

# Global Antimicrobial Resistance Innovation Fund (GAMRIF)

**Logical Framework (Log Frame)** 

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## **Impact**

People in LMICs have improved ability to tackle the development and consequences of drug-resistant infections.

## **Assumptions**

- 1. Research is inherently risky, and not all projects will achieve the intended results- in fact, the majority of funded projects are unlikely to achieve commercialisation. Funding numerous early-stage research initiatives will result in enough successful research that will, in time, contribute to the intended impact.
- 2. GAMRIF only funds innovations to a certain point in the pipeline, and there are several additional factors (e.g. commercial influences, behaviour change to influence uptake, external pressures, etc) that will influence actual production, access and use of innovations to achieve the intended impact.
- 3. Even if GAMRIF funds projects that are eventually commercialized, the process including clinical trials can take years and may not be able to be measured in the GAMRIF lifespan.

| Impact<br>Indicator 1  |         | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year) | Source   |
|--|---------|--------------------------------|---|---|---|---|---|--|--|
| There are new innovations for antimicrobial resistance (AMR) available that can effectively combat drugresistant | Planned | 0                              | n/a   | n/a   | n/a   | n/a   | n/a   | ≥ 1<br>innovation                        | Antimicrobial<br>Resistance<br>Benchmark<br>from the<br>Access to<br>Medicines<br>Foundation,<br>Pew<br>Charitable |

| Impact<br>Indicator 1 | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year) | Source                               |
|-----------------------|--------------------------------|---|---|---|---|---|--|--------------------------------------|
| infections.           |                                |   |   |   |   |   |  | Trusts Antibiotic Resistance Project |

| Impact<br>Indicator 2  |         | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar year)               | Source   |
|--|---------|--------------------------------|---|---|---|---|---|---|--|
| Novel innovations to combat drug-resistant bacterial infections are shown to have been piloted specifically in LMICs | Planned | 0                              | n/a   | n/a   | n/a   | n/a   | n/a   | ≥ 5 case<br>studies of<br>country<br>implementation | DHSC and<br>Partner<br>press<br>releases,<br>ongoing<br>partner<br>reporting |

#### **Outcome**

There is increased likelihood of technologies and solutions across the One Health spectrum that will help combat AMR, which are accessible, affordable and taken up in LMICs.

## **Assumptions**

- 1. A high number of proposals will be successful enough to be able to advance Technology Readiness Levels (TRLs), as opposed to negative results.
- 2. Advanced TRL levels will lead to innovations that will eventually become accessible in LMICs.
- 3. High quality proposals will be achieved across human, animal and environmental health to achieve a reasonable 'One Health' representations (most risky for environmental projects).
- 4. Researchers and delivery partners will be involved in communications of their projects, and will publicize results during the GAMRIF lifespan.
- 5. Policy makers will find communications interesting and relevant.

| Outcome<br>Indicator 1   |         | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year)   | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year)                 | Source                    |
|--|---------|--------------------------------|---|---|---|---|---|--|---------------------------|
| The number of projects funded within the GAMRIF portfolio that have increased their Technology Readiness Level (TRL) within the timespan of GAMRIF | Planned | 0 innovations                  | n/a   | n/a   | 2<br>innovations<br>in the<br>GAMRIF<br>portfolio | 10 innovations in the GAMRIF portfolio          | 10 innovations in the GAMRIF portfolio          | 25 total<br>innovations<br>in the<br>GAMRIF<br>portfolio | Ongoing partner reporting |

| Outcome<br>Indicator 2  |         | Baseline<br>(start<br>2016/17)      | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year)  | Source                    |
|---|---------|-------------------------------------|---|---|---|---|---|---|---------------------------|
| There are funded research projects that address issues in AMR through a focus on topics within human, animal and environmental health | Planned | 0 human<br>0 animal<br>0 environm'l | n/a   | ≥ 18 human ≥ 10 animal ≥ 5 environm'l           | ≥ 12<br>human<br>≥ 5 animal<br>0 environm'l     | n/a   | n/a   | ≥ 32 human total ≥ 15 animal total ≥ 5 environm'l total  75% of research projects have produced a plan for stewardship and access | Ongoing partner reporting |

