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Strengthening the global health dialogue: linking research networks in the Global South

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53

Myriad challenges arise when implementing health measures in middle- and low-income countries. Social, economic and sectoral constraints impede the application of research results and recommendations from national or international organizations. In these countries, platforms in partnership for research and training (dP) developed by CIRAD and partners in the health sector contribute unique and valuable experience. These platforms represent regional networks and foster intersectoral collaborative

exchanges involving research, various social sectors and public and private governance levels. They ultimately seek to develop networks of actors and policymakers while fostering innovation in different local and national contexts. This experience is now ripe for consolidating interactions at a more global level—linking regional health-oriented networks and building an instrument of global scope. The concerned platforms collaborate to develop a shared vision of the targeted impacts and strategies to achieve them.

Boosting partnerships between research agencies and policymakers

A broad range of actors are involved in health-related fields throughout major global regions and within countries—this includes private, voluntary and public sectors, government technical services, research and educational structures, as well as regional economic communities.

Exchanges and collaborations are, however, generally insufficient between researchers, policymakers and other stakeholders, particularly final beneficiaries. National stakeholders often encounter stumbling blocks when attempting to apply national guidelines formulated on the basis of international recommendations: a lack of human and financial resources, difficulty in transferring health policy guidelines from international agencies to political bodies, problems in implementing intersectoral collaborations to work on complex problems requiring joint approaches, weak partnerships between government departments and non-governmental organizations, and general recommendations not relevant to the areas concerned.

Research institutions meanwhile produce results, methods and tools that have potential implications for intersectoral health management. But this knowledge often does not trickle beyond the academic sphere, although it could be mainstreamed into recommendations better tailored to specific national contexts.

An effective dialogue on health between researchers, policymakers and field operators requires co-construction of

actor networks along with training and capacity building of these stakeholders.

Experience of platforms in partnership for research and training in the Global South

Innovative research structures working with a range of actors at the interface of different sectors can help overcome certain obstacles and promote sought-after changes. This is the case with regard to health-oriented platforms in partnership for research and training (dP) developed by CIRAD and partners in four regions around the world: CaribVet in the Caribbean, GREASE in Southeast Asia, One Health OI in the Indian Ocean and RP-PCP in southern Africa (see Boxes on p. 2 and 3). They address animal health and veterinary public health through systems-based One Health approaches, while working closely with stakeholders in rural development, human health and environment. These four platforms support communities of scientists and contribute to improving health management by taking the livelihoods of smallholders and family farmers into account.

These platforms have complementary roles: producing scientific knowledge, transforming it into operational realities, facilitating partnerships and exchange between different types of actors, helping develop and implement public policies tailored to specific circumstances, training new generations of professionals, and creating international South-South and North-South professional networks.

The dynamics of each of these platforms are network-oriented and cross-sectoral. They bring together several countries within a region and are interdisciplinary and intersectoral—by bringing together researchers and actors from different segments of society, and also by developing exchange between these actors. They promote dialogue between different layers of governance, involving both public and private stakeholders. The health dialogue involves exchanges of knowledge and viewpoints, while mobilizing methods and tools from different disciplines. This interchange also entails the organization of professional and academic training sessions.

Strengthening linkages between these platforms for more effective action

Each of the four health-oriented dPs has its own history. They were developed and organized in four regions of the world according to the setting, partner institutions and their target objectives. This has resulted in a diverse range of networking modes, organizational structures and research foci that can be leveraged by fostering relationships between platforms and with other networks.

Each dP has gradually been built through exchanges between its founding members. They have acquired substantial collaborative experience with health, agriculture and environmental stakeholders, while also gaining sufficient insight into the ways research is organized in South-South and North-South partnerships. Members of the four dPs are now determined to go further and forge a common vision to strengthen the cross-sectoral dialogue on health on a more global scale. This scaling implies connecting these regional networks and working towards building a platform encompassing different global regions, while safeguarding the specificity of every one. Each platform has its own activities and themes—national in the country where it is based and regional between partners from different countries—but synergy is sought for research and training programmes and methods.

The four dPs are thus using the *ImpresS ex ante* approach (Impact of research in the Global South, developed by CIRAD). This participatory approach is based on the development of a theory of change, i.e. the explanation of targeted changes (improving health) and hypotheses about causal relations and steps to achieve them (partnerships to develop, training and innovations to promote). Members of the four dPs involved in discussions on the connection between dPs thus develop a shared vision of the target impacts, common strategies to achieve them and the potential roles of each. Through this exercise and other approaches, such as typological analysis of publications and projects [see Figure p. 3], the four platforms formalize their specific features and common points. Avenues for collaboration and networking are identified for some strategies.

