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WATER SUPPLY, SANITATION AND HYGIENE IN MONGOLIA

AN INSTITUTIONAL ANALYSIS

FRANZISKA BOCK



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Ulaanbaatar
2014

A descriptive study of the legal and policy framework as well as the organisational structure of the water sector in Mongolia and an analysis of the crucial institutional issues impeding a reliable provision of water and sanitation services to the country's urban population

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AFCCP	Agency for Fair Competition and Consumer Protection
ALACGC	Administration of Land Affairs, Construction, Geodesy, and Cartography
CAR	Conventional Affordability Ratio
CBO	Community Based Organisation
CDC	Construction Development Center
CWWTP	Central Wastewater Treatment Plant
EBRD	European Bank for Reconstruction and Development
FA	Financial Assistance
GARA	Ger Area Redevelopment Agency
GARP	Ger Area Redevelopment Programme
GASI	General Agency for Specialized Inspection
JICA	Japan International Cooperation Agency
LUUSWSS	Law on Utilization of Urban Settlement's Water Supply and Sewage
MCUD	Ministry of Construction and Urban Development
MDG	Millennium Development Goals
MEDS	Ministry of Education and Science
MEGD	Ministry of Environment and Green Development
MNT	Mongolian tugrug
NGO	Non-Governmental Organisation
NWC	National Water Committee
NWP	National Water Programme
OSNAAG	Housing and Communal Services Authority of Ulan Bator
RBA	River Basin Authority
RBC	River Basin Council
TA	Technical Assistance
TRBC	Tuul River Basin Council
UB	Ulan Bator
UB Municipality	Municipality of Ulan Bator
UNDP	United Nations Development Programme

USD	United States dollar
USUG	Water Supply and Sewerage Authority of Ulan Bator
VEI	Vitens Evides International
WaSH	Water, Sanitation and Hygiene
WSRC	Water Services Regulatory Commission

FOREWORD

Improving water supply, sanitation and hygiene is not only about saving human lives and dignity. It is the foundation for improving human development, especially in poor urban and peri-urban areas.

In Mongolia, as of today more than 50 percent of the urban population lives in peri-urban settlements, ger areas, which lack safe access to water supply and sanitation services. One of the main bottlenecks for improvement is institutional weakness and malfunctions of the water sector.

This report aims to give a comprehensive overview of the current institutional setting of the Mongolian water sector, i.e. the legal and policy framework as well as the organisational structure. Another aim of the report is to outline crucial institutional obstacles impeding a reliable provision of water supply and sanitation services to the country's urban population and to delineate policy recommendations.

I have pleasure to endorse the findings of this report, which has been developed by the ACF team based on interviews and dialogues with Mongolian policy makers and water managers, international organisations and other stakeholders. I am convinced that this report is a valuable source of information for all of those being engaged in the institutional change process of the Mongolian water sector. I hope that it will help promote sustainable and safe water supply and sanitation solutions for all urban households in Mongolia and I would like to acknowledge ACF's critical endeavour in this field.



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1

INTRODUCTION

In the summer of 2012, the water sector of Mongolia underwent a comprehensive reform. Following the parliament elections, state organisations – including ministries – were restructured and agencies were disbanded (i. e. the *National Water Authority*, see section 5.2) or newly created (i. e. Mongol Us, see section 5.6). Hence, although the most recent institutional analysis of the water sector was published only in January 2012¹, it already is severely outdated and does not depict the current organisational and institutional framework of the sector appropriately.

Based on interviews carried out between October 2013 and January 2014² and the available literature, this report attempts to explain the most important agencies involved in the water sector and their responsibilities as well as the links between them. The main focus lies on the provision of water supply services to urban households, i. e. for non-profit purposes: While the institutional setup for this part of the sector is comparatively advanced, both the legal and organisational structure for the provision of sanitation services and the treatment and disposal of greywater are less well developed and the about two thirds of the population of Ulan Bator – or almost 800,000 people – living in the Ger areas have little or no access to these services. The provision of water services in rural areas and the management of water resources are, if at all, only marginally covered.

Following the description of the legal and policy framework as well as the organisational structure of the sector, a SWOT Analysis is used to identify crucial obstacles to an effective and efficient working of the water sector. Institutional weaknesses such as a large degree of fragmentation and a low information capability have a strong negative impact on the implementation capacity of the sector. Although these obstacles were analysed in the context of the provision of water supply services, they are not uncommon in the Mongolian context and do thus most likely also apply to the provision of sanitation services, to the planning and implementation of hygiene promotion policies, and to a sustainable management of the country's natural water resources.

This document has been prepared in good faith on the basis of information available at the date of publication. Given the complex and inconsistent nature of the current framework, however, the accuracy, reliability, or completeness of the information in this report cannot be guaranteed.

¹ Sigel 2012

² Cf. section 9.1 for a list of the conducted interviews.

2

INSTITUTIONAL CHANGE IN THE WATER SECTOR – AN INTRODUCTION

The provision of water and sanitation services does not take place in a vacuum. Instead, a wide range of different factors is part of the institutional environment influencing the performance of the water sector. Many of the most influential components can be seen in Figure 1: The general political and legal system of a country, the economic development – itself dependent on the demographic situation and development – and of course the natural resources and environment affect the provision of water services both directly and indirectly through the interaction of water law, water policy, and water organisation.

Saleth and Dinar, the developers of this model, characterise the interplay between water law, water policy, and water organisation as follows:³

“Under ideal conditions, water law empowers water policy and water policy, in turn, provides a political economy translation for water law. Together, they define the framework and determine the capacity of the water administration that implements the legal and policy provisions at field level. Intuitively speaking, water laws and water policies form the software component of the water institution and water administrations or organizations, its hardware component.”

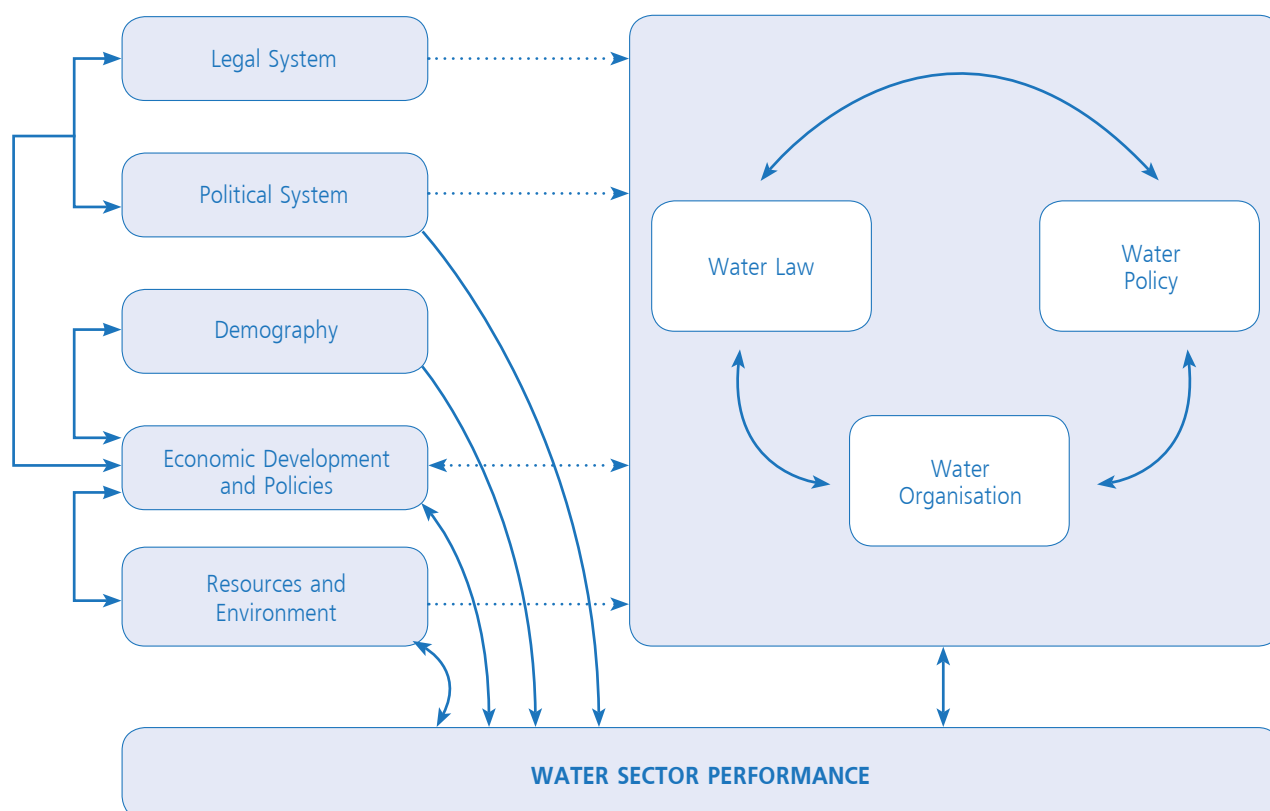


Figure 1: The Institutional Environment of the Water Sector⁴

³ Saleth, Dinar 2004, pp. 101–102

⁴ Adapted from Saleth, Dinar 2005

Further aspects that cannot be seen in Figure 1 include the spectrum of informal institutions. Cultural norms and traditions may have both an immediate and an oblique effect on the way in which water as a rare good is handled and allocated in a country. A direct effect could be for example the tradition of saving water in an environment characterised by water scarcity. An indirect effect, on the other hand, might be a low level of inter- and intra-agency cooperation in the provision of water services due to a lack of such a tradition. However, little or no research could be found on informal institutions in Mongolia and the actual extend to which those affect the water sector thus is difficult to determine.

The analysis in section 7 tries to capture some of the fundamental institutional issues inhibiting the performance of the sector. However, this analysis shows only a snapshot of the sector as it is today and does not take into account temporal dynamics. Yet, the problems can only be resolved through institutional change as time goes by. Figure 2 illustrates the process of institutional change according to Saleth and Dinar: Based on the suggestion of a *Political Entrepreneur*, i. e. somebody whose expectations of a well-working water sector are not met by reality, and following a political bargaining process, a policy document is articulated and translated into an actual reform programme. The result is an institutional change in the sector. But due to e. g. financial, organisational, and bureaucratic constrains, the actual impact of the reform programme may again not fit the expectations placed on the reform. Consequently, based on subjective and objective factors as well as the *expectation consistency* and a resulting *mind change*, again a *Political Entrepreneur* initiates a reform process.

