



**STAR
IDAZ**

International
Research
Consortium on
Animal Health

Investing in research with a One Health approach



STAR IDAZ IRC is the 'Global Strategic Alliances for the Coordination of Research on the Major Infectious Diseases of Animals and Zoonoses - International Research Consortium'. It is a global consortium that brings together funders and programme owners for research on animal health to maximise funding for coordinated animal health research. To achieve its aim, STAR IDAZ facilitates networking among funders, researchers, industry experts, policymakers and other stakeholders to collaborate on research and innovation in the field of infectious animal diseases. This document was produced by SIRCAH, the Scientific Secretariat of the STAR IDAZ IRC.

Support for the International Research Consortium on Animal Health (SIRCAH2) is funded by the European Union Horizon Europe research and innovation programme under grant agreement No 101082377 and by UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [grant numbers 10055666 and 10058793]



More information on STAR IDAZ IRC can be found at www.star-idaz.net

The findings and conclusions in this report are those of the contributors, who are responsible for the contents, and do not necessarily represent the views of the European Commission. Therefore, no statement in this report should be construed as an official position of the European Commission or of any of STAR IDAZ IRC and SIRCAH members.

Disclaimer

This report has been written with existing and new STAR-IDAZ IRC partners and animal health researchers in mind. STAR-IDAZ IRC is a global network of animal health funders and programme owners that aims to coordinate animal health research funding, with a focus on infectious diseases and zoonoses. It does this through collaborating with partner organisations to coordinate funding on over 20 priority topics, including specific diseases (such as African Swine Fever, Brucellosis and Influenzas) and cross-cutting topics (such as Vector Transmission and Control, Alternatives to Antimicrobials and One Health). However, STAR-IDAZ IRC recognises that taking a One Health approach to animal health challenges, such as infectious diseases and zoonoses, requires a broader and more inclusive approach. Aspects of this report should therefore also be of interest for stakeholders working on the health of the environment, climate change and green finance.

Disclaimer on certain references

This report was prepared before recent global changes to international development funding. Several of the useful references used to write this report have been removed due to these changes. As a result, certain references may contain broken links. STAR-IDAZ IRC opted not to remove these references for transparency and apologises for any broken links in certain references.

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Executive summary

The STAR-IDAZ International Research Consortium (IRC) on Animal Health is a global network of animal health funders and programme owners that aims to coordinate animal health research funding at the international level to reduce duplication and accelerate delivery of control tools. The STAR -IDAZ IRC focuses on infectious diseases of livestock and aquatic animals and complements an equivalent network for human health (GLoPID-R). There are also several other initiatives such as the Joint Programming Initiative on Antimicrobial Resistance (JPIAMR), the Global Alliance for Livestock Veterinary Medicines (GALVMed) and resources such as DISCONTTOOLS, which play synergistic roles in coordinating funding and research in the animal health space (1-3).

Although focused on global coordination of research funding, the STAR-IDAZ IRC recognises the importance for funding to move beyond research to implementation and impact. Funding and resource mobilisation for One Health were key themes at the World One Health Congress 2024, highlighting their significance and relevance for putting One Health approaches into action (4). This report builds on the previous work and activities of STAR-IDAZ IRC, including the "[Mapping One Health: An Exploration of the Global Funding Landscape for One Health Research](#)" report, to explore the One Health funding landscape more generally, moving beyond funding for research with a One Health lens (5, 6). The report is a companion piece to the "[Why One Health matters for Animal Health](#)" report, looking into available funding sources, types and mechanisms for projects, programmes and initiatives that take a One health approach, as well as considering the barriers to funding and possible solutions. While aimed primarily at funders and potential funders, other stakeholders should find some relevant and interesting information within the report, including researchers and practitioners working on animal health issues framed with a One Health lens.

International situation for One Health funding

Despite the high-level support and momentum for One Health approaches, insufficient resources are currently being mobilised to implement them (1-3).

Many comprehensive and scientifically robust One Health-related reports and plans exist, including national strategies on specific diseases and national action plans (NAPs) on antimicrobial resistance (AMR), but the resources to implement them are often lacking. For example, almost all countries have developed a NAP on AMR, but only 11 per cent have made budget provisions to implement them (4). In many low- and middle-income countries (LMICs), this is due to competing priorities for scarce resources and historical structural adjustment programmes. Competing priorities for decision-makers can include issues ranging across healthcare, the economy, education, infrastructure and climate resilience.

For animal health, there are a number of prioritisation assessments and toolkits available such as the One Health Zoonotic Disease Prioritization (OHZDP) (5), One Health Systems Mapping and Analysis Resource Toolkit (OH-SMART) (6), as well as widely used national assessments such as the Performance of Veterinary services (PVS) and National Bridging Workshops (NBW) (7, 8). An integrated inventory of One Health tools has also been recently collated and is a valuable resource for One Health researchers and practitioners, going beyond animal health (9). Yet ensuring that adequate budgets are allocated to address these national priorities is often still a challenge.

External funding, finance and investment for animal health to support addressing the priorities above is sometimes available through animal health or livestock specific grant calls or loans. Yet when trying to tackle animal health challenges using One Health approaches, decision-makers might not necessarily be aware of the wide range of potential funding sources available, as some are perhaps less obvious.

The STAR-IDAZ IRC is mainly focused on the global coordination of funding for research, however the IRC partners have highlighted and recognise the importance of funding to move beyond research, to implementation and impact. The funding sources and mechanisms explored in this report can be applied more broadly than research, extending to projects, programmes and initiatives that embed One Health approaches.

What are the potential funding sources for One Health?

