Windward islands—like increasingly the rest of the Caribbean—remain tourist driven economies. The destruction of airports and harbors by hurricanes and coastal erosion that threatens the foundation of hotels and lead to the disappearance of beaches and coastal heritage sites have deleterious and long lasting socio-economic and socio-cultural consequences. The effects of COVID-19, whereby tourism was brought to a halt, is another indirectly related example of the vulnerability of the island(er)s to global climate and environmental events. This is a reminder of the importance of resilience. This program aims to connect scientific relevance to these pressing events by co-creating sustainable and inclusive solutions for social adaptations to climate challenges with the island(er)s.

Island(er)s at the Helm's long-term perspective entails the program's recognition that Caribbean communities have been exposed to climate related challenges ever since the first human occupation of the archipelago between 8000 and 5000 years ago (Beets et al. 2006; Haviser 2019; Hodell et al. 1991; Malaizé et al. 2011; Scheffers et al. 2009). Alternating periods of drought and extremely wet climatic conditions, the threat of tropical storms, hurricanes, earthquakes, volcanic action, major surges, and the continuous menace of sea level fluctuations entailing disastrous floods, landslides, and coastal degradation have significantly altered the island's ecosystems over time (Engel et al. 2012). Such events have had serious impacts on human survival and adaptation strategies, resource practices, basic living conditions, and socio-political structures from the onset of island occupation (e.g. Contreras 2017; Fitzpatrick and Keegan 2007; Hofman and Hoogland 2018; Rivera-Collazo 2019). This has incited Caribbean islanders to constantly adapt and set distinctive insular ways of life and basic needs. Also, after the Western colonial invasion which brought people from Africa, Asia, and Europe to work as exploited 'laborers 'alongside the remaining Indigenous Peoples, massive deforestation, and a sharp population growth increased the pressure on natural resources and ecological systems (Castilla-Béltran et al. 2018; Watts 1987). Against the odds Caribbean islanders have been taking matters into their own hands and have found ways of creating an intra- and inter-island sociality that safeguarded their foodways, homes, and settlements, and integrated water resource management in environmentally astute ways (Beckford 2018). Acknowledging the Creole constitution of these locally-specific knowledge-practices often stored and transmitted in mundane as well as aesthetic forms of cultural heritage, this research program's epistemic starting point is that the innovative tools to be developed will have to be grounded in the lifeworld of the island(er)s and the preservation of their cultural heritage.

Island(er)s at the Helm's main research question is: What set of innovative tools and practices is needed to develop sustainable and inclusive societally embedded solutions to climate challenges in the (Dutch) Caribbean and to create better informed and more tailored strategies with wider regional and global significance? The overall aim is to co-develop with GOs, NGOs, grassroots organizations, and local communities of the Dutch Leeward and Windward islands—innovative tools and practices in the critical areas of integrated water resource management, foodways, and architectural practices, what we term following (Lohani (2020) the water, food, shelter nexus (WFS-nexus), which are socially adapted to climate challenges (Rasul 2016; Liu et al. 2018). These innovative tools and practices will contribute toward sustainable living that may reduce fossil-based energy use (Smajgl et al. 2016; Bazilian et al. 2011).

An innovative aspect of this project is the way social adaptations to these climate challenges will be studied and confronted with innovative solutions by a research team crossing the boundaries between the social sciences, humanities, technical sciences, and the natural sciences. Archaeologists, (paleo)ecologists, (paleo)ethnobotanists, anthropologists, visual artists, performance artists, political scientists, urban designers, urban planners, governance and policy scientists, legal scholars, architects, and civil engineers will mutually enrich each other, creating an open-ended transdisciplinary synthesis while engaging in their discipline-specific forms of research. In five inter-related work packages focusing on integrating traditional knowledge practices from a long-term perspective into urban design and planning, policy making, education, and research, the following methods will be employed: archaeological research, surveys, excavations, (paleo)ethnobotanical research, oral history, archival research, ethnography, filmed interviews, craftsmanship and technology, performing arts, engineering laboratory models of ecologically sustainable housing, water management systems, green-labs on smart agriculture, focus groups, community dialogues, policy co-creation, social action research, socio-technical systems analysis, and desktop research on policies and regulations coupled to design interventions at conceptual and experimental levels. In all the crucial stages of the program, this team of researchers will be working together with 1) the communities where the research takes place, 2) societal partners on both sides of the Atlantic, and 3) institutions of higher education and relevant governmental departments in the wider Caribbean region and the Kingdom of the Netherlands. This will allow for the translation of the research findings in appropriate policy, technologies, and good practices that contribute to the island(er)s attainment of SDGs. Specifically, this research will enrich at least four SDGs— 4 (education for sustainable development and sustainable lifestyle), 6 (support and strengthen the participation of local communities in improving water and sanitation management), 11 (enhance inclusive and sustainable urbanization) and 13 (take urgent action to combat climate change and its impacts).

Island(er)s at the Helm will be hosted by the Royal Netherlands Institute for Southeast Asian and Caribbean Studies (KITLV-KNAW), the Universities of St. Martin (USM), Curaçao (UoC), in collaboration with the University of Aruba (UA), and the Caribbean Netherlands Science Institute (CNSI), guaranteeing Kingdom-wide academic cooperation of all the Dutch institutes dedicated to Caribbean studies. Moreover, all these institutions have been moving towards a thematic of sustainable development in the face of climate challenges. Scientifically, this research will contribute to the knowledge formation on how Small Island Development States (SIDS), in this case, the Dutch Caribbean islands, are coping materially, socially, and mentally with climate challenges. A further step will be taken by initiating a trans-Atlantic academic platform with the goal of fostering research-based education on climate challenges. This platform will consist of representatives of the aforementioned institutions as well as the University of the US Virgin Islands (USVI), the University of the West Indies (UWI), Instituto Pedagogico Arubano (IPA), Delft University of Technology (TUD), Leiden University (LU), the University of Amsterdam (UvA), Erasmus University (EUR/ISS), Utrecht University (UU), University of Twente (UT), The Hague University of Applied Sciences (THUAS), and Utrecht University of Applied Sciences (HU), who have all already committed to the project and the platform. The trans-Atlantic academic platform will be tasked with assisting the research program in developing a BA minor and master classes in Caribbean Climate Challenges. More expansively the platform members will aid the program team in creating a regional expertise center jointly operated by the USM, UoC, UA, and the CNSI. This regional expertise center will specialize in the study of socio-historical, socio-technical, and psycho-social resiliency practices, and host collaborations with the researchers and students for their internships during the project. The ultimate goal of the center is to provide up to date advice and reports for the GOs and NGOs in the Dutch Caribbean on how to best socially adjust local WFS-nexus to climate challenges while fully taking the SDGs into consideration. Exemplary representatives of GOs, NGOs, and grassroots organizations will be a part of the board of the expertise center. These representatives will be key in fostering the co-created innovative tools and practices in the critical areas of integrated water resource management, foodways, and architectural practices. This will be embedded in the educational, governmental, and social infrastructure of the Dutch Leeward- and Windward islands.

2b. Composition of the research team including partners			
Name/Description	Affiliation	Expertise	Role in program
1. dr. F. Guadeloupe	University of Amsterdam (UvA)/Royal Netherlands Institute of Southeast Asian and Caribbean Studies (KITLV)	Anthropology – sociology Anthropology of kingdom relations	**Chair** PL WP 2, co-PL WP 1, 5 0.8 fte Co-supervisor PhD WP 2 Representative of UvA/KITLV in academic platform (WP 5)
Partners from academia			
2. Prof. dr. C.L. Hofman	Leiden University (LU)/ Royal Netherlands Institute of Southeast Asian and Caribbean Studies (KITLV)	Archaeology, heritage, transdisciplinary research	**Co-applicant** PL WP 1, 5, co-PL WP 2 0.6 fte (KITLV, SPINOZA) Supervisor PhD WP 1 Coordinator of WP 5
3. Prof. dr. A. Carmona Bàez	University of St. Martin (USM)	Political economy of development in the Caribbean	**Co-applicant** PL WP 4, co-PL WP 5 0.2 fte (USM) Co-supervisor PhD WP 4 President of USM in WP 5
4. Prof. dr. F. Marchena	University of Curaçao (UoC)	Engineering – sustainable water technology	**Co-applicant** PL WP 3, co-PL WP 5 0.2 fte (UoC) Supervisor PhD WP 3 Representative of UoC in WP 5
5. E. Mijts, MA	University of Aruba (UA)	Sustainable development in SIDS	Co-PL WP 2, 5 PM Representative of UA in WP 5
6. dr. F. Sangiorgi	Utrecht University (UU)	Environmental sciences – (paleo)- ecology and climatology	Co-PL WP 1 0.2 fte funded by UU Representative of UU in WP 5
7. Prof. dr. M. van de Port	University of Amsterdam (UvA)	Visual anthropology	Co-PL WP 2 PM Supervisor PhD WP 2
8. Dr. J. McBrien	University of Amsterdam (UvA)	Culture and development in vulnerable economies	Co-supervisor PhD WP 2, PM Representative of UvA in AP
9. Prof. dr. Ir. T.M.F. Asselbergs	Delft University of Technology (TUD)	Architectural engineering and technology	Co-PL WP 3, PM Supervisor PhD WP 3 Representative TUD in WP 5
10. Prof. dr. R. Belton	University of the District of Columbia (UDC)	Urban Architecture and Community Planning	Co-PL WP 3, PM Representative of UDC in WP 5
11. Dr. S. Bhochhibhoya	University of Twente (UT)	Sustainable Architecture and Water quality management	Co-supervisor PhD WP 3, PM Representative UT in WP 5
12. Prof. dr. E. van Bueren	Delft University of Technology (TUD)	Governance and sustainable urban design and planning	Co-PL WP 4 0.1 fte (TUD) Supervisor PhD WP 4 Representative of TUD in WP 5

13. Dr. D. Misiedjan	Erasmus University Rotterdam/International Institute of Social Studies (EUR/ISS)	Environmental justice and Human rights	Co-PL WP 4, PM Co-supervisor PhD WP 4 Representative of EUR/ISS in WP 5
14. Prof. dr. L. Echteld	University of Curaçao (UoC)	Lector UCRI (University of Curaçao Research Institute)	Co-PL WP 5, PM 0.1fte (UoC)
15. Prof. dr. R. Reddock	University of the West Indies (UWI)-United Nations CEDAW committee	Gender, development, and heritage	PM Representative of UWI in WP 5
Partners from other knowledge institutions (e.g. Universities of Applied Sciences, TO2-institutions, others)			
16. Dr. G. Richardson	Instituto Pedagogico Arubano (IPA)	Cultural heritage	PM Representative of IPA in WP 5
17. dr. P. Wijntuin	Utrecht University of Applied Sciences (HU)	Spatial politics, social work, and community development in the Car.	Affiliated researcher WP 2 0.1 fte funded by HU Representative of HU in WP 5
18. A. M. Andriol	The Hague University of Applied Sciences (THUAS)	Coordinator international programs	PM Representative of The Hague University of Applied Sciences in WP 5
19. dr. J. Stapel	Caribbean Netherlands Science Institute (CNSI)	Environmental sciences and outreach	PM, Director of CNSI in WP 5

