Report of the Third Meeting of the International Network of Drinking-Water Regulators (RegNet)

Montréal
16 - 17 September 2010

Public Health and Environment
Water, Sanitation, Hygiene & Health
Report of the Third Meeting of the
International Network of Drinking-Water
Regulators (RegNet)

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Third Meeting of the WHO International Network of Drinking-Water Regulators (RegNet) – 16-17 September 2010, Montréal, Québec, Canada

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1. Background
A number of WHO Member States, including high-, middle- and low-income countries, have raised concerns about the status of drinking-water regulation. In order to address the global drinking-water and sanitation target under Millennium Development Goal (MDG) 7, the management of water supplies and the response to potential outbreak events of waterborne illness and drinking-water contamination events need to be improved. Regulations make up a powerful tool available to governments, that can be used to address risk assessment and management in the context of pursuing the MDG target and beyond. Regulations are, however, not always used to their maximum potential or to the best advantage of all stakeholders. Specific challenges raised by national experts on drinking-water supply and sanitation and by drinking-water regulators include:

- regulations tend to be developed from an engineering and operational perspective, neglecting the health perspective such as the exertion of authority for public health surveillance and associated responses;
- regulations may be non-existent, incomplete and/or outdated, even in some high-income countries; and,
- there may be a lack of clarity regarding jurisdiction, legal mandates and authority, including gaps and overlaps.

The World Health Organization (WHO) hosts the International Network of Drinking-Water Regulators (RegNet) and coordinates network activities. RegNet was established in response to requests from Member States to create a framework to share and discuss strategies that address the above issues and to explore and promote best practice in legislating for and regulating a variety of water quality management issues. The overall goal of RegNet is to increase access to safe drinking-water through the improvement of regulatory systems.

There is significant attention to confidentiality in this network, in order to provide regulators with a space where they can discuss and share important issues, and where they can agree on the best way forward in particular situations, in the interest of public health. RegNet membership is currently by invitation only.

For the purpose of RegNet, a water regulator is defined as professional tasked with ensuring the safety of drinking-water by establishing and/or enforcing appropriate regulations and standards for drinking-water quality and/or providing independent surveillance of drinking-water quality at national and sub-national levels.

The network’s objectives are as follows:
- provide a discussion forum to address challenges and share best practice in drinking-water regulation;
- share experiences in relation to the development and enforcement of regulatory frameworks for drinking-water quality, and of different approaches to specific issues requiring regulation;
- guide and share experiences on the role of regulators in supporting the implementation of water safety plans within a water safety framework;
- support the development of internationally recognized guidance on the regulation of drinking-water to improve public health protection;
provide a connection with the periodic updates of the WHO Guidelines on Drinking-water Quality, from a regulatory perspective;
provide support and guidance to regulators wishing to create, update or amend a regulatory framework; and
advocate for the improvement of drinking-water regulations.

The inaugural meeting of RegNet was held in February 2008 in Geneva, Switzerland. The second meeting of the Network was hosted by the National Environment Agency of Singapore, 19 and 20 June 2009. The reports of these meetings can be downloaded from www.who.int/water_sanitation_health/dwq/RegNet/en/index.html.

The third RegNet meeting, reported on in the present document, was held on 16 and 17 September 2010 in Montréal, Canada and was hosted by the First Nations and Inuit Health Branch, Health Canada. It was organized in conjunction with the biennial IWA World Water Congress (Montréal, 19-24 September 2010). This report presents meeting proceedings, conclusions and recommendations.

2. Introduction
The third RegNet meeting was designed to further the work undertaken by the Network through review and validation of progress achieved to date and the identification of additional areas for activity and next steps. Drinking-water regulators from low-, middle- and high-income countries from around the world were in attendance, 17 in all. Network members who were unable to attend were given the opportunity to provide inputs through the virtual forum, a web-based platform for information exchange.

The meeting was hosted by the First Nations and Inuit Health Branch, Health Canada and moderated by Mr Jamie Lafontaine (Health Canada) and Ms Jennifer Mercer (WHO). Ms Shelagh Jane Woods, Director-General, Primary Health Care and Public Health Directorate, Health Canada opened the meeting and welcomed participants to Montréal.