| Outcome Indicator 3   |   | Baseline<br>(start 2016/17) | Year 1<br>end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year) | Source  |
|---|---|-----------------------------|--|---|---|---|---|--|---|
| Findings are clearly communicated to global policy makers, for the benefit of LMICs, through non-academic forms of dissemination (e.g. utilizing the forms of communication established by the Fleming Fund and the UK Science and Innovation Network). | - | 0<br>communications         | NA   | ≥ 1<br>commun-<br>ication                       | ≥ 2<br>commun-<br>ications                      | ≥ 2<br>commun-<br>ications                      | ≥ 2<br>commun-<br>ications                      | ≥ 7<br>commun-<br>ications<br>total      | DHSC and<br>Partner<br>press<br>releases,<br>public<br>reports,<br>Fleming<br>Fund, UK<br>Science<br>and<br>Innovation<br>Network |

Foster international partnerships to increase attention and leverage funding towards AMR research and innovations for the benefit of people in LMICs.

- 1. Increased international partnerships and funding will be sufficient to effectively direct resources in a way that will be of benefit to LMICs for tackling AMR.
- 2. Knowledge sharing will contribute to improved innovations in the AMR field, and will be something of benefit to LMIC researchers.
- 3. Increased funding will lead to an increased chance of successful AMR innovations used by LMICs.

| Output<br>Indicator 1.1  |         | Baseline<br>(start<br>2016/17)                          | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year)   | Year 3<br>(end<br>2019/20<br>financial<br>year)                              | Year 4<br>(end<br>2020/21<br>financial<br>year)                              | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year)  | Source                                   |
|--|---------|---|---|---|--|--|---|---|--|
| The amount of resources, both funding and in-kind, leveraged for AMR research and development with a benefit for people in LMICs | Planned | £30 million<br>(approx.<br>due to forex<br>conversions) | n/a   | £11 million (approx. due to forex conversions)  Leverage in- kind resources from donors and partner organiz- ations | £5 million  Leverage in-kind resources from donors and partner organizations | £4 million  Leverage in-kind resources from donors and partner organizations | n/a   | £50 million<br>(approx.<br>due to forex<br>conversions)<br>plus in-kind<br>leverage | Partner and<br>DHSC<br>press<br>releases |

| Output Indicator<br>1.2  | Baseline<br>(start 2016/17)           | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end 2018/19<br>financial<br>year)   | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year) | Source  |
|--|---------------------------------------|---|--|---|---|---|--|---|
| Number of international-facing partnerships held between GAMRIF and other strategic partners that bring attention towards 'One Health' research and innovation in AMR globally, and political leverage for the UK. | 0 partnerships 1 bilateral MOU signed | 1 new partnership                               | 5 new partnerships Partnerships are formed with a diverse number of government and non-profit organizations.  1 Bilateral MOU signed | n/a   | n/a   | n/a   | 7<br>partnerships<br>total               | MOUs and grant agreements between the Global AMR Innovation Fund and external partners, informal partners |

| Output<br>Indicator 1.3  |         | Baseline<br>(start<br>2016/17)   | Year 1<br>(end<br>2017/18<br>financial<br>year)   | Year 2<br>(end<br>2018/19<br>financial<br>year)  | Year 3<br>(end<br>2019/20<br>financial<br>year)  | Year 4<br>(end<br>2020/21<br>financial<br>year)  | Year 5<br>(end<br>2021/22<br>financial<br>year)  | Target<br>(end 2022<br>calendar<br>year)   | Source          |
|--|---------|----------------------------------|---|--|--|--|--|--|-----------------|
| Global meetings, discussions and other knowledge sharing opportunities are held and directly supported by GAMRIF, which bring together researchers from LMIC organizations | Planned | 0 LMIC<br>researchers<br>engaged | ≥ 20 LMIC researchers engaged  GAMRIF supports 1 international meeting with participants from LMIC research organizations | ≥ 30 LMIC researchers engaged  GAMRIF supports 2 international meetings with participants from LMIC research organizations | ≥ 40 LMIC researchers engaged  GAMRIF supports 2 international meetings with participants from LMIC research organizations | ≥ 30 LMIC researchers engaged  GAMRIF supports two 2 meetings with participants from LMIC research organizations | ≥ 30 LMIC researchers engaged  GAMRIF supports 2 international meetings with participants from LMIC research organizations | ≥ 150 LMIC researchers engaged on separate occasions through knowledge sharing opportunities that are directly supported by GAMRIF | Partner reports |

