



Zoonotic Disease Action Package

Annual Report 2022

Version control: 1.0

Date: March 2023

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Jointly produced by the UKHSA and Defra on behalf of ZDAP members



UK Health
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List of Abbreviations

AMR	Antimicrobial Resistance
AP	Action Package
CARPHA	Caribbean Public Health Agency
COVID-19	Coronavirus disease 2019
Defra	Department for Environment, Food, and Rural Affairs
FAO	Food and Agriculture Organization of the United Nations
GHSA	Global Health Security Agenda
GHSA MM	Global Health Security Agenda Ministerial Meeting
GHSAC	Global Health Security Agenda Consortium
GLOW	GHSA Lessons Observed Webinar
HIC	High-income-countries
HPAI	Highly Pathogenic Avian Influenza
HPAIV	Highly Pathogenic Avian Influenza Virus
LIC	Low-income-countries
LMIC	Lower-middle-income-countries
M&E	Monitoring and Evaluation
MS Forms	Microsoft Forms
OH	One Health
OIE	Office International des Epizooties (now WOAH)
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
SEAOHUN	Southeast Asia One Health University Network
UAE	United Arab Emirates
UK	United Kingdom
UKHSA	UK Health Security Agency
UMC	Upper-middle-income-countries
UNEP	United Nations Environment Programme
USA	United States of America
US CDC	United States Centers for Disease Control and Prevention
USDA	United States Department of Agriculture
VOHUN	Vietnam One Health University Network
WHO	World Health Organization
WOAH	World Organisation for Animal Health (founded as OIE)
ZDAP	Zoonotic Disease Action Package

Introduction

Since the inception of the Global Health Security Agenda (GHSA) in 2014, the Zoonotic Disease Action Package (ZDAP) and its members has been integral to its ongoing achievements.

In January 2022, the UK accepted the position of ZDAP Chair, succeeding Indonesia’s Chair in 2021. The 2022 UK Chair role was shared between two UK government departments - Department for Environment, Food, and Rural Affairs (Defra) & UK Health Security Agency (UKHSA).

This report outlines the approach, activities, and impact made against priorities by ZDAP in 2022 (Table 1). Information for this report was collated from member engagement activities throughout the year including surveys, email communications, attendance log and other supporting documents. These resources were utilised as outlined in the monitoring and evaluation (M&E) indicators in the ZDAP 2022 workplan (available on request). Implementation of the M&E strategy has helped provide a comprehensive overview of ZDAP progress and impacts, including how the activities contribute to the wider GHSA goals (Figure 1).

Table 1 – ZDAP 2022 Priorities, as agreed with members.

ZDAP Priorities (2022)		
Priority 1	Priority 2	Priority 3
Establish and strengthen coordination, communication, multi-sectoral engagement, and information sharing among member countries involved in the ZDAP.	Strengthen the technical capacities of animal, human, wildlife and environmental health services to support zoonotic diseases prevention, detection, and response activities, using a One Health approach ¹ .	Improve national, regional, and global cooperation and collaboration in prevention, detection, and control of zoonotic diseases.

¹ [One Health High Level Expert Panel definition](#) - One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent. The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.