Despite the above challenges, there are diverse funding sources available for governments, researchers and organisations who want to conduct One Health initiatives to consider, as shown in Figure 1 (10):

- Public - Domestic public sector (regional, national and sub-national governments)
- Public – Bilateral, multilateral and regional government funding
- Foundations and Philanthropies
- Private sector
- Public-private partnerships (PPPs)
- Academia and research institutions
- International Organisations (IOs)

- Non-governmental organisations (NGOs)
- International financial institutions (IFIs)
 - World Bank (WB)
 - Regional banks
- Innovative finance mechanisms
 - The Pandemic Fund
 - Nature for Health Multi-Partner Trust Fund
 - AMR Multi-Stakeholder Partnership Platform
 - Climate finance mechanisms such as the Green Climate Fund (GCF) and Global Environment Facility (GEF)
- Civil Society Organisations (CSOs) – especially for local/community projects
- Blended finance
- Pooled funding

Figure 1: Channels and mechanisms of funding, adapted from A guide to implementing the OH JPA at national level (10)



*Limited information available

What are the funding mechanisms?

Table 1: Funding sources and mechanisms for One Health

Mechanism	Examples
Domestic public funding	
<ul style="list-style-type: none"> From national or regional Government budgets Directly to government departments for project or programme budgets Can be channelled through academic institutions, research consortia, international organisations and collaborators Usually, annual budget cycles 	<ul style="list-style-type: none"> National Government budgets Regional budgets (e.g. from the European Union)
Bilateral, multilateral or regional government funding	
<ul style="list-style-type: none"> Official development assistance (ODA) via grants or “soft loans” (11) Grant calls for proposals Can be channelled through academic institutions, research consortia, international organisations and collaborators 	<ul style="list-style-type: none"> Government departments, ministries and other government-owned enterprises, for example Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ), Germany; UK Foreign, Commonwealth and Development Office (FCDO), Ministry of Foreign Affairs of Japan (MOFA), Department of Foreign Affairs and Trade, Australia; International Development Research Centre (IDRC), Canada and United States Agency for International Development (USAID) (12) European Commission (EC) Team Europe Initiatives (TEIs)* The Global Fund **
Foundations and Philanthropies	
<ul style="list-style-type: none"> Grants through calls for proposals Grants/sponsorship through collaborative research partnerships Can be channelled through academic institutions, research consortia, international organisations and collaborators Strategic investments*** 	<ul style="list-style-type: none"> Gates Foundation Crawford Fund Howard G Buffett Foundation Leverhulme Trust Mastercard Foundation Rockefeller Foundation Wellcome Trust
Private Sector	
<ul style="list-style-type: none"> Loans or sponsorship Some grants – usually in partnership with foundations/philanthropies (13) In-kind contributions Direct to projects/programmes Can be channelled through academic institutions, research consortia, international organisations and collaborators 	<ul style="list-style-type: none"> Boehringer Ingelheim Ceva Santé Animale Clinglobal DAI Merck Animal Health Vetoquinol Zoetis

Public-Private Partnerships (PPPs)	
<ul style="list-style-type: none"> Mix of funding from bilateral, multilateral, regional government budgets and private sector loans Can be channelled through academic institutions, research consortia, international organisations and collaborators 	<ul style="list-style-type: none"> European & Developing Countries Clinical Trials Partnership (EDCTP) Global Health Innovative Technology Fund (GHIT)
Academia and research institutions	
<ul style="list-style-type: none"> Grants through grant applications and/or calls for proposals Can be channelled through other academic institutions, research consortia, international organisations and collaborators In-kind contributions 	<ul style="list-style-type: none"> International Livestock Research Institute (ILRI) The French Agricultural Research Centre for International Development (CIRAD) Wageningen University and Research (WUR)
International Organisations (IOs)	
<ul style="list-style-type: none"> In-kind contributions, for example: (10): <ul style="list-style-type: none"> Staff time working directly on a project Pro bono professional services Staff cover (backfill to allow staff to participate in a project) Consumables, e.g. research materials Facilities made available, e.g. meeting rooms, lab spaces, factory spaces Equipment made available, e.g. loaned or gifted Knowledge, e.g. datasets Software Travel and subsistence costs Advertising and publicity, e.g. press releases, coverage in paper or web media Note - United Nations organisations and some other IOs receive most of their funding from member countries (domestic public funding) 	<ul style="list-style-type: none"> Food and Agriculture Organization of the United Nations (FAO) United Nations Environment Programme (UNEP) World Health Organization (WHO) World Organisation for Animal Health (WOAH)
Non-governmental organisations (NGOs) e.g. charities	
<ul style="list-style-type: none"> Grants Can be channelled through academic institutions, research consortia, international organisations and collaborators 	<ul style="list-style-type: none"> The Brooke Unlimit Health

International financial institutions (IFIs)	
<ul style="list-style-type: none"> Loans Grants Combination of loans and grants Direct to national governments (loans) Grants might be channelled through academic institutions, research consortia, international organisations and collaborators 	<ul style="list-style-type: none"> African Development Bank (AfDB) Asian Development Bank (ADB) European Bank for Reconstruction and Development (EBRD) International Fund for Agricultural Development (IFAD) World Bank (WB)
Innovative funding mechanisms	
<ul style="list-style-type: none"> Grants, non-grant instruments, co-investment Grants might be channelled through academic institutions, research consortia, international organisations and collaborators 	<ul style="list-style-type: none"> Global Alliance for Livestock Veterinary Medicines (GALVmed) Global Agriculture and Food Security Program (GAFSP) Global Environment Facility (GEF) Green Climate Fund (GCF) The Pandemic Fund
Blended finance	
<ul style="list-style-type: none"> <i>"Combining public and private financing to incentivize increased investment from new sources"</i> (10) Helps to de-risk investments, especially for the private sector 	<ul style="list-style-type: none"> GEF non-grant instruments Parts of TEIs
Pooled funding	
<ul style="list-style-type: none"> Funding from multiple sources collected into one communal pot or distributed among implementing partners Grants 	<ul style="list-style-type: none"> AMR Multi-Stakeholder Partnership Platform Nature for Health Multi-Partner Trust Fund One Health in Agrifood System Transformation Fund (10)

* TEIs - EU Member States, including their implementing agencies and public development banks, the European Investment Bank and the European Bank for Reconstruction and Development