Enhance bilateral research partnerships that will support AMR research.

- 1. Continued funding to bilateral research projects over concurrent years will support positive results.
- 2. Case studies will serve as indicators of successful projects, which have the potential to be scaled up for wider implementation and impact in other contexts.
- 3. Disbursed funding will enable innovative research to occur, which may not have happened otherwise.
- 4. Bilateral partnerships (and cross-cultural research) are an effective mechanism to leverage funding, increase attention for AMR, and to achieve research results.

| Output Indicator<br>2.1   |         | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year)                           | Source                    |
|---|---------|--------------------------------|---|---|---|---|---|--|---------------------------|
| The number of bilateral research projects between researchers from the UK and a bilateral partner that receive funding towards an agreed upon project | Planned | 0                              | n/a   | 14 projects                                     | 19 projects<br>(14<br>ongoing, 5<br>new)        | 19 projects<br>(continued)                      | 19 projects<br>(continued)                      | 19 projects<br>receive<br>GARMIF<br>funding<br>over three<br>years | Ongoing partner reporting |

| Output<br>Indicator 2.2   |         | Baseline<br>(start<br>2016/17)       | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year)                                     | Year 4<br>(end<br>2020/21<br>financial<br>year)                                     | Year 5<br>(end<br>2021/22<br>financial<br>year)                                     | Target<br>(end 2022<br>calendar<br>year)  | Source   |
|---|---------|--------------------------------------|---|---|---|---|---|---|--|
| The number and range of knowledge translation outputs produced by funded projects |         | No products<br>by funded<br>projects | n/a   | n/a   | Increasing<br>number of<br>knowledge<br>translation<br>products<br>are<br>produced. | Increasing<br>number of<br>knowledge<br>translation<br>products<br>are<br>produced. | Increasing<br>number of<br>knowledge<br>translation<br>products<br>are<br>produced. | Increasing<br>number of<br>knowledge<br>translation<br>products<br>are<br>produced. | Ongoing partner reporting, research fish outputs, partner publications |
|   | Planned |                                      |   |   | A variety of products are products to reach different audiences.                    | A variety of products are products to reach different audiences.                    | A variety of products are products to reach different audiences.                    | A variety of products are products to reach different audiences.                    |  |

| Output<br>Indicator 2.3  |         | Baseline<br>(start<br>2016/17)             | Year 1<br>(end<br>2017/18<br>financial<br>year)                              | Year 2<br>(end<br>2018/19<br>financial<br>year)  | Year 3<br>(end<br>2019/20<br>financial<br>year)                                       | Year 4<br>(end<br>2020/21<br>financial<br>year)                                       | Year 5<br>(end<br>2021/22<br>financial<br>year)                                       | Target<br>(end 2022<br>calendar<br>year)  | Source   |
|--|---------|--|--|--|---|---|---|---|--|
| Successful research competitions are ran and as a result GAMRIF funding for bilateral partnerships is allocated to selected projects | Planned | 0% of<br>bilateral<br>funding<br>disbursed | 0.56% of bilateral funding disbursed  Two or more delivery partners selected | 7.26% of bilateral funding disbursed to selected research projects  Individual research competitions from each bilateral delivery partner have been completed, with projects selected. | 29.70% of<br>bilateral<br>funding<br>disbursed to<br>selected<br>research<br>projects | 32.94% of<br>bilateral<br>funding<br>disbursed to<br>selected<br>research<br>projects | 27.36% of<br>bilateral<br>funding<br>disbursed to<br>selected<br>research<br>projects | 100% of<br>bilateral<br>funding<br>disbursed to<br>selected<br>research<br>projects | Ongoing financial monitoring, MOUs and/or grant agreements with delivery partners, Ongoing partner reporting |

