Signatories:

Alliance to Save Our Antibiotics
American Medical Student Association
Center for Science and Environment
Consumers Association of Penang
Ecumenical Pharmaceutical Network
Food Animal Concerns Trust
Health Action International
IFARMA
Institute for Agriculture and Trade Policy
ReAct – Action on Antibiotic Resistance
ReAct Africa
ReAct Asia Pacific
ReAct Europe
ReAct Latin America
ReAct North America
Sahabat Alam Malaysia
Society for International Development
Sustainable Food Trust
Third World Network
US Public Interest Research Group
Introduction:

The IACG has importantly focused on the role of National Action Plans in advancing efforts on AMR. Interested members of the Antibiotic Resistance Coalition (ARC) convened to develop this joint response to the questions posed to stakeholders and to provide useful input to IACG’s discussions of recommendations. We understand that this discussion paper represents the work of a subgroup of the IACG members and that its work is ongoing. We have focused our response around the three sets of questions laid out in the paper (mainstreaming, sustainable financing, regional coordination), but recognize that the paper itself is organized around five areas (Awareness & political will, Data & technical capacity, Monitoring, Coordination, and Finance). ARC responses to other discussion papers will more directly address some of these issues, and we anticipate that those responses will also be of interest to IACG members focused on feedback to this discussion paper. We trust this will be just the beginning of a process of engaging stakeholder inputs as the IACG focuses on more specific, potential recommendations. We also hope this will complement the earlier sent input, particularly on the work on National Action Plans, by 28 ARC members and its civil society allies around the time of the Divonne meeting.

1. **Mainstreaming AMR into broader universal health coverage, sustainable development, food system and environment agendas is key, both to scaling and to sustaining efforts to address AMR. Setting targets and integrating this intersectoral work within the National Action Plans**

1.1 As a starting point, NAPs on AMR must better incorporate sustainable food production and animal health as well as environmental issues. Without these issues being better woven into the implementation of NAPs, one cannot expect reciprocal commitment from these sectors. Among the first 25 NAPs posted in the WHO Library, most were from industrialized countries and make mention of biosecurity and how inspection, prevention and control could reduce the need for antimicrobials. However, few countries address antibiotic pollution or discharge from healthcare settings or food animal production settings. Efforts to grow the role of other UN and intergovernmental agencies, alongside the Tripartite agencies, would be important to ensuring this integration and intersectoral collaboration and coordination. The UN Environment Program should be encouraged to take a stronger role with the Tripartite agencies in forging a One Health approach to tackling AMR.

1.2 **AMR-sensitive interventions, from WASH (water and sanitation for health), maternal and child health, and improving vaccination rates to improved animal husbandry practices, have significant potential to reduce the burden of bacterial infections.** Lowering the burden of viral illness can also reduce the unnecessary use of antimicrobials. Similarly, adoption of more sustainable agricultural practices can diminish reliance on antibiotics in intensive farming operations. To give priority to

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such interventions, countries would benefit from modeling that could project the return on investment through the lens of AMR. The IACG could also work with other UN and intergovernmental agencies, both represented in its membership as well as others like UNDP and UNESCO, to make more concrete how AMR-sensitive interventions would benefit from taking on AMR, and vice versa. This process as well as the recommendations that might follow from the IACG should help with the process of better realigning UN and intergovernmental agency activities to bolster efforts to address AMR.

1.3 **AMR-specific interventions can decrease the burden from drug-resistant infections, driven in part by antibiotic treatments of presumptive or diagnosed bacterial infections.** The relative benefits and costs of mounting AMR-specific vs. AMR-sensitive interventions are likely context-dependent. Ensuring that the return on investment for AMR-specific interventions can also be modelled alongside AMR-sensitive interventions will help integrate these efforts. Similarly, the IACG might also propose the development of a toolkit that might quantify how large a “drag effect” AMR will place on the country’s achievement of Sustainable Development Goals.

1.4 **At the national level, an inter-Ministerial committee that meets regularly typically is the approach taken to ensure intersectoral coordination to tackle AMR. However, this must be paralleled by similar intergovernmental and international agency coordination at the global level and by their in-country focal points working together at country level.** Such integration across AMR-specific and AMR-sensitive initiatives at the global level will enhance how these programs, particularly those supported through overseas development assistance, are implemented at the country level.