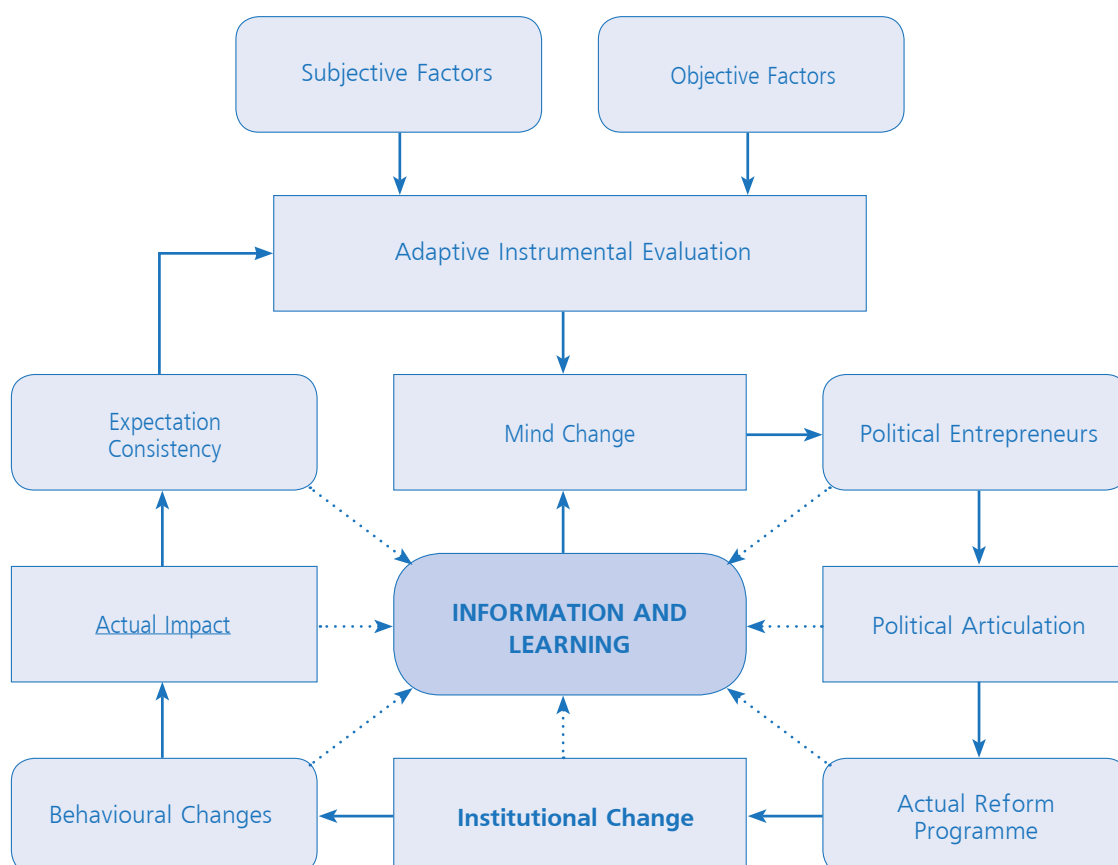


Figure 2: A Stage-Based Model of Institutional Change⁵

⁵ Adapted from Saleth, Dinar 2005

3

WATER POLICY

3.1 NATIONAL WATER PROGRAMME

Mongolia is a country with scarce and unevenly distributed water resources. Being aware that the control and management of these has been weak and that the legal framework is in need of advancement, the parliament of Mongolia approved the *National Water Programme* (NWP) as an extensive policy initiative for tackling these and other issues on 20 May 2010.⁶ The programme is embedded in the country's *Comprehensive National Development Strategy* which itself is based on the *Millennium Development Goals* (MDG).⁷ The implementation is scheduled in two phases – a first phase of intensive development from 2010 to 2015 and a second phase of stable development from 2016 to 2021. The overall objectives of the NWP are⁸

- the protection of water resources from deterioration and pollution,
- the proper use of available resources, and
- the creation of conditions enabling the Mongolian people to live in a healthy and safe environment,

and they are to be implemented through the following strategic goals:

1. Protection of Mongolia's water resources, support of the formation of these, and conservation of their purity and natural replenishment;
2. Establishment of a comprehensive network for the monitoring of water resources and adoption of new management and information management technologies;
3. Creation of conditions necessary for an accumulation of water resources, provision of drinking water meeting health standards, and improvement of the agricultural and industrial water supply for a sustainable development;
4. Improvement of the use and management of water resources, development of the legislative and institutional environment so as to coordinate the multiple requirements for the use of water, and capacity building;
5. Fostering civil participation and the provision of the public with information on the protection and proper use of water resources using advanced technologies.

The Mongolian government hopes to attain six explicit results with the implementation of the programme.⁹ Two of those results are particularly relevant for the provision of water and sanitation services to the urban population:

⁶ Parliament of Mongolia 2010, section 1

⁷ Parliament of Mongolia 2010

⁸ Parliament of Mongolia 2010, section 2

⁹ Parliament of Mongolia 2010, section 6

1. Connection of no less than 30,000 households to the centralised network, and improvement of the housing conditions of no less than 10,000 households across the country annually; and
2. Provision of no less than 70 per cent of the urban population and of no less than 60 per cent of the rural population with water meeting the standards of health and hygiene.

The officially responsible agency for the realisation of the NWP is the *Ministry of Environment and Green Development* (MEGD).¹⁰ Under its supervision, the *National Water Committee* (NWC) is in charge of organising and leading the implementation as well as of coordinating the different agencies that are involved. These implementing agencies include the *Ministry of Health*, the *Ministry of Finance*, the *Ministry of Mineral Resources and Energy*, the *Ministry of Food, Agriculture and Light Industry*, and the *Ministry of Construction and Urban Development*, as well as the local and regional governments and NGOs.¹¹

For the improvement of the provision of water supply services in Ulan Bator, the NWP contemplates the development of a new water source and the construction of new water source facilities, including the installation of the necessary technical equipment and the implementation of a management control network and a water metering system.¹² Moreover, the pipelines in apartment buildings are to be renovated and expanded.¹³ In order to increase the density of the provision of water services, new water kiosks shall be constructed and connected to the central network.¹⁴ To improve the treatment and reuse of wastewater, the wastewater treatment plants are to be technologically renovated, namely the *Tolgoit Wastewater Treatment Plant*¹⁵, and the operational performance is to be improved.¹⁶ The NWP envisages the promotion of awareness for the protection, treatment, and reuse of water.¹⁷ Further areas of activity touching the urban water sector are flood protection, rainwater harvesting, and the reuse of greywater. The issues of the disposal of greywater and stormwater management in the Ger area are not covered by the programme.¹⁸

The NWP highlights the importance of institutional development and capacity building. It stipulates the establishment of new agencies – the *River Basin Councils* and *Mongol Us* – which below are described in more detail¹⁹, the development and implementation of an *Integrated Water Resources Management plan*²⁰, and the improvement and advancement of the curricula for the education of water sector professionals²¹. However, the programme suggests no specific structure of the organisational setup which in Mongolia has the tendency to change quickly. It does not encompass a possible functional assignment of responsibilities.

As the abovementioned measures remain vague in their wording, the *Action Plan for the Implementation of the National Water Programme* defines specific activities for the realisation of the programme and assigns them to one or several implementing agencies. The implementation of these is monitored by the *National Water Committee*, which prepares a report as to the implementation progress every six months.²² According to the committee, 20 per cent of the total activities had been carried out by October 2013.

¹⁰ *Parliament of Mongolia 2010, section 5*

¹¹ *Parliament of Mongolia 2010, Action Plan for the Implementation of the NWP*

¹² *Parliament of Mongolia 2010, section 3.3.11*

¹³ *Parliament of Mongolia 2010, section 3.3.12*

¹⁴ *Parliament of Mongolia 2010, section 3.3.13*

¹⁵ *Parliament of Mongolia 2010, section 3.4.6*

¹⁶ *Parliament of Mongolia 2010, section 3.4.1*

¹⁷ *Parliament of Mongolia 2010, section 3.4.2*

¹⁸ *Sigel 2012, p. 18*

¹⁹ *Parliament of Mongolia 2010, sections 3.5.1, 3.5.7*

²⁰ *Parliament of Mongolia 2010, section 3.5.2*

²¹ *Parliament of Mongolia 2010, section 3.6.4*

²² *Bock 10/29/2013*

3.2 ULAN BATOR MASTER PLAN 2030

In order to tackle the problems arising from the rapid urbanisation Ulan Bator has been experiencing, in 2001 the *Master Plan for Ulan Bator City 2020* was introduced to plan the development of the city until 2020.²³ Following the request of the Mongolian government, JICA conducted the *Study on City Master Plan and Urban Development Program of Ulaanbaatar City* between 2007 and 2009 to revise the development goals and extend the planning horizon until 2030.²⁴ In the report, special attention was paid to the problem of a rapid expansion of the Ger areas.

One of the development objectives covered by the plan is the improvement of the provision of water and sanitation services. As a connection of the residents living on the urban fringe to the existing central water and sewerage networks is unlikely, JICA suggests the establishment of a cluster system in which several local sub-systems help to supply the population with water services.²⁵ The key issues identified by JICA are water capacity enhancement, the development of new water sources, the improvement and/or rehabilitation of water supply facilities and equipment, and a strong demand-side management to reduce the wastage of water for the provision with drinking water. Moreover, JICA stresses the importance of the enhancement of the treatment capacity, the proper treatment of industrial wastewater, and the improvement of sanitation in the Ger areas for a better wastewater management.²⁶ However, the financial investments necessary for the realisation of the ambitious *Master Plan* are immense: The realisation of the water supply objectives require an estimated 326 million USD, plus an additional 6.5 million USD for the installation of metering systems and 29 million USD for necessary improvements in Nalaikh. The wastewater management objectives are estimated to cost 320 million USD for the improvement and rehabilitation of the existing wastewater treatment system plus 120 million USD for the construction of an industrial wastewater treatment system.²⁷

3.3 ULAN BATOR ACTION PLAN 2013–16

On 15 November 2012, the mayor of Ulan Bator, Erdene Bat-Uul, introduced the *Action Plan* for the development of the city from 2013 to 2016 to the *Ulaanbaatar City Citizens' Representatives' Khural*.²⁸ Aiming to create better living conditions for the population, the plan includes a number of objectives for improving the provision of water services and upgrading the Ger areas.

By modernising the *Central Wastewater Treatment Plant* and the construction of additional self-maintained water treatment plants at settlements which cannot be connected to the central water network, the mayor intends to significantly improve the wastewater management in Ulan Bator.²⁹ The treatment and reuse of industrial and household wastewater for irrigation purposes shall help to protect the natural water resources.³⁰ Moreover, both the water supply and the sewage networks are to be renewed and expanded, new sources of water shall be developed and new structures for an efficient water consumption introduced.³¹ The *Action Plan* emphasises the target to convert the Ger areas into private housing districts and provide the residents with basic infrastructure facilities (see also section 6).³² The exact development plan is to be defined in separate plans for each *Дүүрэг* and *Khoroо*. However, the *Action Plan* explicitly calls for the expansion of the city's sewage network to those parts of the Ger areas that are to be redeveloped as well as to the areas of Sharkhad, Amgalan,

23 Japan International Cooperation Agency 2009, p. 1

24 Japan International Cooperation Agency 2009, p. 2

25 Japan International Cooperation Agency 2009, p. 111

26 Japan International Cooperation Agency 2009, p. 112

27 Japan International Cooperation Agency 2009, pp. 115, 117

28 english.news.mn 2012

29 Governor of Capital City and Mayor of Ulan Bator 2012, section 1.4.3

30 Governor of Capital City and Mayor of Ulan Bator 2012, section 1.4.4

31 Governor of Capital City and Mayor of Ulan Bator 2012, section 2.4.3

32 Governor of Capital City and Mayor of Ulan Bator 2012, section 2.2.1

Orbit, Tolgoit, Khailaast, and Dooloonbuudal.³³

Albeit the *Action Plan* stipulates ambitious goals, it does not specify which measures are to be taken in order to achieve these. The required financial investments are enormous and amount to an estimated 16.5 trillion MNT³⁴. Finally, the relation between the *Master Plan 2030* and the *Action Plan 2013-2016* remains elusive and it is unclear whether there is any coordination between the potential implementation programmes.