20. Partners from private and public sector

Aruba:	Ministerie van Financiën, Economische Zaken en Cultuur (program consultant) Nationaal Archeologisch Museum Aruba (NAMA) (partner in WP 1 and outreach) UNESCO Aruba (program partner and outreach) Arte SANO Foundation (partner in WP 2 and outreach) CaribResearch of Aruba (partner in WP 3)
St. Maarten:	Ministry of Public housing, Spatial planning, Environment, and Infrastructure (VROMI) (consultant for WP 4) UNESCO St. Maarten (program partner and outreach) St. Maarten Archaeological Center (SIMARC) (partner in WP 1, 4, regional expertise center) Eco St. Maarten Agriculture Research and Development Center (partner in WP 3) Be the Change Foundation (partner in WP 2) Sint Maarten Hospitality and Trade Association (SHTA) (partner in WP 4)
Saba:	Saba Government (program consultant) Saba Archaeological Center (SABARC)/Saba Heritage Center (partner in WP 1, 2, 4, regional expertise center) Saba Conservation Foundation (SCF) (partner in WP 1, regional expertise center)
Bonaire:	Fundashon Históriko Kultural Boneriano (FUHICUBO) (partner in WP 1, 2) Dutch Caribbean Nature Alliance (DCNA) (partner in WP 1, 4) Workgroup UNESCO Bonaire (program partner and outreach) Bonaire Archaeological Institute (BONAI) (partner in WP 1, 4, regional expertise center) STINAPA Bonaire (partner in WP 1, 4, regional expertise center)
St. Eustatius:	St. Eustatius Center for Archaeological Research (SECAR) (partner in WP 1, 4, regional expertise center) Quill Foundation (partner in WP 2) Mega D Foundation (partner in WP 2)
Curaçao:	Caribbean research and management of biodiversity (CARMABI) (partner in WP 1) National Archaeological-Anthropological Memory Management (NAAM) (consultant WP 1 and 4) Monumentenraad Curaçao (consultant in WP 3) UNESCO Curaçao (program partner and outreach) Curaçao Heritage Foundation (partner in WP 3, 4) UNIARTE (partner in WP 2, regional expertise center) Mind Venture International (partner in WP 2) Public works (partner in WP 3) Samyama Permaculture Curaçao (partner in WP 3)
The Netherlands:	Rijksdienst voor Cultureel Erfgoed – Ministerie OCW (consultant for WP 4) RCN/OCW (partner for WP 5) Caribbean Director of OZ Architecture Company (partner in WP 3) CARAF (program partner) UNESCO Nederland (program partner and outreach)

Staff to be appointed within the research team

21.PhD 1 WP 1	KITLV/LU-UA	Archaeology	4 yrs/1 fte
22. PhD 2 WP 2	KITLV/UvA-USM	Anthropology	4 yrs/1 fte
23. PhD 3 WP 3	UoC-TUD	Ethno-architectural engineering	4 yrs/1 fte
24. PhD 4 WP 3	UoC-TUD	Ethno-urban engineering	4 yrs/1fte
25. PhD 5 WP 4	USM-TUD	Governance and policy making	4 yrs/ 1 fte
26. Postdoc 1 WP 1	KITLV--UA	(paleo)-Ecology – climatology	2 yrs/ 1 fte

27. Postdoc 2 WP 1	KITLV-USM	(paleo-)Ethnobotany – traditional culinary and agricultural practices	2 yrs/ 1fte
28. Postdoc 3 WP 2	KITLV-USM	Performing arts	2 yrs/ 1 fte
29. Postdoc 4 WP 2	KITLV-USM-	Visual culture	2 yrs/ 1fte
30. Postdoc 5 WP 4	KITLV-USM-	Governance and policy making	2 yrs/ 1 fte
31. Program coordinator	KITLV/USM/UoC/UA	General program	4 yrs 0.5 fte
32. Science commun. and outreach coordinator	KITLV/USM/UoC/UA	General program	4 yrs 0.5 fte
33. Data manager	KITLV/USM/UoC/UA	General program	4 yrs 0.3 fte

Research team and partners

The research team will be headed by a Program Chair working in close collaboration with the co-applicants and project leaders of the 5 work packages. The Program Chair, a public anthropologist with 20 years of experience producing ethnographies on both sides of the Kingdom and their postcolonial inter-relationships, served as president of USM between 2013 and 2017. The Program Chair is also PL of WP2 and co-PL of WP1 and 5. The co-applicants and/or PLs are renowned researchers in the fields of archaeology, engineering, and political science. The co-applicant and PL of WP1 and 5 is a Spinoza winner (2014) for her research in Caribbean archaeology and heritage, co-applicant and PL of WP 3 currently holds the UNESCO Chair of Sustainable Water Technology and Management at the UoC, co-applicant and PL of WP 4 and co-PL of WP 5 is the president of USM and a specialist in the political economy of development, and the last co-applicant and co-PL of WP 2 and 5 is the coordinator of Sustainable Island Solutions through Science, Technology, Engineering and Mathematics (SISSTEM) at UA. Together they will form the Program Management team. This team will be tasked with implementing the research program and bringing together the researchers of the various disciplines and the societal partners to achieve a synergy of research that leads to the co-creation of innovative tools and practices in the critical areas of integrated water resource management, foodways, and architectural structures that are socially adapted to climate challenges. They will also play a crucial role in the establishment of the trans-Atlantic academic platform and the creation of the regional expertise center, thereby strengthening the educational and research infrastructure in the (Dutch) Caribbean. In consultation with the Program Chair, the PL of WP5 will coordinate the academic platform and regional expertise center which will be jointly operated and hosted by the USM, UoC, UA, and CNSI.

The following disciplines and fields of expertise are included in the research program:

- Archaeology, (paleo)ethnobotany, (paleo)ecology, and heritage studies (long-term records of climatic and environmental change, social adaptations to natural catastrophes and cultural heritage;
- Anthropology/ethnography (cultural heritage in the storage and the cultural transmission of traditional knowledge-practices; climate change in visual and performing arts; the dynamics of popular culture and activism in complex postcolonial arenas;
- Water management, ethno-architectural engineering, and agro-ecology (opportunities for optimizing climate resilience;
- Policy and governance of sustainable development, human rights, environmental justice, the politics of development, heritage management, urban planning, and resource management in the built environment, spatial politics, social work, community development, political ecology, and heritage safeguarding.

The composition of the team is balanced in respect to gender, ethnicity, and age. The program aims to employ (Dutch) Caribbean students/scholars as much as possible to fill the PhD and postdoc positions. The Program Chair and PL of WP 2 will spend his 80% appointment on the islands, PL of WP 1 and 5 and coordinator of the academic platform and regional expertise center will spend 40% of her 60% dedication to this project in the Caribbean; PLs of WP 3 and 4 reside permanently in the Caribbean. The co-PLs either reside in the Caribbean or will make regular visits to the islands. PhDs and postdocs will spend most of their time in the Caribbean. They will be (co-)appointed at UoC, USM, and UA and at KITLV for the duration of the program. Caribbean institutions will make available their entire infrastructure (labs, offices and computer facilities) during the duration of the project. The presence of the entire

team for substantial periods of time in the Caribbean is deemed crucial to guarantee the success of this program. Their presence will facilitate the continuous exchange with the local societal partners, thereby optimizing the program's local and regional embedding. Being available and local on the ground is crucial for the successful establishment of the academic platform and regional expertise center. All affiliated academic and societal partners from the Netherlands will also regularly be in the Caribbean for conferences, project meetings, and lecturing in the context of the academic platform to continue fostering long term collaborations with and among the islands. In addition, substantial use will be made of existing tools for online education and online collaboration.

The following researchers have agreed to be part of the program as (affiliated) junior or senior researchers, co-supervisors, representatives in the academic platform and regional expertise center, or as consultants (in alphabetical order).

Prof. dr. H. Davies (USVI), education, business, and development in the Caribbean (representative of USVI in the academic platform).
Dr. T. Donders (Dep. of Geo- and Earth Sciences UU), regional anthropogenic and climatic drivers of ecosystem change (affiliated senior researcher WP 1, member UU in academic platform).
S. Emanuelson, MA (UNIARTE, Curaçao) visual arts (consultant WP 2, member of expertise center).
E. Erkoçu, MSc (UoC, Fac. of Engineering), engineering/architecture (junior researcher WP 3, member UoC in academic platform).
Dr. G. Felix, (UPR) agro-ecologist (affiliated senior researcher WP 3).
L. de Geus, MA (working group UNESCO, Bonaire) cultural policy (consultant WP 1, 4, member of expertise center).
Dr. C. Granger, cultural musicology Caribbean (senior researcher WP 2, representative of EUR in academic platform).
Dr. J.B. Haviser (SIMARC, SABARC, BONAI), archaeology, heritage, and outreach (consultant WP 1, 2 and 4, heritage and outreach, member of expertise center).
Dr. M.L.P. Hoogland (LU/KITLV), Caribbean archaeology and anthropology (affiliated senior researcher WP 1, member of expertise center).
H. Kelly, MA (NAMA, Aruba), archaeology and heritage of Aruba (junior researcher WP 1, member of NAMA in the academic platform and expertise center for archaeology and heritage).
Dr. T. Leslie, bio and cultural anthropology Eastern Caribbean Health Foundation St. Eustatius (affiliated researcher WP 2, member of academic platform).
Prof. dr. G. Oostindie (KITLV/LU), history, anthropology, politics (consultant WP 4).
Dr. J.R. Pagán-Jiménez (Puerto Rico), anthropology, archaeology, (paleo-)ethnobotany, (senior researcher WP 1).
A. Richards, MA (UNESCO Caribbean), adaptation planning for cultural heritage in the face of climate change (affiliated junior researcher WP 1, 2, 4, external PhD, supported by SPINOZA).
T. Sankatsing Nava, MA (KITLV), heritage, community engagement, science communication (science communication, general program).
J. Schroën, MSc (TUD, extreme architecture studio), architecture (affiliated junior researcher WP 3 and member TUD in the academic platform).
M. Smit, MSc (TUD, Sustainable Architecture), architecture (affiliated junior researcher WP 3, member TUD in academic platform).
A. Vis, MSc (UoC, Fac. of Engineering), water management/construction (junior researcher WP 3, member UoC in academic platform).

2c. Expected societal impact and utilisation plan

As SIDS, the Dutch Leeward- and Windward islands are the proverbial canaries in the coal mine of climate challenges. This threat is also an opportunity as through the SIDS Accelerated Modalities of Action (SAMOA) Pathway Framework, small island development states are on the forefront of advocating that the emerging global awareness on climate challenges be coupled with far reaching intra-societal, regional, and global cooperation aimed at achieving the SDGs (mentioned above) in their respective countries. The aim of this program is in line with the SIDS Framework on society-wide engagements.

In co-creation with GOs, NGOs, grassroots organizations, and local communities, researchers in the work packages will develop innovative solutions and practices in the critical nexus of water, food, and shelter that are socially adapted to climate challenges.