1.5 **By setting country-level targets for AMR, governments working with different assets and resources might chart different pathways to the same goals.** Flexibility in adapting the modalities of tackling AMR to the local context is key. For example, a One Health approach requires an integrated surveillance system, attention to environmental discharge of antibiotics from hospitals and agricultural operations, and investment in interventions that curb antimicrobials in both the healthcare delivery system and the food production system.

However, for countries to go the distance, AMR-sensitive and AMR-specific programs must offer a tiered approach. Rather than a “one size fits all” approach, both indicators and programs could lay out a series of steppingstones, with expectations growing as local infrastructure and capacity do and as external technical and financial support is received. These steppingstones would take into account the country’s stage of development, level of resources, and local context such as the size of the livestock industry. By offering a tiered approach, lower-resourced countries might participate in the global reporting system at an earlier stage. To be clear, we are not suggesting that a tiered approach should enable some countries to delay or even not to commit to targets.
Effective AMR mainstreaming into multiple national and global programs should adopt and be held accountable to a time-bound, outcome-based approach and move beyond mere planning and integration with few activities. This could, for example, in the case of WASH, mean setting a target for increased supply of clean water such as for drinking, irrigation and aquaculture. In the case of nutrition programs that are based on public food distribution schemes, it could mean a set annual increase in sourcing of foods grown without antibiotic use; and when it comes to linking with responsible production, it could mean a designated increase in area covered under sustainable agriculture, say organic or non-chemical farming.

1.6 Intergovernmental agencies must not only develop guidance on specific competence areas and for specific groups of workers (as usefully laid out in the WHO Competency Framework for Health Workers’ Education and Training on Antimicrobial Resistance), but also define what areas of competence for such workers are needed to bridge across sectors. Beyond pointing to the need to define these areas of competence, the IACG might a) encourage education, training materials and treatment guidelines reflect this inter-sectoral guidance; b) support platforms that would collect and curate such materials, share best practices and disseminate these through professional society, government and church-based healthcare delivery systems, key actors in the food supply chain, and civil society; and c) urge the development of intervention approaches that can be tailored and implemented in differently resourced settings.

1.7 Mainstreaming AMR will require communicating greater understanding of this One Health challenge to the public and to other sectors into which these issues might be integrated. Ensuring this inter-sectoral understanding will require ensuring that professional education, on-the-job training and capacity building carries this integrated understanding of AMR and other development issues.

2. Sustainable financing for AMR should include support for the implementation of stepwise approaches, prioritization of resources, and access to essential antibiotics.

2.1 Country governments have limited resources but face many policy options for implementation National Action Plans on AMR. To direct their investments in the most strategic way, the IACG could call upon intergovernmental agencies to help provide a prioritization framework to assist with this country-level decision making. Such modeling could help make the economic case for return on investment in AMR. Still all countries, even those with minimal domestic resources, can commit to a core set of actions on AMR, such as the establishment of an Inter-Ministerial Committee to coordinate implementation of the NAP on AMR.
2.2 The economic case should be made that high-income countries supporting the implementation of NAPs in low- and middle-income countries is a highly cost-effective investment. The World Bank report argues that:2

…our analysis shows that action on AMR constitutes one of the highest-yield development investments available to countries today… Different countries stand to benefit from AMR control in different ways. Low-income countries will see substantial economic payoffs, relative to the size of their economies. The largest absolute and per capita gains, however, will actually flow to upper middle-income and high-income countries. Assuming, very conservatively, that only 10 percent of the modeled costs were averted through AMR containment measures, high-income countries would still obtain benefits of $0.9 trillion and $2.7 trillion, in the low AMR-impact and high AMR-impact cases, respectively. This is four times and thirteen times more than the global investment cost of $0.2 trillion.

Such analysis might be further refined and detailed, making the case for specific countries and/or regions.

2.3 Financing for implementation of NAPs is seriously lacking, but so is financing for access to antibiotics and other health technologies critically important to saving lives in low- and middle-income countries (LMICs). Of course, the challenge of high drug prices is a global one, not limited to LMICs, but the challenge of underuse of antibiotics and other life-saving health technologies may claim more lives than overuse at this time in some resource-limited settings. The IACG should be clear on the paramount importance of ensuring affordable access to all those in need.