**The Global Fund - 94% of total funding comes from bilateral governments while the rest comes from the private sector, foundations and innovative financing initiatives (14)

***Strategic investments - refers to a smaller proportion of funding, for entrepreneurs, companies, and other organisations (15)

Grants and Calls for Proposals

Grants do not need to be repaid and are a key funding mechanism for research in the animal health sector and for One Health initiatives more broadly. Grants usually fall into one of the following four categories: regional grants, country grants, project grants and fellowships (16). Most researchers apply for funding through grant calls for proposals. Funding organisations and programme owners open these calls for proposals in line with their resource cycle, vision and priorities. They can be one-off grant calls, annual grant calls or one of several rounds of funding for a particular fund, programme or project (16, 17). In some cases, grants provide seed funding for proof-of-concept projects or platforms, such as the initial funding from the UK government to

establish the Global Alliance for Livestock Veterinary Medicines (GALVmed) in 2005, with subsequent joint funding provided with Gates Foundation in 2008 (18). Grants can cover sponsorship of training programmes such as fellowships and post-doctoral training, and thereby contribute to capacity-building, one of the 4 Cs of One Health. Although many stakeholders tend to only think of loans when thinking about IFIs such as the World Bank or regional banks, these institutions sometimes provide country or regional grants; the Pandemic Fund being a significant and recent example (17).

The EC, USAID and FCDO are three examples of major public funders of One Health-related projects globally, mainly through a combination of grants and “soft loans” (19, 20). While they each have relatively large budgets, they also have wide-ranging mandates, meaning that any grant calls for proposals are usually highly competitive. However, there may not always be specific calls for proposals when providing grants. In the spirit of One Health, all these organisations often form partnerships and collaborations, for example with international organisations, academic and research institutions, private sector organisations and CSOs. In some cases, such as the United States Department of Agriculture’s Agricultural Research Service (USDA-ARS), these partnerships and collaborations require a proportion of co-financing (21). One Health-related projects might not be immediately obvious, as many are listed under “Global Health” or in the case of IDRC, they fall under “Climate-Resilient Food Systems” (22, 23).

Joint funding calls are an excellent way of encouraging collaboration (one of the 4C’s of One Health) and help to de-risk investments for funders, since the risk is spread across several different organisations. In joint funding calls, the collaboration is generally agreed at the start and does not change. A recent example of a joint funding call is the European Partnership on Animal Health and Welfare (EUPAHW); an ambitious research and innovation initiative to control infectious diseases of animals and to promote animal welfare. It launched in 2024 and is anticipated to invest €360 million over seven years to boost research and facilitate cooperation between a wide range of stakeholders (24). Its scope extends beyond animal health and welfare, aiming to enhance cross-sector collaboration and provide societal impact through One Health approaches. The partnership has attracted a diverse range of partners, including 56 research performing organisations and 30 funding organisations in Europe (as of April 2025). The budget is 50% funded by the Horizon Europe Framework Programme for Research and Innovation and 50% by partner institutions and organisations (24). Another successful joint call, which has recently ended, was the International Coordination on Research of Infectious Animal Diseases (ICRAD); a consortium of various public sector partners who supported cross-cutting research to improve public health and animal health and welfare, with associated benefits towards the environment and the economy. The three rounds of joint funding calls also connected research partners with different but complementary scientific and technological expertise, helping to maximise resources and share risks, costs and expertise (25). In 2024, there was also a joint grant call for collaborative research on infectious diseases between the UK and Southeast Asia, with co-funding from a number of institutions and agencies and an emphasis on One Health approaches (26). Some joint calls are topic-specific, such as the Joint Programming Initiative on Antimicrobial Resistance (JPIAMR). This is an international collaborative platform involving 29 countries and the European Commission, working together to curb AMR. The JPIAMR coordinates national research funding and supports collaborative action for filling knowledge gaps on AMR with a One Health perspective (27). Complementing the JPIAMR is the EU Partnership on One Health Antimicrobial Resistance (EUP OHAMR); a new partnership co-funded by EU countries and the European Commission, with research funders and national ministries at the core of the consortium. A Strategic Research and Innovation Agenda (SRIA) will be implemented through joint calls and additional activities, with the first joint call due to open in 2025 (28).

Team Europe Initiatives (TEIs) are another joint approach focusing on “identifying critical priorities that constrain development in a given country or region, where a coordinated and coherent effort by ‘Team Europe’ would ensure results with a transformative impact” (29). Team Europe consists of the European Union, EU Member States, including their implementing agencies and public development banks, as well as the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD). The ‘Team Europe approach’ advocates for joining forces so that joint external action becomes more than the sum of its parts, through working collaboratively and pooling resources and expertise to deliver more effective and greater impact (29). This approach aligns well with holistic One Health approaches and targets the sustainable development goals (SDGs), with potential entry points via animal health and agriculture. TEIs work with diverse partners to implement their projects, including CSOs and the private sector. TEIs operate through joint programming and some calls for proposals, providing funding through a combination of loans, grants and blended finance (30, 31). The EU is also funding a new project “Improving knowledge and management capacities to strengthen surveillance systems of priority emerging and re-emerging zoonotic diseases at the animal-human-environment interface” (ZOOSURSY), through a partnership between the TEI and the African Union (32). It aims to build on the success and principles of the EBO-SURSY Project (led by WOAHA), which worked alongside veterinary services and wildlife authorities in ten countries, helping them build their knowledge and capacities on wildlife surveillance systems.

Beyond Europe, the Australian Department of Foreign Affairs and Trade (DFAT) Indo-Pacific Centre for Health Security also funds One Health projects (33). From 2018-2022, the centre funded the “Research for One Health Systems-strengthening Program”, a group of research projects co-funded with the Australian Centre for International Agricultural Research (ACIAR) addressing zoonoses, AMR and systems strengthening within the Asia Pacific (34).