In **work package 1**: Resilient past communities and traditional knowledge practices, the generated long-term climate record and inventory of traditional knowledge practices rooted in the deep history of the island(er)s will contribute towards consciousness of how to respond, mitigate, recover, and adapt to climate challenges. The role of heritage in various stages of the disaster management cycle (preparedness, response, mitigation, and recovery) is

fundamental. Researchers will co-organize seminars with GOs, NGOs, heritage officers/cultural managers, and community members, to share and discuss the findings of the archaeological, (paleo)ecological, and (paleo)ethnobotanical research and collaboratively, with the researchers in WP 4, design a community-supported model for (intangible and tangible) heritage protection, mitigation, and adaptation in the islands. This needs to fill the gap in the absence of cultural heritage from national climate change agendas and or disaster planning processes. In collaboration with UNESCO, a special edition of the UNESCO First Aid course for the cultural heritage protection and preservation will be developed for the Dutch Caribbean islands.

In **work package 2**, aesthetics will complement the aforementioned outreach activities. A performance art piece on the relationship between cultural heritage and the social adaptation of the island(er)s to climate challenges from the pre-colonial period to the modern era will be produced. Further, an art installation that presents the relationships between modern technology and increase in natural hazards facing the (Dutch) Caribbean will be created. In addition, a cinéma vérité will be made on how island(er)s are employing low-tech solutions as part of enhancing their sustainable development. These artworks, which engage the WFS-nexus in an artistic way, will travel throughout the (Dutch) Caribbean and Europe, as well as be included in the course development of the cooperating Caribbean universities.

In **work package 3**, alternative designs and models of the WFS-nexus will be created by engineers who will be working with students and staff from USM, UoC, UA, TUD, and UT. These designs and models will include the desires and needs of local populations, as well as mitigate the ideological reservations of decision makers on the islands regarding sustainable urban planning and design. Besides being used in university courses and presentations to government officials, on site seminars of all six islands will be organized to explain the designs and models to professionals and groups who are less likely to attend institutions of higher learning.

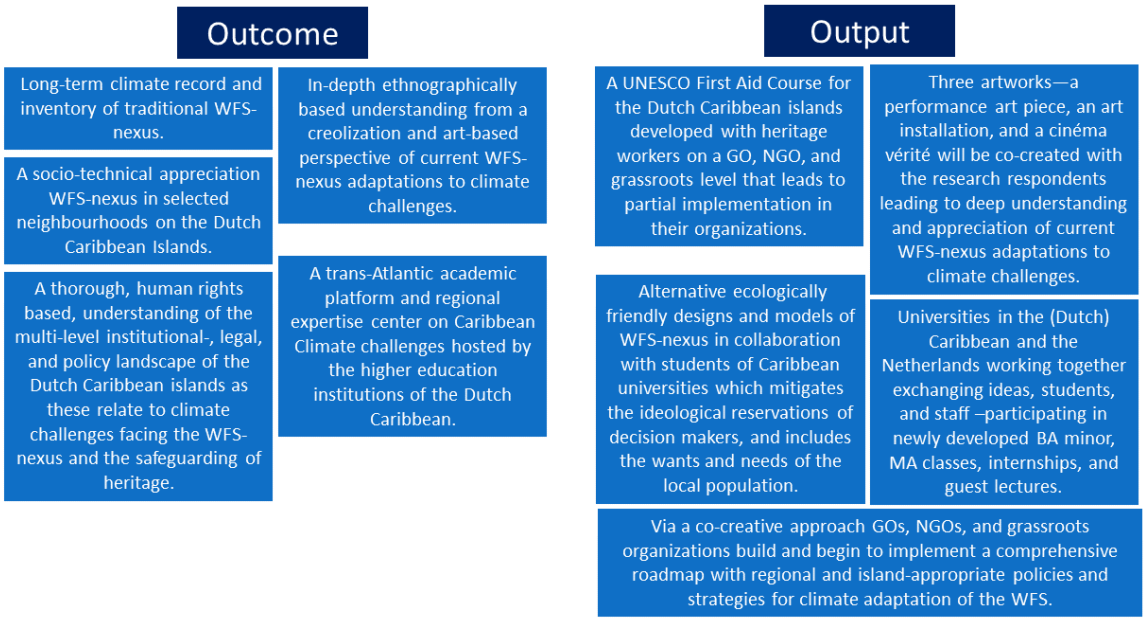
In **work package 4**, a model to facilitate intra-societal dialogue (co-creative approach) will be designed during the program, whose outcome will be a comprehensive roadmap with regional and island-appropriate policies and strategies for climate adaptation. With the roadmap—GOs, NGOs, and grassroots organizations will advocate for national ordinances which are crucial for safeguarding cultural heritage and sustainable forms of WFS-nexus on the islands while respecting human rights. In addition, networking seminars will be organized to incentivize GOs, NGOs, and grassroots organizations to thoroughly understand each other's positions and establish viable partnerships.

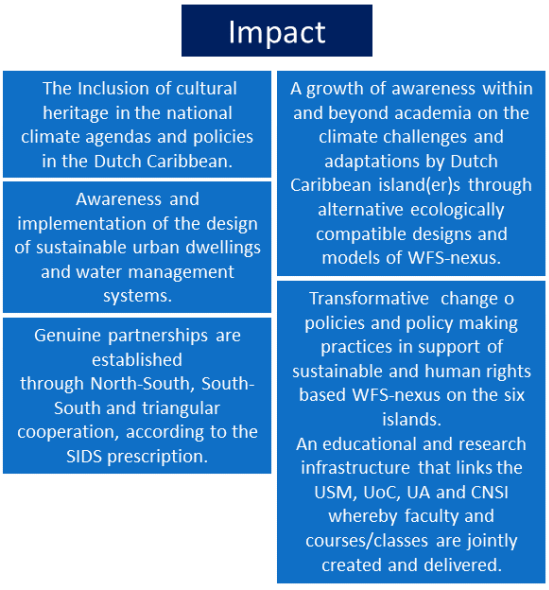
This research program also facilitates the SIDS prescription of establishing partnerships between the Global northern and southern countries in development. The USM, UoC, UA, and the CNSI will work on equal footing with the KITLV and other sister universities in the Netherlands and the wider Caribbean region. In **work package 5** this cooperation will be structured in a trans-Atlantic academic platform with the goal of strengthening the educational and research infrastructures in the Dutch Caribbean. A multidisciplinary BA Minor on Caribbean Climate Challenges will be developed, trans-Atlantic student exchanges and internships will be encouraged, guest lectures will be provided by international scholars who have committed to the academic platform, and seminars, community lectures, conferences, workshops, and performance lectures will be organized to motivate and offer the island(er)s practical tools towards attaining the SDGs.

In terms of the counterpart to the endeavors, the program will strengthen the educational infrastructure of the Dutch Caribbean, laying the institutional groundwork for a regional expertise center carrying out research on Caribbean climate challenges. This center will be jointly operated by the USM, UoC, UA, and CNSI. This center where the PhDs and postdocs might be employed after the program alongside their teaching engagements at the regional institutions, will produce reports, do consultancy, and contribute to academic publications coming out of the region. Exemplary representatives of relevant GOs (e.g., educational departments of all the countries of the Kingdom of the Netherlands), NGOs (e.g., environmental and/or cultural heritage protection agencies and UNESCO representatives on cultural heritage and the SDGs), and grassroots organizations (e.g., those coupling environmental justice to pressing societal issues) will be represented in the board of the expertise center. The regional expertise center will cater to all six islands, include board members representing GOs and NGOs and grassroots organizations from the wider Kingdom of the Netherlands. Via WP 5 the program will work towards securing funding from the Netherlands, Curaçao, Aruba, and St. Maarten to sustain the center after this program's funding has ended.

The long-term outcome and impact of this program lies in the participation of societal partners from the onset in all stages of the research project, educational offerings, and outreach activities. This strategy, which will lead to a comprehensive understanding and awareness of climate challenges and ways to mitigate these throughout the (Dutch) Caribbean. The strengthening of regional educational and research infrastructures, backed by a trans-Atlantic academic platform, provides the basis for Dutch Caribbean universities to structurally cooperate in a blended form and become international beacons contributing to debates on the importance of attaining the SDGs in the face of global environmental challenges. Knowledge exchange throughout the Kingdom of the Netherlands regarding climate

challenges and other related development issues facing these Dutch administered SIDS will be done on a more equitable basis. Students graduating from these institutions will form a well-trained local cadre who valorize the importance of cultural heritage in implementing WFS-nexus strategies that lead to achieving the SDGs.





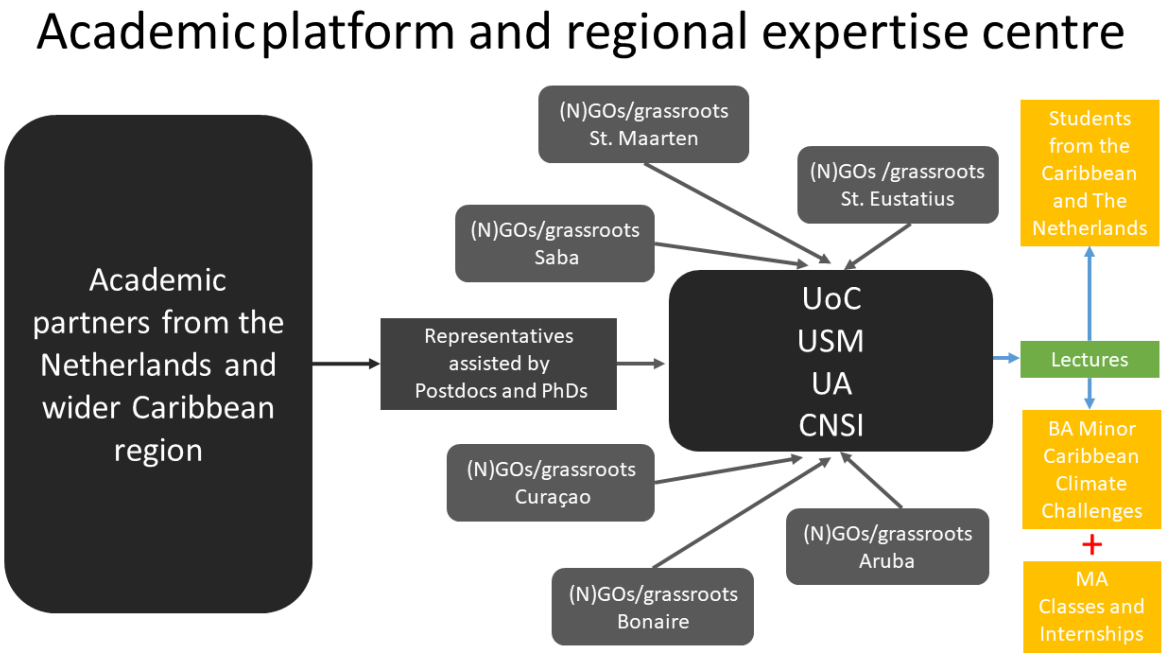
2d. Sustainable regional embedding, including contributions to strengthening the capacity and continuity of research in the Dutch Caribbean

By working together in the academic platform and jointly operating a regional expertise center, structural cooperation among the USM, UoC, UA, CNSI, and NGOs on all six islands will be fostered. These institutions will also immediately use the opportunity to develop relationships and partnerships with universities in the Netherlands and the Caribbean region. Building on decades of experience, the Program Chair and PLs have a uniquely broad network in the (Dutch) Caribbean and the Netherlands, which will enable the structural viability, solidification, and longevity of the academic platform and the creation of such a research center in the Dutch Caribbean. Spending the allotted time in the region leading the research and outreach activities, the Program Chair and the PLs, all having strong regional ties and long-standing experience working and carrying out research in the Caribbean, will consolidate partnerships and Memoranda of Understanding (MoUs) with leading Caribbean institutions, GOs, and NGOs. Existing MoUs with GOs and NGOs, universities, museums, and grassroots organizations will be articulated to the regional expertise center. Representatives of these institutions will be asked to take part in the academic platform and will be invited to teach in the BA minor and MA classes. The PhDs and postdocs will be (co-)appointed at one of three universities in the Dutch Caribbean and at KITLV, whereby they will be based in the region for the majority of the time. To strengthen capacity and regional embedding at all levels, the program aims to employ (Dutch) Caribbean scholars for the PhD and postdoc positions. It is also our endeavor to connect with and expand the network of regional and international projects with similar objectives.