Support global initiatives (GI) that foster innovation in AMR research and product development, to develop knowledge and research that have benefit for LMICs.

- 1. Global initiatives will draw in a range of research proposals that may lead to effective AMR innovations for LMICs.
- 2. Case studies will serve as indicators of successful projects, which have the potential to be scaled up for wider implementation and impact in other contexts.
- 3. Academic publications and presentations will serve as effective tools for knowledge translation in the research community to share research successes (and failures), and may broaden the impact of funding to additional funding audience.
- 4. Publications and presentations will be accepted in academic papers and conferences, and will be developed in the lifespan of GAMRIF.
- 5. Real-world testing of vaccines, antibiotics or therapeutics will be able to be advanced down the commercialization pipeline, and will overcome market risks to become accessible.
- 6. Real-world testing will occur in the lifespan of GAMRIF.

| Output<br>Indicator<br>3.1  |         | Baseline<br>(start<br>2016/17)       | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end 2020/21<br>financial<br>year)   | Year 5<br>(end 2021/22<br>financial<br>year)  | Target<br>(end 2022<br>calendar<br>year) | Source  |
|---|---------|--------------------------------------|---|---|---|--|---|--|---|
| The number of research projects within global initiatives that receive funding towards an agreed upon project | Planned | No products<br>by funded<br>projects | n/a   | 21 projects                                     | 16 new projects                                 | 8 new projects  3 human/animal vaccines and alternatives to antibiotics are advanced to real-world testing, which includes clinical trials in humans and the development phase in animals. | n/a  3 human/animal vaccines and alternatives to antibiotics are advanced to real-world testing, which includes clinical trials in humans and the development phase in animals. | human/animal                             | Ongoing partner reporting, partner publications |

| Output<br>Indicator<br>3.2  | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year)                             | Year 3<br>(end<br>2019/20<br>financial<br>year)   | Year 4<br>(end<br>2020/21<br>financial<br>year)   | Year 5<br>(end<br>2021/22<br>financial<br>year)   | Target<br>(end 2022<br>calendar<br>year)  | Source  |
|---|--------------------------------|---|---|---|---|---|---|---|
| The number and range of knowledge translation outputs produced by funded projects | No products by funded projects | n/a   | n/a Two research competitions are run, that provides pump- priming funding. | Increasing number of knowledge translation products are produced.  A variety of products are products to reach different audiences. | Increasing number of knowledge translation products are produced.  A variety of products are products to reach different audiences. | Increasing number of knowledge translation products are produced.  A variety of products are products are products are products to reach different audiences. | Increasing number of knowledge translation products are produced.  A variety of products are products are products are products to reach different audiences. | Ongoing partner reporting, partner publications |

| Output<br>Indicator 3.3  |         | Baseline<br>(start<br>2016/17)            | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year)           | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year)                                | Source   |
|--|---------|---|---|---|---|---|---|---|--|
| Successful research competitions are ran and as a result GAMRIF funding for global initiative partnerships is allocated to selected projects | Planned | 0% of global initiative funding disbursed | n/a   | 4.92% of global initiative funding disbursed    | 32.71% of global initiative funding disbursed   | 35.93% of<br>global<br>initiative<br>funding<br>disbursed | 26.45% of global initiative funding disbursed   | 100% of global initaive funding disbursed to selected research projects | Ongoing financial monitoring, MOUs and/or grant agreements with delivery partners, Ongoing partner reporting |