The objectives of the meeting included:
• Review progress achieved in RegNet activities since the last meeting and update the proposed 2010-2011 work plan.
• Review progress on and identify next steps for:
  o Questionnaire for RegNet members and regulatory scan to populate www.waterlawandstandards.org;
  o Water Safety Plan case studies, WSP quality assurance tool, and issue sheet on how to support the implementation of WSPs using regulations.
• Identify challenges and best practices associated with regulating resource-limited communities, e.g. human and financial resources.
• Review case studies on capacity needed to support implementation of regulations and identify lessons learned.
• Review case studies on mitigation strategies to ensure compliance with regulations and identify lessons learned.
• Review the relevant draft issue sheets associated with the above three bullet points.
• Update the proposed list of issue sheet topics and associated work plan.

Please refer to Annexes 1 and 2 for the agenda and programme of work and for the list of participants.
3. Proceedings of the meeting

Following is a summary of the discussions on the agenda items at the meeting.

3.1 Introduction and global context for drinking-water and sanitation.

Objective: Ensure that RegNet members understand the scope and context of the WHO drinking-water, sanitation and health programme.

Robert Bos, Coordinator, Water, Sanitation, Hygiene and Health, WHO, welcomed the meeting participants and spoke about the importance of the network in working towards the continuous improvement of the regulatory environment for drinking-water supply. In his opening statement he highlighted the current status of the WHO Water, Sanitation, Hygiene and Health programme, with a focus on its flagship activities, monitoring and water quality.

WHO and UNICEF are responsible for the Joint Monitoring Programme on Water Supply and Sanitation (JMP) which is the official mechanism for tracking and reporting on progress towards achieving the Millennium Development Goal (MDG) 7 drinking-water and sanitation target. JMP datasets are derived from household surveys and censuses carried out by national statistical bureaus in collaboration with international partners such as UNICEF (Multiple Indicator Cluster Surveys –MICS–), USAID (Demographic and Health Surveys –DHS–), the World Bank and WHO. The information from industrialized countries is mainly based on data collected by national regulatory bodies. Analysis of the drinking-water and sanitation data results in biennial reports which are forwarded to Member States, bi-lateral and multi-lateral organizations, and international NGOs. The latest JMP report (the 2010 update, covering datasets upto and including 2008) was published in March 2010. It indicates that by the end of 2008, an estimated 884 million people around the world lacked access to improved drinking-water sources, and 2.6 billion lacked access to improved sanitation. These data are further presented in a disaggregated way, by region, comparing rural and urban conditions, and the report also presents a breakdown in progress on the drinking-water and sanitation ladders. The latter indicates, for example, important progress in the elimination of the practice of open defecation, which nevertheless remains significantly prevalent in sub-Saharan Africa and South Asia.

In addition to the JMP, WHO produces the Global Analysis and Assessment of Sanitation and Drinking-water (GLAAS) under the auspices of UN-Water. GLAAS collects information and analyses the “enabling environment” for progress in drinking-water and sanitation coverage, in terms of policy frameworks, institutional arrangements, the human resource base and the flow of financial resources. GLAAS bases itself on existing databases (the JMP, the database on Official Development Assistance of the OECD) and generates additional datasets through surveys among Member States’ water and sanitation authorities, and among bilateral and multilateral agencies. The first GLAAS report was published in April 2010 and demonstrated important flaws in the targeting of donor funds and in the focus of allocating financial resources by governments, as well as specific needs for policy formulation and strengthening of institutional arrangements.

The GLAAS findings link directly to one of the points of discussion for this RegNet meeting, i.e. how to protect public health as it relates to drinking-water and sanitation in resource-limited communities. This discussion should include consideration of examples from urban slums.
The other flagship activity of WSH addresses water quality and health, with the continuous updating of the WHO drinking-water quality guidelines at its core. The fourth edition of the WHO Guidelines for Drinking-water Quality will be published in July 2011. With the Stockholm Framework for integrated risk assessment and management now firmly anchored, WHO will proceed to develop a harmonized Water Quality and Health Strategy that will encompass drinking-water quality, safe use of wastewater in agriculture and the management of recreational water safety. This strategy will relate directly to the remit of the four WHO-(co)-hosted networks. In addition to RegNet these include the International Household Water Treatment and Safe Storage Network, the Small Community Water Supply Management Network and the Operation and Maintenance Network.