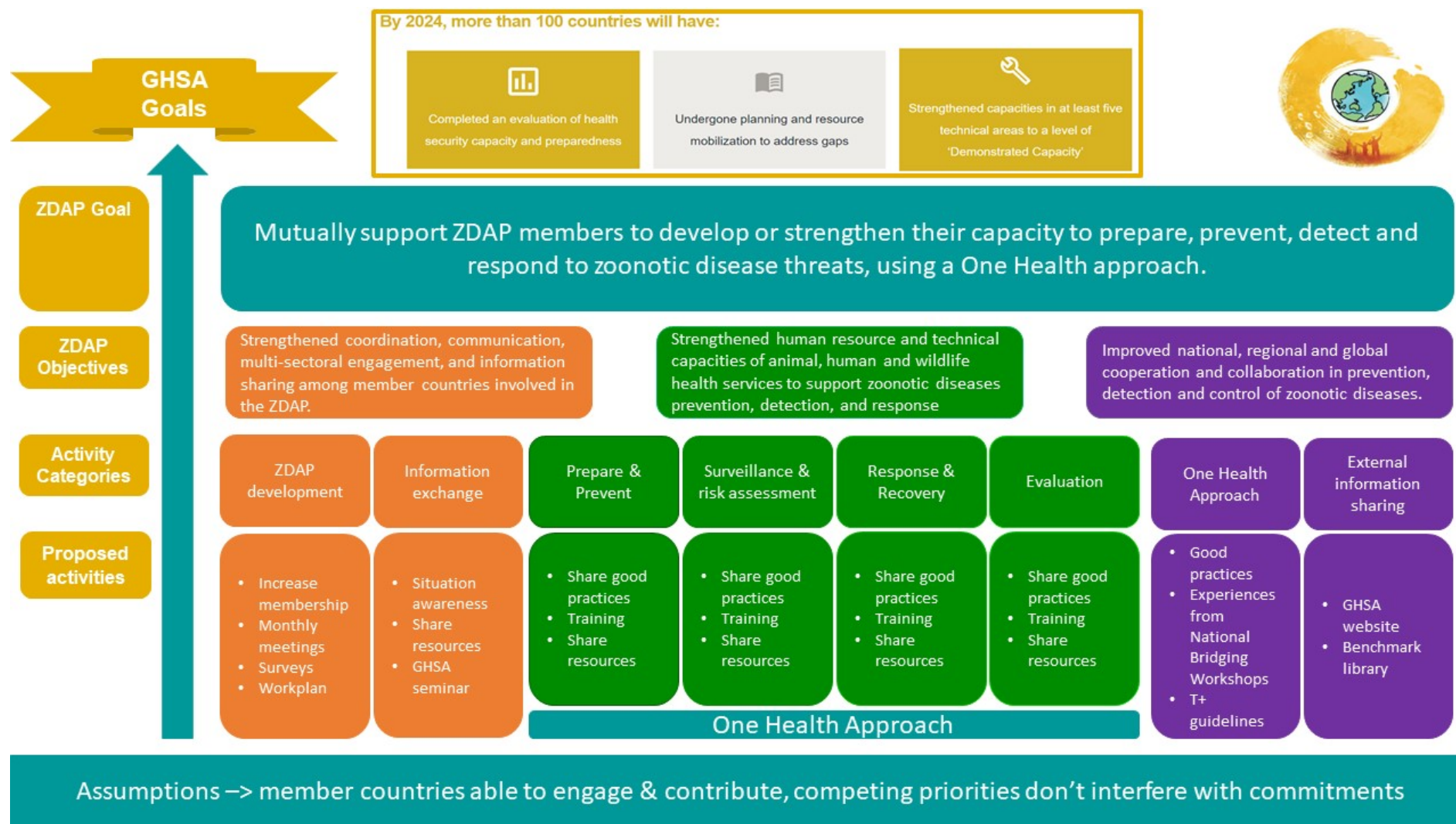


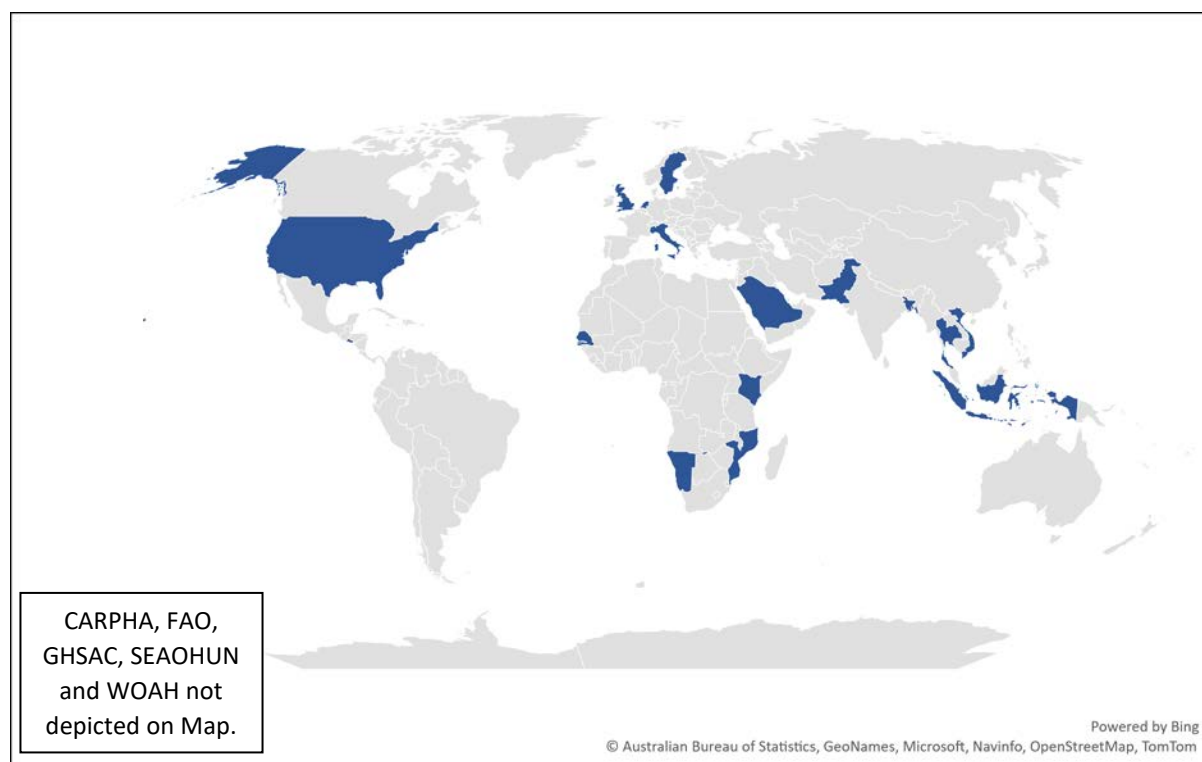
Figure 1 – ZDAP Theory of Change for 2022. Schematic illustrating how ZDAP activities contribute to wider GHSA goals.

ZDAP Priority 1: Establish and strengthen coordination, communication, multi-sectoral engagement, and information sharing among member countries involved in the ZDAP.

