# Including Health in the Transnational Political Agenda: EU-India Partnership and the Global Outbreak of Antimicrobial Resistance

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## Antimicrobial resistance as a global common challenge for India and EU

Like all living creatures, bacteria, fungi, viruses and parasites have always mutated over the time. Nevertheless, unsustainable paths of human development have been instrumental to accelerate the mutation of communicable pathogens. In this framework, the antimicrobial resistance is defined as the incapability of the existing drugs and medications to cure infection generated by mutant bacteria, fungi, virus and parasites. While until a few years ago the term was widely unknown to the mass population – the contemporary unsustainable deterioration of the public health and financial state of art - is likely to transform antimicrobial resistance as a new global cause. Similarly to climate change, the fight against superbugs requires a global coordination between national policy makers. As clearly demonstrated by the COVID-19 outbreak, pathogens do not require neither passport nor visa to travel around the globe.

As noted by the UN Interagency Coordination Group, today drug resistance diseases cause at least 700 000 deaths globally per year. If tailored measures are procrastinated, antimicrobial resistance will lead to 10 million casualties per year (United Nations 2019). Hence, drug resistant diseases are expected to become the first cause of death. In addition, antimicrobial resistance causes an unsustainable raise of the public expenditure in health, expanding its negative impact on the social and labour sphere – impacting harder developing societies and the poorer strata of the world population (see Ahmad and Khan 2019; Kirby and Herbert 2013). In economic terms, by 2050 the global increase in healthcare costs could range between the 300 billion – to more than 1 trillion - US Dollar per year (World Bank 2017). Only considering the diseases ascribable to resistant bacteria, hospitals will have to invest in an average of US$ 25,000 to treat patients not responsive to the traditional antibiotic treatment (Cecchini et al. 2015). In this scenario, antimicrobial resistance is a threat for consolidated Universal Health Coverage services in advanced countries; and it also represents a hampering factor for the development of public health care services in emerging economies.

Reflecting the incremental relevance of the issue in the public sphere, for the first time the *India-EU Strategic Partnership: A Roadmap to 2025* introduces the antimicrobial resistance at the centre of bilateral cooperation. Considering the novelty of the issue in the strategic partnership, it is crucial to identify the position and the role of India and EU on the matter, in order to build joint Indo-European initiatives to tackle antimicrobial resistance.

## Tackle antimicrobial resistance: a critical analysis for joint initiatives

To have a complete understanding of the European and Indian state of art, it is essential to briefly illustrate the solutions advanced by the scientific community to tackle antimicrobial resistance (e.g. Maloy and Atlas 2014; O'Neill 2016; World Health Organisation 2015; United Nations 2019). Simplifying the finding of the scientific community and the conclusion of the competent international organisations, the appropriate answer to drug resistant diseases is represented by a double folded strategy, blending R&D with preventive measures.
On one hand, public policy makers should take concrete financial measures to ensure the release of new antibiotics in the market. The last class of antibiotics was patented in the 1980s (see Shore and Coukell 2016). The fact that during the last thirty years not a single new antibiotic was introduced in the market – makes evident that the time and investment required patenting new classes of antibiotics does not meet the commercial model of the pharmacological industry. Without solid public subsidies for R&D, the world is likely to return to the pre-antibiotic era, where minor bacterial infections have fatal consequences.

In parallel, political communities should encourage the enforcement of interdisciplinary preventive measures designed to tackle the phenomenon at its multiple grassroots sources. Promoted by the competent international organisations, the One Health tackles the causes that accelerate the mutation of the communicable pathogens – adopting an enhanced and interdisciplinary approach interconnecting the human and animal health, the economy and the environment. Building integrated links between these spheres and antimicrobial resistance, the One Health approach proposes preventive awareness, educational and developmental solutions to reduce the further outbreak of mutant pathogens (see Maloy and Atlas 2014).