Drinking-water and sanitation in specific settings, ranging from health care facilities and schools to ships and planes, and in humanitarian crisis and natural disasters, make up a third important stream in WSH’s programme, and predicting and managing the health implications of water resources development (dams, irrigation schemes, other hydraulic infrastructures) a fourth.

Cross-cutting issues include the resilience of drinking-water and sanitation systems and services in the face of climate change and the financial and economic aspects of drinking-water supply and sanitation in different contexts. The WHO Cholera Task Force, which cuts across various departments in the Organization, is based in the WSH unit. These are all issues that have a direct bearing on the regulation of drinking-water supply and sanitation.

3.2 Review of work plan and progress made since the last meeting

Objective: To review the RegNet work plan with members and document progress on issue sheets, guidelines and other activities in the general scope of the network.

Jennifer Mercer, Technical Advisor, WHO, updated members on the progress achieved since the last meeting of the Network in Singapore, in June 2009.

With respect to the arrangements for the establishment of the Network, she reiterated that membership is by invitation only and that one of RegNet’s main aims is to provide a face-to-face forum for frank discussions between regulators.

RegNet’s scope is public health protection as it relates to drinking-water supplies. As such, the focus of the network remains on the optimization of regulations and development of guidance materials for drinking-water regulators. There has been some interest by RegNet members to expand the scope to sanitation, hygiene and wastewater. This interest has been noted and will be addressed in due course; until then, however, WHO wishes to maintain the focus on drinking-water, in order to have concrete deliverables in this area, before moving on to regulatory issues for sanitation and wastewater.

RegNet is in the process of developing a series of guidance documents (issue sheets) for regulators. As these are nearing the final production stages and will be published shortly, a communications strategy will need to be formulated for the dissemination of these documents. Issue sheets are presently undergoing clearance procedures for formal publication. Draft versions were provided to RegNet members in August 2010 and final comments were requested by Jennifer Mercer by close of business 17 September 2010.
3.3 Current work on and proposed next steps for RegNet questionnaire and regulatory scan

Objective: To update RegNet members on the status of the questionnaire and regulatory scan. In addition, members were to provide feedback on the proposed next steps and their feasibility from their country’s perspective.

Dr Joshi distributed the document titled “Piped Drinking-Water Regulatory Elements Database” for information and discussion by RegNet members. The purpose of the database is to bring together the information collected through the questionnaire that RegNet participants were asked to complete and present it in a readily accessible format.

Members discussed the database and concluded that perhaps a better way to share information would be via the RegNet virtual form. This would involve a three-pronged approach:

- RegNet members to make use of country level presentations posted on the virtual forum;
- specific questions can be raised by a RegNet member on the virtual forum, but they would also the responsible of developing a summary of responses to be shared with RegNet members; and,
- where appropriate, circulation of survey questions in a limited number can also be used, on issue sheet-specific topics.

Jennifer Mercer provided a brief update on the work of the contractor responsible for developing the regulatory scan. Unfortunately there were some delays due to technical issues that resulted in the loss of the work which had been completed to date. However, work had recommenced and members will be provided with a copy of the regulatory scan once it is completed.

3.4 Discussion – Regulatory support for surveillance and monitoring

Objective: To gauge the level of interest from RegNet members to form a sub-group of regulators to draft a short (four to five page) issue sheet on how regulations can be used to optimise surveillance and monitoring.

Robert Bos provided the group with some background information on the WHO/UNICEF Joint Monitoring Programme (JMP) on Drinking-Water Supply and Sanitation, which is the official United Nations mechanism tasked with monitoring progress towards the MDG 7 Target C. This target is defined as: "To halve, by 2015, the proportion of people without sustainable access to safe drinking-water and basic sanitation". The JMP provides information on the status of water supply and sanitation coverage and its importance for our health and well-being, and obtains detailed statistics about the use of water and sanitation facilities at different scales (global, regional and country-level).