³³ Governor of Capital City and Mayor of Ulan Bator 2012, section 2.2.4

³⁴ Almost 9.5 billion USD as of 6 March 2014.

4

LEGAL FRAMEWORK

4.1 LAW ON WATER

The first *Law on Water* became effective in 1995.³⁵ After the adoption of its first amendment in 2004, many ambiguities, gaps and overlaps were discovered over time. In order to identify these, specialists conducted a thorough legal analysis of the text on behalf of the Mongolian government in 2007.³⁶ Based on its results, the law was amended a second time in May 2012. The purpose of the water law is to regulate the water resources of Mongolia, to ensure a sustainable use and natural regeneration of them, and to protect the river basins.³⁷

The most prominent alteration of the law with respect to the provision of water supply and sanitation services is that the articles covering this topic in the *Law on Water 2004* have been deleted in the currently prevailing version.³⁸ Until 2012, the law assigned the adoption of a policy programme and the organisation of its implementation to the government and the now *Ministry of Environment and Green Development* (MEGD) respectively. As of now, the *Law on the Utilization of Urban Settlement's Water Supply and Sewage* is the predominant statutory source for the sector, cf. section 4.2.

Most of the 15 terms that were defined in the version of 2004 have been adopted unaltered in the *Law on Water 2012*. An additional 19 definitions were included, covering terms such as water scarcity³⁹, water quality⁴⁰, and wastewater producer⁴¹. Among the most fundamental definitions are those leading to the distinction of a water user from a water consumer. While a *user* needs water in order to carry out for-profit purposes, irrespective of them being a citizen or an economic entity, the *consumer* of water only requires the resource for non-profit purposes such as drinking, household purposes, herding, and agriculture.⁴² The Articles 26 to 31 describe in detail which rights and duties the users and consumers of water have. Particularly with regard to the residents of the Ger area, it is notable that the drilling of a borehole and abstraction of water requires the issuing of a licence even for water consumers.⁴³ The land owner can submit a copy of their land title together with information on the purpose and quantity of the planned water abstraction to the local branch of the MEGD. Depending on the quantity and quality of the groundwater they then are granted a licence. Moreover, the ownership of a piece of land does not entitle the owner to the abstraction of water from the groundwater resources.⁴⁴ If the owner thus wants to sell the water from their borehole, they are considered *water users* and consequently required to pay water usage fees.⁴⁵

The Articles 8 to 21 describe the roles and responsibilities of the different state organisations. The newly introduced concept of an *Integrated Water Resources Management* is to be developed into a plan by the MEGD which requires approval by the government.⁴⁶ While the *Law on Water 2012* initially assigned different tasks to the *Water Authority*, it was revised after the dissolution of the agency in midsummer 2012 and the tasks were

35 Sigel 2012, p. 21

36 Bock 12/11/2013

37 Parliament of Mongolia 2012b, Art. 1

38 Parliament of Mongolia 2004, Art. 10.1.5, Art. 11.1.7

39 Parliament of Mongolia 2012b, Art. 3.1.18

40 Parliament of Mongolia 2012b, Art. 3.1.20

41 Parliament of Mongolia 2012b, Art. 3.1.29

42 Parliament of Mongolia 2012b, Art. 3.1.27, Art. 3.1.28

43 Parliament of Mongolia 2012b, Art. 27.1

44 Parliament of Mongolia 2012b, Art. 28.10

45 Parliament of Mongolia 2012b, Art. 31.1

46 Parliament of Mongolia 2012b, Art. 10.1.1, Art. 9.1.1

mostly relocated to the MEGD.⁴⁷ Among them is the responsibility to develop a water allocation plan in case of a drought.⁴⁸ Moreover, the law appoints the ministry to work out and supervise the implementation of the technical conditions and standards for water saving, wastewater treatment, and reuse – which should surprise as most responsibilities related to the provision of water and discharge of wastewater are located in the *Ministry of Construction and Urban Development* (MCUD) which indeed currently is working on standards dealing with the hardness of water and wastewater systems in buildings.⁴⁹

The *Law on Water 2012* defines a *water facility* as an ordinary and engineering construction to regulate the abstraction, collection, transfer, distribution, and treatment of water, a construction to regulate rivers, a deep well, or a flood protection dam for the protection of urban settlements and streets.⁵⁰ According to Article 32, the MCUD is in charge of making decisions on the construction of new *water facilities* based on the suggestions of the local city or Aimag governors and the *River Basin Authority's* (RBA) assessment of these.⁵¹ The constructed facilities then are in the property of a state agency.⁵² The law does, however, not specify the appropriate government level. The governor of the respective city or Aimag by law is authorised to organise and coordinate the construction process – a statement conflicting with the findings from an interview with the MCUD, cf. section 5.3.⁵³

The water law stipulates the establishment of a comprehensive water database. Consisting of information such as data on surface and groundwater bodies, their quality and change thereof, the usage of water resources, the disposal of wastewater, and the status and capacity utilisation of infrastructure facilities, the database is supposed to give a detailed picture of the country's water resources.⁵⁴ The maintenance of the database is the responsibility of the MEGD and each year the current data is added as gathered by the governors of Aimags, Souns and cities.⁵⁵ However, the differentiation of the ministry's competencies of those assigned to the RBA remain blurry – according to the Articles 17.1.4 and 17.1.5, it is the RBA's responsibility to maintain the database and keep the public informed about the development of Mongolia's water resources. It is noteworthy to point out that the idea to create a database is by no means a novelty of the *Law on Water 2012*.⁵⁶ However, in how far the intention has been implemented by now is questionable.

In spite of the improvements introduced with its amendment, still several legal gaps, overlaps and ambiguities can be found in the water law, a further example of which is the phrase "major rivers" that has been used several times. In Article 8.1.2 the regulation of the major rivers of Mongolia is assigned to the parliament – yet, there is no explanation of what makes a river "major". Similarly, it is difficult to deduce which agencies Article 21, the *Professional Organization on Water*, and Article 4.5, the *Water Council*, are referring to.

4.2 LAW ON UTILIZATION OF URBAN SETTLEMENT'S WATER SUPPLY AND SEWAGE

Approved in June 2011 and introduced in January 2012, the *Law on Utilization of Urban Settlement's Water Supply and Sewage* (LUUSWSS) is designed to govern the ownership and utilisation of water facilities required to supply urban users with drinking water and to treat and dispose of their wastewater.⁵⁷ Contrary to the *Law on Water*, the LUUSWSS does not distinguish between commercial and non-commercial users of water services.⁵⁸ It does not

47 Parliament of Mongolia 2012b, Art. 16, Art. 10.1.15-10.1.30

48 Parliament of Mongolia 2012b, Art. 10.1.24

49 Bock 11/6/2013; Parliament of Mongolia 2012b, Art. 10.1.20

50 Parliament of Mongolia 2012b, Art. 3.1.13

51 Parliament of Mongolia 2012b, Art. 32.2

52 Parliament of Mongolia 2012b, Art. 32.7

53 Parliament of Mongolia 2012b, Art. 12.1.3

54 Parliament of Mongolia 2012b, Art. 7.1

55 Parliament of Mongolia 2012b, Art. 7.3, Art. 10.1.7

56 Parliament of Mongolia 2004, Art. 7

57 Parliament of Mongolia 2012a, Art. 1

58 Parliament of Mongolia 2012a, Art. 3.1.13

refer to the definition of a *water facility* in the *Law on Water*, yet the law provides no own general interpretation of the term. However, several specific facilities are defined – among them *sewage, network* and *wastewater treatment plant*.⁵⁹

The LUUSWSS assigns the task of developing the legislation and policy on the urban water supply and sewage disposal to the *Ministry of Construction and Urban Development* (MCUD).⁶⁰ The overall responsibility for the service provision is placed on the government which must approve the policy drafted by the MCUD and supervise its implementation.⁶¹ The realisation of the national programmes on a local level is scheduled and supervised by the *Representatives' Khural* and organised by the governor of the respective city or Aimag.⁶² Article 6 authorises a further agency for the implementation of the legislation on water supply and sewage disposal – however, it is difficult to interpret the article and infer the existing agency it is referring to.^{63,64}

The provider of water supply and sewerage disposal services and the consumer agree on a contract according to Article 13, specifying – among other things – the quantity, quality, composition of both the fresh and the wastewater, and the terms of payment.⁶⁵ The provider is not allowed to refuse the formation of this contract without a reasonable justification.⁶⁶ They are bound to provide the consumer with the services as specified by the contract while complying with the relevant laws and regulations.⁶⁷ Additionally, the provider must maintain and rehabilitate all used facilities and equipment according to technical standards.^{68,69} They may stop the service provision if the consumer fails to fulfil their side of the contract.⁷⁰ Aside from paying the provider for the services and complying with the relevant laws, the consumer must also maintain the used piping network and other equipment.⁷¹ The amount to be paid by the consumer shall be based on the quantity used as read on their water meter.⁷² If no water meter is installed, the consumer is to pay a fix amount based on a consumption standard set by the MCUD and *Ministry of Environment and Green Development*.⁷³ A *consumer* in the sense of the law can be both a legal entity receiving the water from the local utility company and redistributing it to the residents, e. g. OSNAAG in the case of Ulan Bator, or a household as the final consumer.

The *Representatives' Khurals* of Aimags and cities are authorised to decide on the location of a drinking water source.⁷⁴ A protection and sanitary zone is to be established around both centralised and decentralised drinking water sources.⁷⁵ The location of wastewater treatment plants is to be determined based on the general development plan of the region and other indicators by the MCUD.⁷⁶ The composition of the treated wastewater and the technology used in the facility are to be monitored by the *Health and Environment Inspection Authority* and the *Infrastructure Inspection Authority*, respectively.⁷⁷ The law stipulates that all *water facilities*, including the piping network, shall be public property.⁷⁸ It does not specify in which case the Aimag or municipality and in which case the state is the appropriate owner. The MCUD is in charge of holding the operators of state-owned water facilities to account, the Aimag or city governor holds the operators of facilities owned by the Aimag or

59 Parliament of Mongolia 2012a, Art. 3.1.3, Art. 3.1.5, Art. 3.1.11

60 Parliament of Mongolia 2012a, Art. 5.1.1, Art. 5.1.4

61 Parliament of Mongolia 2012a, Art. 4.1.1, Art. 4.1.3

62 Parliament of Mongolia 2012a, Art. 7.1.1, Art. 8.1.1

63 Parliament of Mongolia 2012a, Art. 6.1.1

64 In the English translation, the law calls the agency the “state administrative organization in charge of urban Element’s water supply and sewage” [sic]. The interpretation of this term is easy neither in the translation nor in the Mongolian original text. It seems likely that the agency is the local branch of the MCUD.

65 Parliament of Mongolia 2012a, Art. 13.3

66 Parliament of Mongolia 2012a, Art. 13.5

67 Parliament of Mongolia 2012a, Art. 14.2.1, Art. 14.2.3

68 Parliament of Mongolia 2012a, Art. 14.2.4

69 According to law, the provider is obliged to maintain facilities they “utilize and own”. If the utilisation of a facility indeed is sufficient or only necessary remains unclear.