Private sector funding

The private sector is an important One Health stakeholder yet has often been overlooked for opportunities to provide input, for potential partnerships and collaborations, and as a funding source (35). Private sector funding does not always mean loans, as many organisations are willing to provide sponsorship, grants or in-kind contributions. In the veterinary sector, public-private partnerships (PPPs) have been very successful and are actively encouraged by WOAHA (36). Similar approaches could prove successful for collaborating across sectors and disciplines for One Health initiatives.

Although private sector funders might have different priorities than public sector funders, many do have an interest in One Health. For example, participants (mainly private sector) at the 2024 Discovery to Innovation in Animal Health (DIAH) Conference identified the following seven key drivers for investment (37):

1. Robust scientific evidence base
2. A clear market demand
3. Substantial customer (or consumer/end-user) benefit
4. Innovative and scalable solution
5. Experienced management
6. Significant return on investment (ROI) potential
7. A strong syndicate, who share a vision

Several of these drivers are relevant for One Health. Market demand exists for some livestock, aquatic animal, zoonotic or food-borne diseases, especially those with high mortality rates or severe production, health, economic and trade impacts. However, demand does not necessarily equal willingness to pay, especially for livestock keepers in LMIC contexts, who might require government subsidies to access essential products such as vaccines. This is where context-specific governance and political economy become very important. Market demand might not always correlate with country or local needs, emphasising the importance of processes such as the OHZDP to ensure resources and efforts are directed appropriately. Depending on the product, benefits can be significant and high impact e.g. positively affecting animal health populations, food security and livelihoods in LMIC contexts. In some cases, benefits might not accrue without associated behaviour change, requiring collaboration across disciplines (such as vets, livestock-keepers, fisherfolk, social scientists etc). Private sector stakeholders look for experienced management for their investments, and can potentially contribute to strengthening management teams, especially if investments align with company priorities such as sustainable production or addressing the SDGs. The ROI potential is challenging to demonstrate as One Health tends to focus on public good aspects, but there is a small and growing evidence base showing positive economic outcomes of One Health approaches (38). The relative lack of metrics to adequately capture One Health benefits currently hampers these efforts. In some cases, the public good aspect of One Health approaches is what makes specific projects or programmes good value, even if there is not a significant ROI. In these situations, private sector stakeholders might consider partnerships or collaborations (with other private sector companies or via public-private partnerships) or blended finance to de-risk their investment and meet social impact goals.

Non-grant instruments

Within the context of the GEF programming, a non-grant instrument is “a mechanism to provide financing for activities that have a potential to generate financial reflows for the financier, irrespective of whether such reflows actually materialize” (39). Reflows include any payments of principal, interest, guarantees, or fees from loans or other financial products other than grants, which are due to be returned to GEF (39, 40). The use of non-grant instruments has been proposed as an important mechanism for engaging the private sector. Recent GEF documents support this view, with significant co-financing coming from the private sector (39). The non-grant instruments commonly used by the GEF include debt, equity and guarantees (41).

In-kind contributions

In-kind contributions (see Table 1) include any contributions to a specific project or programme that are not monetary, but a monetary value can be placed against them using a demonstrable methodology (42). In-kind contributions are not always included in project or programme budgets yet can provide significant support and expertise. In some cases, there might not be a clear “market value” for these contributions, for example, datasets provided by large companies, and access to archives or repositories gifted to an organisation who then makes them available for research (42). However, in-kind contributions should not be overlooked, as they can provide significant added value to projects and programmes, and often support collaboration and capacity-building, two of the four Cs of One Health.

Blended Finance

The Organisation for Economic Co-operation and Development (OECD) defines blended finance as “the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries” (12). Development finance is official development finance, other public resources, private investment, portfolio flows and grants, innovative forms of public–private partnerships and private philanthropic funds (43). Additional finance refers to commercial finance, including public and private sources, whose principal purpose is commercial rather than to support development outcomes (12). Blended finance encourages the private sector to participate in projects that have the potential to generate significant social benefits, by reducing financial risks. In the animal health sector, one case study showed how blended finance improved dairy farmers’ capacity to improve herd management and milk quality (44).

Co-investment

Co-investment requires the applicant to provide some funding themselves. The level of co-investment varies but is a key aspect of encouraging sustainable resource mobilisation and is a requirement for grant proposals to the Pandemic Fund. Co-investment also helps to promote ownership as well as leveraging and catalysing further funding through attracting new resources over time, for example from domestic and regional resources (45). When domestic resources are scarce, there can be a tendency to lean heavily on external funding, but to be sustainable, funding for One Health needs strong support from and co-investment by national governments (15).

Co-financing

Co-financing differs from co-investment, as this funding comes from a range of external sources, such as multilateral development banks, global health institutions, the private sector, philanthropies and others. These external sources are *additional* to the primary external fund (e.g. grant) and are often partners involved in implementing a project, programme or initiative. Their co-financing contributions can be substantial. For example, from the first round of the Pandemic Fund, each grant dollar leveraged an average of over four dollars in co-financing, with some projects achieving a leverage ratio of six times the grant amount in co-financing (46). These figures emphasise the catalytic potential of co-financing. By encouraging both co-investment and co-financing, One Health stakeholders have the potential to support sustainability and ownership, while also increasing the available funding for projects, programmes and initiatives.