Véronique Morriset (Health Canada) indicated that HC’s Healthy Environments and Consumer Safety Branch (HECSB) had participated in the development of a national surveillance model, the Canadian Network for Public Health Intelligence (CNPHI). CNPHI is targeted at improving the capacity of the Canadian public health system to reduce human illness associated with infectious disease events by supporting intelligence exchange, surveillance activities and outbreak investigations. This is achieved by the establishment of a secure web-based resource which collects and processes surveillance data, disseminates strategic intelligence and coordinates responses to biological threats. Canada holds considerable unique expertise relating to infectious diseases and drinking-water data collection systems, but a national framework to allow the timely integration of these was lacking. CNPHI aims to facilitate the integration of relevant public health
intelligence into a common national framework to support coordination among jurisdictions. Health Canada indicated its willingness to make this database available to RegNet members for their information.

WHO will be organising a meeting of a Task Force established by the WHO/UNICEF Joint Monitoring Programme on Drinking-water Supply and Sanitation, on the subject of monitoring drinking-water quality. The meeting is to be held on 16-18 November 2010 at Villié-Morgon in France. The meeting’s specific focus will be on the processes and tools in place to ensure effective monitoring and surveillance of drinking-water quality and on exploring whether any of these practices can be used by the WHO to develop proxy indicators. A number of RegNet members will be invited to this Task Force meeting. Following the meeting in November, these members will be asked to stay an extra day to develop an issue sheet on the use of regulations as they relate to surveillance and monitoring.

3.5. Regulating resource-limited communities

**Objective:** Through country presentations and associated round table discussions, for RegNet members to review and identify the next steps for a draft issue sheet on regulating resource limited communities.

As a continuation from previous meetings, RegNet members took the opportunity to share their experiences with the challenges and successes associated with regulating resource-limited communities in their respective countries.

Ghana shared its experiences on the challenges associated with regulating water service providers that have poor quality of service and poor financial performance. A key issue in the Ghanaian context is that the majority of water service providers are private and only serve an urban population. Currently, regulations do not extend into rural communities and are funded predominantly through donor support.

The Ghanaian members presented next steps for the information of RegNet members. Ghana anticipates that in the near future, it will secure commitments from the appropriate stakeholders to work towards a common goal, one of formalizing methodologies and building on strong science for drinking-water management. Part of this approach will also include the promotion of water safety plans, duty-of-care practices and community participation in the regulatory process.

In addition, Ghana is looking towards fostering global partnerships with donors, multi-laterals and developing countries to work more proactively towards universal access to sanitation and drinking-water. This will include the development of a framework to address existing gaps in policy, funding and information sharing that meet the current MDG target.

Discussion following the presentation from Ghana focused predominantly on the affordability of drinking-water and the use of tariffs. Ghana stated that, to date, the Government, in its regulatory responsibilities, has been tough on the utility providers and has recommended that tariffs be applied based on real accessibility. This has not been an easy task due to the lack of regulation in the rural areas, which often results in rural residents paying a higher price for drinking-water than urban residents.

Germany also shared its experiences in regulating resource-limited communities from their country’s perspective. Water in Germany is regulated by several government departments, depending on the source and use of water. Specifically, drinking-water to tap is regulated by the
Ministry of Health, while “post-tap” (i.e. bottled) drinking-water is regulated by the Ministry of Food, Agriculture and Consumer Protection.

The challenge in assessing the ability of communities to meet the standards consists of the absence in Germany of mechanisms to collect data on the costs of drinking-water surveillance. Three municipalities of different sizes and capacities were assessed to determine how resources affected the cost of the water. Overall, the “less developed” systems had a higher cost per inhabitant and a greater need to increase their internal capacity to address issues in the system. With an increase in human resources, drinking-water could be cheaper and safer.

Following the presentations from Germany and Ghana, RegNet members worked to identify next steps for the preparation of a draft issue sheet on the use of regulations in resource-limited communities.

Overall, RegNet members were supportive of the draft issue sheet, but recommended that it be edited to remove any overlaps in the text of the document with that of other existing issue sheets. In addition, members were requested to add the appropriate quantifiers and qualifiers into the text as well as boxes to provide more context to the readership.

