



Opinion

Strengthening one health in the future of the Caribbean through a regional community of practice

Marie-Jeanne Guenin^{a,*}, Caribbean One Health community of practice¹, Séverine Thys^b,
Eric M.C. Etter^{a,c}

^a UMR ASTRE, CIRAD, Guadeloupe, France

^b UMR ASTRE, CIRAD, Vientiane, Laos

^c CaribVET, Guadeloupe, France

ARTICLE INFO

Keywords

One health
Community of practice
Caribbean
Impact pathway

ABSTRACT

Forty-four experts in animal, plant, environmental and human health and in social sciences, formed a Caribbean community of practice and formulated an aspirational One Health future for the region, the obstacles and solutions to necessary changes to achieve that future.

The COVID-19 pandemic highlighted the need to address socio-ecosystem health threats in a coordinated and collaborative way from

community to international levels and by adopting an integrated and intersectoral approach recognizing the interdependence between

* Corresponding author.

E-mail address: marie-jeanne.guenin@univ-montp3.fr (M.-J. Guenin).

¹ Author consortium:

- Asia Fernandes, CaribVET and USDA, Dominican Republic
- Bastien Barral, CIRAD, Guadeloupe
- Catherine Abadie, CIRAD, Costa Rica
- Damarys de las Nieves Montano Valle, CENSA, Cuba
- Damien F. Meyer, CIRAD, Guadeloupe
- Daniela Apu, IICA, Guyana
- Dayana Rodriguez Velazquez, IPK, Cuba
- Dionne Clarke Harris, CARDI, Jamaica
- Germán A. Vasquez, PAHO, Dominican Republic
- Jacques Avelino, CIRAD, Costa Rica
- Janil Gore Francis, CPHD, Antigua
- Jean-Michel Risede, CIRAD, Martinique
- Jesus Beltran Gonzalez, CIMAB, Cuba
- Karen Cuevas, Ministry of Health, Dominican Republic
- Karla Georges, CaribVET and UWI, Trinidad and Tobago
- Kirk Douglas, UWI, Barbados
- Lilián Morales Romero, INIVIT, Cuba
- Lucile Toniutti, CIRAD, Guadeloupe
- Manuel de Jesus Verdecia Tamayo, UDG, Cuba
- Maria E. Chimenti, WOA, Argentina
- Maritza Luis Pantoja, IIFT, Cuba

<https://doi.org/10.1016/j.onehlt.2025.101152>

Received 2 July 2025; Received in revised form 25 July 2025; Accepted 25 July 2025

Available online 28 July 2025

2352-7714/© 2025 The Author(s). Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

human, animal and environmental health embedded in the One Health (OH) concept as defined by the One Health High-Level Expert Panel (OHHLEP) and the quadripartite (WHO, WOA, FAO, and UNEP) [1].

To meet the challenge of a OH future in the Caribbean, forty-four experts in animal, plant, environmental and human health and in social sciences from sixteen countries and territories came together, as part of a community of practice (CoP) [2,3], in a participatory strategic planning process [4,5] (Fig. 1). They collectively defined the obstacles and solutions to changes needed at community, national and regional levels towards the common vision they co-formulated and would like to achieve through this Caribbean OH CoP.

1. Obstacles in the CoP's radar

Several OH initiatives encouraging inter-sectoral collaboration supported by various regional actors, networks and organizations from different countries and territories and disciplines emerged in the Caribbean. Unfortunately, these OH initiatives rarely result in true interdisciplinary activities and implementing OH in practice remains challenging [6,7] due to different obstacles the CoP identified and wants to address.

• Funding capacity

The lack of political will in allocating financial resources remains an obstacle to building the context-adapted infrastructural and management capacities necessary to the implementation of OH approach [6]. National funding is not optimally distributed between the different ministries due to competition for national budget and OH activities leadership.

• Experience-learning capacity

Decision-makers and health actors do not implement OH approach because they do not perceive the tangible benefits they can derive. There is a lack of case studies and evaluation and monitoring of their costs and benefits to provide strong evidence, illustrate the practical application of OH and ensure experience-learning and sustainable implementation.

• Staff capacity

There is a deficit in qualified staff in OH approach within institutions due to a lack of protocols, manuals and standards to train them. Insufficient funding and budgets allocated to these human resources also impede proper interaction among actors and correct networking liaisons. This problem is exacerbated by the frequent

turnover of qualified staff within institutions, and the transfer of such staff from national institutions to regional or international bodies.

