Transformation of the GWS sector
under the Rural Water Programme

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Transformation of the GWS sector

By the mid 1990s, the GWS sector was in crisis. Schemes lacked several essential criteria for sustaining a successful water supply: appropriate treatment (capable of dealing with variations in raw water quality), relevant and consistent training/mentoring of operatives, effective business organisation and forward planning. Above all they lacked the capacity to meet the financial burden of delivering a consistent quality water supply, much less the capital demands of upgrade works. Notwithstanding all of this, the case taken by a resident of Ballycroy GWS to the European Court of Justice would confirm that group water schemes must comply with the same onerous quality standards demanded of a municipal water supply and, furthermore, that the State has a responsibility to ensure that this standard is achieved by all water providers that come under the Drinking Water Regulations (i.e. those supplying more than 50 people or smaller supplies with a social/commercial connection).

As Minister Owen pointed out in 1995, the State was willing and ready to grant-aid capital works in the GWS sector, recognising that group schemes were playing a unique role in the social and economic life of rural communities, a role that the State would otherwise have had to assume (at far greater cost to the Exchequer). As for the possibility of the State simply taking over all schemes, this was not a viable option given the legal, financial and logistical ramifications of taking-in-charge or replacing hundreds of sources, pump houses and reservoirs as well as thousands of miles of pipework (much of it running through private lands). Indeed, the public water sector had serious challenges of its own to resolve. Thus, any solution to the problems afflicting the GWS sector would have to be found through a new framework that would equip the GWS sector to deliver on its statutory responsibilities.

The Rural Water Programme (RWP)

This framework evolved in the late 1990s. Until then there was no coherent organisation through which group water schemes could be mobilised on a sectoral (as opposed to individual) basis. With the formation in 1997 of the National Federation of Group Water Schemes (NFGWS), however, a vehicle now existed through which a process of co-ordinated transformation could be achieved. In tandem with this development, the devolution of responsibility for the GWS sector from the Department of Environment to local authorities meant that a statutory platform was in place through which National policy could be implemented at a local level. Building on these developments, the Rural Water Programme agreed in 1998 would provide the engine of rural water reform, forging a structured partnership between the Minister, the Department, the local authorities and the NFGWS. The stated objectives of the RWP were as follows:

- To protect public health by ensuring compliance with the Drinking Water Directive.
- To pursue a planned approach to investment and ensure best practice in all aspects of the management and operation of rural water schemes.
- To give practical effect to the principle of partnership with the voluntary group scheme sector in the determination and implementation of policy on rural water supply through the local monitoring committees.
- To assist in the effective administration of the devolved rural water programme.
- To sustain the rural environment and promote economic development.

The above stated objectives have informed all aspects of the transformation of the rural water sector since the late 1990s and below we outline the practical outworking of these same objectives to date, bearing in mind that the RWP is an ongoing programme, key to the future sustainability of group water schemes.

Delivery of the programme

Besides reaffirming (and expanding) the availability of capital funding towards the cost of GWS infrastructural upgrades, the RWP put in place financial supports in the form of an annual subsidy to be paid by the State towards the
operation of group schemes. While this subsidy was introduced ostensibly to provide parity for GWS communities – given that domestic water charges had been removed on public supplies – there was no automatic entitlement to subsidy. Instead, conditions were imposed with a view to encouraging schemes to adopt best management practice, especially in terms of delivering a quality water supply. Furthermore, there has always been an upper limit (maximum per household) in terms of recoupable costs. The provision of a ‘free’ domestic water allowance was required of schemes in DBO projects from 2008, while such an allowance is now a condition of subsidy on all group water schemes in receipt of subsidy.

In the early years of the RWP, partnership structures were established at national and at local level (e.g. the NRWMC and WSNTG), rural water strategic plans were developed, pilot studies were conducted on treatment processes, intensive monitoring programmes were initiated both for raw water sources and treated water supplies and a National Strategy was developed to resolve unacceptable quality deficiency on group schemes.

Added impetus was given to the search for viable solutions to the issue of parametric non-compliance in the GWS sector in November 2002 when the European Court of Justice (ECJ) issued its ruling in the case taken by a resident of Ballycroy GWS. Ireland was adjudged to be in breach of the water quality standards in respect of group water schemes and with failing to adequately reflect in Irish law the binding nature of the EU water quality Directive 80/778. The Court threatened to impose substantial fines on the Irish State if this situation was not resolved without delay.

No fewer than 453 schemes were listed in the ECJ judgement, while a further 276 were subsequently identified as being out of compliance. As if to drive home the message that urgent action was needed, the EPA’s drinking water quality report released in January 2003 showed a deteriorating situation in respect to microbiological quality on Irish group water schemes, no fewer than 485 group schemes having testing positive for faecal coliforms. Meanwhile, the results of an intensive raw water monitoring study commissioned by the NRWMC on 723 sources supplying 664 group schemes provided stark evidence that no scheme could rely on untreated water: It stated:

‘The introduction of treatment processes to eliminate bacteriological problems is needed immediately, as the data generated in this study indicate that no source is consistently of sufficient quality that it may be used for drinking water without treatment.’