List of existing regional collaborators:
University of the Virgin Islands, St. Thomas; Université des Antilles, Martinique; Kalinago Territory, Dominica; Ministry of Kalinago Affairs, Dominica; Musée Edgar-Clerc, Guadeloupe; National Trust of St. Kitts and Nevis; Ministry of Youth, Sports, Culture and Arts, Grenada; Ministry of Tourism, Sports and Culture St. Vincent; St. Vincent and the Grenadines National Trust; National Trust of Trinidad and Tobago; Ministerio de Cultura República Dominicana; Centro Cultural León Jimenes Santiago de los Caballeros, Dominican Republic; Museo Regional de Arqueología Altos de Chavón, Dominican Republic; Instituto Tecnológico de Santo Domingo (INTEC), Dominican Republic; La Pontificia Universidad Católica Madre y Maestra (UCCM), Dominican Republic; University of the West Indies (UWI) Mona, Jamaica; UWI Saint Augustine, Trinidad and Tobago; Anguilla Community College; Instituto Pedagogico Arubano, Aruba; Centro de Investigaciones y Servicios Ambientales y Tecnológicos (CISAT), Cuba; Universidad de la Habana, Cuba; Universidad Tecnológica de la Habana José Antonio Echeverría, Cuba; Anton de Kom Universiteit, Suriname; International Association of Caribbean Archaeology (IACA).

2e. Academic education program

A trans-Atlantic academic platform and regional expertise center on Caribbean Climate Challenges will be initiated and coordinated by PL Hofman (0.4fte, KITLV) and the Program Chair and will hosted by the USM, UoC, UA, and CNSI (**see WP 5**). The Program Chair will spend 0.2 fte of his appointment working on the academic educational program. The academic platform and regional expertise center will bring a sea of change in Dutch academia and Kingdom relations pertaining to education and research. The academic platform will unite the expertise from the academic partners in the wider Caribbean and the Netherlands. The affiliated researchers of the institutions outside of the Dutch Caribbean (see list above), will represent their respective institutions in the trans-Atlantic academic platform. These researchers have been invited based on their knowledge of the region and their discipline, institutional networks, social commitments, and their dedication to academic excellence. Their main role here will be to support the Program Chair, the academic platform coordinator, and the PLs in the overall strengthening of the educational and research infrastructure in the Caribbean. The postdocs and PhDs of the program will assist these representatives in preparing and giving the lectures for the BA minor and MA classes.
Interested students in the BA minor and MA classes, besides those from USM, UoC, and UA, will come from the Caribbean diaspora, TUD architecture programs, LU archaeology and heritage programs, HU social work and public health programs, EUR/ISS governance and international sustainable development programs, UDC urban architecture and community planning program, as well as the participating Caribbean universities. Part of the academic coursework for BA and MA students will consist of completing an internship at one of the GOs, NGOs, or grassroots organizations as complements to the main body of qualitative data of the program. They will also contribute in disseminating the research findings to a broader public audience. Together with NGOs (e.g., UNIARTE, Arte SANO Foundation), grassroots organizations, and local communities, the BA and MA students will co-develop campaigns and artistic workshops on sustainable development and community resiliency targeting primary and secondary school students, youth detention centers, and community youth programs.



2f. Communication and outreach

Public engagement, communication, and outreach of **Island(er)s at the Helm** will focus on four main audiences: regional and global scientific communities, societal partners, youth and schools, and the general public. The program will hire a science communication and community engagement coordinator, and a data manager, who will oversee the public engagement, communication, and outreach program. This will be accompanied by a robust and targeted communication and outreach plan (including website and branding) in collaboration with and using the existing communication channels of all partner institutions. To maximize impact, **Island(er)s at the Helm** will explore a broad range of top-down and bottom-up communication approaches. Project results will be disseminated through a variety of existing channels, networks, and repositories targeting research and academia, education, GOs, NGOs, and governments. Where possible, open access dissemination will occur using the existing digital platforms and tools of the participating universities. Local stakeholders will also play a fundamental role in disseminating activities and results to a wider public audience through their extensive networks (both online and offline).

1. Research Community and students: Dissemination of research results is targeted at both the regional and global scientific communities through participation and organization of conferences and symposia, published dissertations, peer-reviewed open access articles, edited volumes, and monographs. The research community and students in the (Dutch) Caribbean and the Netherlands will be targeted through all partner channels, as well as existing networks for (Dutch) Caribbean researchers.
2. Societal partners: The involvement of societal partners in all crucial stages of the research will also enhance communication to the general public. This will be achieved through sustained co-creation events and community seminars throughout the duration of the project, at regular intervals, and in key stages. The involvement of UNESCO is based on a mutual interest in the topic, previous event organization of one of the PLs (debate 'Heritage after Irma', The Hague Feb. 2018), and their program on Water Management and Governance. A special edition of the UNESCO First Aid course for the protection and preservation of heritage will be developed for the (Dutch) Caribbean islands.
3. Youth and schools: The program will also be working with schools and youth community centers on all six islands as well as in the Netherlands in elaborating educational materials to enhance the knowledge, and create awareness about the (Dutch) Caribbean and the challenges it faces. In the Netherlands, this is particularly urgent as school curricula pay little attention to the overseas parts of the Kingdom. A mobile planetarium hosted by our societal partner NOVA (co-sponsored by CaribTrails (SPINOZA) Hofman) will travel in the Caribbean and offer unique opportunities for education in a full-dome environment unknown to the region. First of all, the planetarium helps students of each island to gain a better understanding of the starry sky in the past and present as well as visualize effects of climate change. With the current software, the results of **Island(er)s at the Helm** can be made visual and transferable to visitors. The mobile character of such a Planetarium makes it possible to be integrated with the school education programs in all locations of the Kingdom of the Netherlands and the wider Caribbean. It is expected

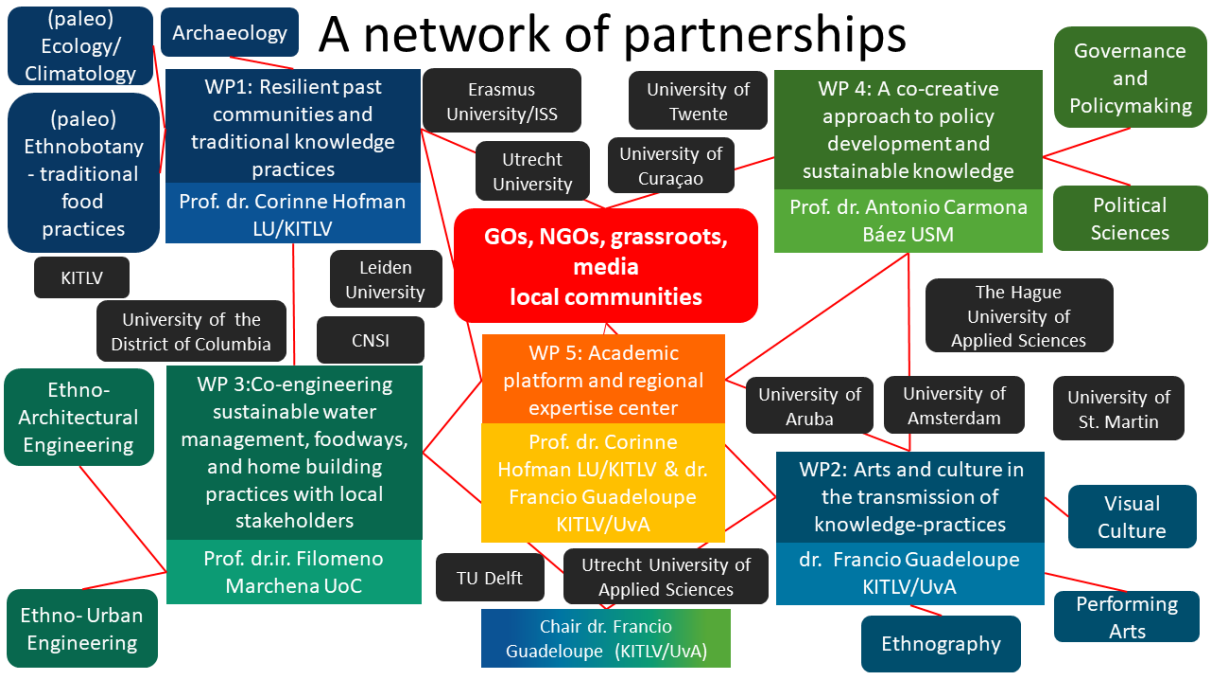
that Caribbean research will be strengthened through the long-term by increasing interest in study and career opportunities related to academic research and climate topics with youths on the islands.
4. The general public: Research blog, media appearances and articles will be published in a variety of media across the Kingdom, at each program milestone, event, and about main research results. Alongside traditional media and sustained social media through **Island(er)s at the Helm**, USM, UoC, UA, CNSI, and other program partner channels, the project will engage the general public through several public engagement and education projects across work packages. A documentary co-produced by and in the (Dutch) Caribbean on climate change challenges and the research and results of **Island(er)s at the Helm** will be one of the major societal outreach products in tandem with an exhibition in six editions to travel around museums, community centers, and grassroots organizations. Besides the program exhibit and documentary, the project will produce and implement a cinéma vérité, art installation, performance art production, a popular edited volume, public events, lectures, workshops, and the creation of educational materials.

The communication and outreach plan aims to ensure that **Island(er)s at the Helm** insights, results and products are implemented in practice beyond the lifetime of the project.

3. Workplan

3a. Overall workplan

Island(er)s at the Helm is planned for a total of five years and the program is organized into five interrelated work packages (WP) each led by a PL and co-PL(s). From the inception, WP 1-4 will be working with students from UoC, USM, UA, and participating universities in the Netherlands, these WP will be contributing to education and the trans-Atlantic academic platform (WP 5). A network of partnerships involving academic partners from different disciplines and institutions in the Caribbean and the Netherlands and societal partners (GOs, NGOs, grassroots organizations) and local communities will be developed. Embedding the program in the fabric of the Dutch Leeward and Windward islands entails having the societal partners involved in all crucial stages of the research. The feasibility of this program in terms of collaboration with societal partners, is guaranteed through MoUs and collaboration agreements. Collaboration will be sought, where possible, with the recipients of the other NWO programs in the natural/life sciences.



