WORLD ECONOMIC FORUM

Antibiotics are contaminating the world's rivers

Antibiotic resistant infections kill more than 700,000 people every year Image: Reuters

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From the Mekong to the Seine, the first global study of antibiotics in the world's rivers has revealed that some contain concentrations up to 300 times above 'safe' levels.

Antibiotic pollution was found in two-thirds of the rivers sampled.

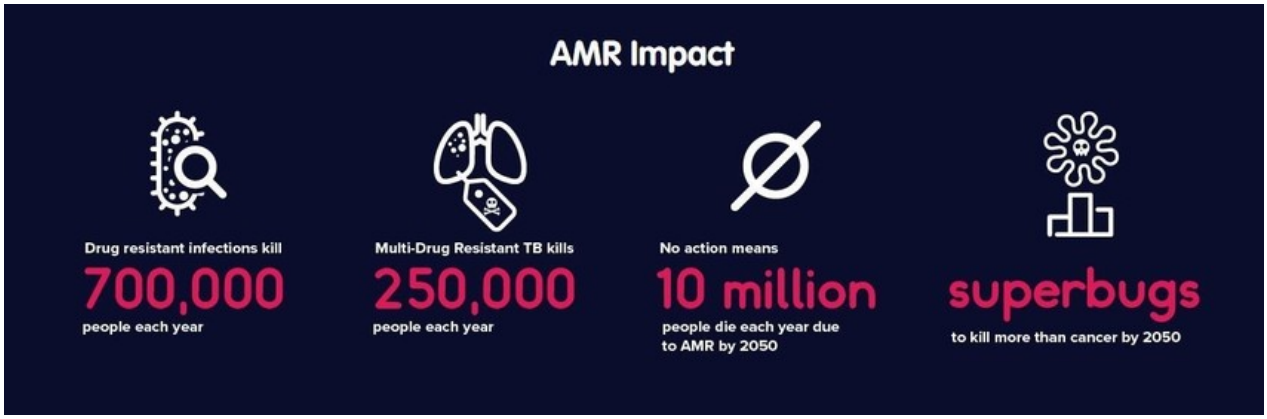

Image: AMR Industry Alliance

Scientists from York University in England tested samples from rivers in 72 countries. They found safe limits for the most commonly used antibiotics were exceeded in all continents but the highest levels were in Bangladesh, Kenya, Ghana, Pakistan and Nigeria.

Describing their findings as “eye opening and worrying”, the scientists said solving the problem would be a mammoth task involving investment in wastewater treatment, tighter regulation and cleaning up contaminated rivers.

“Many scientists and policy makers now recognise the role of the natural environment in the antimicrobial resistance problem. Our data show that antibiotic contamination of rivers could be an important contributor,” said Alistair Boxall, of the York Environmental Sustainability Institute.

Global killers

Antibiotic resistant infections already kill more than 700,000 every year, according to the AMR (antimicrobial resistance) Industry Alliance. As more bacteria develop immunity to treatment, the Alliance of leading drug makers says superbugs will kill more people than cancer by the middle of this century.

Overuse of antibiotics is leading us into a post-antibiotic world in which people will once again die from common infections and minor injuries, the World Health Organisation has said, calling antibiotic resistance one of the biggest threats to humanity.

Bacterial resistance is growing fastest in areas where antibiotics for human and animal use can be bought without prescription.

A study of antibiotic use in the developing world reported that medical staff were prescribing antibiotics as a precaution even if patients were suffering from a virus against which the treatments are known to be ineffective.

No easy answers

Scientists say the only way to slow the growth of resistant infections is to reduce the use of antibiotics worldwide. But new evidence suggests that limiting prescribing to occasional use may not be as effective as previously hoped.

A Harvard University study of patients in the United States found that occasional, low-intensity use by large numbers of people led to more resistance than intensive use by a few.

“More antibiotic use generally means more antibiotic resistance, but it seems like the number of people taking antibiotics might matter more than the amount they’re taking,” said lead author Scott Olesen.

Incentivising research

Image: World Economic Forum

In its report on antimicrobial resistance, the World Economic Forum says poor financial returns are holding back the development of new antibiotics because the $40 billion-a-year global antibiotics market is dominated by generic drugs sold at low prices.

The report says drug companies won’t invest in new treatments unless they are able to recover research costs. And it calls for increased public funding for research and guaranteed financial returns to incentivise companies to find new treatments.

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