ZDAP Priority 1 was identified as the primary objective for ZDAP for 2022 to re-invigorate the action package by increasing membership and members engagement, hosting regular meetings to support information exchange and co-learning, and to ensure all activities organised met the needs of ZDAP members.

Membership

The number of ZDAP members (countries and organisations) increased from 11 in February 2022 (first membership stocktake) to 23 by December 2022. As of the end of 2022, ZDAP membership consisted of the following countries and organisations with the number of official ZDAP focal points (Figure 2): Bangladesh (2), CARPHA (2), El Salvador (1), FAO (2), the Republic of the Gambia (2), GHSA Consortium (8), Indonesia (6), Italy (2), Kenya (2) Mozambique (3), Namibia (3), the Netherlands (2), Pakistan (2), the Kingdom of Saudi Arabia (1), SEAOHUN (2), Senegal (2), Sweden (3), Thailand (4), the United Kingdom (7), US CDC (4), USDA (1), Việt Nam (3) and WOAAH (3).



**Figure 2 – ZDAP member countries as of December 2022.
ZDAP member organisations not highlighted on map².**

² While US CDC and USDA are ZDAP member organisations, these federal agencies/departments are highlighted on the map (Figure 2) as the USA.

Using the [World Bank Classification](#) to categorise the 16 ZDAP country members by income group, the majority (7) classified as Lower-middle-income-countries (LMICs), followed by 5 countries classified as High-income-countries (HICs), and 2 countries each representing Upper-middle-income-countries (UMCs) and Low-income-countries (LICs) (Figure 3).

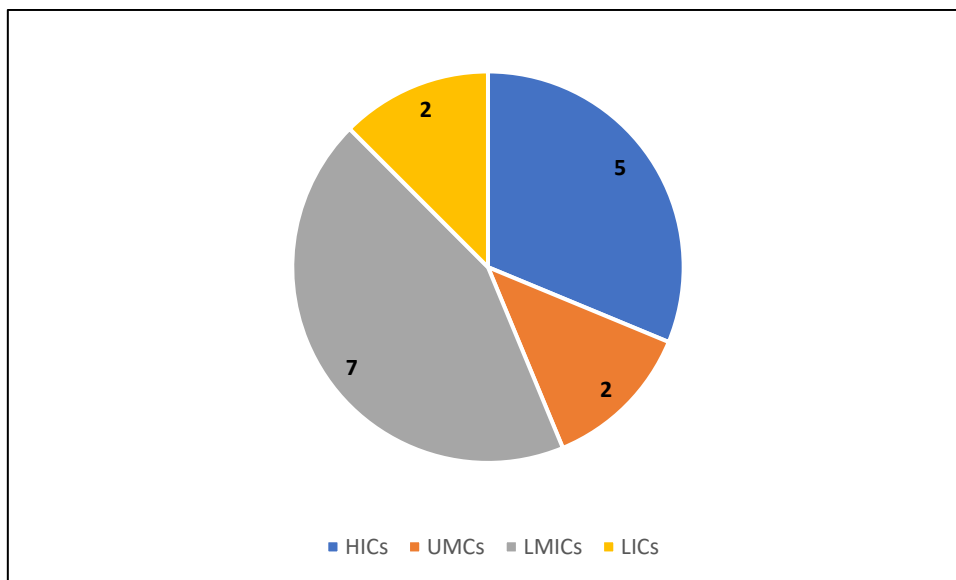


Figure 3 – ZDAP member countries categorised by income according to the [World Bank Classification](#).

In terms of sectoral representation by ZDAP members, the majority of ZDAP individual participants and ZDAP country/ organisation members were from departments, organisations or agencies representing the human health sectors (49% and 43%), followed by animal health (28% and 32%), and then environment/plant health (23% and 25%) (Figure 4).