3b. Work packages

Work package number	1
Work package title	Resilient past communities and traditional knowledge practices
Work package leader	Prof. dr. C.L. Hofman (PL), dr. F. Sangiorgi and dr. F. Guadeloupe (co-PLs)
Involved partners	LU/KITLV, UU, UA, USM, UoC, CNSI
Timing	2021-2026

Objectives: WP 1 aims to understand social adaptation to climate challenges in the past to enrich and innovate the current knowledge-practices of the island(er)s. Researchers specialized in archaeology, (paleo)ecology/climatology, paleo-ethnobotany, and anthropology will study the continuities within the discontinuities of the precolonial and colonial histories of the island(er)s. The researchers in this WP will combine paleo-environmental and archaeological records to understand how people in the (Dutch) Caribbean islands adapted to climate challenges in the past (e.g., Cooper and Perros 2009; Fitzpatrick and Keegan 2007; Hofman and Hoogland 2015; Rivera-Collazo 2019). To date, this information is missing for these islands while it significantly contributes to the set of traditional knowledge practices necessary to develop sustainable solutions for social adaptation to climate challenges. In addition, in-depth research of (ethno-) historical sources and ethnographic research into traditional knowledge practices will be collected to understand the ways people, during the pre-colonial and colonial periods, built resilience in terms of water and food management and how they construct(ed) their houses to protect themselves from extreme weather events.

Description of activities: One PhD in archaeology and **two postdocs** in (paleo)ecology/climatology and anthropology/(paleo)ethnobotany will work together on case studies across the six islands using human behavior ecology and human niche construction approaches (Albuquerque et al. 2018; Balée 2006; Boivin et al. 2016) to produce an integrated reconstruction of the past ~8000 years in relation to regional-scale climate dynamics, environmental change, and social adaptation to climate challenges.

1) **Paleo-ecological investigations** (through analyses of sediment cores) in coastal and mangrove areas will provide records of past vegetation and coastal (marine) ecosystem changes that identify shifts in their health status and functioning through time (in relation to climate change and human habitation). The relation between environmental changes and density, type, and structure of archaeological sites will provide insights into temporal dynamics and resilience (i.e., time of return to pre-impact conditions or adaptations) of coastal ecosystems and associated resources vital for human survival.

2) **Archaeological surveys and excavations** in sites dating to the pre-colonial and colonial periods, added to existing archaeological and (ethno-) historical information, are expected to inform and enrich our knowledge on how people adapted to extreme weather events through time, and in this respect, how and where people settled, what there shelter and water management systems looked like, and what their subsistence practices were (Hofman and Hoogland 2015).

3) **Ethnographic field research**, in collaboration with WP 2 and 3 will add to this information with oral histories on traditional knowledge practices in these fields (Cone et al. 2013; Hiwasaki et al. 2014; Stancioff et al. 2018). Ethnobotanical information, also in collaboration with WP 2 and 3, will be critically assessed to identify how and why food systems were designed and applied in the ways they were in such local conditions over time.

This WP will also contribute to the policies and research developed in WP 4 specifically regarding the role of cultural heritage in adaptation and mitigation planning (Hofman and Haviser 2015; Perdikaris et al. 2017; Siegel et al. 2013). In addition, an archaeological and heritage course will be developed for the Caribbean Climate Challenges module developed in WP 5. Three fieldwork campaigns are planned in the context of the Academic platform and LU field schools (yr 1: ABC case studies; yr 2: SSS case studies; yr 3: additional in ABC or SSS). The regional expertise center and societal partners (BONAI, FUHICUBO, STINAPA, NAAM, NAMA, SECAR, SABARC, SCF, SIMARC, CARMABI) will host the researchers and lab facilities. Community consultation and participation will be at the core of this WP.

Expected output: Academic output**:** Dissertation 1 PhD in yr4; two articles postdocs in yrs1,2; academic and popular science articles PL/co-PLs in collaboration with WP 2,3,4 in yrs2,4; Edited synthesis with PLs WP 2, 3 and 4 published in university press, alongside a popular science variant in yr5. Congresses: Congress of the International Association of Caribbean Archaeology in yr3,5; European Association for Archaeology and Society for American Archaeology in yrs2,4; Participation program conference yr4. Educational materials: Implementation module Archaeology and heritage for BA minor and MA classes for the academic platform in yr3. Policy roadmap: Presentation community-supported model for (intangible and tangible) heritage protection, mitigation, and adaptation in the islands in yr 5 (with WP 4). Outreach: Bi-yearly seminars with societal partners and communities yrs1-5; Community lectures in yrs1-5; Presentations in planetarium in yrs1-5; UNESCO First Aid course in yr3.

Work package number	2
Work package title	Arts and culture in the transmission of knowledge-practices
Work package leader	Dr. F. Guadeloupe (PL), Prof. dr. M. van de Port, Prof. dr. C.L. Hofman and E. Mijts (co-PLs)
Involved partners	KITLV, USM, EUR, LU, HU, UA, CNSI
Timing	2020-2025

Objectives: The aim of this WP is to conduct in-depth ethnographic studies from a creolization and art-based perspective on how the island(er)s in the Dutch Caribbean are adapting their foodways, water resource management, and architectural practices to climate challenges. Anthropologists skilled in visual and performing arts, as well as the interface of technology and craftsmanship will carry out a broad inventory of the island(er)s explicit and tacit knowledge-practices with regards to their WFS-nexus. Academic appreciation of the pivotal role of the arts in the cultural transmission of knowledge-practices, and social adaption to climate challenges, is minimal in the (Dutch) Caribbean as opposed to the critical work done on this subject in the wider Caribbean (Sturtz 2016; Dirksen 2018; Soler-Martinez; Valdivia 2019). A similar lacuna exists where studies of current forms of creolization in the (Dutch) Caribbean are concerned. The researchers in this WP will depart from the tenet that in everyday life in the Creole cultures of the island(er)s older and newer knowledge-practices are artistically engaged in novel ways (Gutiérrez Rodríguez and Tate 2015; Guadeloupe 2009; Mintz 1996; Glissant 1996); a case of neo-tradition brought about by aesthetic motifs within the processes of creolization.

Description of activities:

A **postdoc** specialized in the anthropology of performance arts and with fieldwork experience working in the Dutch West Indies will focus on Curaçao, Bonaire, and Aruba. Building on existing networks, the postdoc will conduct original research on the tacit and explicit ways that art based- and environmental NGOs make use of the cultural heritage of the islands to promote sustainable foodways, water use, and building practices in the face of climate challenges. The methodology will consist of 1) historical research and Foucauldian discourse analysis (Ball 2013) on the artistic-pedagogical use cultural heritage, 2) participant observation, 3) structured and conversational interviews, 4) group discussions employing theatrical and other performance methods whereby interlocutors from various islands exchange knowledge practices on how they use cultural heritage to sensitize the inhabitants of the islands to socially adapt to climate challenges. The postdoc will create a performance art piece with his/her interlocutors, presenting the relationship between cultural heritage and the social adaptation of the island(er)s to climate challenges from the pre-colonial days to the modern era (in collaboration with researchers from WP 1).

The second **postdoc** and the **PhD** candidate will live for a full year in communities that form the locus of their research. They will study foodways by learning how much residents earn, how they allocate their budgets, and how dietary intakes are acquired and consumed. Exploring water use, the anthropologists will analyze different ways of water acquisition: via cisterns, state owned water companies, or bottled water consumption. They will explore the reuse of water via cesspits that irrigate grounds for kitchen and garden use, or whether it immediately flows to the sea. Moreover, they will study how cistern, tap, or bottled water is used for cooking, bathing, laundry, dishwashing, leisure, and status performance. Last, architectural practices will be investigated by researching how residents are adapting and have adapted their housing and living practices over a set time, in terms of location choice, building design, material use, indoor and outdoor comfort, maintenance and repairs, and waste practices.

Involving their trusted interlocutors, the postdoc and PhD will also make a start in their final stages of fieldwork on the production of artworks based on their gathered data: a cinéma vérité on how island(er)s are employing low tech solutions as part of enhancing their sustainable development, and an art installation that presents the relationship between modern technology and climate change challenges facing the (Dutch) Caribbean.

The findings of the three anthropologists as well its translations in their artworks, writings, and public presentations, will allow authorities with whom fellow researchers work in WP 3 and 4 to better appreciate and cater to the needs and wants of the island(er)s before and after natural hazards. Their work will also contribute to WP 5 in the form of developing and teaching courses based on their findings. The artworks, weaving everyday linguistic practices, music, rituals, and customs, will travel **and** be exhibited to sensitize (Dutch) Caribbean and Europe on how island(er)s are coping with climate change challenges. Involved societal partners are: UNIARTE, Mega-D, Arte Sano, Quill Foundation, National Institute of Arts.

Expected output Academic output: Dissertation: 1 PhD in yr4; two articles by postdocs in yrs1,2; academic and popular science articles PL/co-PLs in collaboration with WP 1,3,4 in yrs2,4; A cinéma vérité, art installation, performance art production in yr4; Edited synthesis with PLs WP 1, 3 and 4 published in university press, alongside a popular science variant in yr5. Congresses: Caribbean Studies Association, American Anthropological Association, European Anthropological Association, Performance Studies International in yrs1-5; Program conference yr4. Educational materials: Implementation module BA minor and MA classes in anthropology, art, and heritage for the academic platform in yr 3. Outreach: Bi-yearly seminars and workshops with the societal partners yrs1-5; Community lectures, performance lectures, themed study days in yrs1-5.

Work package number	3
Work package title	Co-engineering: the water-food-shelter-nexus with local stakeholders
Work package leader	Prof. Dr. Ir. F. A. Marchena (PL), Prof. dr. Ir. T.M.F. Asselbergs and Prof. dr. R. Belton (co-PLs)
Involved partners	UoC, TUD, UDC, KITLV, UT, USM, UPR, CNSI
Timing	2021-2026

Objectives: The objective of this WP is to make conceptual and experimental designs of a sustainable way WFS-nexus at the building and neighborhood level, based on a socio-technical analysis of the nexus in selected neighborhoods on the (Dutch) Caribbean islands (cf. Lohani 2020). The ethno-architectural engineer and the ethno-urban engineer conducting the research in this WP will take the WFS-nexus as a unit of analysis in their community-based studies. The necessity of such a study is manifold. Houses and community buildings are currently built with unsustainable materials and designs. Sustainable building in the right places is essential, as is the harvesting and purifying of rain water in the ephemeral streams where pathway houses are built. The costliness of fresh water supply in the (Dutch) Caribbean, based almost exclusively on seawater desalination, is exponential (Marchena and Halman 2018). Although of very high quality, desalinated water is too costly for private gardens and community green-labs that could complement the imported foods on the islands. This WP seeks to contribute to making the WFS-nexus of the island(er)s more sustainable and affordable. Researchers in WP 3 will complement the humanities and social scientific focused approaches of WP 1 and WP 2, and the policy and governance approach of WP 4.