It is rather impossible to draw a general picture for the incidence and prevalence of superbugs in the European Union (see European Centre for Disease Prevention and Control 2019; Tacconelli and Pezzani 2019). As commonly occurring in the study of the European integration, there are considerable asymmetries among the Member States. Several Member States stand as a worldwide benchmark for the effectiveness of the measures adopted. Conversely - as clearly reflected in the statistical figures on incidence and prevalence - there are Member States struggling to enforce measures against resistant pathogens. Nevertheless, within the European Union there is homogeneity in the legislative framework related to the prevention of antimicrobial resistance. Similarly, as designed under the aegis of the World Health Organisation (2015), the national plans against the antimicrobial resistance lead to an acceptable degree of coherency among Member States. As a whole, the legislative measures adopted by the European institutions during the last two decades seems to properly respond to the scientific road map embedded in the One Health approach, but at the same time, the delivery of policies and recommendations is not uniform.
Moving the Indian state of art, akin to the European scenario, Union Ministry of Health and Family Welfare has released in 2017 the national action plan on antimicrobial resistance. India has a central role to play in the global fight against superbugs. Due to a wide range of reasons, the scientific literature agrees to pinpoint South – and South-East - Asia as the epicentre of the epidemiological challenge (e.g. Frost et al. 2019; Prestinaci et al. 2015; Zellweger et al. 2017). Only to provide a glimpse of the issue, it is estimated that around 60 000 neonates perish yearly in India due to sepsis resistant to antibiotics (Chaurasia et al. 2019; Laxminarayan and Bhutta 2016). To fully meet the One Health preventive measures - despite the recent positive developments - Indian national legislation has still room for improvement. Mostly the legislation in the field of veterinary, environmental protection and waste management raises concerns.

## Policy recommendations: gaps and rooms of room for manoeuvre

Considering the magnitude of the issue, it is evident that the inclusion of antimicrobial resistance in the EU-India partnership agenda is a societal responsibility of the policy makers towards their citizens. The following recommendations are meant to encourage the development of a bilateral partnership. The India-EU initiative should be accountable to the economic and social impact of antimicrobial resistance - and at the same time – politically and economically feasible.

a) **Improve the public governance of antimicrobial resistance**
Target: EU institutions and Indian governments.

Gap to address: Currently, the issue is managed within the EU by the DG SANTE, while in India by the Ministry of Health and Family Welfare. The challenges raised by antimicrobial resistance have an interdisciplinary nature. Thus, it is unrealistic to exclude ministerial experts - in environment, agriculture, foreign policy, education, research, finance, industry and SMEs - from the governance of antimicrobial resistance.

Recommendation: Mirroring the interdisciplinary nature of the issue, the domestic governance of the antimicrobial resistance should be built over an interministerial task force. Different expertises are required both for the preparation – and the delivery – of comprehensive measures tackling resistant diseases. At multilateral level, this approach was recently adopted under the umbrella of the UN.

b) **Solve the current R&D bottleneck**
Target: EU institutions and Indian governments.

Gap to address: The last class of antibiotics was released in the market thirty years ago. Developing new antibiotics is a time demanding (+10 years) and expensive exercise. In this framework, it is clear that the pharmaceutical sector will not release new antibiotics. The additional gap is represented by

the scarce transnational pooling of R&D funds. As observable during the COVID-19 outbreak, R&D rather than becoming an opportunity for global cooperation, opened the door to nationalism.

Recommendation**:** India and EU should actively promote in the multilateral arena, and in bilateral talks, the establishment of a global R&D instrument aimed to develop new drugs and medical devices. The goal is to avoid duplication of R&D programmes, in order to tackle better the outbreak of antimicrobial resistance.

c) **Build a pragmatic bilateral cooperation on regulatory standards and financial instruments**

Target: EU institutions and Indian governments.

Gap to address: Vis-à-vis the scientific recommendations and the One Health approach, European and Indian legislations could be improved to prevent the mutation of pathogens. Normative amendments might produce negative economic consequences that should be addressed with ad-hoc financial instruments.

Recommendation**:** EU and India should mutually engage in the optimisation of the domestic legislations designed to prevent the outbreak of resistant pathogens. A common financial instrument should be established to ensure the enforcement of the standards, and the delivery of the national action plans.

Currently, in the global governance scenario it is missing a frontline country advocating the fight against antimicrobial resistance. Considering the exponential growth of public concern over the issue, it could be strategic for India and the EU to build an enhanced alliance, to acquire the global frontline position. The alliance could demonstrate the feasibility of a pragmatic model to tackle antimicrobial resistance, which fairly distributes the duties and responsibilities between advanced and emerging economies.

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