Pooled funding and Trust Funds

In the context of the One Health funding landscape, trust funds are often essentially pooled funding mechanisms, for example Multi Partner Trust Funds (MPTFs). A number of different stakeholders and organisations contribute to these pooled funds including national governments, the European Union, IFIs, the private sector, philanthropic foundations, and United Nations organisations (47). These differ from joint funding calls since they remain open for contributions from existing and new funders, and collaboration between the different stakeholders can evolve over time. In 2019, FAO, WOA, and WHO joined forces to address the health

risks of AMR through a pooled fund, the AMR MPTF. The AMR MPTF consists of global, regional and national components and reduces the threat of AMR by funding transformative and innovative practices that support national governments in implementing and maintaining the One Health approach. Financial resources are used to pinpoint existing gaps and coordinate multi-sector responses for addressing AMR at regional and country levels (48). The Nature for Health (N4H) Fund works to reduce the risk of pandemics by strengthening environmental aspects of One Health and engages across sectors and communities at different societal levels to catalyse integrated policies, evidence-based action and capacity development for impact locally, nationally and regionally (49). N4H is also an MPTF, with eight consortium partners who leverage extensive multisectoral diverse One Health practical experience. The second call closed in April 2025 (50). A smaller pooled fund is FAO's One Health in Agrifood System Transformation Fund, which aims to support 20 countries, through an integrated and comprehensive One Health support package, to progress national pathways for transforming agrifood systems (51). It aims to do this through One Health assessments and planning, coordination, technical support, policy advice and leveraging investment, systems and tools, emergency response and capacity-development (51). Several partners, including the Australian government, have contributed to this fund.

Loans

Loans need to be repaid with interest, the level of which will vary depending on the type of loan. Lending terms for concessional loans are very low (or sometimes even zero) interest, also known as “soft loans”. The International Development Association (IDA) of the World Bank Group refers to these types of loans as credits (52). Non-concessional loans accrue market-level interest rates and have less favourable lending terms than concessional loans. If a project or programme budget is very high, for example for national or regional One Health projects, a mix of funding through concessional loans and grants could be considered. Applicants should consider the importance of timing to take advantage of such opportunities, as loan cycles and grant calls do not always align.

Innovative financing mechanisms

The Pandemic Fund is a multilateral financing mechanism dedicated to strengthening pandemic prevention, preparedness, and response capacities and capabilities of LMICs through investments and technical support at the national, regional, and global levels (17). The SARS-CoV-2 pandemic highlighted a lack of readiness to deal with a pandemic in many countries (not only LMICs) across the globe, leading to the establishment of the Pandemic Fund in 2022. The fund provides a stream of additional long-term financing for investments in priority areas of infectious disease surveillance, laboratories and diagnostics, and health workforce strengthening. There is a requirement for co-investment in Pandemic Fund project proposals, to encourage ownership and sustainability, but the fund is designed to be catalytic, leveraging significant additional funding through co-financing (46). The Pandemic Fund actively encourages One Health approaches, with successful projects including a 25 million USD grant to India for the “Animal Health Security Strengthening for Pandemic Preparedness and Response” project (53). Another example, from Cambodia, works to integrate wildlife and human surveillance programmes, conduct multisectoral risk assessments, and develop a One Health technical working group for workforce development, including conducting zoonotic disease training for community health workers, vets and others. The third call for proposals opened in December 2024. For future calls, animal health research groups are encouraged to consider opportunities for collaboration with national ministries,

organisations and other stakeholders (for country proposals), to see if animal health-related research questions or interventions could be incorporated into Pandemic Fund project proposals.

The Global Alliance for Livestock Veterinary Medicines (GALVmed) functions as a Product Development Partnership (PDP) – currently it is the only veterinary PDP, while there are several human PDPs (54). GALVmed harnesses the best available expertise and capabilities from across academia, public research institutions and the private sector to develop vaccines, medicines and diagnostics for the major livestock diseases impacting small-scale producers (55). GALVmed became a partner of the STAR-IDAZ IRC in 2024, contributing an important voice and unique perspective to discussions on research and development for livestock health and sustainable production.

The Global Agriculture and Food Security Program (GAFSP) is a multilateral partnership platform and a unique innovative funding mechanism that provides a mix of grant options; public sector grants, producer organisation grants, and private sector financing, as well as concessional loans, blended finance, technical assistance, and advisory services (56). Its producer organisation grants are especially useful for community-led and smaller-scale projects. In October 2024, GAFSP launched the Business Investment Financing Track (BIFT) to “take finance for addressing food insecurity in low-income countries to the next level”. The BIFT is designed to catalyse access to affordable private and climate finance for smallholder farmers, producer organizations, innovative startups, and micro-, small-, and medium-enterprises in the agrifood sector (57). The GAFSP is funded by a combination of public and private sector organisations (58).

Administration fees

Administration fees can be incurred when grants are channelled through a third party, such as implementing entities or partners, research consortia and international organisations. While administration fees are usually relatively low, they can still be significant. For example, the Pandemic Fund awards large grants to successful project proposals, with implementing entities collectively entitled to administration fees of up to seven per cent per project proposal (59).

Barriers and possible solutions for One Health funding

Many of the available funding sources, types and mechanisms present challenges for potential applicants. By identifying these obstacles, it is feasible to suggest possible solutions. Some barriers and potential solutions for livestock funding have been raised in a recent Livestock Data for Decisions (LD4D) Solutions Group climate brief, further highlighting the importance of funding for animal health and its close links to the environment and climate (48).

Table 2: Specific challenges affecting funding for One Health projects, programmes and initiatives and possible solutions (20, 38, 60)