With respect to content, members requested that some information on alternatives to regulations also be included. Finally, there were some discussions on the economic perspective, with some members wanting a greater emphasis on the economic pressures that face communities and their implications for effective regulation.

3.6 Water Safety Plans

Ms Jennifer De France, Technical Officer, WHO, provided an update to RegNet members regarding WHO activities in supporting Water Safety Plans (WSPs). She also gave a brief overview of obtaining buy-in for WSPs based on the article published by Corinna Summerhill et al. (2010).  

With respect to WSPs, an important but challenging step is securing buy-in from water supply organizations, particularly senior management. One well-known barrier is that WSPs may be viewed as an additional bureaucratic layer, increasing overall organizational workload. Also, in situations where water quality is deemed as acceptable, it can be difficult convincing organizations to invest time and resources, especially when benefits may take some time to materialize. Addressing these challenges with the goal of shifting the overall organizational culture to preventive risk management is critical to ensuring the long term institutionalization of WSPs. Recommendations as noted in the Summerhill et al. article were then provided on how regulators and other stakeholders can promote WSPs amongst water utilities.

The next part of the presentation focused on the various resources WHO is developing to support WSPs. As regulators have an important role to play in water safety planning (e.g. through communication and advocacy with water suppliers, and potentially through audit of WSPs), particularly in light of the changing role of regulators with evolving regulatory frameworks supporting WSPS, these tools and resources are relevant to regulators as well.

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Details on the WSP Quality Assurance (QA) tool were provided. RegNet participants were notified of the WSP QA Tool at the last RegNet meeting and therefore, summaries of updates made since that last meeting were given. It was also highlighted that the tool could potentially be used by regulators to support their audit of WSPs. Next steps were identified, which included development of a user manual, finalization and launch of the tool and convening and facilitation of workshops.

Jennifer De France provided RegNet members with updates on several other WSP resources, including the WSP Road Map, a RegNet issue sheet on WSPs, WSPortal, a WSP case study template and other associated guidance documents. Other WSP initiatives being led by the Small Community Water Supply Network and WSP scale-up work through the WHO/AusAID Water Quality Partnership for Health were discussed.

Following the presentation, RegNet members were asked to identify areas of work related to WSPs they wanted to support or initiate. It was suggested by Jennifer De France that RegNet could continue to support development of the WSP QA Tool, application of the case study template and review of the WSP Risk Assessment Tool for small supplies. One suggestion for a new initiative was related to certification of WSPs. WHO acknowledged that this is being explored and that although WHO could not certify WSPs, they may be able to support development of certification requirements in this regard.

There was also a discussion on the need to provide more support in the consumer premises aspect of WSPs. Many participants agreed that this component is one of the most challenging parts of water safety planning and more attention needs to be given to this area. They reported on how they were addressing this aspect within their own countries. Additionally, to support hazard identification, risk assessment and the mitigation of the identified risks in consumer premises, WHO highlighted a planned document currently under development: Water Safety in Buildings (Note: this publication has meanwhile become available\(^2\)).

### 3.7 Round Table – Capacity needed to support implementation of regulations and the corresponding issue sheet on how to implement regulations.

During this round table, RegNet members were asked to share their experiences with respect to the capacity needs to support the implementation of regulations. Common themes raised by members included:

#### 3.7.1 Financial Capacity
Countries indicated that budget constraints have a negative impact on the delivery of drinking-water related programmes and associated regulations. In Canada, many remote and isolated communities require significant financial investments to implement and enforce regulations. The same has occurred in the USA, where State regulators have not had a budget increase due to economic pressures and are required to operate on existing limited budgets. In addition, the maintenance of infrastructure can be quite costly and limited financial resources can impact the ability to upgrade and meet regulatory requirements.

#### 3.7.2 Human Capacity
Many countries expressed that is it difficult to train and retain qualified staff to ensure drinking-water quality. For example, in Iceland where local authorities enforce regulations, workload is

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high and often authorities are understaffed. This has lead to human error with respect to drinking-water quality. It was also noted that human capacity is required in communicating drinking-water regulations to the public. Often, to increase public awareness, additional human resources are required for the communications strategy, which should also include the water system operator.