• Interaction capacity

Information sharing, communication and coordination between researchers from different disciplines and field actors, from the community to the international levels, is lacking or insufficient and remain challenging because they have different languages, objectives and interpretations of the OH concept whose definition is continuously evolving and does not reflect societal interests.

• Leadership and ownership capacity

Some actors, including the local communities, do not support and trust in OH approach. A participatory and interdisciplinary approach is required to better integrate their own interests and the complexity of the societal, ecological, economic, organizational factors which differ among territories to implement fine-tuned policies and tailor-made OH initiatives.

The experts agreed on the need to act together within a CoP to overcome these problems through collaboration, communication, coordination and capacity building. They aim to be a collaborative network, gathering actors from environment, plant, human and animal health, who promote, lead and coordinate OH projects in the region. Their objective is to collaboratively design adapted solutions through actor-centered, bottom-up and transdisciplinary approaches and by including technical, political, legal, ethical and socio-economic dimensions to tackle different health issues.

2. The CoP's scope of interest

The experts co-formulated the medium and long-term impacts of interest they want to contribute through the CoP. The experts target a better human, animal, plant, environmental, agroecosystem health, resilience and sustainability in the Caribbean through more integrative and better agricultural practices as well as disease prevention, surveillance, alert and control including an easier collection and sharing of biological material. Finally, this OH CoP expects to be an example recognized by the regional organizations and international quadripartite alliance encouraging the creation of OH CoP at the national level and worldwide (Fig. 2).

3. The CoP's scope of influence

To contribute to the impacts of interest for the CoP, the experts

-
- Maurice Frank, CARPHA, Trinidad and Tobago
 - Mauricio Soto Suarez, AGROSAVIA, Colombia
 - Nancy P. Chaves Mendez, CORBANA, Costa Rica
 - Nelson Laville, CPHD, Dominica
 - Olivier Sounigo, CIRAD, Colombia
 - Paul Crooks, UWI, Trinidad and Tobago
 - Paula Morales, CaribVET and USDA, Dominican Republic
 - Rémi Cluset, FAO, Italy
 - Roger Mc Lean, UWI, Trinidad and Tobago
 - Samson Mukaratirwa, CaribVET and RUSVM, Saint Kitts and Nevis
 - Sharon Veira, CaribVET and Directorate Economics, Nature and Infrastructure, Sint Eustatius
 - Shelley Bridgewater, CARDI, Bahamas
 - Stefano Todde, Ministry of Health, Dominican Republic
 - Troy Lorde, UWI, Barbados
 - Valérie Rodrigues, CIRAD, Guadeloupe
 - Victor Gongora, CaribVET, Belize
 - Wendy Gonzalez, CaribVET & Ministry of Agriculture, Dominican Republic
 - Yanet Rodriguez Perdomo, CENSA, Cuba
 - Yuli. A. Lovera Sotelo, AGROSAVIA, Colombia

identified changes that a multitude of public and private actors from local to international level need to operate and that they would like to influence. To this aim, the OH approach must be supported by governmental authorities, NGOs, public and private relevant actors, in all countries and territories through adapted legislation, funding and implementation and through coordination and collaboration among disciplines and from municipal to regional levels including local communities' engagement. Previously, all actors in the Caribbean should be aware and educated to the importance of the OH approach and share a common vision (Fig. 2).

4. The CoP's scope of control

To overcome the obstacles and generate these changes, the experts identified 7 strategies to include within the scope of the CoP they are co-building (Fig. 2).

- **Making the OH CoP active**

First, it is essential to make this OH CoP active through different activities (governance definition, strategic planning, budgeting, training, advocacy sharing, regular group work and plenary meeting, operational capacity building and monitoring of change) to empower the members to implement the other strategies.

- **Producing case studies on national systems**

The CoP will work on producing case studies of national systems through reviewing on OH laws and legislations, collecting and disseminating of positive and negative experiences, revisiting the "doing without knowing" experiences, incorporating improved way forward for advocacy.

- **Knowing more about "One Health-ness"**

In order to learn from these case studies, the CoP will work jointly to produce assessment tools and method, cross-analysis of infra-national experiences and reflexive learning to know more about the "One Health-ness" of different national initiatives or experiences.

