

DRINKING WATER QUALITY

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The water we drink should be safe. The cryptosporidiosis outbreak in Galway in 2007 reminded us that it sometimes is not. But bad water quality does not only cause acute health problems. It also causes chronic ailments, including cancer. Therefore, the drinking water quality is monitored by the City and County Councils, overseen by the Environmental Protection Agency (EPA). A recent paper by Tol *et al.*, examines the quality of drinking water in Ireland over time.¹

Let us first have a look at the facts. Figure 1 shows the fraction of people, by county, whose drinking water failed to meet at least one of the EU regulations in 2007. The numbers range from 52 per cent in Cork North to 100 per cent in the cities. Figure 2 shows the same data, but per water quality parameter. In 2007, 35 of the 48 standards were breached by at least one sample of Irish drinking water. In most cases, only a small number of people are affected. However, more than 5 per cent of people had their drinking water polluted with manganese, iron, lead or aluminium. The share of people suffering from biological contamination (enterococci, colony, e-coli, clostridium, coliform) is even larger. At first sight, these results are alarming. There are substances in Irish drinking water that make people ill. However, one can also conclude that monitoring is working. Problems are identified. But are they also solved?

In 2007, water quality was not much better than in 2006. In 2006, 88 per cent of people had something wrong with their water and in 2007 this was 85 per cent. Figure 3 compares breaches of water quality standards between 2006 and 2007. Figure 3 reveals that many sources that reported a problem in 2006 continued to report the same problem in 2007. While some of the problems were adequately dealt with, many other cases of biological and chemical contamination linger. These results are alarming.

How can this be? The European Union has stipulated that drinking water quality be monitored, and so the EPA publishes a report every year. To date this has not captured the public imagination. It deserves much greater attention from the general public and from policymakers. Previously, the EPA could only advise the county councils to take corrective action. The EPA only

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¹ Tol, R.S.J., N. Commins, N. Crilly, S. Lyons and E. Morgenroth, 2009, "Towards Regional Environmental Accounts for Ireland", Journal of the Statistical and Social Inquiry Society of Ireland, forthcoming.

recently acquired the authority to enforce its decisions. It is too early to judge how much difference its new powers will make. However, there are a number of structural factors which need to be addressed in improving the quality of water to the Irish public. Maintaining drinking water quality requires particular skills and expertise as well as resources. Given the results set out above, it is questionable whether the existing system, with the local authorities at the centre, is equipped to guarantee drinking water quality. The local civil service does not offer a career perspective for specialists, and many of the counties have too few people to hire a full-time expert. A sorry illustration is the high concentrations of trihalomethanes (THMs). These carcinogenic substances are byproducts of the improper chemical treatment of biological contamination. These problems can be addressed: for example county councils could outsource the operation of drinking water facilities to specialised companies or responsibility for water services could be transferred to a single national authority.

Figure 1: The Percentage of People who are Supplied with Drinking Water that Violates at Least One of 48 Water Quality Standards, Per County, for 2007