| Output<br>Indicator 3.4  |         | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year)                      | Year 4<br>(end<br>2020/21<br>financial<br>year)                      | Year 5<br>(end<br>2021/22<br>financial<br>year)                      | Target<br>(end 2022<br>calendar<br>year)                                     | Source                    |
|--|---------|--------------------------------|---|---|--|--|--|--|---------------------------|
| The number of research projects that have participated in training, capacity building or mentorship as a part of carrying out their research program | Planned | 0 research<br>projects         | n/a   | n/a   | 15 projects participate in training, capacity building or mentorship | 10 projects participate in training, capacity building or mentorship | 10 projects participate in training, capacity building or mentorship | ≥ 35 projects have participated in training, capacity building or mentorship | Ongoing partner reporting |

Support product development partnerships (PDPs) to develop affordable innovations that will reach commercialization.

- 1. The products being funded through PDPs are effective when implemented in a real-world setting.
- 2. Piloted products will be able to be effectively scaled up to additional countries and communities.
- 3. Study reports will lead to a broader implementation and awareness of the respective products, and will share methods and approaches that will advance other innovations in global health.
- 4. Products will be able to reach the market and be widely accessible in LMICs.

| Output<br>Indicator 4.1   |         | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year) | Source                    |
|---|---------|--------------------------------|---|---|---|---|---|--|---------------------------|
| The number of pilot implementations of GAMRIF funded AMR innovations in selected LMIC trial sites | Planned | 0 pilots                       | n/a   | 3 pilot sites finalized                         | 3 new pilot<br>sites<br>finalized               | n/a   | n/a   | ≥ 6 pilots underway or completed         | Ongoing partner reporting |

| Output Indicator 4.2   |         | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year)                        | Source                    |
|--|---------|--------------------------------|---|---|---|---|---|---|---------------------------|
| The number of published reports that share results from product development towards a global audience. | Planned | 0 reports                      | n/a   | 1 report  3 diagnostic TPPs published           | 2 new reports                                   | 2 new reports                                   | n/a   | 6 study<br>reports in<br>total on<br>new<br>products<br>for AMR | Ongoing partner reporting |

| Output<br>Indicator 4.3   | (st | aseline<br>tart<br>)16/17)             | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year)   | Year 3<br>(end<br>2019/20<br>financial<br>year)   | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar year)   | Source                    |
|---|-----|--|---|---|---|---|---|---|---------------------------|
| Funded innovations achieve milestones that advance the product down the commercial pipeline | pro | new<br>oducts<br>chieving<br>ilestones | n/a   | 2 new<br>products<br>achieve<br>new<br>milestones | 2 new<br>products<br>achieve<br>new<br>milestones | n/a   | n/a   | 4 products show<br>to have achieved<br>milestones in the<br>commercialization<br>pipeline | Ongoing partner reporting |

| Output Indicator<br>4.4   |         | Baseline<br>(start<br>2016/17) | Year 1<br>(end<br>2017/18<br>financial<br>year) | Year 2<br>(end<br>2018/19<br>financial<br>year) | Year 3<br>(end<br>2019/20<br>financial<br>year) | Year 4<br>(end<br>2020/21<br>financial<br>year) | Year 5<br>(end<br>2021/22<br>financial<br>year) | Target<br>(end 2022<br>calendar<br>year)                                      | Source   |
|---|---------|--------------------------------|---|---|---|---|---|---|--|
| Successful<br>research<br>competitions are<br>ran and as a<br>result GAMRIF<br>funding for PDPs<br>is allocated to<br>selected projects | Planned | 0% of PDP funding disbursed    | n/a   | 18.35% of<br>PDP<br>funding<br>disbursed        | 66.97% of<br>PDP<br>funding<br>disbursed        | 14.68% of<br>PDP<br>funding<br>disbursed        | 0% of PDP funding disbursed                     | 100% of<br>PDP<br>funding<br>disbursed<br>to selected<br>research<br>projects | Ongoing financial monitoring, MOUs and/or grant agreements with delivery partners, Ongoing partner reporting |