- **Developing curricula on OH approach at different levels**

The knowledge generated by these two strategies will feed into the development of integrative and mixing field curricula on One Health approach at different levels (schools, university, etc.) including case studies learning.

- **Influencing media and raising awareness**

There is also a need to influence media and to raise awareness through communication on OH approach based on case studies and by reaching out various audiences (decision-makers, general public, farmers, educators, communities, donors, private sector) with adapted content and communication strategies and by involving relevant actors.

- **Bringing collaboration**

To contribute to change from the national to the transnational level we need to bring institutional support for intersectoral collaboration at national level and to build consensus and collaboration from local to regional and international levels OH through facilitation support and setting up of national committee in each country and territory.

- **Influencing funding strategies**

Finally, as traditional funding is essential but not sufficient, there is a need to influence funding strategies and to look for untraditional and inclusive fundings.

5. Discussion and perspectives

The configuration of the Caribbean area with its plurality of countries and territories makes it necessary to strengthening exchanges between a diversity of professionals to tackle common health issues. This participatory strategic planning process gave a space for experts from different disciplines and territories to co-build a regional One Health CoP, which still needs to be structured, and to collectively defined strategies towards a common desirable One Health future in the Caribbean and to include in their scope of action. The outputs of this participatory workshop are avenues for pursuing this change-oriented approach and using them as a tool for dialogue and monitoring within the group. This participatory process is an iterative and open innovation approach. The final objective is that this One Health CoP be sustainable, be able to identify and adjust these objectives and needs, include new relevant actors in the community, create and find its own opportunities for implementation and future activities over time and through other One Health projects in the region.

The relationships between the strategies, the changes and the impacts underpinning the theory of change of the CoP have to be consolidated. The impact pathway modelling these relationships could be

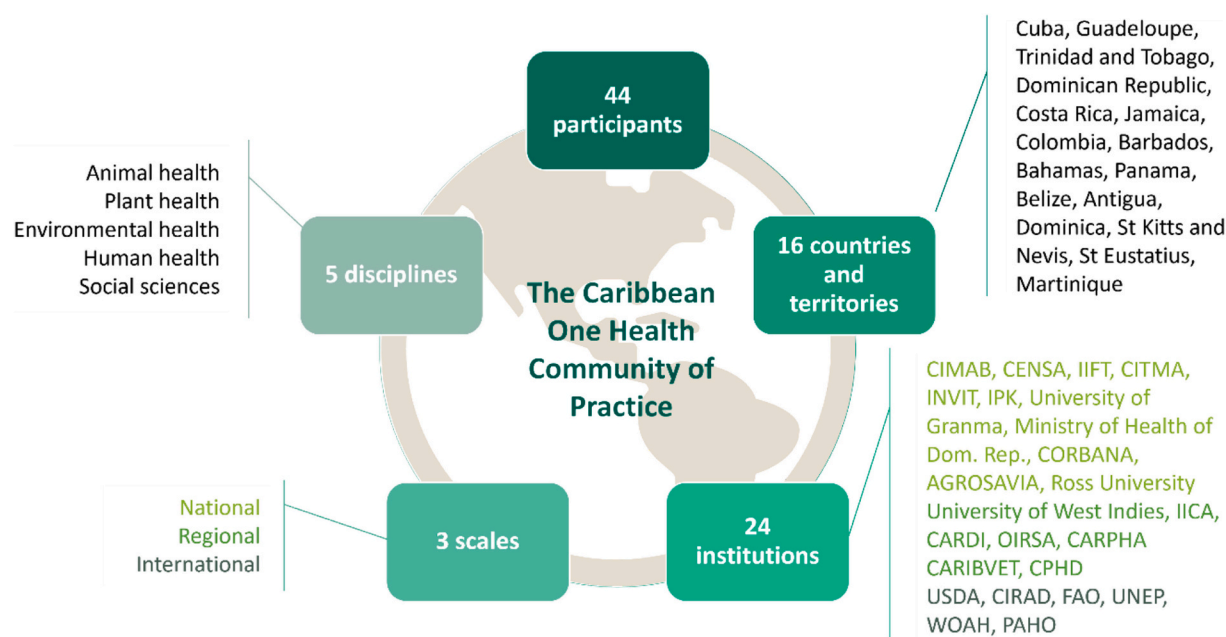


Fig. 1. Composition of the Caribbean One Health community of practice.