Barriers and reasons	Possible solutions
<p>Barrier 1: National ministerial silos</p> <ul style="list-style-type: none"> Ministry of Health, Ministry of Livestock, Ministry of Agriculture, Ministry of Finance etc. Since funding usually goes to one specific national ministry, this inevitably creates competition for scarce resources, instead of promoting a more integrated, holistic and collaborative One Health approach Unequal partnerships (economically, power dynamics etc) – for example, if multiple ministries collaborate, and the costs are borne by one ministry only, but the benefits mainly fall under another ministry – vaccinating dogs against rabies is an example of this. Colleagues working in different ministries might not discuss ideas or collaborate on project design due to concerns about losing out on funding, reducing incentives for co-design 	<ul style="list-style-type: none"> Involve Ministry of Finance from the start Provide One Health project or programme funding across ministries at the national level, rather than only to one lead ministry Providing funding to multiple relevant ministries involved in a particular One Health project could help to reduce competition between them Spreading funding across different ministries could also help to ensure that an appropriate proportion of the total project budget goes to each ministry, encouraging resources to be used more efficiently and reducing tension between ministries
<p>Barrier 2: Scientific or disciplinary silos</p> <ul style="list-style-type: none"> Scientific or disciplinary silos can discourage transdisciplinary and holistic One Health approaches For example, a grant funding call with a relatively narrow focus, such as disease-specific calls Such calls are more likely to result in a group of technical experts from the same discipline working together, potentially neglecting other important aspects and perspectives relevant to the disease 	<ul style="list-style-type: none"> Broader and less specific funding calls could attract more diverse and innovative approaches and potentially lead to better collaboration and more efficient use of resources Funding calls could encourage transdisciplinary, integrated and holistic approaches to complex problems – such as stipulating a requirement to include and engage with social scientists and social science methodologies Broader funding calls should still outline some boundaries, to avoid the submission of irrelevant or inappropriate project proposals
<p>Barrier 3: Geographic criteria</p> <ul style="list-style-type: none"> The geographic criteria for some funding calls excludes organisations and colleagues from certain countries or regions from applying In some circumstances, this can result in end-user's perspectives and knowledge being excluded, especially if the expected beneficiaries are those in excluded regions 	<ul style="list-style-type: none"> Adjust funding call criteria to maximise inclusivity and diversity This would encourage collaboration and knowledge sharing across regions and countries including between LMICs. This should improve access to funding for One Health researchers and practitioners in some of the most high-risk and severely affected regions and countries.

Barrier 4: Level of co-investment required	
<ul style="list-style-type: none"> Co-investment from domestic public budgets can be a useful way of empowering countries and organisations to follow their priorities while also supporting long-term sustainability However, if the level of co-investment required is too high, this can exclude some applicants For example, some recent grant calls have set co-investment levels of between 50- 70%, which are not feasible in many LMIC contexts (61) 	<ul style="list-style-type: none"> Co-investment should be encouraged for ownership and sustainability, but the level of co-investment required needs to be realistic This is important for inclusivity and equity within One Health partnerships and collaborations
Barrier 5: Short timeframes	
<ul style="list-style-type: none"> Grants are often only offered for short timeframes such as three years (17) Yet most One Health initiatives require at least five years to demonstrate their value or impact, so funding should ideally be for longer than three years Longer-term funding is especially important for work relating to climate change and the environment, and for building transdisciplinary research consortia 	<ul style="list-style-type: none"> Increase grant funding duration to five years, or longer if feasible This could potentially be combined with requirements for co-investment, or perhaps co-investment after the first five years, to promote sustainability, but also provide time for positive impacts to occur and be measured
Barrier 6: Limited support for participatory approaches that empower communities	
<ul style="list-style-type: none"> Most calls do not specify a requirement for participatory approaches, which are a key part of integrated, holistic One Health approaches to complex health problems This can lead to civil society voices and end-user's perspectives being excluded 	<ul style="list-style-type: none"> Include participatory approaches in grant call criteria to ensure all relevant stakeholders (especially expected beneficiaries) can contribute to the problem-solving process Should help to ensure that interventions and policies are feasible, cost-effective and context-specific Participatory approaches can also help to improve understanding and collaboration between sectoral and disciplinary partners
Barrier 7: Exclusionary language or terminology	
<ul style="list-style-type: none"> Although rarely intentional, a lack of inclusive language or terminology can perpetuate existing inequities (e.g. donors and recipients) This can result in skewed partnerships and collaborations and reduce feelings of ownership 	<ul style="list-style-type: none"> Language should be explicitly inclusive – encouraging diverse representation, participation and leadership

Barrier 8: Limited promotion of capacity-strengthening	
<ul style="list-style-type: none"> Many grant calls do not specify or promote capacity-strengthening as part of their criteria Capacity-strengthening is essential for sustainability and one of the 4 Cs of One Health 	<ul style="list-style-type: none"> Include capacity-strengthening in grant call criteria and recognise the value of existing capacity Some calls already do this, such as the Pandemic Fund, which highlights workforce capacity and development as one of its three priorities (17)
Barrier 9: Project or programme-based funding	
<ul style="list-style-type: none"> Funding is often project or programme-based, resulting in the benefits or positive impacts accrued often being limited after the end of the project or programme 	<ul style="list-style-type: none"> Best addressed through adjusting funding architecture for longer-term sustainability, for example, directly funding national or sub-national infrastructure, staff, logistics and training that support the project or programme outcomes, rather than through a separate project or programme budget Where this is not feasible or likely, the next best option is to ensure funding can be renewed at least once, ideally with an element of co-investment for better ownership
Barrier 10: Limited renewal options	
<ul style="list-style-type: none"> The process for renewing funding can be challenging and time-consuming, with important project or programme results still pending when applying In some cases, there is no option to apply for renewal of funding at all Currently, a lack of such opportunities can lead to poor long-term outcomes, even when projects have been successful, since it is often not possible to secure domestic public funding to continue the work before the project ends (partly due to the timing of funding and budget cycles) 	<ul style="list-style-type: none"> Where feasible, grant calls should include the option to renew funding, even if only once Requests for renewed funding could potentially include, or be required to include a plan for future co-investment or other long-term sustainability plans
Barrier 11: Limited flexibility (20)	
<ul style="list-style-type: none"> Limited flexibility in funding conditions can limit the adaption and development of a project or programme after it has started This could hinder more relevant or beneficial research and outputs and lead to scarce resources being misused and poor value for money 	<ul style="list-style-type: none"> Funders should support adaptive implementation, allowing adjustments to changing circumstances Flexibility can enhance the success of grant calls by allowing projects to adapt based on real-world factors