From a scientific and operational viewpoint, several themes addressed in all or part of the four dPs converge towards common methods and tools. These are integrated One Health approaches that can, for example, be applied to deal with antibiotic resistance, enhance surveillance systems or identify disease reservoirs. This work is international in scope and often involves interaction with international agencies that address health issues (FAO, OIE, WHO).

The four platforms also collaborate with other non-health-oriented dPs as well as with many regional or international research and development networks [see Box p. 3].

Fostering relationships between platforms in partnership for research and training (dPs) strengthens the generic thrust and

What is a platform in partnership for research and training (dP)?

CIRAD and its partners have launched dPs in many developing countries with the aim of enhancing the impact of research via networking of various stakeholders and organizations.

dPs pool partners from several countries of the Global South and North. These long-term partnerships are sometimes asymmetrical with regard to resources and skills and are mainstreamed in a portfolio of projects involving public and private sector actors. The partners are committed to working together through an explicit agreement and shared governance (see Figure p. 3). Human, financial and logistical resources are allocated to common research, innovation and capacity building priorities.

A dP designs research projects that incorporate the social value of scientific knowledge and is rooted in local scientific production while addressing specific needs. A platform is a structure through which partners can, for instance, build innovation systems that could benefit vulnerable communities. National and regional research priorities are shaped into operational donor-funded projects. The expertise and knowledge produced has development potential and may thus be used by international agencies, policymakers and development stakeholders.

A platform has a long-term commitment to strengthening the research capacities of partners in least developed countries, in line with the 17th UN Sustainable Development Goal, which calls for strong, inclusive and integrated partnerships at all levels. This strengthening aims to increase the capacity of individuals and institutions to conduct high quality research and participate in a wider South-South and North-South community.

Twenty-two platforms in partnership for research and training (dP) are currently operational. Their research fields are related to agriculture, food, environment, land management and health.

<https://www.cirad.fr/en/our-research/platforms-in-partnership-for-research-and-training>

facilitates interdisciplinary approaches by linking the social and life sciences and multiple sectors in a One Health approach. This can—with the support of international organizations—help strengthen scientific advocacy with regard to policymakers. Sharing methods and data fosters comparative research dynamics and contributes to the development of novel health management coordination strategies.

Sharing training courses is, moreover, a positive way for participants from all global regions to discuss their views on health management. It is also an opportunity for these future graduates to build sustainable professional networks. Based on expertise mapping, the dPs could create a cross-sectoral think tank and an alumni association of former students from the different platforms—some of whom could have research or government service responsibilities. This strategy, underpinned by future leaders, is one of the possible levers for enhanced interaction with policymakers.

Political and technical authorities could benefit from these exchange processes between platforms that are active in their countries. These exchanges could in turn give rise to common founding documents, such as scientific and technical specifications and an ethical charter of principles and values to underpin the potential emergence of new collaborative health research structures in other parts of the world.

The four health-oriented dPs: CaribVet, GREASE, One Health OI, RP-PCP

Each of these four dPs is structured in a regional health-oriented network:

> dP CaribVET, Caribbean Animal Health Network (<https://www.caribvet.net/>). Strengthening animal disease surveillance and control networks in the Caribbean region.

> dP GREASE, Emerging Diseases in Southeast Asia (<https://www.grease-network.org/>). Managing emerging health risks at the human-animal-environment interface in Southeast Asia. The InterRisk Master's degree programme is part of this dP [InterRisk: Health risk assessment and management at the human-animal-environment interface, <http://www.onehealthsea.org/interrisk>].

> dP One Health OI, One Health Network – Indian Ocean (<https://www.onehealth-oi.org/>). Controlling animal and human infectious diseases in the Indian Ocean islands.

> dP RP-PCP, Production and conservation in partnership in southern Africa (<https://www.rp-pcp.org/>). Health is one of the main themes of this platform, which is in line with the sustainable development of rural populations and biodiversity conservation in Zimbabwe and neighbouring countries.

These four dPs collaborate with other dPs and various international organizations and networks, in particular:

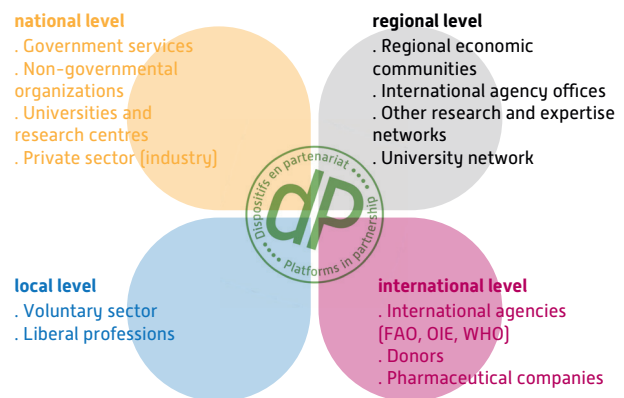
> dP schemes located in the same regions and with other expertise—food security, environment, public policy: MALICA [Markets and Agriculture Linkages for Cities in Asia, <https://www.malica.org/>], F&B [Forests and Biodiversity in Madagascar, <https://www.forets-biodiv.org/en/>], GOVINN [Centre for the Study of Governance Innovation, <http://governanceinnovation.org/>].