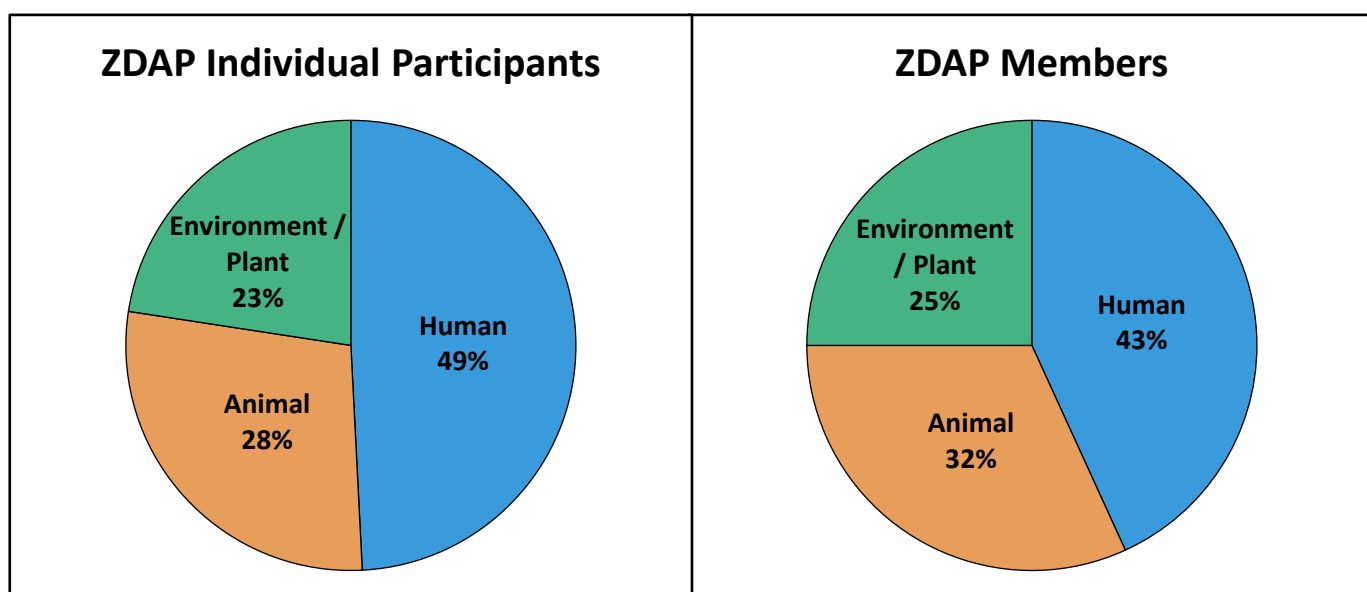


Figure 4a (left) – ZDAP Individual Participants by Sector. Figure 4b (right) – ZDAP Members by Sector.

Workplan

The annual workplan was developed to help meet ZDAP priorities and support progress towards the GHSA 2024 target. Key activities were proposed by ZDAP members through the members survey conducted in February 2022. Based upon these suggestions, the ZDAP Chairs and Secretariate prepared a ZDAP workplan for 2022. This workplan was presented to members at the March ZDAP meeting. Member feedback was incorporated, and a finalised version adapted in April 2022.

In July 2022, the workplan was revised and reviewed by ZDAP members to focus on deliverables for quarter 3 and 4.

A copy of the ZDAP Workplan for 2022 is available on request.

Meetings

From February to December 2022, 9 ZDAP meetings were held, including 1 meeting co-hosted with the AMR action package in December 2022. An average of 10 countries/organisations were in attendance per meeting. March and April had the highest attendance of 14 member countries/organisations, with the lowest attendance of 5 member countries/organisations in December (Figure 5).

Individual participation of ZDAP members ranged from its lowest of 12 in December to the highest attendance of 39 in July. The average number of participants per meeting was 26.8 (SD 8.5, median = 28), and the average number of member countries/organisations per meeting was 10.2 (SD 2.9, median = 11). Most participants attended 1 – 3 meetings (n=69), followed by 15 members attending 4 – 6 meetings, 11 specified members attending 0 meetings, and 8 members attending 7 – 9 meetings.

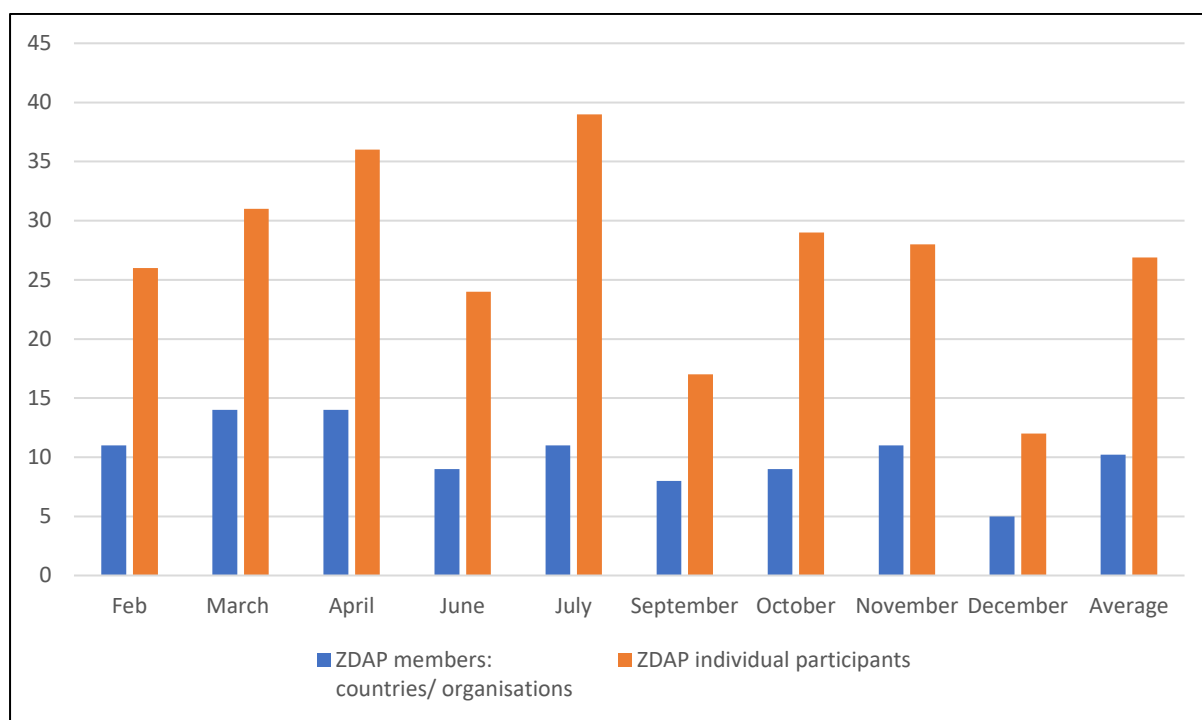


Figure 5 – ZDAP Meeting Attendance 2022.