70 Parliament of Mongolia 2012a, Art. 14.1.2

71 Parliament of Mongolia 2012a, Art. 15.1.3, Art. 15.1.5, Art. 15.1.8

72 Parliament of Mongolia 2012a, Art. 15.1.3, Art. 20.1

73 Parliament of Mongolia 2012a, Art. 20.2

74 Parliament of Mongolia 2012a, Art. 7.1.2

75 Parliament of Mongolia 2012a, Art. 17.2

76 Parliament of Mongolia 2012a, Art. 18.2; Parliament of Mongolia 2012b, Art. 32.2

77 Parliament of Mongolia 2012a, Art. 18.4

78 Parliament of Mongolia 2012a, Art. 19.1

municipality to account.⁷⁹

The responsibility to monitor the compliance with the legislation lies with the *General Agency for Specialized Inspection* (GASI), while the *Agency for Fair Competition and Consumer Protection* (AFCCP) is in charge of monitoring the prices charged for water supply and sewage disposal services.⁸⁰

The introduction of the LUUSWSS led to the creation of a new agency – the *Water Services Regulatory Commission*. Details on its responsibilities can be found in section 5.5.

The law does not refer directly to the topic of sanitation and the responsibility of service provision to the people.

⁷⁹ *Parliament of Mongolia 2012a, Art. 5.1.3, Art. 8.1.3*

⁸⁰ *Parliament of Mongolia 2012a, Art. 21*

5

ORGANISATIONAL SETUP

See section 9.2 for a graphical overview of the most important agencies involved in the provision of water and sanitation services in Mongolia and in Ulan Bator in particular.

5.1 MINISTRY OF ENVIRONMENT AND GREEN DEVELOPMENT

Following a recommendation of the *United Nations*, which suggested for Mongolia to commit to a sustainable development, the former *Ministry of Environment, Nature and Tourism* was renamed the *Ministry of Environment and Green Development* (MEGD) as part of the government reforms of 2012.⁸¹ It will be taking a leading role in responding to the challenges of the proceeding environmental degradation and, together with the UNDP, it currently is working on the development of a *National Green Development Strategy*.⁸² The core goal of the ministry is to enable economic growth while at the same time fostering social development and protecting the environment in the interest of both present and future generations.⁸³ It develops legislation and policies as well as strategies and programmes, including the necessary financial and investment plans, and is responsible for the implementation and coordination of these.⁸⁴

While the ministry was responsible for organising the supply of the Mongolian population with drinking water under the *Law on Water 2004*⁸⁵, the new *Law on Water 2012* does not appoint a particular organisation with this responsibility. Instead, according to the *Law on Utilization of Urban Settlements' Water Supply and Sewage*, the responsibility of establishing urban water supply and sanitation services lies with the central government.⁸⁶

The duties of the MEGD are predominantly related to the management of water resources. Apart from the *Department of Environment and Natural Resources*, most water-related issues are being dealt with in the *Department for Policy Implementation and Coordination*. It is divided into three divisions – the *Division of Water Resources*, the *Division of Water Monitoring* and the *Division of River Basin Management*, under the last of which operates the *Tuul River Basin Council*.⁸⁷ The former staff of the *Water Authority*, which was an independent agency responsible for the development and implementation of water resources management issues until September 2012⁸⁸, now works for the MEGD, divided among the divisions of the *Department for Policy Implementation and Coordination*.⁸⁹

As of 2010, 80 per cent of the demand for drinking water in Mongolia is being met by drawing water from groundwater aquifers.⁹⁰ Recognising the need to reduce the abstraction of groundwater, the MEGD presently is working on a strategy to increase the use of greywater and developing a new standard for the installation of greywater systems in the construction of new buildings.⁹¹ According to the ministry, this standard will be put into force in the year 2014.⁹²

81 Bock 10/23/2013

82 UNDP Mongolia 2013

83 Action Contre La Faim Mongolia 2013b

84 Action Contre La Faim Mongolia 2013b

85 Parliament of Mongolia 2004, Art. 11.1.7

86 Parliament of Mongolia 2012a, Art. 4.1.1

87 Houdret et al. 2014; Action Contre La Faim Mongolia 2013b

88 Unger 2013, p. 35

89 Bock 10/23/2013

90 National Water Authority of Mongolia 2011, p. 16

91 Bock 10/23/2013

92 Bock 10/23/2013

5.2 NATIONAL WATER AUTHORITY

Established in 2005 as the *Government Agency in Charge of Water Issues*, the agency was renamed the *National Water Authority* in 2008.⁹³ It was an independent government implementation agency under direct supervision of the then *Ministry of Nature, Environment and Tourism* (now the MEGD)⁹⁴, endowed with a number of responsibilities in the management of water resources according to the *Law on Water 2004*.⁹⁵ The agency's vision being to "provide professional and managerial service in implementation of state policy on proper utilization, protection and restoration of water resources in Mongolia"⁹⁶, it was responsible for the development and implementation of policies on the assessment, use, conservation, and protection of water resources and their ecological environments.⁹⁷ Moreover, the *Water Authority* coordinated the cooperation between the different organisations in the management of water resources; it offered information services, issued permission certificates for the use of water, and imposed a water tax.⁹⁸

In an attempt to reduce the number of agencies involved in the management of water resources, the *Water Authority* has been fully incorporated into the *Department for Policy Implementation and Coordination* of the *Ministry of Environment and Green Development* in the course of the government reforms of 2012.⁹⁹

5.3 MINISTRY OF CONSTRUCTION AND URBAN DEVELOPMENT

The *Ministry of Construction and Urban Development* (MCUD) is the main state agency responsible for the provision of water and sanitation services to households and industrial users. Although the ministry, too, was reformed within the government reforms of 2012 – the former *Ministry of Roads, Transportation, Construction and Urban Development* was transformed into the *Ministry of Construction and Urban Development* – those sections of the ministry dealing with issues of water and sanitation infrastructure remain unchanged.¹⁰⁰

The main responsibilities of the MCUD are the organisation and coordination of the implementation process of legislation, policies, strategies, and programmes on the construction sector, urban development, land affairs, the building industry, and building materials, housing, and public utilities.¹⁰¹ They are being dealt with in the six departments of the ministry, the most important of which regarding the WaSH sector is the *Department of Policy Implementation and Coordination for Housing and Public Utilities*, cf. Figure 3. Furthermore, there are two external organisations affiliated and closely working together with the MCUD – the *Administration of Land Affairs, Construction, Geodesy, and Cartography*¹⁰² (ALACGC) and the *Construction Development Center* (CDC).¹⁰³

93 *Ministry of Environment and Green Development of Mongolia 2012a*, pp. 639–640

94 *Sigel 2012*, p. 33

95 *Parliament of Mongolia 2004*, Art. 12

96 *Ministry of Environment and Green Development of Mongolia 2012a*, p. 640

97 *Basandorj, Singh 2008*, p. 31

98 *Basandorj, Singh 2008*, p. 31

99 *Bock 10/23/2013*

100 *Bock 10/23/2013*

101 *Action Contre La Faim Mongolia 2013a*

102 *The exact translation of the Mongolian term differs among different publications.*

103 *Bock 11/6/2013*

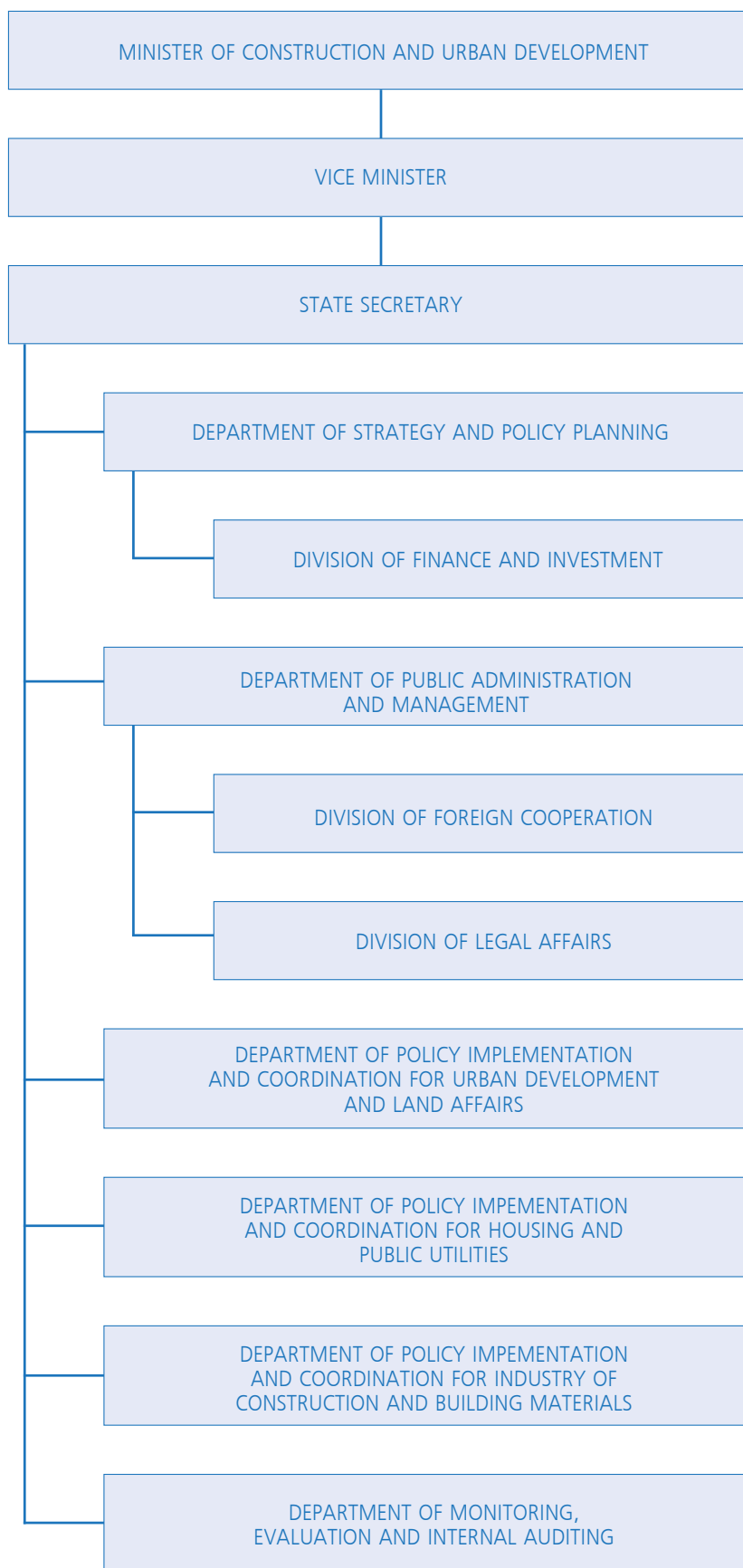


Figure 3: Organisational structure of the Ministry of Construction and Urban Development¹⁰⁴