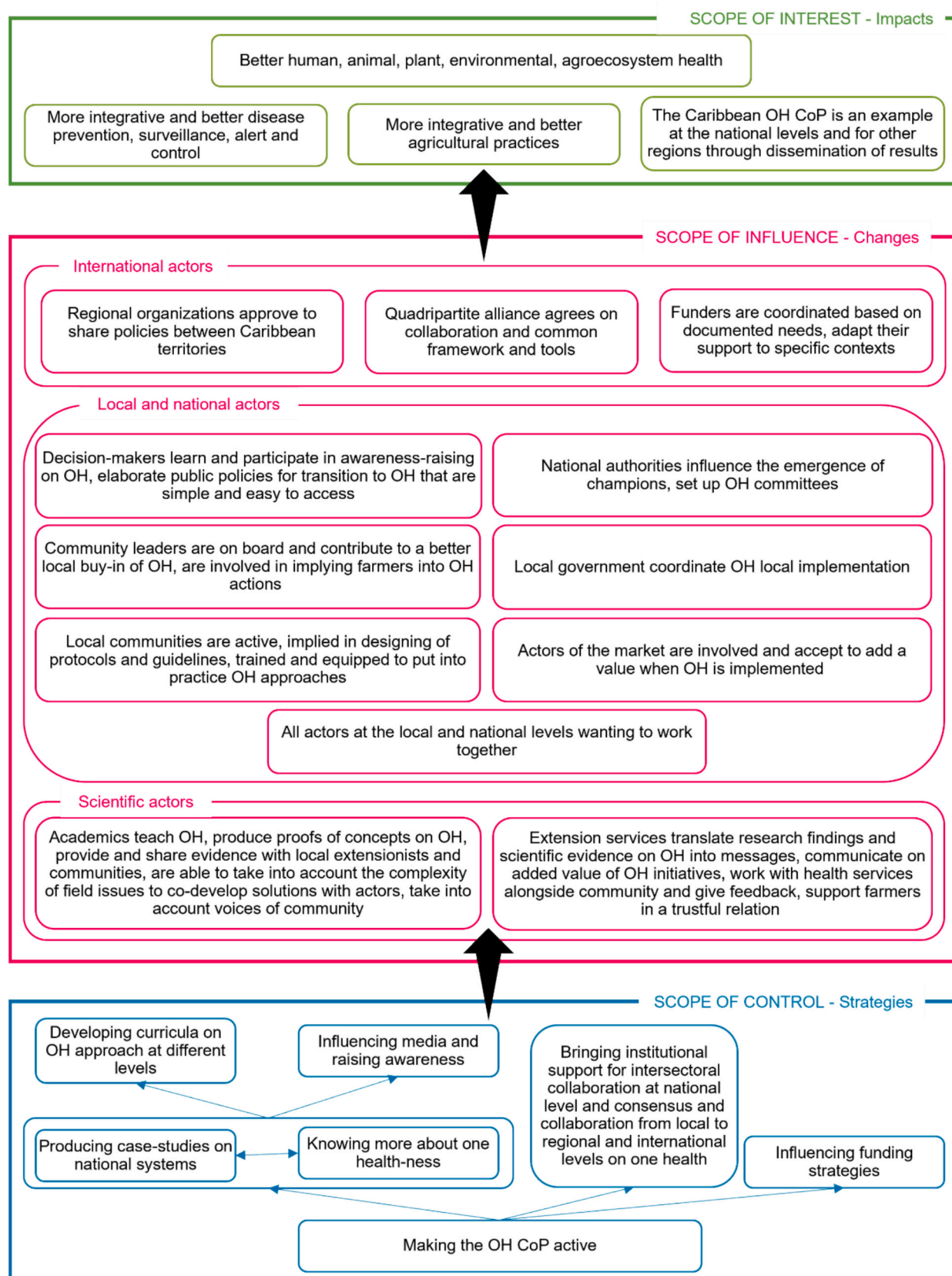


Fig. 2. The scopes of control, influence and interest formulated by forty-four experts in animal, plant, environmental and human health and in social sciences, as part of a Caribbean One Health community of practice. CoP, Community of Practice; OH, One Health.

translated in useful outputs: action plan for the CoP, basis for a monitoring-evaluation system of the changes generated by the strategies, narrative to convince other protagonists of change who could influence the success of strategies such as decision-makers and donors or who could contribute within the CoP such as industries and farmers from the private sector. The experts also identified the need to better understand the role of the civil society and of international and geopolitical actors. To better understand the vulnerability of socio-ecosystems and the barriers to change and to meet social demand and interests for ensuring the success of the actions carried out by this CoP, input of social sciences and transdisciplinary approach will be a key [8,9].