Attendees at ZDAP meetings were categorised by income status as specified by the [World Bank Classifications](#). Across the year, HICs were more frequently represented than countries from other economic status. For 2022, an average of 3.6 HICs were represented at ZDAP meetings compared to an average of 0.33 LICs per meeting in attendance in 2022 (Figure 6). Average meeting attendance by number of countries per meeting for LMICs and UMCs was 2.67 and 1.11 respectively.

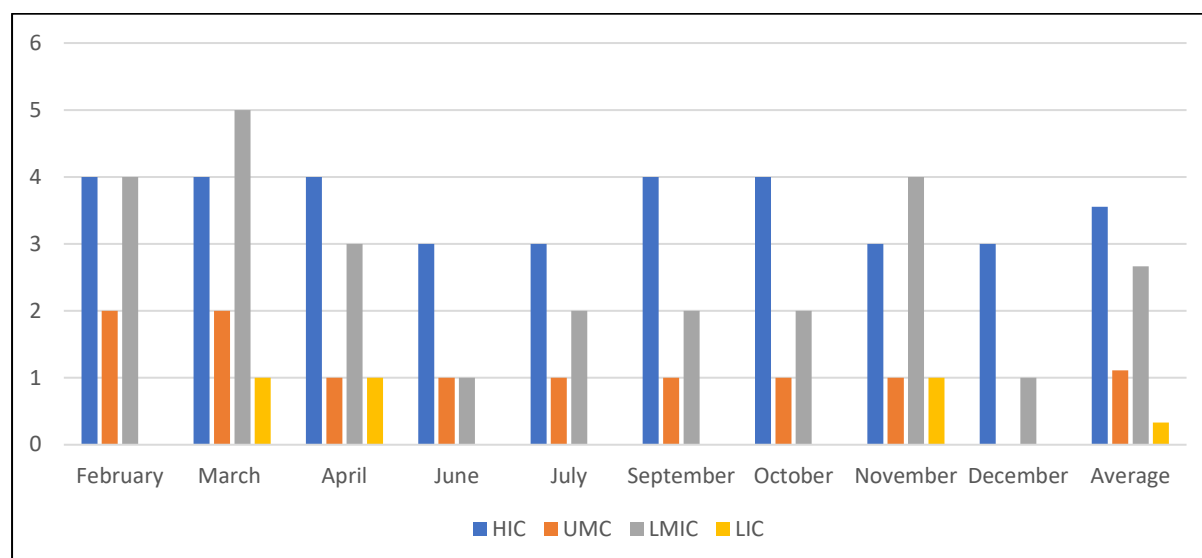


Figure 6 – ZDAP Meeting Attendance by Economic Development of Member Countries (members country split according to the [World Bank classification](#)).

Over the course of the action package meetings held in 2022, including the AMR co-hosted December meeting, a total of 48 agenda items were covered, excluding standing agenda items such as introductions and ‘Any Other Business’ items. Of the 48 agenda items, 11 were presentations delivered by ZDAP member countries/ organisations and one was delivered by a non-ZDAP member:

1. OIE’s response to SARS-CoV-2 infection in animals (Dr Marrana, WOH (formerly OIE))
2. VOHUN and One Health BioRisk Management Training Workshops (Dr Phuc, VOHUN)
3. Primary pandemic prevention: reducing risk of pathogen spillover (Dr Vora, GHSAC)
4. Examples of designing and implementing a One Health Surveillance System (Dr Salim, Bangladesh)
5. Dealings with Rabies – the UK experience (Dr Roberts, UK)
6. Kenya’s Journey at One Health Institutionalisation and Zoonotic Disease Control (Dr Mwatondo & Dr Muturi, Kenya)
7. One Health Surveillance: Building Capacity in Countries (Dr Shadomy, US CDC)
8. Global Update on HPAI (Dr Pavade, WOH and Dr Roche, FAO)
9. Highly Pathogenic Avian Influenza (HPAI) poultry in Thailand (Dr Hearn & Dr Thukngamdee, Thailand)
10. Delivering a laboratory response to HPAIV: A frontline perspective (Dr Banyard, UK)
11. Introduction and Zoonotic Disease Context in Mozambique (Dr Inlamea & Dr Chongo, Mozambique)
12. Avian Influenza Bioinformatics Workshop (Dr Wibawa, Indonesia)

All action package-wide meetings were recorded in 2022 and made accessible to members on the shared Google Drive, which acted as a central library for members to access freely and contributed to ZDAP's inclusive, collaborative and effective ways of working. This has been praised by members on several occasions, including in the end of year survey and by those who weren't able to join the meeting at the time due to other commitments or time-zone differences.

Further information ZDAP presentations given throughout 2022 is available on request.

