Shout about the European Union's success

As people in other nations watch the UK prepare to sever ties, **Herman Goossens** *urges more scientists to stress what the EU does for them.*

When the United Kingdom voted to leave the European Union, I received a text message from a friend and colleague at the University of Oxford: "From one proud European to another; I feel sadness in every cell in my whole body on this nightmare day. I am shocked and devastated. But I hope science and friendships will find a way to transcend this awful mess."

The nightmare continues. The UK parliament last week voted to trigger Article 50 of the Lisbon Treaty to begin withdrawal, and the EU faces probably its greatest crisis.

The European Union is a great project. Yet millions of Europeans are questioning what it does for them. They are told it spends its money on fanciful projects that don't benefit its citizens. They have lost faith in its ability to address their most pressing problems.

Has the EU let its citizens down? I can respond by referring to the fight against antibiotic resistance. The answer is an emphatic 'No'. We have made significant progress over the past two decades, and our success shows what is possible. With colleagues, I analysed levels of funding from the EU and individual states devoted to antibiotic resistance between 2007 and 2013. Some 33% of the total investment came from the EU. By contrast, funds from the EU Framework Programme made up only 7.5% of all research expenditure financed by governments of EU members. This suggests significant underfunding of such research by member states. But more crucially, it shows how important cross-national efforts are. A campaign in Belgium over antibiotic misuse began in 2000, with a similar effort starting in France two years later. Ministers in those countries would not have offered essential support without an EU-funded project that collected necessary and highly compelling data on the scale of the problem.

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Ongoing, rigorous data collection and analysis have continued to monitor the situation, and have shown that both campaigns led to crucial decreases in antibiotic use and resistance among non-hospitalized patients. Furthermore, EU-funded, independent studies have demonstrated how the campaigns produced positive changes in clinician and patient attitudes and behaviour towards antibiotic use.

Inspired by this success, the European Commission lent its support to the first European Antibiotic Awareness Day in 2008. This became an annual event, and in 2015 was scaled up to become the World Antibiotic Awareness Week, now coordinated by the World Health Organization.

There's more. It was EU funding that uniquely enabled us to compare antibiotic resistance in many hospitals throughout Europe. This project identified huge differences between countries in the proportion of infections that were resistant to antibiotics. The data provided a call to arms for many policymakers in member states, and national plans were rolled out for the first time to address the crisis. These initiatives have resulted in a step-change reduction in infections caused by the superbug MRSA in hospitals throughout Europe.

And it was only after we started analysing antibiotic use in food-producing animals in Europe, supported once again by EU grants, that we realized that the Netherlands was one of the highest European users of antibiotics in farming. After a debate in the Dutch parliament, the Dutch minister of agriculture set mandatory targets for reduced antibiotic use in animal husbandry, and, indeed, Dutch farmers rose to his challenge and achieved these ambitious reductions ahead of schedule. We now have clear indications that antibiotic resistance is decreasing in animals in the Netherlands. It is not only Dutch consumers who are benefiting from the resulting increase in meat safety: consumers throughout Europe have also profited, because food and associated resistant bacteria cross national borders.

Given successes such as these, how can we convince European citizens that the EU project brings considerable benefits to its individual citizens?

To prevent further breakdown of the EU, scientists must shout from the rooftops that many of our problems today can be solved only at a European, or even a global, level. We must challenge time and again the current populist view that countries are better off trying to address the most pressing problems on their own.

European institutions and their staff should develop a strategy to communicate the benefits of the EU more effectively. Journalists should use their diverse platforms to bring many more positive stories to people's attention. Industry, too, receives considerable support from EU taxpayers to develop its businesses, and should acknowledge this far more widely. And academia should articulate better the benefits of EU support and collaborations. The sentiments in my Oxford friend's message on the value of cooperation should be proclaimed in banners across universities' buildings and on their websites. Rectors and vice-chancellors should be bolder in repeating them to government, students and citizens.

Why don't we create a group of EU-funded scientists who regularly present some of their impactful research to European citizens using more varied and creative media and messages? I realize that this might itself sound rather like a populist manifesto. Perhaps we should indeed counter EU critics by unashamedly using the methods that have served these people so well. But there will be a crucial difference: our populist programme will be supported by hard evidence, rather than by deceitful slogans on the sides of buses and by alternative facts. ■

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