> International technical agencies: European Food Safety Authority [EFSA, <https://www.efsa.europa.eu/>], Food and Agriculture Organization of the United Nations [FAO, <http://www.fao.org/>], World Organisation for Animal Health [OIE, <https://www.oie.int/en/>], World Health Organization [WHO, <https://www.who.int/>].

> Regional economic organizations: Association of Southeast Asian Nations [ASEAN, <https://asean.org/>], Caribbean Community [CARICOM, <https://www.caricom.org/>], Indian Ocean Commission [COI, <http://www.commissionoceanindien.org/>], Southern African Development Community [SADC, <https://www.sadc.int/>].

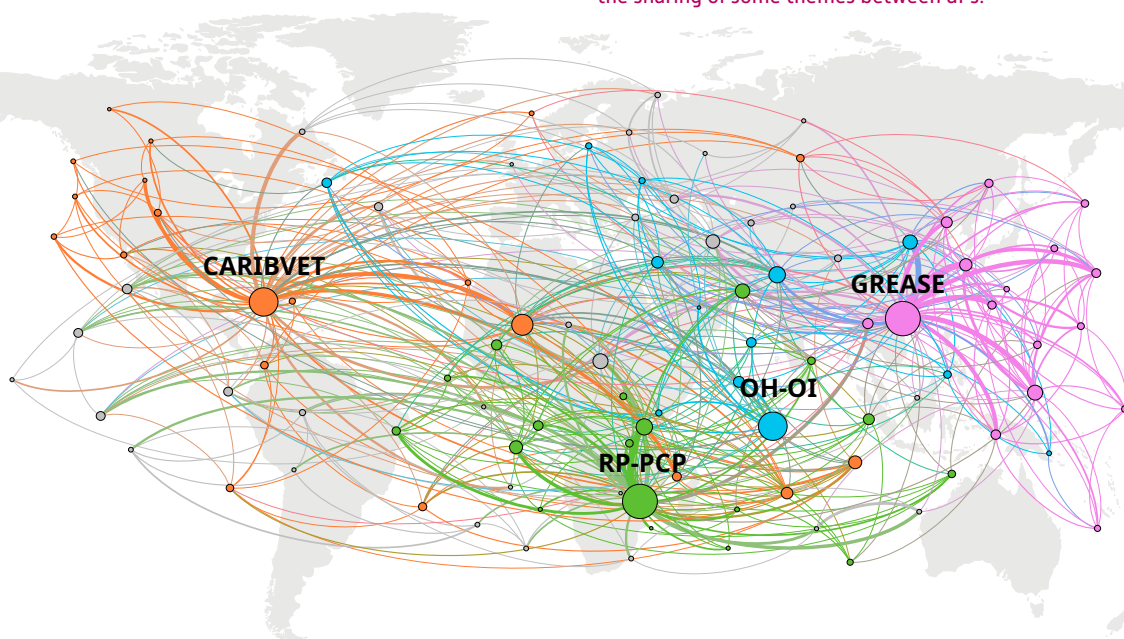
> Thematic networks: Global African Swine Fever Research Alliance [GARA, <https://www.ars.usda.gov/GARA/>], OIE-FAO Network of Expertise on Animal Influenza [OFFLU, <http://www.offlu.net/>], Institut Pasteur International Network (<https://www.pasteur.fr/en/institut-pasteur>), Southeast Asia One Health University Network [SEAOHUN, <https://www.seaohun.org/>], Participatory Epidemiology Network for Animal and Public Health [PENAPH, <https://penaph.net/>], affiliated with the International Livestock Research Institute [ILRI, <https://www.ilri.org/>].

Actors of the four health-oriented dPs have different statuses and are linked at different scales—core members, associate partners, and observers. The dP governance bodies invite future partners or validate other invitations.



The analysis of four dP health-focused activities led to the development of a typology and to mapping of connections between their research themes.

The figure below highlights the health themes covered in publications of the following dPs—CaribVET [orange], GREASE [pink], One Health OI [blue], RP-PCP [green]. The background map shows only the geographical position of each dP. Circles correspond to the themes—diseases, disciplines, methods, models, etc.—and the links showcase the sharing of some themes between dPs.