Description of activities: PhD 1 on ethno-architectural engineering will conduct a socio-technical systems analysis in a local community with BSc- and MSc students of USM, UoC, UA, and universities in the Netherlands, on the WFS-nexus in relation to climate challenges. Housing architecture will be the PhD's point of entrance in investigating the nexus. In this first phase of the research the PhD will also take on board the socio-cultural insights emerging in the studies being done in WP 1 and WP 2. An understanding of these is essential for locally appropriate building designs. In the second phase, the PhD will conduct research on the design and construction of cost effective, energy efficient, and climatologically resilient residential buildings (Meir and Pearlmutter 2010; Larsen et al. 2011). The third phase will be the conceptual design of homes integrating a sustainable and possibly off-grid way WFS-nexus and the presentation of the designs to the research respondents. Their responses will be recorded, as well as the PhD accompanied by the students will make use of the opportunity to conscientize the respondents and the wider community on the necessity of adapting their WFS-nexus to climate challenges.
PhD 2 will take an ethno-urban engineering approach and will conduct research on the urban development policy goals and strategies of civil servants and politicians, the decision makers. The researcher will seek to ascertain the reasons behind the choices of these decision makers in 1) issuing building permits in the pathways of the ephemeral streams, 2) not engaging in the harvesting rainwater or 3) the stimulation of kitchen gardens and community green-labs, and 4) the development waste discharge systems that do not further contaminate the groundwater. A combination of methods will be employed including interviews and analyses of policy documents. PhD 2 will go on to design small scale water resources management- and agro-ecological technologies to enhance food security and off-grid resiliency in the local community studied by PhD 1. These designs, which include the mitigation of the reasoning of the decision makers, will complement the models presented in phase 3 of the research of PhD 1. In this phase PhD 2 will work in close collaboration with the researchers in WP 4 to appreciate and make publicly known the policy and governmental implications of spatial planning in relation to these designed solutions. Involved societal partners are: Samyama Permaculture Curaçao, Eco-St. Maarten Agriculture Research and Development Center, and CaribResearch of Aruba.

Expected output: Academic output: Dissertations on the basis of articles 2 PhDs in yr4; WFS-nexus informed designs of energy efficient and cost-effective buildings, as well as models on how to implement small scale water resource management technologies supplying green-labs that enhances food security in yr5. Contribution to the artworks of WP 2 in yrs1-5; Scientific and popular articles by PL/co-PLs in collaboration with WP 1,2,4 in yrs2-4. Edited synthesis by PL with WP 1,2,4 published in university press, alongside a popular science variant in yr5. Congresses: International Conference on Sustainable Architecture and Urban Planning, International World Conference on Desalination and Water Reuse yrs1-5; Program conference yr4. Educational materials: module for BA minor and MA classes in sustainable water management, food security and safety, and home building in yr3. Outreach: Bi-yearly workshops and seminars with societal partners in yrs1-5; community lectures in yrs1-5

Work package number	4
Work package title	A co-creative approach to policy development and sustainable knowledge practices
Work package leader	Prof. dr. A. Carmona Báez (PL), Prof. dr. E. van Bueren, dr. D. Misiedjan (co-PLs)
Involved partners	USM, TUD, EUR/ISS, KITLV, , UoC, UA, , CNSI
Timing	2021-2026

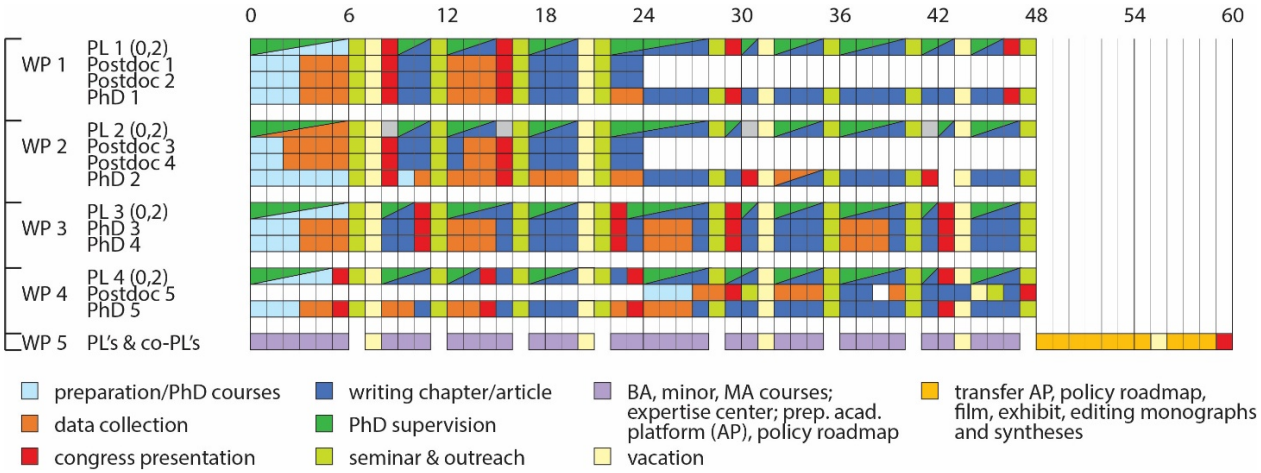
Objectives: The aim of WP 4 is to develop a co-creative approach that will advance a transformative policy roadmap enabling the island(er)s to socially adapt their existing WFS-nexus to climate challenges which are in line with SDGs 4, 6, and 11. Throughout the entire process, the researchers trained in political science, and governance and policy making, will be working with representatives of GOs, NGOs, and grassroots organizations to guarantee that the cultural heritage and contemporary ways of being of the island(er)s forms an integral part of the policy roadmap. This falls in line with the human rights-based approach (HRBA) which requires accountability of duty bearers and participation/empowerment of communities (Arts 2017; Meehan et al., 2018, Misiedjan 2019). In contrast, recent policy ventures and guidelines for environmental management, spatial planning, and cultural heritage (e.g., Beleidsplan Natuur en Milieu 2020-2030; Cultuur in Caribisch Nederland, een handreiking 2017; the Convention for the Safeguarding of Intangible Cultural Heritage 2003/2014); Spatial Development Plan Aruba, 2019), have been for the most part top-down technical silo affairs (cf., Terrapon-Pfaff et al. 2018) and lack consistent guidance for adaptation (Thomas et al. 2019). In developing the co-creative approach with the various aforementioned stakeholders, researchers will facilitate policy prioritization in order to reconcile or overcome trade-offs and identify synergies amongst practices and solutions to make the WFS-nexus more socially and ecologically sound (Van Bueren et al. 2012; Galafassi et al. 2017).

Description of activities: The **PhD** researcher in governance and policy making will develop the contours of the conceptual framework of the approach, based on a systematic review (PRISMA), of relevant literature in fields of Political Ecology, Policy Transfer and Diffusion, Participatory Policy-Making, and Critical Legal Studies as these specifically relate to the Dutch Caribbean, wider Kingdom of Netherlands legislation, and the attainment of the SDGs. In doing so formal and informal power relations between actors at multiple levels of governance influencing current WFS-nexus will be revealed, as well as possible forms of collaborative action and policies necessary to adapt the current WFS-nexus to climate challenges. Working closely with the three aforementioned WPs, the **postdoc** in political science will organize an inter-island focus group consisting of representatives of GOs, NGOs, and grassroots organizations who will be tasked with critically reflecting on and further co-designing the conceptual frameworks of the approach. This focus group will be encouraged to also further co-develop the co-creative model initiated by the PhD researcher in line with the best practices based on their cultural heritage.
Situations whereby the WFS-nexus is seriously and structurally challenged by changing climatological conditions, e.g., increase in the frequency of hurricanes or prolonged drought seasons, will be selected as case studies for the social action research part of this WP. Given the composition of the focus group, their ownership of the co-creative approach and input in the choice of cases, the postdoc and PhD researchers will be able to attain the interest of key stakeholders to participate in the research. First, a thorough analysis will be performed of the specific policy contexts and settings where the WFS-nexus can be improved. In the analysis the SDGs will be included. Second, intensive group dialogues will be organized to inform the key stakeholders about the findings and the importance of the SDGs for the improvement of the WFS-nexus. These meetings will also be used to allow the stakeholders an appreciation of each other's institutional needs and wants. Third, (renewed) trust and recognition between these stakeholders will lead to joint actions to improve cross-sector resource dependencies and alleviate legal bottlenecks. Fourth, policy roadmaps will be co-developed with the stakeholders to socially adapt the WFS nexus to the existing climate challenges and the SDGs.

Expected output: Academic output: Dissertation PhD based on articles in yr4 two articles postdoc positioning the approach in the field and critically reflecting on the use and outcome in yr3,4; PL and co-PL's: scientific and popular publications and outreach on the approach and recommendations in collaboration with WP 1,2,3 in yr2,4. Edited synthesis PL with WP 1,2,3; Policy roadmap: in collaboration with WP1,2,3 in yr 5.Outreach: bi-yearly workshops and/or seminars with societal partners and communities yr1-5; community lectures in yrs1-5.

Work package number	5
Work package title	Academic platform, regional expertise center, science communication and outreach
Work package leader	Prof. dr. C.L. Hofman and Dr. F. Guadeloupe (PLs), Prof. dr .A. Carmona Bàez, Prof. dr. F. A. Marchena; Prof. dr. L. Echteld, E. Mijts (co-PLs)
Involved partners	KITLV, USM, UoC, UA, IPA, LU, UvA, TUD, UT, THUAS, HU, UU, EUR/ISS, CNSI, USVI, UWI, UDC
Timing	2021-2026
Objectives: The aim of WP 5 is the creation of a jointly operated trans-Atlantic academic platform and a regional expertise center specialized in sustainable solutions for social adaptations to climate challenges based on technical, traditional, and contemporary knowledge practices. These two substantial outputs of WP 5 will strengthen the existing academic ecosystem with partnering universities from the Netherlands and the wider region, fostering environmentally friendly positive long-term economic, social, technological, and cultural impacts in the Dutch SIDS. GOs, NGOs, and grassroots organizations on the six islands will function as research sites and research partners for the PhD and postdoc researchers and students participating in the program. The academic platform will be hosted by the USM, UoC, and UA in collaboration with the CNSI. Representatives of universities in the Netherlands and the region that are involved in this NWO funded program will be a part of this trans-Atlantic education platform. A synergetic relationship will be established with other regional and Caribbean wide cooperative agreements of tertiary institutions and professional organizations already addressing extreme events such as climate challenges. Collaboration with the recipients of the other NWO program in the natural/life sciences will be crucial for expanding the educational infrastructure. The platform members will join in the development of the regional expertise center jointly managed by USM, UoC, UA, and CNSI. The regional center will become a hub for undergraduate and graduate research in the region. PhDs and Postdocs will assist in the development of education (teaching) curricula. The endeavor is to train a new generation of Caribbean scientists (AA, BA, MA, PhD, PD), independent researchers, and young professionals through organizing of joint courses, academic program(s), BA/MA minors/classes, and eventually the development a regional hub for PhD students and postdocs from the Kingdom conducting research in and/or about the Dutch Caribbean. Equally important during the duration of the project is the further contribution to the digital academic tradition and extramural activities of the USM, UoC, and UA.	
Description of Activities: This WP will be supported by the program coordinator, the science communication coordinator and the data manager who will during the duration of the program and in collaboration with the business and marketing departments of USM, UoC and UA help develop and implement a communication and public engagement plan to involve the broader public and promote the project with a wider audience (public outreach) by organizing events (debates and seminars), and engaging in digital communication (including a documentary of the project to maximize visibility and impact. The main activities of WP 5 are to 1) create, coordinate, and organize the trans-Atlantic academic platform and the regional expertise center, 2) develop a strategy for long term embeddedness and sustainability of the trans-Atlantic platform and the regional expertise center , 3) develop a multi-disciplinary BA minor (30 EC) in Caribbean Climate Challenges (modules in archaeology and heritage, anthropology, ethno-engineering, policy for governance and sustainable development and an internship) and MA classes (face to face and blended making use of existing digital platforms), 4) coordinate that students who take the BA minor co-develop campaigns and workshops on sustainable development and community resiliency , 5) attract and cater to academic students in the region and the Netherlands interested in a BA minor or MA classes , 6) evaluation and transfer of the platform and the regional expertise center to the USM, UoC and UA.	
Expected output: Creation of academic platform and regional expertise in yr 1-2; strategy for long term embeddedness and sustainability of the platform and expertise center in yr 3; implementation of the BA minor and MA classes in yr 3; implementation of campaigns and workshops on sustainable development in yr 3; students from the wider Caribbean and the Netherlands follow the BA minor and MA classes in yr 4; transfer of academic platform and regional expertise center to the USM, UOC and UA in yr 5. Academic platform becomes hub for PhD and postdocs in yr 5.	