3.7.3 Technical Capacity
Technical capacity has been and continues to be a challenge for some regulators. At times, governments are hard-pressed to keep up with the technologies used by private water suppliers and do not have the finances or human resources to regulate the sector.

Following the plenary discussions, RegNet members where asked to consider the draft issue sheet on how to implement regulations. Five items for consideration by members were:

- Regulations built on a foundation of science-based evidence and good practices;
- Clear regulatory goals and outcomes;
- Roles and responsibilities clearly understood by all stakeholders;
- Regular assessment of regulatory programmes and policies; and
- Options for flexibility.

Jennifer Mercer agreed to work with the RegNet members to provide some examples taken from the discussions during this session and will contact countries for additional information when necessary. It was also agreed that capacity (human, financial and technical) should also be included in this issue sheet as this was the common theme discussed by all RegNet members.

3.8 Ensuring compliance with regulations

Objective: Through country presentations and associated round table discussions, RegNet members will review and identify the next steps for a draft issue sheet on ensuring compliance with regulations.

RegNet members from Iceland, the Netherlands and South Africa presented the current regulatory environment for drinking-water in their countries as well as their experiences with ensuring compliance with regulations.

Iceland’s geography and recent political events provide unique challenges for the regulation of drinking-water. The country’s small population, often living in remote locations, with active volcanoes and recent seismic activity, and the economic crisis are all factors that have impacted drinking-water resources and their management in Iceland.

Iceland considers drinking-water to be a food and it therefore resorts under regulations that apply to food establishments. Compliance with these regulations is administered by one of the ten independent health boards in Iceland, whose roles include issuing permits, surveillance, water protection and enforcement activities.

The challenges in ensuring compliance with regulations in Iceland include lack of capacity (human and financial), environmental factors, human error and lack of emergency planning. The Government of Iceland has acknowledged these challenges and is addressing them at three levels. At the national government level, investments in regulations, training and education and quality assurance have been undertaken. At the municipal level, a greater emphasis has been place on improvements to small water systems that pose a high risk. At a technical level, the Federation of
Icelandic Waterworks has been provided with more technical assistance and general guidance to meet regulations.

Moving forward, Iceland anticipates greater improvements with ensuring compliance with regulations through initiatives such as involvement with the European Water Framework Directive. This Directive establishes principles for water management, including public participation in planning and integration of economic approaches.

The Netherlands also presented the Network with its perspective on ensuring compliance with regulations through legal and institutional frameworks,

Currently in the Netherlands there are ten water supply companies responsible for the production and distribution of drinking-water. They are 100% government-owned and have an average charge of 1 Euro to 1.9 Euros per m$^3$. These systems are regulated by the Drinking-water Quality Decree (2001), a standard based on the European Drinking-water Directive with 62 standards to ensure overall quality. Under this decree, general requirements for bacteriological standards are included, as well as mandatory risk assessment and risk management. In addition, in 2011 the new Drinking-water Act is scheduled to be published with provisions regarding the production and distribution of drinking-water and the organization of the public drinking-water supply.

In ensuring compliance with drinking-water regulations, the Dutch Government introduced benchmarking for water supply companies. This has been a successful management tool for all parties involved in drinking-water quality.

In addition, the Netherlands has fostered an open and transparent dialogue between government and the drinking-water entities. Through fostering cooperation and consultation, the parties have been able to develop a series of common interests and goals that not only can help in ensuring compliance, but also increases transparency to the consumers.

It is also noteworthy that in the forthcoming Drinking-water Act, the Government of the Netherlands will include drinking-water tariffs. The basic philosophy of the tariffs is that they must be cost-oriented and are legally required to be set based on cost estimation.

South Africa presented the regulatory environment in their country. The challenges faced in South Africa include the geographic size of the area to be regulated, limited resources (human, financial and technical) and an increasing population against the backdrop of South Africa’s economy growth.

The regulatory approach currently being used in South Africa includes compliance monitoring, risk-based targeted regulation and incentive-based regulation. Compliance monitoring includes measures such as performance monitoring and reporting and regulatory action. Risk-based targeted regulations include the determination of cumulative risk ratings and regulation towards risk reduction.