104 Adapted from Action Contre La Faim Mongolia 2013a

According to an overly simplified description of the water use chain, the MEGD manages the natural water resources and, once they are made accessible, the MCUD takes care of supplying the population with these.¹⁰⁵ Unfortunately, the legal position is less clear. Under the *Law on Water 2004*, the now *Ministry of Environment and Green Development* (MEGD) was responsible for the provision of the population with drinking water.¹⁰⁶ As the newly designed *Law on Utilization of Urban Settlement's Water Supply and Sewerage*, enacted in January 2012, describes this responsibility in more detail in Article 5¹⁰⁷, the phrase was dropped in the revised *Law on Water 2012*. However, Article 5 was tailored for the ministry in charge of nature and the environment – hence the defined functions only partly fit the now responsible MCUD.¹⁰⁸ As of now, it remains unclear which of these tasks exactly are supposed to be carried out by which of the two ministries. For the provision of water supply and sanitation services relevant (and mostly in the hand of the MCUD) are the responsibilities

- to adopt norms, rules, and general regulations of water supply and sewage in urban settlements and to monitor the standards,¹⁰⁹
- to implement client responsibility of state property buildings and facilities for the provision of water supply and sanitation services as specified in, among others, the *Law on Construction*,¹¹⁰
- to develop a state policy on urban water supply and sewerage that is consistent with water consumption tendencies as well as the (potential) water reserves,¹¹¹ and
- to adopt the regulation on the provision of water in the case of an environmental disaster or another unexpected situation happening.¹¹²

According to the *Law on Water 2012*, the MCUD is in charge of planning the construction of new infrastructure facilities based on the suggestions of the governors of the respective city or Aimag and the evaluations of the local *River Basin Authority*.¹¹³ In order to construct an infrastructure facility, the MCUD initiates a procurement procedure and submits the technical specifications and particular requirements to a special procurement agency¹¹⁴ which then carries out the process.¹¹⁵ Based on these conditions, the procurement agency decides on the best way in which to run the tendering. Under the supervision of the MCUD, it monitors the construction work of the winning company and makes sure that the requirements are met. The CDC, too, is responsible for monitoring the whole tender process and supervises each step being taken after the signing of the contract with the construction company. Additionally, a working group of the MCUD verifies that the predefined technical specifications are being adhered to. After the construction, the facility is handed over to the local authorities.

The ALACGC is of importance mainly for the development and implementation on policies, programmes and projects on urban development and public utilities.¹¹⁶

105 Bock 11/6/2013

106 Parliament of Mongolia 2004, Art. 11.1.7

107 Parliament of Mongolia 2012a, Art. 5

108 How and when this shift in responsibility from the now MEGD to the MCUD took place cannot not be retraced at this point.

109 Parliament of Mongolia 2012a, Art. 5.1.1

110 Parliament of Mongolia 2012a, Art. 5.1.3

111 Parliament of Mongolia 2012a, Art. 5.1.4

112 Parliament of Mongolia 2012a, Art. 5.1.5

113 Parliament of Mongolia 2012b, Art. 32.2

114 The interviewee did not specify the exact name of this procurement agency. However, it seems reasonable to assume that they were referring to the Procurement Unit of the UB Municipality, which was established in January 2013 and is a local branch of the National Procurement Agency. The Procurement Unit reports directly to the governor of the UB Municipality, cf. ADB 2013a, p. 93.

115 Bock 11/6/2013

116 Sigel 2012

5.4 NATIONAL WATER COMMITTEE

Recognising the relevance of a proper water management, in 1998 the *National Security Council* initiated the development of a *National Water Programme* and the creation of the *National Water Committee* (NWC) to oversee the implementation thereof as well as the overall sector coordination.¹¹⁷ Corresponding to *Government Resolution No. 43*, the committee was established in 1999.¹¹⁸ Initially being under the supervision of the deputy director of the *Cabinet Office*, from 2003 on the NWC was chaired by the *Minister of Nature, Environment and Tourism* following *Government Resolution No. 4*.¹¹⁹ The NWC comprised of a committee of state secretaries and an operational group of relevant experts¹²⁰ that would gather as and when required to provide advice to the committee – the agency’s only fulltime positions responsible for carrying out the daily functions being the secretary of the NWC and their assistant.¹²¹ The attendance at the meetings of the committee, however, was very week and many members did not take their responsibility seriously enough.¹²² Hence, the committee’s impact remained limited.

In order to strengthen it, the NWC too was restructured in the course of the government reforms of 2012 and presently is headed by the prime minister of Mongolia according to *Government Resolution No. 98*.^{123,124} While the committee’s tenure previously had been linked to the finite *National Water Programme*, the NWC has been turned into a permanent government agency and its duties and responsibilities are anchored in the *Law on Water 2012*.^{125,126}

Art. 9 Powers of the Government¹²⁷

9.1.5 Coordination of the duties and responsibilities of all actors involved in the water sector; Overall direction, monitoring and evaluation of the water governance implementation [i. e. of the *National Water Programme* – author’s note].

The NWC comprises of a National Committee of State Secretaries and a Working Group, cf. Figure 4.¹²⁸ The *National Committee* is composed of the state secretaries of thirteen¹²⁹ ministries as well as representatives of GASI, the *National Safety Council*, *Mongol Us*, and the deputy governor of the capital city Ulan Bator.¹³⁰ While the members of the *National Committee* are officially responsible for the coordination of the sector, they are supported by the *Working Group*. Contrary to the former operational group, the *Working Group* consists of seven to eight regular employees attending to day-to-day matters.^{131,132}

117 Ministry of Environment and Green Development of Mongolia 2012a, p. 638

118 National Water Committee n.d.a

119 Ministry of Environment and Green Development of Mongolia 2012a, p. 638

120 The operational group was established in 2007 according to the Ministerial Order No. 245 in order to reinforce and extend the committee’s functioning and operations, cf. Ministry of Environment and Green Development of Mongolia 2012a, p. 639.

121 Ministry of Environment and Green Development of Mongolia 2012a, pp. 638–639; Bock 10/29/2013

122 Bock 10/29/2013

123 Ministry of Environment and Green Development of Mongolia 2012a, p. 638

124 National Water Committee n.d.a

125 Prior to the reforms of 2012, there was no legal basis protecting the NWC and its functions, cf. Sigel 2012, p. 31, Ministry of Environment and Green Development of Mongolia 2012a, p. 638; National Water Committee n.d.a

126 Parliament of Mongolia 2012b

127 Author’s own translation from German.

128 Prime Minister of Mongolia 11/26/2012, Sections 3, 4

129 According to Art. 3.2 of the Attachment to the Prime Minister Decree No. 75, dated 2012, the state secretary of the Ministry of Justice is not a member of the National Committee; However, according to the NWC they do participate in the committee, cf. National Water Committee n.d.b.

130 Prime Minister of Mongolia 11/26/2012, Art. 3.2

131 Bock 10/29/2013

132 Prime Minister of Mongolia 11/26/2012, Art. 4.2

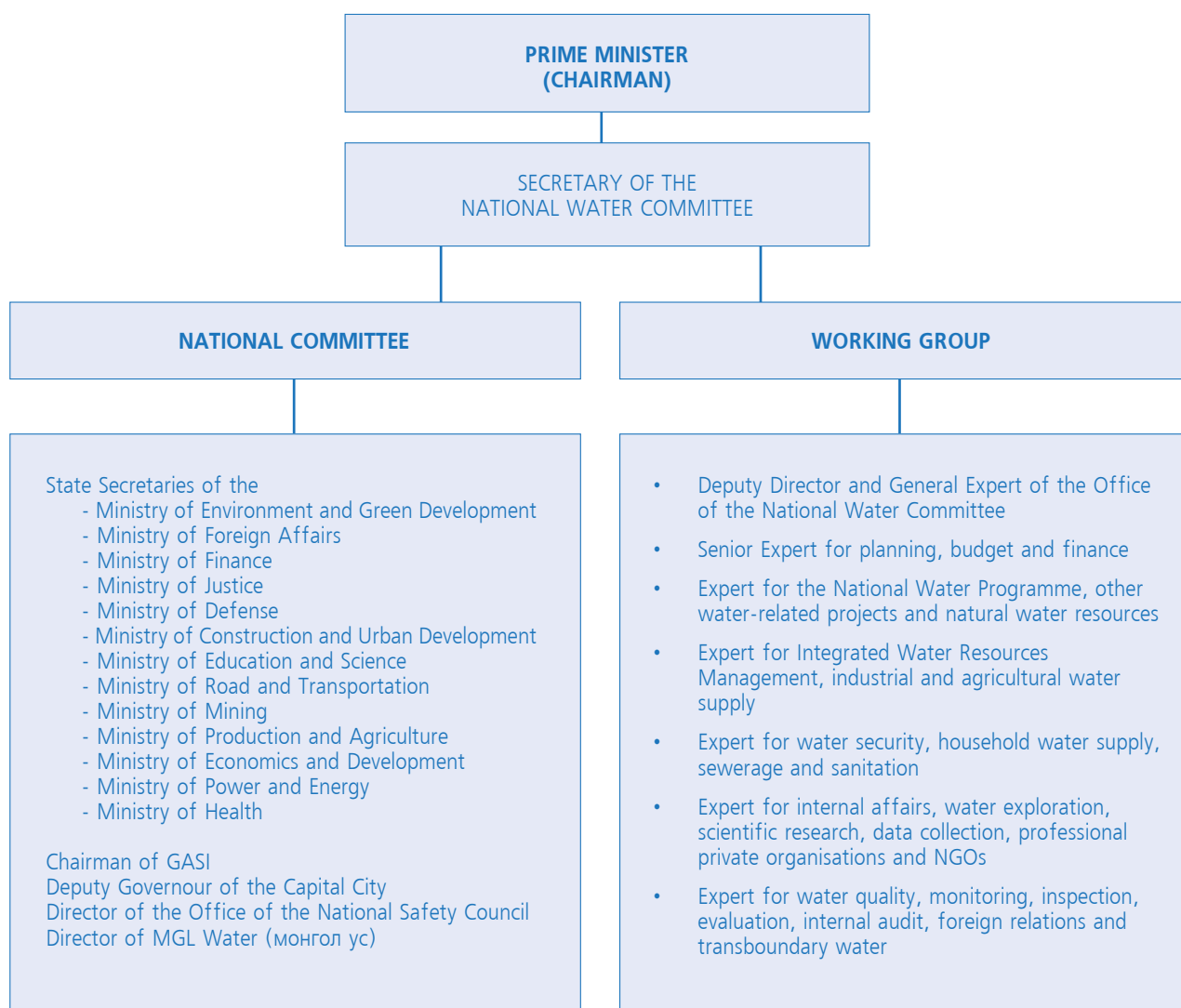


Figure 4: Organisational structure of the National Water Committee after the reforms of 2012^{133,134}

The comprehensive roles and responsibilities of the NWC are specified in section 2 of the *Attachment to the Prime Minister Decree No. 75, dated 2012*.¹³⁵ Among the most important duties of the organisation are

- the coordination of the activities of all state agencies operating in the water sector (Art. 2.1.1);
- the monitoring of the implementation of an Integrated Water Resources Management plan (Art. 2.1.3);
- improving the efficiency of water usage and introducing new technologies for the treatment of wastewater and the reuse of greywater (Art. 2.1.7);
- the development of strategies to increase the use of surface water for household and industrial water supply (Art. 2.1.10); and
- the development of a water safety plan (Art. 2.1.11).

¹³³ Adapted from Bock 10/29/2013; National Water Committee n.d.b

¹³⁴ Furthermore, there are sub-committees at Aimag and capital city level chaired by the respective governors, cf. National Water Committee n.d.b.