3c. Timeline and milestones



3d. Risk assessment

WP 1:
Risk: problematic access to sites due to natural or human impact.
Risk mitigation: Sub-surface testing of high-risk areas to identify heavily eroded, submerged, and deeply buried archaeological sites and anthropogenically influenced deposits (sampling sites in ponds, lagoons, coastal beds, etc.).
High gain: High resolution data on complex and long-term human-environment interaction processes and a new synthesis of the historical relation between architectural practices, resource use, and social adaptations to climate challenges as expressed in the WFS-nexus.

WP 2:
Risk: Lack of trust in researchers by local communities, grassroots organizations, NGOs, and GOs.
Risk mitigation: Involve these societal partners in all stages of research and specifically acknowledging the potentials toward effective social adaptations to climate challenges contained in the islands' cultural heritage.
High gain: Stimulation of grassroots initiatives, while safeguarding and innovating the creolized knowledge-practices of the island(er)s which are stored and transmitted via their cultural heritage.

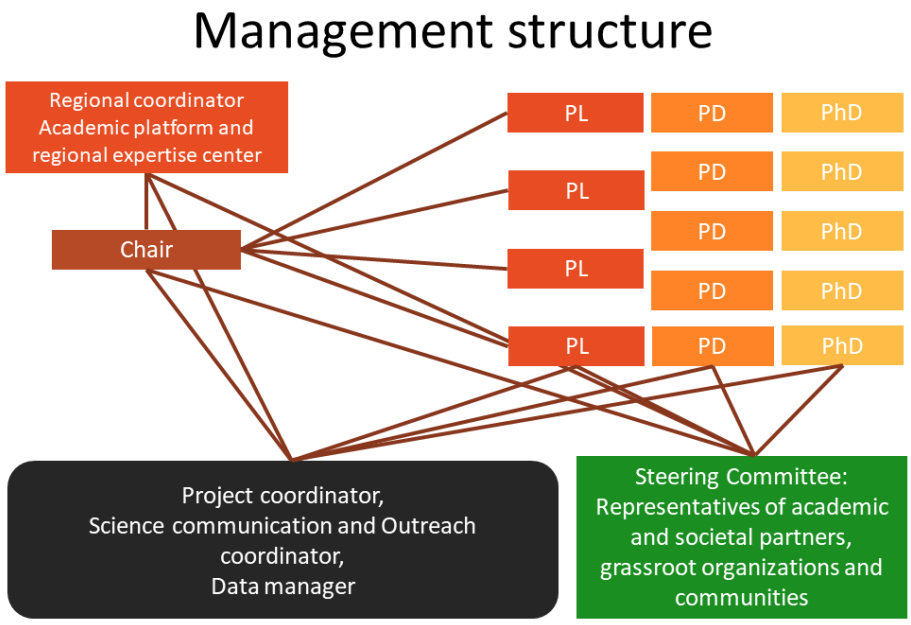
WP 3:
Risk: Failure to implement new techniques developed by academics.
Risk mitigation: Involvement of all stakeholders, taking their wants and needs into consideration for development of techniques from the start.
High gain: Breakthroughs in sustainable water management, resilient architecture, and foodways that are fully adapted to climate challenges.

WP 4:
Risk: Lack of political support to adopt tailored plans for environmental planning and heritage protection in support of improved WFS-nexus policies and practices.
Risk mitigation: From the inception involve GOs, NGOs, and grassroots organizations from both sides of the Atlantic.
High gain: a comprehensive, widely supported, and implementable co-created roadmap with regional and island-appropriate policies and strategies for WFS-nexus related climate adaptation.

WP 5:
Risk: Academic cooperation between the USM, UoC, UA, GOs, and NGOs in the autonomous countries of St. Maarten, Curaçao, and Aruba and the NGOs on the special municipalities of Saba, St. Eustatius, and Bonaire may be hampered by constitutional boundaries.
Risk mitigation: bureaucratic finessing and pragmatism given the complicated constitutional arrangements can be accommodated through Kingdom-wide academic cooperation that is culturally sensitive in terms of knowledge generation and exchange, recognizing that currently most technical expertise disproportionately resides in the Netherlands.
High gain: The creation of a longstanding trans-disciplinary research and educational collaborations leading to expertise consolidation. The platform is envisioned to bring about a sea change in Dutch academia and Kingdom relations pertaining to research and education on climate challenges.

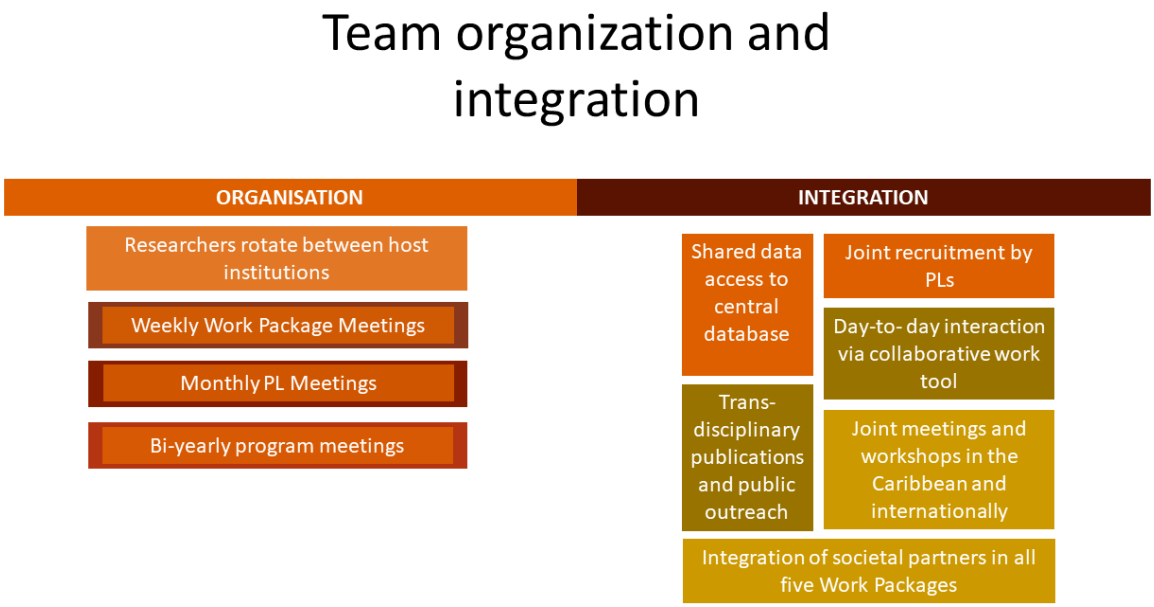
3e. Management structure

The Program Management Team, consisting of the Program Chair working closely with the PLs, will manage the daily responsibilities. They will be assisted by a project coordinator, a science communication coordinator, and a data manager. The Program Chair and PLs will be advised by a steering committee which is composed of representatives of the academic partners and societal partners chosen based on their scientific records of accomplishment, commitment to the development of SIDS, and integrity. The postdocs will be the daily contact persons for the PhDs. The PhD and postdocs will have a dual affiliation in two universities, but one will be their main host institution (KITLV, USM, UoC, UA).
Regular discussion meetings, thematic workshops, joint fieldwork, joint conference attendance and presentations, as well as preparation of joint publications will bond the team permanently. An online collaborative work tool will be used to facilitate communication and integration of the team members.



The Program Chair will devote at least 80% of his time to the program, 40% to the WPs and 40% to ensure complete integration of all researchers and coordinate group output. The co-applicants, PLs and co-PLs will devote between 20 to 60% to the program and live or spend large portions of their time in the Caribbean. Together they will guide the entire process ensuring the implementation of fundamentals such as data management, ethical procedures, outreach, timely communication with the media and stakeholders, and the creation and safe storage of comprehensive multi-disciplinary data-sets. The establishment of the academic platform and regional expertise center will be prioritized by the Program Chair and the PL of WP5, assisted by other members of the Program Management Team. The postdocs and PhDs will be respectively employed between 1 and 4 years. Team organization and integration will be ensured by an online collaborative work tool, regular meetings, seminars and workshops including those with the academic and societal partners, rotation of researchers between the host institutions and by joint publications. The team will produce transdisciplinary and thematic issues in international scientific and popular

journals during the course of the program and the Program Chair and PLs will devote the fifth year of the program to the synthesizing of the program and to the editing of a synthesizing volume. In year 5 the artworks from WP 2, and the program's film documentary, and exhibition on **Island(er)s at the Helm** will be finalized and travel across the Kingdom of the Netherlands.



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5. Academic profile, experience and motivation applicant

5a. Academic profile, relevant experience and motivation of Program Chair

Paradoxical as it seems, publishing peer reviewed works led me to develop a vocation for public anthropology. This began in 2007 when I co-edited the volume “Zo Zijn Onze Manieren…visies op multiculturaliteit in Nederland” with Vincent de Rooij from the University of Amsterdam. As the book was produced to contribute to the lively debate surrounding the woes and virtues of the post-World War Two ethnic diversity in the Netherlands, it was launched in the Nieuwspoort debating salon in The Hague that nationally elected officials often frequent. Ms. Ella Vogelaar, Minister of Integration and Housing, received the first copy of the book. The launch was followed by a tour throughout the country in which discussions of the book took place with prominent figures such as Prof. Dr. Ruud Lubbers and Prof. Dr. Jo Ritzen, respectively the former Prime Minister and the Minister of Education, Culture, and Science. Since the goal was to influence both the authorities and grassroots organizations, I contacted social movements and welfare organizations operative in working class neighborhoods on organizing free lectures and workshops by the book contributors and other academics. Five years later I received tenure at the UvA. This was based on my award in that same year as one of the five best lecturers in the entire UvA and my peer reviewed academic publications including my monograph “Chanting Down the New Jerusalem: Calypso, Christianity, and Capitalism in the Caribbean,” with the University of California press in 2009. Since then I have the privilege to also experience the other side of the publishing world of academia. I have sat on the board of international peer review journals such as American Ethnologist and Etnofoor, and as of January 2020 I am one of the three executive editors of the journal Ethnography. I also supervised the input on historical and contemporary Afro-Dutch luminaries as part of the editorial board of the Harvard University organized “Dictionary of Caribbean and Afro-Latin American Biography.” Between 2013 and 2017 I held the position of President of the University of St. Martin. I was tasked with running the institution as its only academic professor with a chair in education and nation building, and leading the efforts to acquire internationally recognized academic accreditations. My experience completing years of fieldwork on St. Maarten made me aware that the USM had to be an institution that aligned itself to both the educational situation of the Americas and that of the EU. Since 2015 the USM offers UK accredited Higher National Diplomas in Business Management, Hospitality, and Tourism Management.