Infectious diseases, as well as antimicrobial resistance or the use of crop protection products in agriculture, are on the rise due to economic, political and social change, compounded by global climate and ecological disturbances. Governments and their services are handling these challenges in different ways and with diverse efficacy. Similarly, research and training partnerships around the world address these themes from different angles. Convergence between structures is therefore essential to be able to streamline health management in

all environmental and social settings at the local, national and global levels. Jointly building a theory of change could facilitate collaboration between structures seeking to work together. This approach enables strategic management, while greater stakeholder involvement and interaction enhance the potential of achieving the target changes. Sharing health knowledge and information can in turn help define generic global research programming so as to be able to tailor health policies to local needs. ■

Perspective n° 53 is the result of collaborative discussions between the research teams of four CIRAD platforms in partnership for research and training (dP) working in the fields of animal health, veterinary public health, wildlife and environment (CaribVET, GREASE, One Health OI, RP-PCP).

Since 2017, these discussions have been organized in the form of exchanges with many partners and interdisciplinary workshops between the teams of these four dPs:

- > One week in Réunion (October 2017) with several workshops on converging themes between the four dPs, such as antibiotic resistance from the One Health standpoint.

- > One week in Bangkok, Thailand (November 2018), with two main workshops:

- . the first on various common themes such as the One Health and EcoHealth approaches (focused on animal and human health) applied to the infectious disease reservoir concept

- . and the second to test CIRAD's *ImpresS ex ante* approach (Impact of research in the Global South, <https://impres-impact-recherche.cirad.fr/>, <https://www.cirad.fr/en/our-research/the-impact-of-our-research>).

- > In 2018, questionnaire response analysis meetings between CIRAD's ImpresS team, teams of the Animal, Health, Territories, Risks and Ecosystems joint research unit (UMR ASTRE, <https://umr-astre.cirad.fr/en>) and of the four dPs.

Publications resulting from this research include:

Blundo Canto G., Barret D., Faure G., Hainzelin E., Monier C., Triomphe B., Vall E., 2018. *ImpresS ex ante*. Une proposition de démarche pour construire *ex ante* les chemins de l'impact. Montpellier, CIRAD, 64 p. ISBN 978-2-87614-734-8. <https://doi.org/10.19182/agritrop/00060>

Blundo-Canto G., Triomphe B., Faure G., Barret D., de Romémont A., Hainzelin E., 2019. Building a culture of impact in an international agricultural research organization: Process and reflective learning. *Research Evaluation* 28 [2]: 1-9. <https://doi.org/10.1093/reseval/rvy033>

Goutard F. L., Binot A., Duboz R., Rasamoelina-Andriamanivo H., Pedrono M., Holl D., Peyre M.-L., Cappelle J., Chevalier V., Figuié M., Molia S., Roger F. L., 2015. How to reach the poor? Surveillance in low-income countries, lessons from experiences in Cambodia and Madagascar. *Preventive Veterinary Medicine* 120 [1]: 12-26. <https://doi.org/10.1016/j.prevetmed.2015.02.014>

Paul M. C., Rukkamsuk T., Tulayakul P., Suprasert A., Roger F., Bertagnoli S., Goutard F., 2013. InterRisk: an international "One Health" master program in Southeast Asia. International Conference of Education, Research and Innovation, Seville, Spain, 18-20 November 2013. In: ICERI 2013 Proceedings CD. IATED, Seville, pp. 3089-3098. ISBN 978-84-616-3847-5. <http://agritrop.cirad.fr/578310/>

Roger F., Caron A., Morand S., Pedrono M., de Garine-Wichatitsky M., Chevalier V., Tran A., Gaidet N., Figuié M., de Visscher M.-N., Binot A., 2016. One Health and EcoHealth: the same wine in different bottles? *Infection Ecology & Epidemiology* 6 [1]: 30978. <https://doi.org/10.3402/iee.v6.30978>

A few words about...

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A few links

Connecting Organizations for Regional Disease Surveillance (CORDS). <https://www.cordsnetwork.org/>

Global Outbreak Alert and Response Network (GOARN). <https://extranet.who.int/goarn/>

Khan M. L., Rothman-Ostrow P., Spencer J., Hasan N., Sabirovic M., Rahman-Shepherd A., Shaikh N., Heymann D., Dar O., 2018. The growth and strategic functioning of One Health networks: a systematic analysis. *The Lancet Planetary Health* 2 [6]: e264-e273. <https://www.sciencedirect.com/science/article/pii/S2542519618300846>

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