¹³⁵ Prime Minister of Mongolia 11/26/2012

The main instrument for the coordination of the water-related organisations are the meetings of the *National Committee*.^{136,137} Since the prime minister of Mongolia has assumed control of the committee, the attendance of its members has improved significantly and the meetings have become more formal.¹³⁸ However, committee meetings do not take place on a regular basis but are scheduled only as necessary upon request and the day-to-day tasks are taken care of by the secretary of the NWC and the *Working Group*.^{139,140} The committee has met no more than two to three times since 2012 and arranging a time and date with the prime minister is difficult due to his busy schedule.¹⁴¹ Thus, albeit the reforms having enhanced the impact of the committee, coordination of the water sector still remains weak.^{142,143}

Additionally, it is the NWC's responsibility to monitor and evaluate the implementation process of the *National Water Programme*.¹⁴⁴ As of October 2013, 20 per cent of the measures of the *National Water Programme*, which was designed in 2010 to be realised over a period of ten years, have been carried out.¹⁴⁵ Since improving the legal framework was the central part of the first two years of the programme, most of the actual implementation activities are only at the planning stage and the NWC has not yet had a lot of monitoring and evaluation to do.¹⁴⁶ Every six months, the committee prepares a report presenting the progress of the implementation of the programme.¹⁴⁷

According to the NWC, one of the major obstacles to improving its performance is its lack of human resources.¹⁴⁸ Although the *Working Group* has been established as a consistent organisation, their staff needs to be expanded in order to be able to fulfil the committee's responsibilities adequately. Furthermore, the *Working Group* does mostly provide objective information to the committee by request of it.¹⁴⁹

5.5 WATER SERVICES REGULATORY COMMISSION

The *Water Services Regulatory Commission* (WSRC) was established based on the *Law on Utilization of Urban Settlement's Water Supply and Sewerage* and in accordance with the *Government Resolutions No. 46 and No. 183* on 30 May 2012.¹⁵⁰ Its main duties are to define the water and wastewater tariffs for each of the 21 Aimags plus Ulan Bator (and the respective 34 public utilities) and to issue special licences to legal entities.¹⁵¹ The structure and responsibilities of the council are regulated by Article 9 and 10 respectively.¹⁵² The WSRC comprises of a council, consisting of the WSRC's chairman and four additional members representing water users and NGOs specialised in water governance, and three departments – the *Administrative Department*, the *Licensing Department* and the *Tariff Department*, cf. Figure 5.¹⁵³

136 *Prime Minister of Mongolia 11/26/2012, Art. 3.5*

137 *Bock 10/29/2013*

138 *Bock 10/29/2013*

139 *Bock 10/29/2013*

140 *Prime Minister of Mongolia 11/26/2012, Art. 3.4*

141 *Bock 10/29/2013*

142 *Seemingly, the NWC is not perceived as having a large coordinative function either. When asked if there was an organisation taking charge of the coordination of all the agencies active in water governance, the interviewee from the MEGD answered decisively that there was no such organisation, cf. Bock 10/23/2013.*

143 *Bock 10/29/2013*

144 *Parliament of Mongolia 2010, Art. 5.2*

145 *Bock 10/29/2013*

146 *Bock 10/29/2013*

147 *Bock 10/29/2013*

148 *Bock 10/29/2013*

149 *Bock 10/29/2013*

150 *Water Services Regulatory Commission n.d., 2013*

151 *Parliament of Mongolia 2012a; Bock 11/13/2013*

152 *Parliament of Mongolia 2012a*

153 *Currently, the Administrative Department has 7, the Licensing Department has 6 and the Tariff Department has 5 employees.*

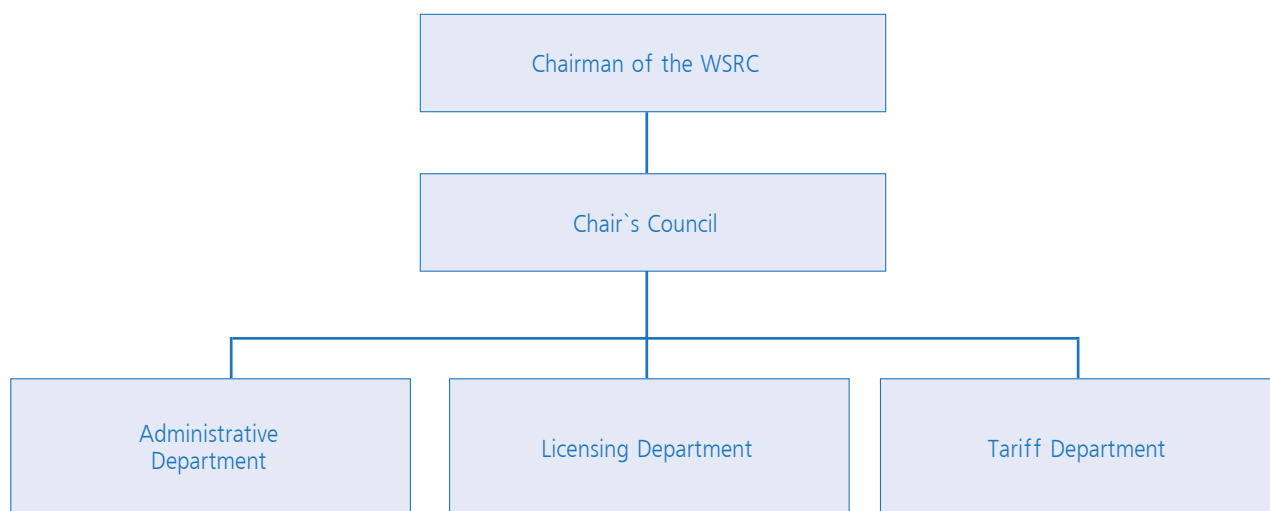


Figure 5: Organisational structure of the Water Services Regulatory Commission¹⁵⁴

The commission mentions the ADB, the EBRD, *Vitens Evides International*, the *Singaporean National Water Agency PUB*, *Artois Picardie*, *ACF Mongolia* and JICA as international cooperation partners.^{155,156} Although these donors' assistance did help to improve the operation and technology of Mongolia's water utilities, a satisfactory service provision cannot be accomplished without running the utilities in a financially sustainable manner.¹⁵⁷ The Mongolian law stipulates the water tariff to be cost recovering.¹⁵⁸ However, at the current tariff levels, the resulting revenues are far too low to make the necessary investments in maintenance and development of the infrastructure and the low salaries lead to a brain drain of the skilled employees of the utilities to the private sector.¹⁵⁹

Loosely based on the suggestions of the public utilities¹⁶⁰ – e. g. USUG in the case of Ulan Bator –, it is the duty of the WSRC to develop a tariff structure that is

- based on the actual costs of the provision of water supply services,¹⁶¹
- transparent and easily comprehensible for consumers,¹⁶² and
- uniform among all water consumers, living in both urban and rural settlements.^{163,164}

¹⁵⁴ Adapted from *Water Services Regulatory Commission n.d.*

¹⁵⁵ *Water Services Regulatory Commission n.d.*; *Bock 11/13/2013*

¹⁵⁶ At least some of these collaborations are not directly between the WSRC and the respective partner, but between other state agencies and the international partner – for example the capacity development cooperation between *Vitens Evides* and USUG which was to be renewed in 2012, cf. section 5.7 and *Vitens Evides International 2012*.

¹⁵⁷ *Water Services Regulatory Commission n.d.*

¹⁵⁸ *Parliament of Mongolia 2012a*, Art. 10.2.4

¹⁵⁹ *Bock 11/13/2013*

¹⁶⁰ *Bock 11/25/2013*; *Parliament of Mongolia 2012a*, Art. 14.2.6

¹⁶¹ *Parliament of Mongolia 2012a*, Art. 10.2.4

¹⁶² *Parliament of Mongolia 2012a*, Art. 10.2.3

¹⁶³ *Parliament of Mongolia 2012a*, Art. 10.3

¹⁶⁴ According to Art. 10.3, one of the powers of the WSRC is “Policy to deliver service to provide urban and rural settlement’s people with clean water at the same tariff and take actions to implement the policy” [sic!], cf. *Parliament of Mongolia 2012a*. How this vague wording is to be interpreted is arguable. It seems reasonable to deduce that at least all the water consumers living in the same municipal area should be charged with the same price – which would include the population of the peri-urban Ger area. If this ambiguity is partly caused by an inaccurate translation of the law in Mongolian is unclear.

The current tariff structure in Ulan Bator hardly fulfils these conditions: the revenues of the public utilities are far from cost-covering and when purchasing water at a water kiosk the residents of the Ger area pay roughly three times the price per litre as the residents of the apartment area.¹⁶⁵ It thus is widely recognised that a reform of the water tariff structure is past due.¹⁶⁶ Meeting its obligations, the *Tariff Department* submitted a proposal already in late 2012. However, it was rejected by the prime minister.¹⁶⁷ After many meetings and discussions, the adjusted proposal now is pending approval by the Mongolian antitrust agency, the *Agency for Fair Competition and Consumer Protection* (AFCCP).¹⁶⁸ Although the law requires the AFCCP to be independent, it de facto is highly dependent on the government and a direct subordinate to the first deputy prime minister.¹⁶⁹ As a result, the agency struggles to meet its responsibilities adequately.¹⁷⁰ Fearing the loss of votes and the opposition's criticism, the governing party is ever cautious to increase the water tariffs – as lately by reason of the presidential elections of June 2013.¹⁷¹ As of late December 2013, the WSRC expects the AFCCP to make a decision on the tariff proposal very soon.¹⁷²

The tariff structure under discussion combines a fixed charge with a single volumetric rate¹⁷³ – similar to the prevailing tariff structure, cf. section 9.3. While the price per litre for water purchased at a water kiosk remains unchanged, the prices for those costumers connected to the central network are raised significantly, leading to an average increase of water prices of 60 to 70 per cent.¹⁷⁴ Nonetheless, owing to the currently very low tariffs, the reform will not be sufficient to increase revenues to a cost-covering level: Only approximately 90 per cent of operational expenses will be covered, let alone the necessary investments in the maintenance and expansion of the infrastructure. Notwithstanding, the WSRC would consider the approval of the suggested tariff structure a great success.¹⁷⁵

Aside from the tariffs for the supply with drinking water, the WSRC also is responsible for setting the wastewater charges. As the *Central Wastewater Treatment Plant* (CWWTP) of Ulan Bator is barely operational and a lot of sewage effluent is being discharged untreated into the Tuul river¹⁷⁶, the WSRC intends to increase the wastewater charges in the near future so as to raise funds necessary for an appropriate treatment of wastewater.¹⁷⁷

According to the *Law on Utilization of Urban Settlement's Water Supply and Sewerage*, a *special licence* has to be issued for any legal entity operating and maintaining urban or rural water supply and sewerage services.^{178,179} It is the WSRC's responsibility