Members of the National Rural Water Monitoring Committee (NRWMC), including NFGWS representatives. Established as the advisory body to the Minister under the Rural Water Programme, the NRWMC was tasked with devising and implementing a strategy to resolve the issue of deficient drinking water quality on hundreds of group water schemes. Under the Water Services Act (2007), the committee secured Statutory recognition and in 2017 it was absorbed as part of An Fóram Uisce (The National Water Forum).
Upgrade strategy

Clearly, the long-standing strategy of addressing the issue of GWS upgrades on an individual basis could no longer be sustained. Whereas group schemes had previously been urged to come forward with their own upgrade proposals, the new strategy agreed by the NRWMC insisted that schemes set aside their own plans so that the most economically advantageous upgrade solution would be pursued. An Action Plan for Rural Drinking Water Quality 2003-2006 pointed the way forward for group water schemes seeking financial support for upgrades under the capital investment programme.

For most schemes and, in particular, those relying on surface waters or groundwaters influenced by surface flow, this meant agreeing to become part of a ‘bundle’ in one of several Design Build Operate (DBO) projects. A substantial number of privately sourced schemes were designated for connection to a public main, others to be taken in charge. Only schemes that already had treatment in place or that had exceptional groundwater quality could expect to pursue a stand-alone upgrade solution, usually involving the installation of simple disinfection.

Apart from 145 (20.4%) non-compliant schemes that were already connected to public supplies, the upgrade breakdown was as follows:

<table>
<thead>
<tr>
<th>Upgrade option</th>
<th>No. of schemes</th>
<th>% of schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection to public mains</td>
<td>118</td>
<td>16.7%</td>
</tr>
<tr>
<td>Taking-in-charge</td>
<td>65</td>
<td>9.2%</td>
</tr>
<tr>
<td>DBO treatment</td>
<td>258</td>
<td>36.5%</td>
</tr>
<tr>
<td>Stand-alone</td>
<td>122</td>
<td>17.2%</td>
</tr>
</tbody>
</table>

Connection to public mains/taking-in-charge

This was the preferred option in the agreed NRWMC Strategy for non compliant schemes that were close to municipal distribution networks, because parametric compliance (and microbiological compliance in particular) was considerably better on public supplies. As this strategy involved the loss of identity/sovereignty for the schemes involved, there was considerable resentment and opposition to surrendering schemes that were long-established, low-cost and community-run enterprises, regardless of the fact that the taking-in-charge option attracted 100% funding for all associated upgrade works, while 85% was available towards connection to public water mains.

Here, the NFGWS used its good offices to act as a persuader for what was a difficult pill to swallow, not least for the Federation itself given its representative role and its stated objective of standing by the right of rural communities to retain and operate their own water services. However, in the spirit of partnership, both the NFGWS and the
individual schemes sacrificed self interest for the common good and set aside their genuine concerns in relation to loss of identity and (for some) the acceptance of ‘chemically-treated’ water.

**Stand-alone**
A large proportion of group water schemes are ‘stand-alone’ in that they treat the raw water themselves (or retain an individual or company to do so, but without having a long-term *bona fide* DBO contract in place). This stand-alone sector is regionally strong in parts of the east, south and west of Ireland and it includes schemes that were to pursue one of the other upgrade strategies, but did not proceed as planned for a variety of reasons. Improved disinfection systems (and occasionally filtration processes) have been installed on most stand-alone schemes under the Rural Water Programme.

However, compliance issues persist due, in part, to the purely voluntary management of many such schemes. NFGWS strategy is to rationalise clusters of such schemes with a view to putting in place paid management (to achieve compliance with the parameters under the Drinking Water Directive) and to better provide for their sustainability as community-owned businesses.

**DBO bundling**
The DBO bundling concept was first piloted by the NRWMC in County Monaghan. This project was tendered in 2001 and the first treatment plant at Truagh GWS became operational in June 2003. Following the success of the Monaghan pilot, DBO bundle projects began to roll-out across the country, the procurement process being aided by comprehensive guidelines formulated with the assistance of the Water Services Training Group (WSTG).