Barrier 12: Limited collaboration between funders of existing synergistic or complementary projects	
<ul style="list-style-type: none"> Currently, there is limited collaboration between different funders of existing projects or programmes that are synergistic or complementary, especially those that involve different disciplines and are not explicitly labelled as "One Health" Many funding organisations and research institutions have their own database of One Health projects that they are working on, yet a lack of awareness of other similar work could hinder collective efforts to pool resources, improve cost-effectiveness and maximise impact 	<ul style="list-style-type: none"> Active efforts for regular dialogue between different funders, as well as between researchers and funders could help to address this issue A global tracker of One Health (and planetary health and ecohealth) projects or programmes and their funders could be ideal, although perhaps not yet feasible A similar tracker, the Pandemic Pact, was set up for human health following the SARS-CoV-2 pandemic and provides useful and accessible information for both researchers and funders (62)
Barrier 13: Limited diversity within review panels and limited One Health expertise	
<ul style="list-style-type: none"> Currently, not all grant calls have diverse review panels, potentially influencing the type of One Health work that receives funding One Health principles promote inclusive and equitable collaboration, yet a lack of diversity on review panels could inadvertently perpetuate existing biases 	<ul style="list-style-type: none"> Increase diversity of review panels and provide panel induction training that highlights transdisciplinary, integrated and whole-of-society approaches to complex problems Diversity should reflect gender, region, organisation type, expertise etc
Barrier 14: Lack of standardised or well-recognised One Health success metrics	
<ul style="list-style-type: none"> There is currently a lack of standardised or well-recognised success metrics for One Health projects, making it difficult to measure and show the impact of research and initiatives (positive or negative) 	<ul style="list-style-type: none"> Development of success metrics to measure impact of research This is a challenge, but there is already work underway to try to address the lack of quantitative metrics for One Health (38, 63, 64)
Barrier 15: Limited requirements to demonstrate how One Health research will translate into action and policy	
<ul style="list-style-type: none"> Many grant calls do not require applicants to explain how their research will translate into action or policy This could potentially lead to resources being used to explore interesting but academic questions, instead of addressing complex problems through a One Health approach 	<ul style="list-style-type: none"> Funders should aim to include this aspect in their grant templates, to emphasise the importance of high-impact One Health work and appropriate allocation of resources Promote involvement of policy specialists and political scientists from the outset

Barrier 16: Excessive bureaucracy

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| <ul style="list-style-type: none"> • Most calls require significant amounts of pre-submission preparation • Sometimes there is no/little feedback on unsuccessful proposals, making it difficult for proposers to improve for future rounds or other submissions • Organisational rules and regulations can lead to significant delays, in some cases resulting in projects not happening at all, and damaging professional relationships | <ul style="list-style-type: none"> • Where feasible, streamline the process for both applicants and funders, ensuring processes and timelines are clear on websites and call paperwork • Provide feedback on unsuccessful proposals where possible, or general guidance for how to improve following an unsuccessful submission • Consider if less formal methods are feasible in certain situations, for example a memorandum of understanding or letter of intent could provide a sufficient level of commitment |
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The importance of funding for sustainability, scaling and long-lasting impacts

Currently, funding for many One Health projects is almost exclusively external. Research from 2021 showed that over 90 per cent of funding for One Health initiatives across Africa originated largely from outside the continent with some partial co-funding from national governments (65). It is positive to note some co-funding in this case, which is essential for ownership and sustainability. However, more generally, there is a need for longer project and programme timeframes, more diversity in review panels as well as some of the other possible solutions suggested in Table 2, to ensure more sustainable One Health initiatives and longer-lasting impacts. It is better value for funders, and more impactful for researchers, if projects or programmes can continue and become self-sustaining. Otherwise, even successful projects can end up being poor value for money in the long run, due to loss of benefits once the project finishes.

Sustainability is also important for opportunities to scale up, which can have substantial positive impacts. For example, sometimes expensive laboratory equipment cannot be maintained after a project closes, so the capital spent on it is not best utilised. Successful projects, programmes or initiatives are often pilots and require scaling up (to national or regional levels) or down (to sub-national or local levels) for wider and longer-lasting impacts. This is often a challenge in terms of financial resources, as well as capacity, political will and governance. Funders could play an important role, by encouraging and supporting the inclusion of implementation research and scaling in project proposals, as is already happening with some human health proposals (66, 67). Implementation research is an emerging research area that helps research and health programmes achieve impact at scale, using systematic approaches to understand and overcome the gaps between theory and knowledge, and implementation and practice (68). Evidence from the human health sector shows funders are already starting to address this issue, for example by ensuring “their grants have the applicant think about sustainability from the get-go, including having requirements that relate to having people that will be sustaining the intervention as part of the project team” (68).

One Health networks face similar challenges, often relying on external funding (66, 69). Yet these One Health and animal health networks can also play an important role in sustainability, scaling and long-lasting impacts. By their nature, networks bring people together, forming new and interesting connections across sectors, disciplines and society. “Preventing Zoonotic Disease Emergence” (PREZODE) has significant expertise and

influence, affecting positive change through collaborative projects, advocacy, sharing case studies and connecting with new or on-going One Health projects, with a focus on prevention (70). The Quadripartite Return on Investment for One Health and One Health investment planning Community of Practice brings people together with a specific interest in the funding and economic aspects of One Health, allowing lessons learned to be shared and helping to co-generate solutions for how to improve funding mechanisms and the importance of bearing in mind specific contexts (71).

External funding plays an essential role in One Health initiatives, yet finding a balance with national public resources and encouraging other sources of funding (e.g. national private sector) is crucial for their sustainability, scalability and impact. Funders providing grants that support essential animal health and One Health research and interventions should therefore urge countries to set aside some of their national public budgets and seek collaborations with the private sector and other sources to continue the work in the future.

Beyond funding, funders, programme owners and resource partners often bring a wealth of technical, regulatory and operational expertise. This knowledge should be recognised and valued more often and where feasible, contribute to medium-term sustainability and scaling as appropriate. Funders should not be afraid to voice their expertise and willingness to contribute more broadly to One Health initiatives.