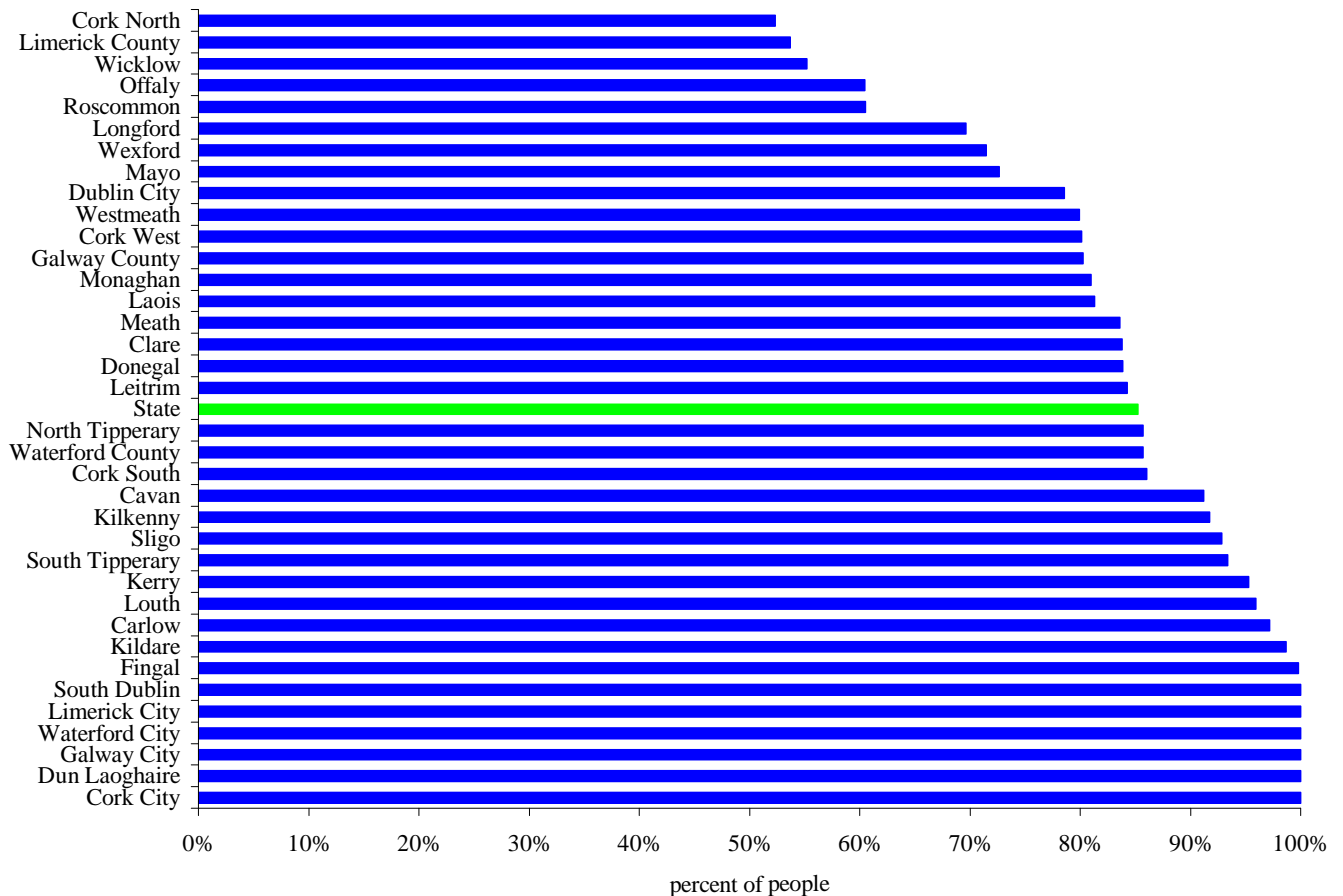


Figure 2: The Percentage of People who are Supplied with Drinking Water that Does not Meet the EU Quality Standard, Per Water Quality Parameter, for 2007

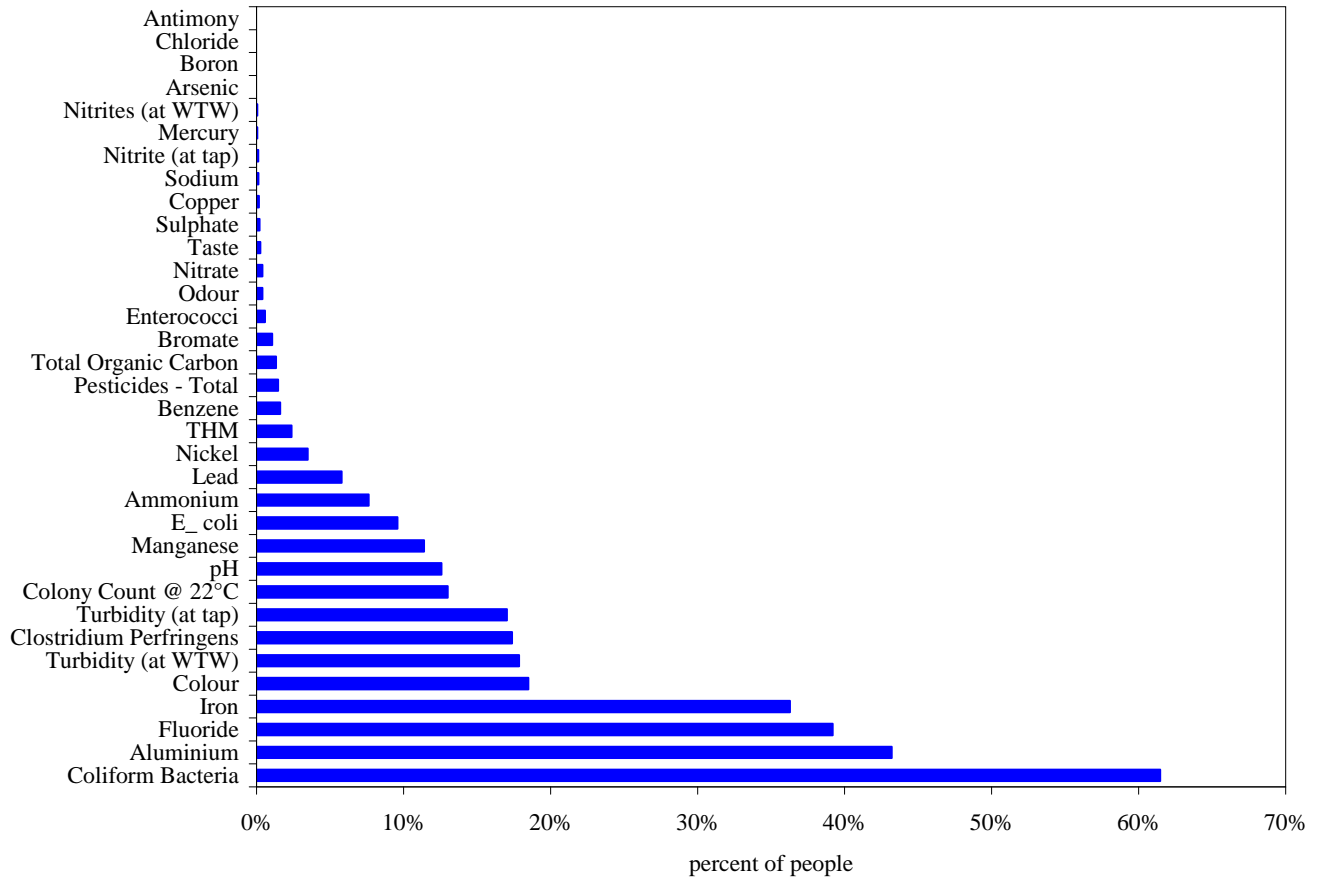


Figure 3: The Persistence of Breaches of Water Quality Standards Between 2006 and 2007 Per Water Quality Parameter