Although 258 schemes were originally proposed for DBO bundle upgrades, this reduced to 219 schemes (because of other options being pursued by the remaining schemes). This number reduced further to 141 schemes following a successful rationalisation process that saw many smaller schemes amalgamate into more viable entities.
Water quality improvements
The delivery of effective treatment systems to rural communities has been one of the main drivers in the steady improvement in parametric compliance across the GWS sector. Whereas nearly 600 schemes had tested positive for faecal contamination at the turn of the millennium, 14 schemes had similar failures in 2018, while compliance with chemical and physical parameters is now close to 100%. However, problems persist on a small minority of schemes that have yet to complete treatment upgrades, have inadequate treatment or are otherwise deemed to be at risk. These are included in a Remedial Action List and where deficiencies in treatment are identified) they will be the main focus of capital investment under Measure 1 of the current 3-year Multi-annual Rural Water Programme 2019-2021.

Wider infrastructural investment
Besides addressing the deficit in water treatment, the capital investment under the Rural Water Programme has included a wider range of infrastructure, from the development of boreholes and source abstraction points to water storage facilities, pipelines, boundary boxes, meters, valves & fittings and a wide range of monitoring systems. Funded at 85%, these investments have had a major impact on the reduction of water loss across the GWS sector, thereby ensuring the more effective operation of treatment systems and reducing the operating costs of schemes.

Rationalisation
From the early days of the NFGWS, there was recognition that group schemes would have to consider rationalisation and mergers in the context of improved water quality, economic efficiencies and professional management. Rationalisation was embodied in Federation policy and strategy from 2000, when a series of mergers were driven...
by the Federation in the context of the development of county rural water strategic plans.

For many schemes the provision of a water treatment facility was deemed not to be feasible, either because of the inadequacy of their source or because of unaffordability due to the small size of the GWS and the limitations of the maximum per household capital grant available. In such cases the only viable way forward was to join with neighbouring schemes to share one treatment plant. As part of its development programme and in recognition of the benefits of strategic rationalisation, the NFGWS worked with the relevant schemes to facilitate discussion and agreement on proposed amalgamations.

Rationalisation templates and formal agreements and resolutions were developed by the NFGWS in consultation with ICOS to ensure the amalgamation of registered co-operative societies was carried out fairly and in accordance with relevant legislation. The co-operative structure is the Federation’s recommended corporate structure for group water schemes. As already stated, during the planning stages of the DBO roll-out many GWSs, with the assistance and support of the NFGWS, agreed to amalgamate into larger GWS entities.

A total of 105 group water schemes amalgamated into just 34 new schemes as part of this ambitious and very successful rationalisation programme. In one of these amalgimations a total of 11 group water schemes in the Cappataggle area of Co. Galway amalgamated into one larger scheme serving a total of 575 households, while 10 schemes in Mid Roscommon also merged (640 households).

The spreading of costs and sharing of resources through amalgamation has had the added benefit of ensuring sustainability for the future, particularly for smaller schemes and this has prompted an ongoing NFGWS strategy to rationalise clusters of stand-alone schemes and small DBO schemes with a view to putting in place paid management (to achieve compliance with the parameters under the Drinking Water Directive) and to better provide for their sustainability as community-owned businesses.

**Capacity building in the sector**

From the outset, the Rural Water Programme (RWP) acknowledged that addressing public heath concerns through
the provision of essential treatment facilities (and infrastructural investment generally) was only part of what was required. Beyond the provision of infrastructure, the RWP recognised the need for capacity building in the sector, as schemes would have to address a range of issues from source protection to the oversight of treatment systems and the effective management of distribution networks, as well as general management issues associated with the running of an open and accountable community-owned water services business.

The first task in realising these objectives was a root and branch restructuring of the GWS sector to promote open and democratic member-participation leading to accountable management, grounded in a rights-based approach. The Charter of Rights and Responsibilities developed by the NFGWS was key to delivering this objective, as was the adoption of the GWS Co-operative Model Rules by individual schemes.

Once democratic structures were in place, the strategy involved the design and delivery of relevant and tailored training programmes aimed in the first instance at improving the management skills of GWS committees/managers and, secondly, the practical skills of operatives on group water schemes. A course for directors of group water schemes was developed in partnership with the Irish Co-operative Organisation Society, while the Federation collaborated with the Water Services Training Group in the development of courses focusing on topics such as disinfection, water demand management and network maintenance, amongst others. The annual Rural Water Conference and tailored workshops for the officers and managers of schemes also helped to build capacity in the sector.

Aside from capacity-building initiatives developed in association with other agencies, the Federation’s development and promotion of a HACCP-based Quality Assurance system from catchment/source to tap has further enhanced the operational capacity of schemes. A focus on disinfection residual monitoring and periodic scouring of mains as being key to the delivery of quality drinking water supplies, in addition to the promotion of water conservation and source protection, have contributed to increased professionalism within the sector, as has the circulation of a quarterly magazine, Rural Water News and the hosting of site visits to ‘model’ schemes.

With 120 domestic connections, Lettergesh/Mullaghgloss GWS is on the coastal fringe of north Connemara. More than half of schemes have less than 100 households. Only 100 schemes exceed 200 households, while 50 supply more than 400 homes.