In addition, all BA and MA degrees in Education, Business Management, and General Liberal Arts, enjoy USA accreditation through a strategic alignment with the University of the US Virgin Islands (UVI). In January 2018 after the total devastation wrought by hurricane Irma, I returned to the UvA where I continued working on the NWO funded research project "Imagining the Nation in the Classroom, the case of St. Maarten and St. Eustatius"(IMANAT) which I had begun during my term as President of the USM. One of the two PhD candidates of that program has successfully defended her thesis on education, popular culture, and national belonging on St. Maarten, and four peer reviewed articles have been authored so far. The group has published articles on Kingdom Relations, popular culture, and belonging in "de Volkskrant" and "the Daily Herald," two of the leading newspapers in the Netherlands and the Dutch Windward Islands. From 2016-2019 monthly blogs in Dutch were written for the Caribbean Studies Association, thereby academically enhancing the visibility of the Dutch Caribbean and its Diaspora in the region as well as internationally. In terms of public outreach of the NWO project, a diversity toolbox for universities was co-authored by one of the PhDs and for the first-time in history a lesson plan for cycle TWO of the primary schools was developed in the Dutch Caribbean on the topic of trans-Atlantic slavery and Human Rights which was taught in schools on both sides of the Atlantic. The project involved students and staff of the Iselinge University of applied sciences carrying out research with USM students and staff alongside the PhD researchers of the NWO program. The last public outreach is one that connects education, the Anthropocene, and the question of belonging. Members of the NWO project are collaborating with anthropology students of the UVA and the USM in the creation and implementation of a new Kingdom wide tradition— "Het Waterfeest". In this project, the European and Antillean parts of the federation are connected through their mutual ecological vulnerability as well as their ethnic diversity. This last endeavor I consider a precursor to the program proposal I am submitting. I am doing so from my current position as senior researcher at the KITLV and Associate Professor at the UvA committed to public anthropology and building educational and research infrastructures in the Dutch Caribbean.

5b. Key relevant output of Program Chair

In this section I solely provide peer reviewed scholarly publications in English and in Dutch. I have subdivided my selection into three parts, namely, 1) ethnographies that focus on the Dutch Caribbean, 2) articles on the Dutch Caribbean Diaspora, 3) theoretical-conceptual essays. Through the latter pieces I have sought to contribute to the ongoing discussion on postcolonial theory and the decolonial turn in (Dutch) academia. The second set of articles are precursors to a monograph that is forthcoming with Mississippi University Press. I begin with my publications that focus on the Dutch Caribbean. "Chanting Down the New Jerusalem," (University of California Press) was taught in various anthropology departments in the Netherlands as well as abroad. It is this publication that allowed me to connect with international scholars writing on the Caribbean. I have provided multiple talks in the Netherlands, the Dutch Antilles, the wider Caribbean, the USA, and Europe on the book. The other articles focus on Aruba and Curaçao.

Dutch Caribbean

Guadeloupe, F. (2009) *Chanting down the new Jerusalem: Calypso, Christianity, and capitalism in the Caribbean*. (The anthropology of Christianity; No. 4). Berkeley, CA: University of California Press.

Guadeloupe, F. (2009) "Their modernity matters too: the invisible links between Black Atlantic identity formations in the Caribbean and consumer capitalism." *Latin American and Caribbean Ethnic Studies*, 4(3), 271-292.

Guadeloupe, F. (2013) "Curaçaoans on the question of home: the lure of autochthony and its alternatives. In L. Lewis (Ed.), *Caribbean sovereignty, development and democracy in an age of globalization* (pp. 189-207)." (Routledge advances in international relations and global politics; No. 100). New York [etc.]: Routledge.

Allen, R. M., and Guadeloupe, F. (2016) "Yu di Kòrsou, A Matter of Negotiation: An Anthropological Exploration of the Identity Work of Afro-Curaçaoans." In J. W. Duyvendak, P. Geschiere, and E. Tonkens (Eds.), *The Culturalization of Citizenship: Belonging and Polarization in a Globalizing World* (pp. 137-160). London: Palgrave Macmillan.

Guadeloupe, F. and Halfman, J. (2019). "All-inclusive resorts on Sint Maarten and our common decolonial state: on butterflies that are still caterpillars in chrysalis." In J. Guibault and T. Rommen (Eds.), *Sounds of Vacation: Political Economies of Caribbean Tourism*. Durham: Duke University Press, pp. 134-160.

Dutch Caribbean Diaspora in the Netherlands

Guadeloupe, F. (2013) "The Netherlands, a Caribbean island: an autoethnographic account." *Agathos*, 4(2), 83-98. O

Guadeloupe, F., and de Rooij, V. A. (2014). "The promise of a utopian home, or capitalism's commoditization of blackness." *Social Analysis*, 58(2), 60-77.

Theoretical-conceptual articles

Guadeloupe, F. (2010) *Adieu aan de nikkers, koelies en makambas: een pleidooi voor de deconstructie van raciaal denken binnen de Nederlandse Caraïbistiek*. Nijmegen: CIDIN, Radboud Universiteit Nijmegen.

Guadeloupe, F. (2014) “Reparaties als een hedendaagse uiting van de permanente revolutie: een standpunt.” *Bijdragen en Mededelingen betreffende de Geschiedenis der Nederlanden*, 129(4) 106-117. O
Guadeloupe, F., and Romero, I. (2018). “Thou Shalt not Kill! Or Notes on Caribbean Music as Literary Text on Being Human”. *Il Tolomeo A postcolonial studies Journal*, 1(20), 209-224.

6. Budget

6a. Justification of requested budget

The largest part of the budget goes to the salaries of the Program Chair and the 5 PhDs and 5 postdocs for the execution of the research. The project will be supported by a project coordinator, data manager, and science communication and outreach specialist who will ensure the translation of the research and results to the public and underline the societal relevance of the scientific research. All the PhDs and postdocs will have a travel budget to carry out their fieldwork in the islands. For the PhDs this budget consists of 6000 euros per year, for the postdocs 8000 euros per year. The Program Chair will have a budget of 12.000 euros per year to ensure his travel within the Kingdom of the Netherlands and be able to visit all team members who will be hosted by the different universities throughout the year. Conferences with a budget of 30.000 euros will be organized in the Caribbean to foster regional and international partnerships. In addition in the context of the academic platform 45.000 euros is budget for travel and lecture costs. Thus 75.000 euros is dedicated to internationalization. These conferences will be key to profile the project internationally and specifically in the wider Caribbean. Relevant parties from the region will be invited (travel and accommodation paid), as well as noted before partners for the Dutch institutions in the trans-Atlantic academic platform to reflect on the project. This is in addition to the national workshops and seminars budgeted at 180.000 euros which will bring together the team and the societal partners, alongside 10.000 euros for open access. The academic partners participating in the academic platform will be travelling to and within the Caribbean to facilitate education and synergy within the team. Knowledge utilization costs of 75.000 euros for the five years will be spent on the development of: (blended) educational and other teaching materials (25.000), art works (20.000), documentary (10.000) and a travelling exhibition (20.000).

7. Data management and ethical aspects

7a. Data management

Will data be collected or generated that are suitable for reuse?

Yes. Reusable data will include:

- Photographs, drawings, reports from archaeological and ecological surveys and excavations and from anthropological-ethnographic fieldwork; A database of analyzed finds; a Geo-database of archaeological excavations and coring locations; 3D models generated from sites and objects; databases / spreadsheets containing chemical or other analyses of archaeological objects; microscope photographs of archaeological objects; anonymized data resulting from interviews; other (derived) datasets in the form of spreadsheets
- Artworks: a cinéma vérité, art installation, performance art piece; models of energy efficient and ecologically sound WFS built by engineers; a co-creative approach model based on cooperation between GOs, NGOs, and grassroots organizations to build a roadmap to create policy to face climate change.

Where will the data be stored during the research?

Data will be stored on the internal network of KITLV at Leiden University. Data will be shared with after consultation with non-university staff through safe facilities like Surfdrive and SurfFileSender, which are backed up daily in two locations in the Netherlands. During fieldwork it cannot be prevented to take offline copies abroad. These will be stored on encrypted laptops provided by the institution.
Personal sensitive data will be anonymized maintaining separate copies of research data and identifying information. After collection, this type of data will be stored within the KITLV .
Personal, identifiable, and other sensitive research data will be stored in a separate folder with necessary protection (e.g. limited access, encryption, etc.), in consultation with KITLV.

After the project has been completed, how will the data be stored for the long-term and made available for the use by third parties? To whom will the data be accessible?

All the datasets that support the research publications and are available for re-use will be prepared for long term archiving. All personal data will be anonymized before becoming available for sharing. The datasets will be securely stored for at least 15 years. Each dataset deposited will be provided a DOI, that facilitates findability, accessibility, and re-use. The archaeological and heritage management data will be deposited with the EASY archive at KNAW/DANS, according to the guidelines of the eDepot Nederlandse Archeologie. Anthropological data which is intersubjective by nature – and therefore highly sensitive – will only be made available after consultation with researchers and research respondents.

Which facilities (ICT, (secure) archive, refrigerators or legal expertise) do you expect will be needed for the storage of data during the research and after the research? Are these available?*

KNAW/DANS Easy Archive; Legal expertise from Leiden University Center for Digital scholarship.

7b. Ethical aspects

	Not applicable	Not yet applied for	Applied for	Received
Approval from a recognised (medical) ethics review committee	☒	☐	☐	☐
Approval from an animal experiments committee	☒	☐	☐	☐
Permission for research with the population screening Act	☒	☐	☐	☐

8. Administrative details

8a. Details applicant

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Current institution of employment:	KITLV(KNAW)-UvA
Preferred language of correspondence (choose one):	☐ Dutch ☒ English

8b. Details co-applicant(s)

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Type of appointment:	☒ Permanent ☐ Temporary, end date:

	☐ Tenure Track, end date:
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Institution of employment:	University of Curaçao (UoC)
Type of appointment:	☒ Permanent ☐ Temporary, end date: ☐ Tenure Track, end date:

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Institution of employment:	University of St. Martin (USM)
Type of appointment:	☒ Permanent ☐ Temporary, end date: ☐ Tenure Track, end date:

By submitting this form I declare that:

☒ I have completed this form truthfully;

☒ I satisfy the nationally and internationally accepted standards for scientific conduct as stated in the Netherlands Code of Conduct for Research Integrity 2018.

Name: Francio Guadeloupe

Place: Leiden

Date: 20-04-2020