165 *Japan International Cooperation Agency 2013, pp. 3-17 - 3-18*

166 *Bock 12/27/2013*

167 *Bock 11/13/2013*

168 *Bock 12/27/2013*

169 *UNCTAD 2012, p. 7*

170 *UNCTAD 2012, p. 7*

171 *Bock 12/27/2013*

172 *Bock 12/27/2013*

173 *Bock 12/27/2013*

174 *Bock 12/27/2013*

175 *Bock 12/27/2013*

176 *Bock 12/11/2013*

177 *Bock 12/27/2013*

178 *A special licence has to be issued for the operation and maintenance of facilities of urban and rural settlements' water supply, of facilities to produce and purify water, of piping networks transmitting and distributing water, of indoor sewerage pipelines, of water transmitting centres, of wastewater collecting piping networks, of networks discharging and disposing wastewater, of wastewater treatment facilities; for the service to conduct tests and adjustments of water supply and sewage equipment; for the operation and maintenance of urban and rural settlements' water distributing buildings; for trucking water supply services and for services transporting wastewater via a specific purpose car, cf. Parliament of Mongolia 2012a, Art. 12.2. It should be noticed that the Mongolian law distinguishes between several different types of licences in the context of water governance, see e. g. Parliament of Mongolia 2012b, Art. 27, 28 for borehole drilling and water usage licences for water users and water consumers.*

179 *Parliament of Mongolia 2012a, Art. 12*

- to issue, extend, suspend, and cancel special licences,
- to set the conditions and requirements of special licences and monitor their implementation,
- to solve disputes arising between different licence holders or a licence holder and their customer, and
- to set up a database consisting of information on the specific operations, workforce, technology, and on economic indicators of all the licence holders.¹⁸⁰

As provided by law, the activities of the WSRC are fully financed by the revenue generated from issuing the special licenses.¹⁸¹

5.6 MONGOL US

Mongol Us (Монгол Ус, also referred to as *MGL Water*) is a state owned enterprise that was founded in November 2012 based on *Government Resolution No. 335* (2011).¹⁸² The resolution refers to the *Law on State and Local Property* as well as the *Law on Water 2004* as the legal basis for the creation of the organisation.¹⁸³ Moreover, the NWP stipulates the establishment of the organisation with the management of water resources and the operation and maintenance of the state owned water infrastructure facilities as its field of activity.¹⁸⁴ According to the organisational structure proposed in the draft bylaw¹⁸⁵, *Mongol Us* consists of a steering committee and a monitoring committee, both of which are subordinate to the shareholders' meeting, cf. Figure 6. The NWC furthermore calls for the establishment of local branches of *Mongol Us* in both Aimag capitals and in rural sites.¹⁸⁶ Currently the staff comprises 50 employees, approx. 40 of which are well educated engineers, chemists, etc.¹⁸⁷

¹⁸⁰ Parliament of Mongolia 2012a, Art. 10

¹⁸¹ Parliament of Mongolia 2012a, Art. 9.8; Bock 11/13/2013

¹⁸² Bock 12/11/2013

¹⁸³ Parliament of Mongolia 2004, Art. 36.7; Parliament of Mongolia 1996, Art. 9.5

¹⁸⁴ Ministry of Environment and Green Development of Mongolia 2012a, p. 652; Parliament of Mongolia 2010, section 3.5.7

¹⁸⁵ As neither the final version of the bylaw nor an official organigram could be found, the actual organisational structure in early 2014 may have changed as compared to Figure 6.

¹⁸⁶ Parliament of Mongolia 2010, Art. 3.5.7

¹⁸⁷ Bock 12/11/2013

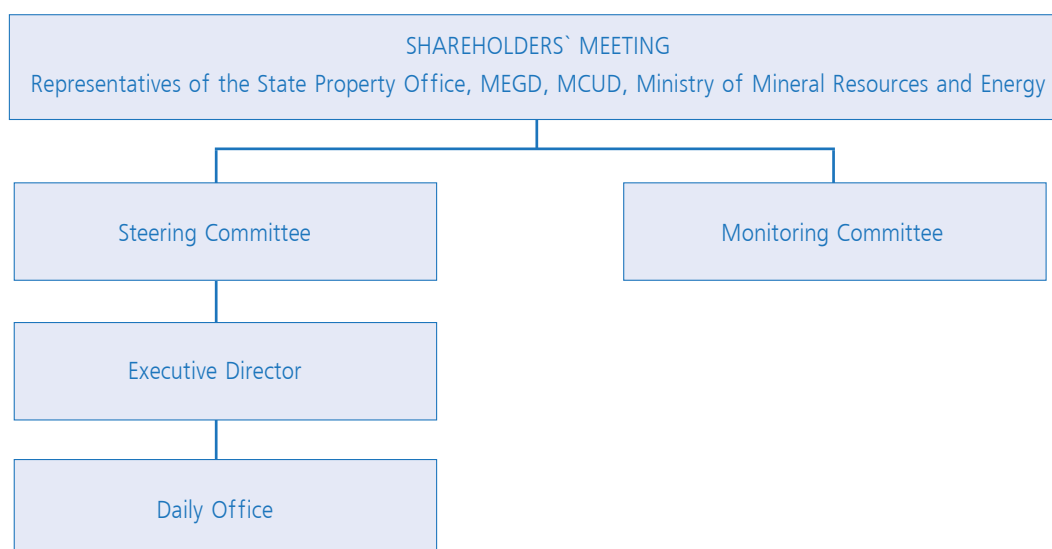


Figure 6: Organisational Structure of Mongol Us¹⁸⁸

Initially, taking care of a reliable provision of water to both users and consumers, the training of experts for the water sector as well as the maintenance and operation of major water infrastructure facilities were supposed to be among the main responsibilities of *Mongol Us*.¹⁸⁹ Yet, the organisation did not carry out any specific tasks until now. According to the interviewee, the responsibilities of the former *Water Authority* were to be taken over by the MEGD.¹⁹⁰ However, the ministry did not have the capacity to bear these newly gained responsibilities and turned more and more into an implementing agency. To enable the MEGD to concentrate again on its policy making competencies, several of the responsibilities now have been assigned to *Mongol Us*. The organisation is to take up its activities in January 2014.

Different from the initial assumptions, among the basic tasks of *Mongol Us* are¹⁹¹

- to establish a comprehensive database collecting data on water resources, abstraction and usage – including data on the abstraction of water and discharge of (treated) wastewater to the Tuul river by USUG,
- to explore water resources, to design implementation plans and to monitor the process,
- to research technological solutions for the use of domestic greywater and the reuse of wastewater, for saving water and for the treatment of industrial wastewater,
- to evaluate and charge for the abstraction and usage of water quantities larger than 100 m per day and for the usage and pollution of more than 50 m per day, and
- to monitor the biological and chemical quality of water resources and wastewater.

Evidently, the responsibilities of *Mongol Us* cover a broad range of fields and the description of the activities to be carried out remains vague. Nonetheless, the interviewee is very optimistic that *Mongol Us* will be able to fulfil these tasks adequately and increase its staff to 2,000 employees in the medium term.¹⁹²

¹⁸⁸ Ministry of Environment and Green Development of Mongolia 2012a, p. 652

¹⁸⁹ Parliament of Mongolia 2010, pp. 652–653

¹⁹⁰ Bock 12/11/2013

¹⁹¹ news.mn 2013; *Mongol Us n.d.*; Ministry of Environment and Green Development of Mongolia 2012a; Bock 12/11/2013

¹⁹² Bock 12/11/2013

5.7 USUG (WATER SUPPLY AND SEWERAGE AUTHORITY OF ULAN BATOR)

USUG, the *Water Supply and Sewerage Authority of Ulan Bator*, was established in 1959 and is a public enterprise owned by the municipality of Ulan Bator.¹⁹³ USUG abstracts water from the Tuul river basin, provides water and sanitation services to industrial users and apartment dwellers (the latter mostly via the housing company OSNAAG, cf. section 5.8) and supplies Ger area residents with drinking water through water kiosks that are either truck-fed or connected to the central water network, cf. Figure 7.¹⁹⁴ These activities are carried out under a licence issues by the WSRC according to Art. 12 of the *Law on Utilization of Urban Settlement's Water Supply and Sewerage*.¹⁹⁵ The specific rights and obligations of the providers of water and sanitation services and their customers are regulated in Art. 13, 14 and 15 of the same law.¹⁹⁶

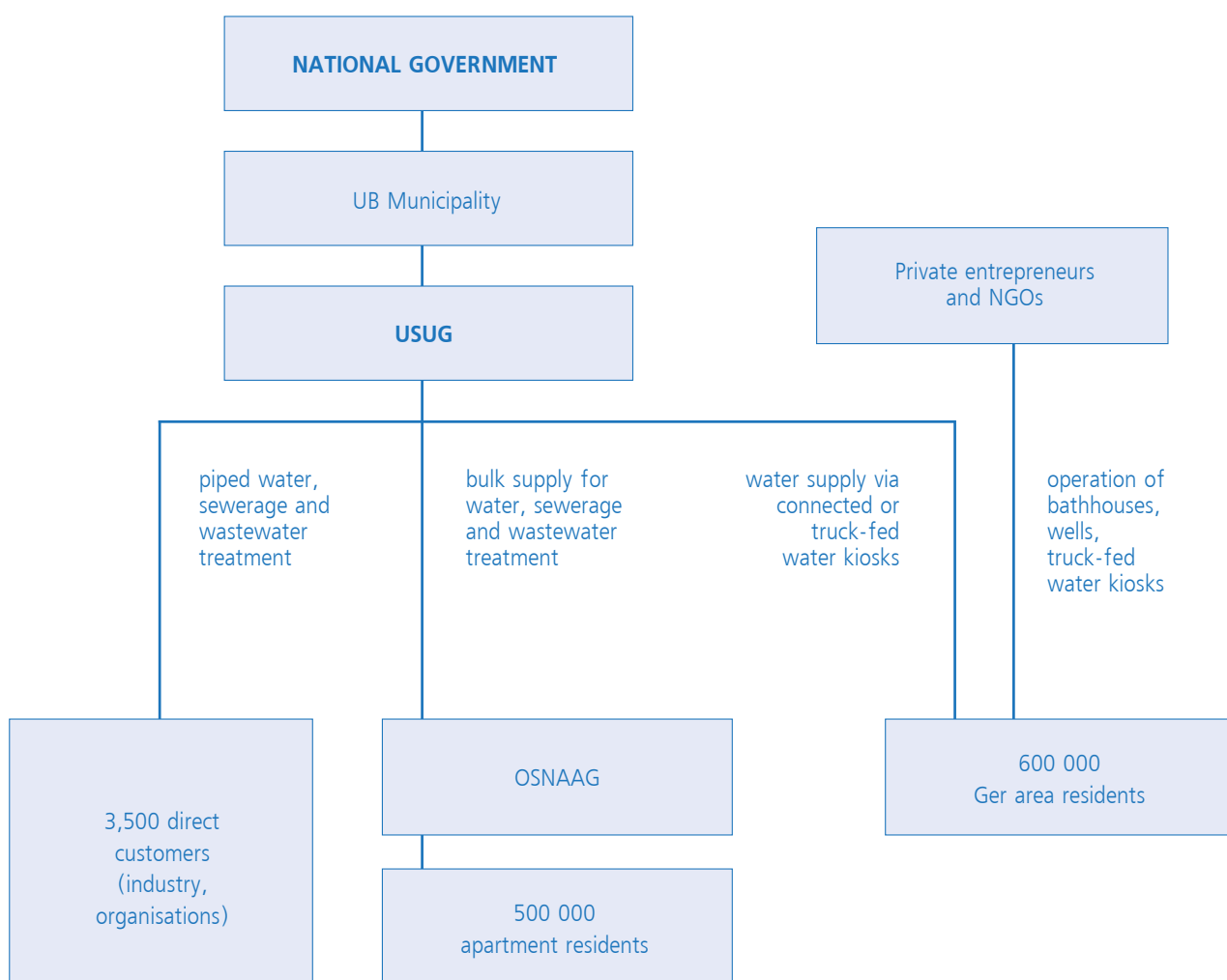


Figure 7: Organisational Structure of Water Supply and Sanitation Services in Ulan Bator¹⁹⁷