Succession Planning

Conversations around succession planning for the 2023 ZDAP Chair started in August 2022. It was decided that applications to be the 2023 ZDAP Chair would be open to all ZDAP members to apply for, thus an Expression of Interest form was drafted and opened to members in September 2022. In preparation for the handover, a Terms of Reference for ZDAP Chairs document was drafted. UK chairs offered to have informal conversations about the chair role and offered several options for chair including:

- a) Join the UK as a Co-Chair
Fully co-chair ZDAP with UK, including sharing secretariate function
- b) Join the UK as a Co-Chair with lower resource requirements
Involved in forming key ZDAP strategies
Secretariate function will be held within the UK
- c) UK remains sole Chair for 2023 (least preferred)
No change from 2022 format

Unfortunately, no volunteer for the role of ZDAP Chair in 2023 was identified, so UK agreed to continue the role in 2023 for one additional year, with the understanding that the Chair role would need to rotate in 2024.

External Communications

In order to raise awareness to the activities associated with and benefits of ZDAP membership, a number of formal and informal external communication activities were conducted in 2022.

UKHSA Science Conference 2022

The UKHSA Chair of ZDAP gave a presentation on the UK's role in ZDAP and highlighted some activities undertaken at the UKHSA annual scientific conference. The presentation was well received and helped greater raise awareness of ZDAP within UKHSA and others in attendance.

7th World One Health Congress, Singapore

Having taken over as Chair during the COVID-19 pandemic, many countries still had social distancing rules in place, the One Health Congress was the first in-person event that several ZDAP members attended. The Chairs organised an informal in-person meet-and-greet with ZDAP members. This

provided an immeasurable value to connect with members in-person, where more free-ranging conversations could take place.

GHSA Ministerial Meeting - Side Event

ZDAP co-hosted a side event (*Taking a One Health Approach across GHSA Action Packages*) with the AMR Action Package at the [Global Health Security Agenda \(GHSA\) Ministerial Meeting](#) in Seoul, Republic of Korea on the 28th of November 2022.

More than 60 people were in attendance and 30 participants engaged with the Mentimeter that was integrated into the presentation. Oral interventions were also received from Indonesia, WOH, UAE, Sweden, SEAOHUN and Thailand. Feedback following the event from participants was overwhelmingly positive with remarks made on significant audience engagement, good use of technology, tone of event and fruitful discussions.

For more information on the side event, please contact the UK ZDAP Chairs who can share the side event report, or refer to the GHSA January 2023 newsletter, of which there is a summary of the event.



GHSA Newsletter

Please click on the icon to access the GHSA January 2023 Newsletter: [January 2023.msg](#)

Monitoring and Evaluation

Monitoring and evaluation has been a focus of GHSA and has helped quantify the progress of ZDAP and the activities undertaken. Throughout the year, progress has been recorded which added value to ZDAP, enabling members to have open discussions about improving and providing what is useful for all its members and to achieve the GHSA's objectives.

Methods of monitoring progress for each milestone were outlined and agreed with members in the 2022 workplan. Evidence for each milestone has been collected and progress is outlined in this report. Specific monitoring and evaluation activities undertaken for ZDAP include the use of surveys to monitor progress, analysis of meeting attendance and membership data.

Surveys

A total of three surveys were conducted through Microsoft Forms during 2022. The focus of the initial survey was for workplan development, while the purpose of the mid-year survey was to review ZDAP's progress against the workplan, and the purpose of the end of year survey was two-fold - to help review 2022 progress and support the preparation of the 2023 workplan.

Following closure of each survey, results were presented to members and reports were drafted for each.

More information on each survey conducted (workplan development, mid-year and end of year surveys) is available on request from the UK ZDAP Chairs.

ZDAP Priority 2: Strengthen the technical capacities of animal, human, wildlife, and environmental health services to support zoonotic diseases prevention, detection, and response activities, using a One Health approach

Priority 2 is the key capacity building ZDAP priority which links most directly with the overall GHSA objectives. The first few months of activities in 2022 focussed on priority 1, but following the results of the mid-year assessment survey, which identified priority 2 as an area of requiring prioritisation for the remainder of 2022, the Chairs encouraged and actively shared external learning opportunities for members (Figure 7). Approximately 30 learning opportunities/ resources were shared by email in 2022.