Engagement between researchers, funders and other One Health stakeholders

Engagement between researchers involved in animal health and One Health initiatives (including those from biomedical, ecological and social sciences) and funders or potential funders is a two-way process, involving active listening and open, empathetic and effective dialogue. Although different stakeholders have different priorities and aims, it is often possible to find alignment and common ground. To improve the chances of successful partnerships and collaborations, stakeholders understand each other's values and vision and approach initial conversations with an open mind. This will allow all parties to share their priorities and aims and clearly identify possible synergies and alignment (15). Often, researchers and funders are already indirectly working with the same colleagues, institutions and teams, making further collaborations logical and improving efficiency.

Researchers and funders should make use of their professional networks, especially regional and local ones. Personal introductions are helpful and improve the chances of a positive response and further interaction. Having connections in a particular region also demonstrates interest and past support for work in that area, as well as some important contextual knowledge.

For collaborations with large organisations, it is important to ensure that One Health principles of inclusion and equity are still incorporated to ensure approaches are not too top-down. This principle applies when collaborating with any type of stakeholder from international organisations to the European Commission and IFIs.

Providing platforms for different funders to listen to and talk to each other is also important, as this is something that tends not to happen naturally. This is one of the strengths of global networks such as the STAR-IDAZ IRC and GloPID-R, which bring together a diverse range of funders to exchange thoughts and ideas, as well as influence animal health and human health research strategies respectively. These networks support funders to identify synergies and complementary efforts, where collaboration and joint funding calls could be appropriate, more efficient and avoid duplication.

Researchers should consider how to best communicate their findings and priorities when engaging in dialogues with funders. For example, comprehensive and evidence-based gap analyses and research roadmaps are vital to ensure resources are directed appropriately (72). However, bearing in mind that most funders are very short of time, perhaps executive summaries, policy briefs or a theory of change (ToC), might be more helpful and impactful. Examples of such documents are produced by STAR-IDAZ IRC (73-75). Most funders provide useful guidance to researchers on their website and through grant documentation, regarding how to submit a strong grant proposal.

Conclusion

There is a need for funding to move beyond research to implementation and impact. Researchers and funders (or potential funders) should therefore be aware of the wide range of funding sources, types and mechanisms available for animal health projects with a One Health approach. Although grants through calls for proposals are often the go-to option for many stakeholders, it is worth considering other options, especially potential sponsorship or grants from private sector organisations and PPPs, as well as blended finance. IFIs are traditionally known for loans, but usually provide several funding options, including grants, and these should be more widely considered. Stakeholders should ensure they understand the difference between concessionary and non-concessionary loans.

Funders should be aware of the diverse and evolving funding architecture currently available for One Health, capitalising on opportunities for collaboration with each other to increase efficiency, improve impact and minimise duplication. The private sector has much to offer and should be encouraged to support joint efforts through PPPs, sponsorship of specific activities or training, blended finance and grants. Funding for a single One Health initiative can come from a combination of different funding sources, types and mechanisms. Regular dialogue between funders to exchange ideas and update on proposed funding calls through networks like the STAR-IDAZ IRC will support these efforts.

Domestic public funding is usually distributed in annual budget cycles, so stakeholders should familiarise themselves with these timeframes, for other funders to identify opportunities for collaboration and for researchers to increase their chances of a successful pitch for funding. A lack of explicit promotion of One Health approaches in grant calls can lead to opportunities being overlooked by researchers. To address this, it is important to consider why some organisations remain resistant to funding “One Health” and how this can be overcome. Engaging with such organisations can help to address these concerns, but in the meantime, researchers should always check the details of calls, as potential One Health initiatives are often covered under global health, global health security, climate and health, climate-resilient food systems etc.

Co-investment is essential for sustainability and ownership and should be encouraged wherever feasible. Catalysing additional resources through co-financing is also important and can help to fill significant funding gaps, as demonstrated by the first round of the Pandemic Fund (46). Blended financing and PPPs can help to de-risk investments and encourage better engagement and collaboration with the private sector. Joint funding calls also provide good opportunities for multiple stakeholders to get involved in animal health projects with One Health approaches, thereby reducing the risk.

Governance, political economy and behaviour change are all key aspects of putting One Health approaches into practice (60). For example, even if effective livestock vaccines for certain diseases are developed, it is important to ensure they will be affordable and there will be good uptake by smallholders or relevant beneficiaries. Although these factors are beyond the scope of the STAR-IDAZ IRC, it recognises the relevance and value of, for example, cold chains, appropriate transport, enabling policy environments and support for behaviour change to implement evidence-based control strategies. Organisations such as GALVmed are already collaborating with partners on these other aspects, as well as the technical factors.

Finally, more communication between researchers and funders is essential, as regular dialogues and contact should help match proposed projects and funders together in a two-way process. Match-making is very important but takes effort; researchers must recognise that funders are unlikely to come across relevant research outputs by chance, and so dissemination of their robust work needs to improve to increase advocacy and impact. Funders can also highlight their wider expertise, beyond financial resources, such as context-specific and technical knowledge, as this is valuable and can provide helpful contributions to collaborative One Health approaches. Communication and coordination between different funders are vital, to ensure synergies between complementary work are recognised and acted upon where feasible, and to reduce the risk of duplication. Considering resources are scarce, these regular dialogues should ideally result in resources being used more efficiently, while improving impact. This is where the STAR-IDAZ IRC aims to make a positive difference, bringing these key stakeholders together to collaborate on priority topics and steer financial and other resources to where they are most needed for maximum impact for animal health and One Health.

Acknowledgements

With thanks to the STAR-IDAZ IRC One Health Working Group for producing the Mapping One Health report, which this report builds on, as well as colleagues in the STAR-IDAZ IRC and Secretariat for very helpful discussions and debates. Special thanks go to Professor Robyn Alders, Professor Linfa Wang and Professor Wim van der Poel for their very helpful reviews. Sincere thanks also go to the team at FAO (Barbara Häslar, Katrin Taylor, Aashima Auplish and Katinka de Balogh) and CIRAD (Marisa Peyre and Yoeri Booiijink), for closely aligned work on One Health funding, and stimulating conversations through the Quadripartite Return on Investment for One Health and One Health investment planning Community of Practice.

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