2.4 Global financing priorities must also be set, such that:

Financing for innovation of technologies to address AMR (drugs, diagnostics, vaccines) must also be tied to target product profiles that include affordability as a criterion and that ensure the end-products are suited to use in resource-limited settings, so that NAPs at the country level can be carried out effectively.

Financing for innovation has to go beyond innovation of technologies for healthcare delivery, but also must support the development of vaccines and diagnostics that counter the reliance on antimicrobial use in food animal production.

A globally coordinated research agenda also must support the innovation of practice, both for antimicrobial stewardship in the healthcare delivery system and for curbing antimicrobial use in the food production system.

2.5 Sustainable financing may require recommending a financing mechanism that could provide lasting support such as that adopted by 196 parties to the Montreal Protocol.

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One of the most successful international treaties has been the Montreal Protocol, which has phased out 98 percent of ozone-depleting substances and has put the world on the path to closing the hole in the ozone layer over Antarctica. Mexico was originally the only developing country to have ratified the agreement, but, by 2013, the Multilateral Fund had provided financial assistance to 147 of the 196 parties to the Protocol and all developing countries had complied with their obligations by 2013. The Fund has funded 144 country programs since 1991, providing $3.6 billion to projects ranging from industry conversion and technical assistance to training and capacity building efforts. The UN Environment Program, the UN Development Program, UN Industrial Development Organization and the World Bank collectively coordinate the implementation of the Montreal Protocol. Thirty years after its signing, the Montreal Protocol remains a valuable model example for sustainable financing, developing country support and participation, and inter-agency coordination.

3. **Regional cooperation should be expanded to international cooperation, include setting targets for AMR, and enable mechanisms of monitoring for accountability.**

3.1 *International, not just regional, cooperation is necessary, and action by industrialized countries, not just LMICs, is important.* Examining the highest users (by DDD per capita in healthcare delivery or by antibiotics consumed by biomass in food production) by country, clearly the responsibility is a shared one, and this paper seems to focus largely on bolstering the infrastructure needed for NAP implementation in LMICs. Important as that is, there also must be commensurate action among industrialized countries, which also carry responsibility for much of today’s and tomorrow’s projected usage.

3.2 *Targets are both aspirational and operational. The gap between the two reflects often a resource gap. The timeframe for accomplishing such targets, however, must take into consideration the resources mobilized.* The goals for target setting, therefore, are at least twofold. On the one hand, the setting of targets and the sizing up of the gap between aspirational and operational targets provide a useful guide to how resources, both global and domestic, might be directed. On the other hand, such targets also provide benchmarks towards which countries might strive to achieve.

Concurrently, there should be targets for access to antibiotics, curbing excessive use, and lowering drug resistance levels. This will require triangulating carefully, especially in countries where there are both challenges of access and excess. Such targets should avoid unadjusted approaches like the global median of antimicrobial consumption in a country, where there may be both underuse and overuse present.
Monitoring for accountability can be a powerful tool to leverage policy change. For example, regional cooperation might be strengthened and encouraged through self-reporting and benchmarking against comparison scorecards.

3.3 Countries at a similar resource and asset level and leading the way could help the global community to gauge what aspirational goals are feasible and appropriate. Not all LMICs are the same in their capacity, flexibility and political will in what they can do. It would be useful to identify the progress made by countries--given different levels of assets and resources--on implementation of NAP AMR goals.

3.4 The impact of AMR-related trade restrictions by importing countries on export markets can also play an important role in shifting consumer demand and also production practices. The IACG could analyze how such patterns in trade restrictions might align with efforts to work with countries to advance their NAPs on AMR. Some countries might be motivated by their exports facing increasing trade restrictions; others might be usefully targeted because they are significant importers of such food animal products.

3.5 At the global level, AMR should be recognized as an integral part to achieving the Sustainable Development Goals. Setting AMR goals at the global level can serve as a benchmark for countries developing and implementing their NAPs. The UN High Level Political Forum’s yearly progress review and country voluntary reporting provides an important opportunity for Member States to discuss their efforts towards these AMR-related goals. Several country governments, notably Germany, Ghana and Norway, have called upon the WHO to rally key stakeholders in support of the SDG 3 goals and to develop a joint “Global Action Plan for Healthy Lives and Well-Being for All.” In so doing, AMR-specific indicators in the Sustainable Development Goals could be added in the 2020 review process. For SDG3, such an AMR-specific SDG indicator might address access issues to life-saving antibiotics.