Perhaps the most successful method in ensuring compliance with regulations has been incentive-based regulations. The development of the Blue Drop Programme in South Africa$^3$ has led to the Government working with communities to communicate the regulatory requirements, and monitoring and continuously assessing the systems. The regulator would then advise on nature

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$^3$ http://www.dwaf.gov.za/dir_ws/dwqr/
and timing of improvements, with the intent of reporting on overall progress on an annual basis. Systems meeting the regulatory requirements are awarded Blue Drop Certification.

Since the inception of this programme, microbiological compliance has increased, as have chemical standards and the overall use of water safety plans. This overall improvement has subsequently led to positive budget revisions at the municipal level for drinking-water systems, which can begin to address issues with capacity.

The increase in public involvement in drinking-water has also increased with the use of incentive-based compliance strategies. Communities and media outlets are provided with access to an information system charting the performance of the systems. Not only does this increase awareness of drinking-water systems, it also creates a system of accountability for the operators.

Revealing the progress of drinking-water systems has had a positive impact on the overall regulatory environment. It has been determined that this incremental regulation approach based on output is the most appropriate as it allows the government to regulate according to available capacity. South Africa hopes to apply these same principles to the regulation of wastewater and to make the same progress in this area as it did with drinking-water in the country.

Following these three country presentations, RegNet members discussed the further development of an issue sheet on regulatory compliance.

During this session, the affordability of water was discussed as impacting the ability to ensuring compliance with regulations. It was put forward that the cost or affordability of water should perhaps be considered by RegNet as a separate issue sheet.

It was also agreed by members that the transparency aspect should be discussed in greater detail. Through public reporting and accountability measures, systems can often achieve compliance through the additional layer of public/political pressure to meet the regulations. This should be communicated more strongly within the existing text of the issue sheet and should also include additional text regarding South Africa’s Blue Drop Programme.

RegNet members concluded that additional information on the management of systems by third parties needed to be strengthened and should be worded more carefully so that government take-over of the management of these systems is a last resort only.

4. Work plan and next steps

RegNet members agreed on the following list of proposed issue sheets and, where appropriate, required next steps:

- How to develop and improve regulations (Zambia and Canada -INAC)
  ◦ Next steps: Draft text formulated on how to develop new and improve existing regulations
- How to implement basic principles of WHO’s Guidelines for Drinking-water Quality (Canada - HECSB)
  ◦ Next steps: Draft text developed by the Drinking-water Quality Committee
- How to establish health-based targets into regulations (Canada - HECSB)
  ◦ Next steps: Draft text developed by the Drinking-water Quality Committee
- How regulations can be used to mitigate potential and immediate risks to public health
- How to identify and select DWQ parameters of concern (South Africa)
  ◦ Next steps: Document to be published by WHO on this topic
• How to ensure a meaningful contribution from the area of regulation and surveillance to the monitoring of drinking-water quality (JMP Task Force-Sub Group of Regulators)
  ♦ Next steps: Task Force to meet in November 2010
• How to regulate the process of water treatment and delivery, including trucks and other forms of transport (Canada – FNIHB to provide input)
• How to regulate products, consumables and other materials used in the treatment and distribution of drinking-water (Germany and WPC)
• Affordability and accessibility of drinking-water (Portugal, Canada - INAC, Netherlands and Ghana)
• How to ensure safe drinking-water in households – safe storage, softeners (WPC)
• Capacity building – education, training, communication, awareness – at all levels, e.g. plumbers, operator, govt entities, public (Canada – FNIHB)
Annex 1

Agenda and programme of work

International Network of Drinking-Water Regulators
16-17 September 2010, Montréal, Québec, Canada

Programme of Work:

- Review progress achieved on RegNet activities since the last meeting and modify the proposed 2010-2011 work plan;
- Review progress on and identify next steps for:
  - Questionnaire for RegNet members and regulatory scan to populate www.waterlawandstandards.org;
  - Water Safety Plan case studies, WSP quality assurance tool, and issue sheet on how to support the implementation of WSPs using regulations;
- Identify challenges and best practices associated with regulating resource-limited communities, e.g. human and financial resources, and review draft issue sheet;
- Review case studies on capacity needed to support implementation of regulations, identify lessons learned and review draft issue sheet;
- Review case studies on mitigation strategies to ensure compliance with regulations, identify lessons learned and review draft issue sheet;
- Finalize proposed list of issue sheet topics and associated work plan.