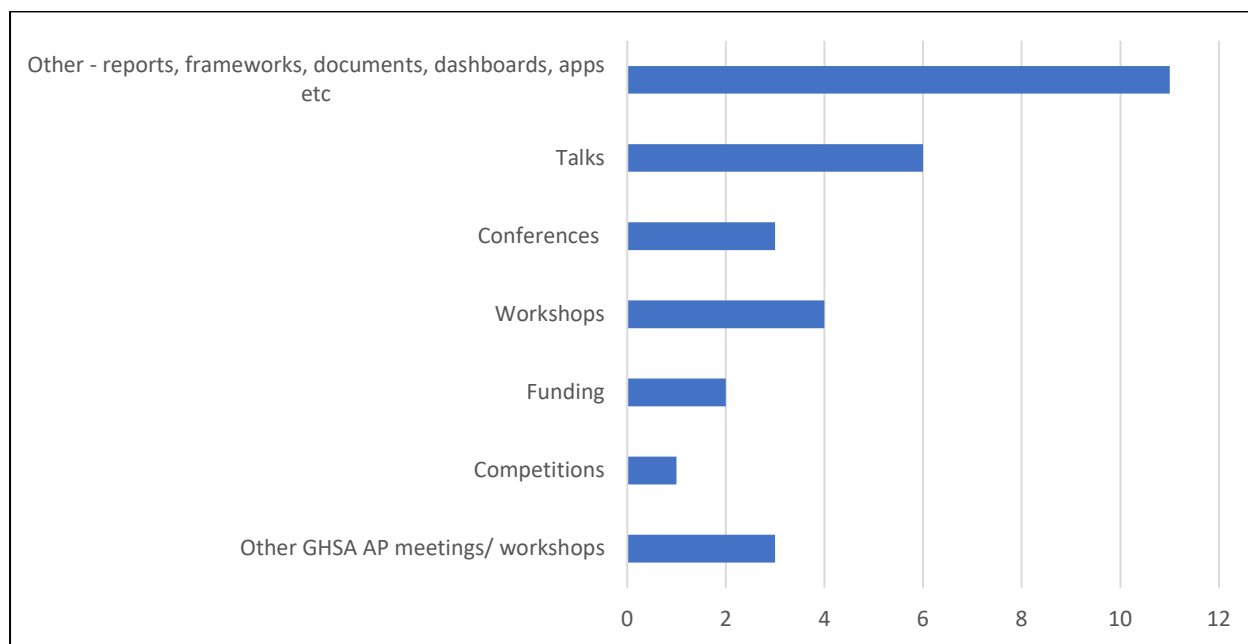


Figure 7 – Distribution of external learning opportunities shared with ZDAP members in 2022.

In terms of internal co-learning opportunities, of the 12 speaker presentations at ZDAP meetings in 2022, eight addressed aspects of response and recovery, seven addressed preparation and prevention of zoonotic diseases, seven addressed surveillance and risk assessment and one covered aspects of capacity evaluation (Figure 8). Examples of good practice and lessons identified were shared through these presentations with ZDAP members. There has been general praise around the presentations, with members stating this format of information sharing and updating is beneficial and interesting in the end of year survey report. More specifically, the presentation on the zoonotic disease context in Mozambique garnered great engagement and resulted in a FAO representative connecting Mozambican ZDAP members with their regional quadripartite colleagues in Africa.

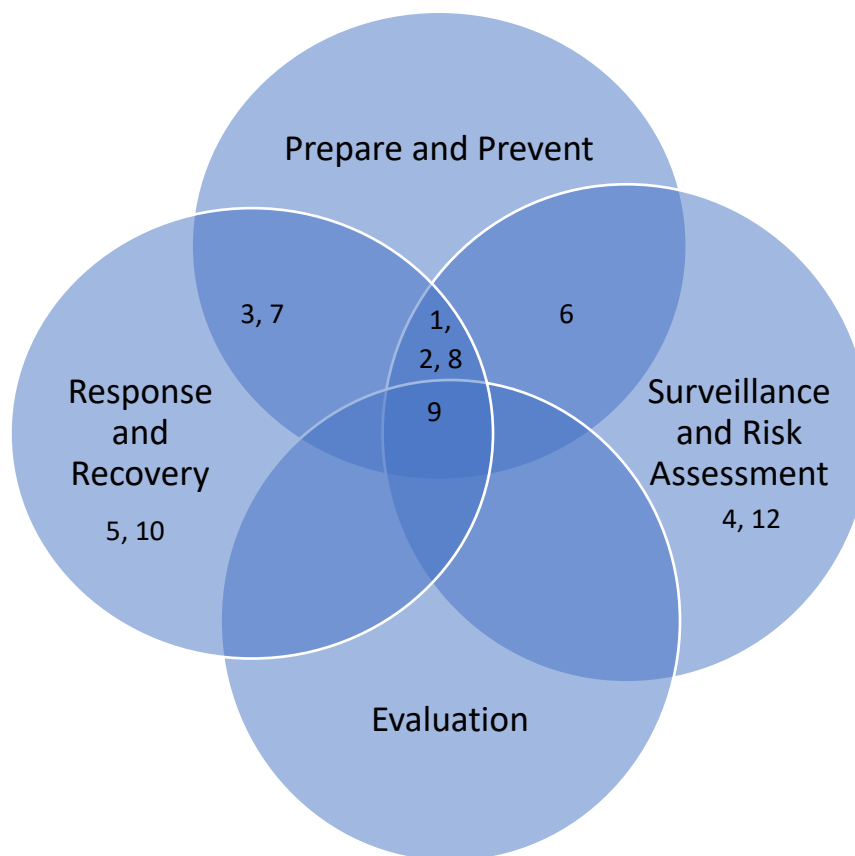


Figure 8 – Categorisation of ZDAP speaker presentations under priority 2.