CRedit authorship contribution statement

Marie-Jeanne Guenin: Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Formal analysis, Conceptualization. **Séverine Thys:** Writing – review & editing, Validation, Methodology. **Eric M.C. Etter:** Writing – review & editing, Validation, Resources, Project administration, Funding acquisition, Conceptualization.

Declaration of competing interest

None.

Acknowledgement

The authors wish to thank the AUSCAR (One Health Approach to Reduce Health Risks in the Caribbean) project funded by the Guadeloupe Region through the European Regional Development Fund (Interreg Caribbean).

Data availability

This opinion article is the result of participatory workshop and the

data presented in this opinion paper have been collectively validated by the Caribbean One Health community of practice.

References

- [1] O.H.H.-L.E. Panel (OHHLEP), W.B. Adisasmito, S. Almuhaire, C.B. Behraves, P. Bilivogui, S.A. Bukachi, N. Casas, N.C. Becerra, D.F. Charron, A. Chaudhary, J.R. C. Zanella, A.A. Cunningham, O. Dar, N. Debnath, B. Dungu, E. Farag, G.F. Gao, D.T. S. Hayman, M. Khaita, M.P.G. Koopmans, C. Machalaba, J.S. Mackenzie, W. Markotter, T.C. Mettenleiter, S. Morand, V. Smolenskiy, L. Zhou, One health: a new definition for a sustainable and healthy future, *PLoS Pathog.* 18 (2022) e1010537, <https://doi.org/10.1371/journal.ppat.1010537>.
- [2] B. Mercieca, What Is a Community of Practice?, 2017, pp. 3–25, https://doi.org/10.1007/978-981-10-2879-3_1.
- [3] E. Wenger, *Communities of Practice: A Brief Introduction*, 2011.
- [4] G. Blundo Canto, A. De Romemont, E. Hainzelin, G. Faure, C. Monier, B. Triomphe, D. Barret, E. Vall, *ImpresS ex ante. An approach for building ex ante impact pathways in development-oriented research*, in: *ImpresS ex Ante Methodological Guide (Second Version)*, CIRAD, Montpellier, France, 2020, <https://doi.org/10.19182/agritrop/00147>.
- [5] M.-J. Guenin, E. Etter, C. Abadie, *Proceedings of the ImpresS ex ante and AUSCAR project workshop - Cobuilding a One Health community of practice in the Caribbean*. Dominican Republic, November 20th to 23rd, 2023, CIRAD, n.d. http://publications.cirad.fr/une_notice.php?dk=607904 (accessed February 16, 2025).
- [6] C. Pettan-Brewer, D.P. Figueroa, N. Cediel-Becerra, L.H. Kahn, A.F. Martins, A. W. Biondo, Editorial: challenges and successes of one health in the context of planetary health in Latin America and the Caribbean, *Front. Public Health* 10 (2022), <https://doi.org/10.3389/fpubh.2022.1081067>.
- [7] C. Pettan-Brewer, A.F. Martins, D.P.B. de Abreu, A.P.D. Brandão, D.S. Barbosa, D. P. Figueroa, N. Cediel, L.H. Kahn, D.F. Brandespim, J.C.C. Velásquez, A.A. B. Carvalho, A.M.M. Takayanagui, J.A. Galhardo, L.F.A. Maia-Filho, C.T. Pimpão, C. R. Vicente, A.W. Biondo, From the approach to the concept: one health in Latin America-experiences and perspectives in Brazil, Chile, and Colombia, *Front. Public Health* 9 (2021), <https://doi.org/10.3389/fpubh.2021.687110>.
- [8] B. Min, L.K. Allen-Scott, B. Buntain, Transdisciplinary research for complex one health issues: a scoping review of key concepts, *Prev. Vet. Med.* 112 (2013) 222–229, <https://doi.org/10.1016/j.prevetmed.2013.09.010>.
- [9] M.K. Lapinski, J.A. Funk, L.T. Moccia, Recommendations for the role of social science research in one health, *Soc. Sci. Med.* 129 (2015) 51–60, <https://doi.org/10.1016/j.socscimed.2014.09.048>.