16 September

08:30 – 09:00 Registration

Chair: Jamie Lafontaine, Manager, Legislative Initiatives, Health Canada

09:00 – 09:15 Opening of the meeting and welcome to participants
  Ms Shelagh Jane Woods, Director General, Primary Health Care and Public Health Directorate, Health Canada

09:15 – 09:45 Global context for drinking-water and sanitation
  Mr Robert Bos, Coordinator, Water, Sanitation, Health and Hygiene Unit (WSH), World Health Organization (WHO)

09:45 – 10:00 Introduction of participants and identification of rapporteurs

10:00 – 10:15 Review and approval of proposed agenda and associated programme of work
  Mr Jamie Lafontaine, Manager, Legislative Initiatives, Health Canada

10:15 – 10:30 Review work plan and progress achieved since the last meeting
  Ms Jennifer Mercer, Technical Officer, WSH, WHO

10:30 – 11:00 Coffee Break

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<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>11:00 – 11:30</td>
<td>Discussion – Current work on and proposed next steps for RegNet questionnaire and regulatory scan</td>
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| 11:30 – 12:00| Discussion – Regulatory support for surveillance and monitoring, with a special focus on WHO and UNICEF’s Joint Monitoring Programme for water supply and sanitation  
Mr Robert Bos, Coordinator, Water, Sanitation, Health and Hygiene Unit (WSH), World Health Organization (WHO) |
| 12:00 – 12:30| Country presentation – With special focus on challenges and suggested best practices associated with regulating resource-limited communities  
Mr Stephen Adu, Executive Secretary, Public Utilities Regulatory Commission, Ghana |
| 12:30 – 13:30| Lunch                                                              |
| 13:30 – 14:00| Country presentation – With special focus on challenges and suggested best practices associated with regulating resource-limited communities  
Dr Birgit Mendel, German Federal Ministry of Health |
| 14:00 – 15:00| Discussion – Review and identify next steps for draft issue sheet on the use of regulations in resource-limited communities |
| 15:00 – 15:30| Tea Break                                                          |
| 15:30 – 16:30| Water Safety Plans – Current activities supported by WHO and RegNet  
Ms Jennifer de France, Technical Officer, WSH, WHO |
| 16:30 – 17:30| Discussion – Review RegNet’s support of current activities as they relate to WSPs, including issue sheet on regulatory support of Water Safety Plans, and identify next steps |
17 September

Chair: Jamie Lafontaine, Manager, Legislative Initiatives, Health Canada

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<tr>
<td>09:00 – 09:15</td>
<td>Summary of previous day’s discussions and agreement on next steps</td>
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<td>Ms Andria Sherstone, Senior Program Officer, Legislative Initiatives, Health Canada</td>
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<td>09:15 – 10:45</td>
<td>Round Table – RegNet members speak to capacity needed to support the implementation of regulations and suggest best practices</td>
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<td>10:45 – 11:15</td>
<td>Coffee Break</td>
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<td>Discussion - Review and identify next steps for draft issue sheet on how to implement regulations</td>
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<td>Mr Wennemar Cramer, Co-ordinator, Drinking Water Policy and Regulations, Ministry of Housing, Spatial Planning and the Environment, Netherlands</td>
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<td>Mr Helgard Muller, Acting Chief Director, Department of Water Affairs and Forestry, South Africa</td>
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<td>Mr. Guðjón Gunnarsson, Senior Officer, Food Safety and Consumer Affairs, Icelandic Food and Veterinary Authority</td>
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<td>14:30 – 15:00</td>
<td>Tea Break</td>
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<td>15:00 – 16:00</td>
<td>Discussion - Review and identify next steps for draft issue sheet on regulatory compliance</td>
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<td>16:00 – 17:00</td>
<td>Discussion – Finalize list of issue sheets proposed and associate work plan</td>
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<td>- List of issue sheets</td>
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<td>- Next steps</td>
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<td>17:00 – 17:15</td>
<td>Closing remarks</td>
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