Key:

1. OIE's response to SARS-CoV-2 infection in animals (Dr Marrana, WOAHA (formerly OIE))
2. VOHUN and One Health BioRisk Management Training Workshops (Dr Phuc, VOHUN)
3. Primary pandemic prevention: reducing risk of pathogen spillover (Dr Vora, GHSAC)
4. Examples of designing and implementing a One Health Surveillance System (Dr Salim, Bangladesh)
5. Dealings with Rabies – the UK experience (Dr Roberts, UK)
6. Kenya's Journey at One Health Institutionalisation and Zoonotic Disease Control (Dr Mwatondo & Dr Muturi, Kenya)
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12. Avian Influenza Bioinformatics Workshop (Dr Wibawa, Indonesia)

ZDAP Priority 3: Improve national, regional, and global cooperation and collaboration in prevention, detection, and control of zoonotic diseases

In 2022, activities aligned with priority three were centred around (i) implementation of the One Health approach and (ii) sharing of learning across technical action packages.

One Health Approach

Four examples of good One Health practice were shared to members through presentations, including by VOHUN, Thailand, Bangladesh, Kenya and US CDC (One non-member and three members). Some member presentations also touched upon their Joint External Evaluation experience and their National Action Planning for Health Security (Mozambique).

GHSA-Wide Webinar

In May, the ZDAP Chairs hosted an event in the GHSA Lessons Observed Webinar (GLOW) series, *“The Zoonotic Disease Action Package GLOW Seminar on The Quadripartite One Health Joint Plan of Action.”* The Chairs presented (albeit it with a minor technical issue due to a building evacuation requirement), a brief introduction to ZDAP, its past successes, and objectives for 2022. This was followed by a presentation by the representatives from the Quadripartite of FAO, WHO, UNEP and WOAHA on their One Health Joint Plan of Action, its background, rationale, purpose, the proposed action tracks, and plans for next steps. Delivery of this webinar addressed a significant milestone under a One Health approach and provided first exposure to a newly developed OH strategy and guide.

Ahead of the event, promotional materials were drafted, and invites were sent to all ZDAP members and UK colleagues with the support of the GLOW team. While the session was not recorded at the request of the Quadripartite, the session was well received with participants across GHSA joining, but meeting attendance was not logged.

ZDAP Webpage

ZDAP webpage schematics were drafted in early 2022, but due to issues with the GHSA website, no updates were possible to the ZDAP webpage and the wider GHSA website in 2022. The issue has since been resolved and the ZDAP webpage has been noted as a key deliverable for 2023.

Conclusion

Reflecting on the progress of the action package in 2022, there have been many activities under delivered throughout the year which indicate progress towards each of ZDAPs three priorities (Table 2).

Table 2 – Summary of progress made under each ZDAP priority in 2022.

ZDAP Priorities (2022)		
Priority 1	Priority 2	Priority 3
Establish and strengthen coordination, communication, multi-sectoral engagement, and information sharing among member countries involved in the ZDAP.	Strengthen the technical capacities of animal, human, wildlife and environmental health services to support zoonotic diseases prevention, detection, and response activities, using a One Health approach ³ .	Improve national, regional, and global cooperation and collaboration in prevention, detection, and control of zoonotic diseases.
<p><u>Fully met expectations</u></p> <ul style="list-style-type: none"> • ZDAP membership increased (11 → 23) • Workplan developed and implemented • 9 action package meetings held, including co-hosted with AMR AP • Monitoring and evaluation conducted, including 3 surveys • GHSA MM side event delivered • 2 Conferences attended 	<p><u>Partially met expectations</u></p> <ul style="list-style-type: none"> • Approximately 30 learning opportunities shared • Speaker presentations addressed various aspects of zoonotic disease control 	<p><u>Partially met expectations</u></p> <ul style="list-style-type: none"> • Some examples of OH Approach shared • GHSA-wide webinar held • ZDAP webpage to be updated in 2023

In the mid-year survey, which covered activities in quarter 1 and 2, most respondents were satisfied with progress under priority 1. At the time however, there was a lower satisfaction score for questions relating to sharing of information. Thus, a standing agenda item was added to each subsequent meeting to allow for open discourse and sharing between members, with an expectation that members actively provide information and join any discussion items. For priority 2, the majority of respondents selected ‘neutral’ for the questions related to the progress of sharing training opportunities. One ‘unsatisfied’ result was provided for ZDAP’s sharing external training opportunities in response and recovery, as well as for training related to evaluation. Since the mid-

³ [One Health High Level Expert Panel definition](#) - One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent. The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.

year survey, the Chairs made an active effort to find and share opportunities. Meanwhile, for priority 3, many respondents were happy or neutral with progress.

With the end of year survey, all respondents agree that the action package had overall met their expectations or more. Several benefits of ZDAP were also listed by respondents, for example, acting as a forum for information exchange, sharing OH and zoonotic disease control experiences from members and networking. While ZDAP aims to work in an inclusive, effective, and collaborative manner, it had been noted by members that the meeting times were not as suited for all member regions – something the Chairs look to make more inclusive in 2023.

The ZDAP Chairs and Secretariate would like to thank all members and the wider OH community who supported or contributed to the action package in 2022. Significant progress has been made under each ZDAP priority and as the Action Package prepares for 2023, further activities are being planned to continue this progression.

As 2023 marks the final year of the current phase of GHSA (GHSA 2024), ZDAP looks forward to playing its part in the global effort to strengthen the world's ability to prevent, detect and respond to infectious threats.

Timeline

Timeline of key activities carried out during the UK's Chair of ZDAP in 2022.