¹⁹³ ADB 2013a, p. 90; Japan International Cooperation Agency 2013, pp. 3–23

¹⁹⁴ ADB 2013a, p. 90

¹⁹⁵ Bock 11/25/2013

¹⁹⁶ Parliament of Mongolia 2012a

¹⁹⁷ Vitens Evides International n.d.a, p. 8

Table 1: Functions for the Provision of Water and Sanitation Services in Ulan Bator¹⁹⁸

	Asset Owner	Operator	Capital Investment	Project Planning & Implementation	Regulatory Control
Water Production and Treatment	UB Municipality	USUG (UB Municipality enters into a contract with USUG for operation, maintenance and asset management)	UB Municipality (with funds from the national government or international financial institutions)	UB Municipality Engineering and Investment Department (in cooperation with USUG and OSNAAG Kantors)	WSRC (licencing, tariff and service quality regulation), GASI (monitoring service quality)
Water Distribution	UB Municipality (for OSNAAG Kantors), private operators or consumers (apartment dwellers) (for non-OSNAAG assets)	OSNAAG and non-OSNAAG Kantors ¹⁹⁹ (UB Municipality has management contracts with OSNAAG Kantors)	UB Municipality (for OSNAAG-Kantors), private sector (for non-OSNAAG Kantors)		

Large parts of the water infrastructure and water distribution and sewage network stem from the 1950s.²⁰⁰ As during the years merely 20 per cent of the pipes have been replaced and the city has been growing significantly, the expansion and renovation of the network is crucial.²⁰¹ The infrastructure is in the property of the UB Municipality and only operated and maintained by USUG.²⁰² While USUG makes suggestions for the construction of major facilities, decisions are made at the MCUD and financed under the national budget.²⁰³ Statements on whether the construction and maintenance of small scale infrastructure and the piping network is to be borne by USUG or by the UB Municipality are inconsistent; however, according to USUG and the *Law on Utilization of Urban Settlement's Water Supply and Sewerage*, at least part of the financial burden is carried by USUG.²⁰⁴ Table 1 summarises the functions of the different organisations involved in the provision of water supply and sanitation services in Ulan Bator.

USUG, which is supposed to be a self-financing enterprise, currently finds itself in a very weak financial situation and is running large operational losses.²⁰⁵ The crucial reasons for these difficulties are:²⁰⁶

- **Non-cost-covering tariffs for water services.** The tariffs for the provision of water services in the residential area are low as compared to the standards for large cities in Asia. Customers living in the Ger area pay about trice the residential tariff per unit of water. Yet, the service provision in the Ger area is highly subsidised by the water sales in the apartment area.
- **Unaccounted-for water.** In addition to the rate of leakage, several non-technical problems add up to a large quantity of non-revenue water. Among these problems is incomplete customer metering: Only about 45 per cent of customers have water meters and are charged per unit of consumption.

198 ADB 2013a, p. 91

199 Author's note – in non-OSNAAG Kantors, drinking water is distributed by USUG, private entrepreneurs and NGOs, cf. Figure 7.

200 Vitens Evides International n.d.b

201 Unger 2013; Vitens Evides International n.d.b

202 Bock 11/25/2013; Parliament of Mongolia 2012a, Art. 19.1; Parliament of Mongolia 2012b, Art. 32.7

203 Bock 11/6/2013 Bock 11/25/2013

204 Bock 11/25/2013; Parliament of Mongolia 2012a, Art. 12.1

205 Bock 11/25/2013

206 ADB 2013b, Appendix 9, p. 7

- **Payment delays of the OSNAAG Kantors.** There are a large number of outstanding payments from OSNAAG Kantors to USUG. Some of these payments might be unrecoverable. USUG does not create provisions for bad debt as is commonly done in accounting practice.

USUG itself has outstanding debt²⁰⁷ to the World Bank (issued under the USIP projects) and to the Spanish government the repayment of which it chose to delay.²⁰⁸ Instead, the enterprise uses its funds for operational expenditures.²⁰⁹ For a summary of USUG's operational expenditures and revenues, see section 9.4.

Personnel expenses make up a large fraction of USUG's operational expenditures. About 1,500 employees work for the enterprise – roughly 34 per cent of which alone for the *Truck Supply Division* and 22 per cent of which for the *Connected Kiosk Division* operating in the Ger area.²¹⁰ One quarter of the employees have a university degree while more than 45 per cent only have a junior high school education or lower.²¹¹ They work in five different departments: Following a suggestion of *Vitens Evides International* (VEI), USUG was reorganised into a matrix structure, cf. Figure 8.

207 Amounting to 76,680 million MNT as of December 31, 2011, cf. *Japan International Cooperation Agency 2012*.

208 *Bock 11/25/2013*

209 *Bock 11/25/2013*

210 *Japan International Cooperation Agency 2013*, pp. 3–25

211 *Japan International Cooperation Agency 2013*, pp. 3–25

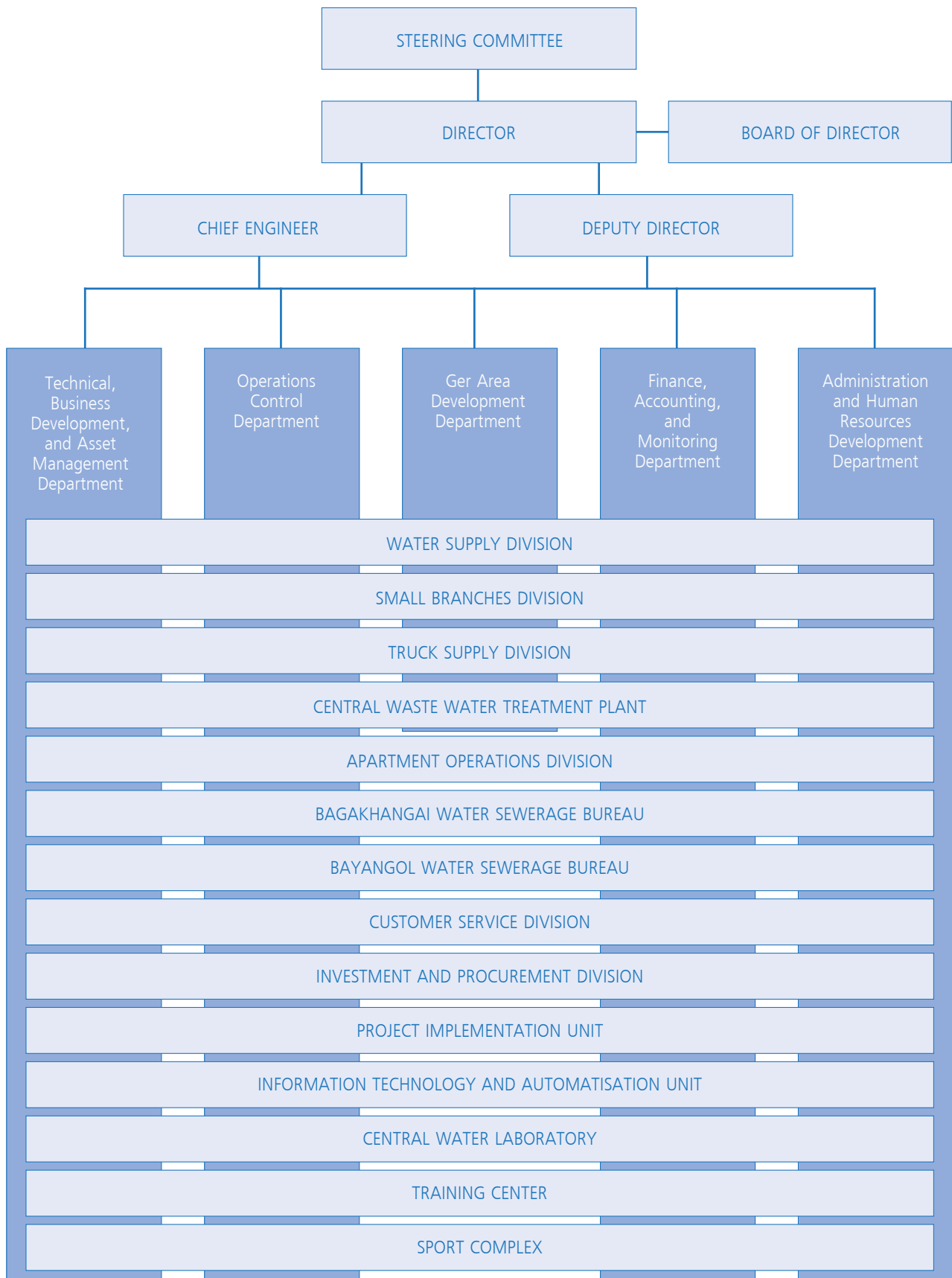


Figure 8: Structure of USUG²¹²

212 Adapted from Vitens Evides International n.d.a

From 2007 to 2012, USUG and VEI engaged in a partnership:²¹³ Within the frame of the UN-HABITAT's *Global Water Operators' Partnership Alliance*, VEI provided assistance to USUG regarding the operational management of water supply and wastewater treatment infrastructure as well as concerning administrative, legal, and financial aspects.²¹⁴ Both long and short term workshops and trainings were offered to the employees of USUG, as VEI had identified capacity development as one of the most important objectives of the partnership.²¹⁵ Not only does USUG lack a methodical and efficient data collection, but also needs the HR department professional training on the proper recruitment, training, evaluation, and motivation of employees as well on how to foster a positive corporate culture.²¹⁶ The latter point is particularly important in the light of the brain drain which occurred in 2012 owned to the extensive restructuring.²¹⁷ Although both organisations deemed the cooperation a success, a scheduled continuation had to be cancelled due to a lack of financing.²¹⁸

In accordance with the recent policies for the development of the Ger area of Ulan Bator, cf. section 6, USUG established a *Ger Area Development Department* in January 2013.²¹⁹ Its responsibility is to plan the supply with drinking water and the disposal of wastewater of the apartment buildings that are to be constructed within the scope of the *Ger Area Development Programme* (GADP).²²⁰

5.8 OTHER

Apart from the abovementioned organisations, several other ministries, research institutes and other agencies are involved in the management of water resources in Mongolia at national or local level.

OSNAAG, the *Housing and Communal Services Authority* of Ulan Bator, supplies many of the residents of the apartment area, which is divided into *Kantors*, with water supply and sanitation services, heating and electricity.²²¹ Similar to the French Model, the OSNAAG *Kantors* are operated in public private partnerships, i. e. under management contracts in which the assets are in the property of the UB Municipality but operated by private entities.²²² As it is the case with USUG, the operating companies too are responsible for the maintenance of the infrastructure and distribution network they are using.²²³ The OSNAAG *Kantors* find themselves in an equally precarious financial position, among the reasons for which are the low tariff collection levels (estimated to be between 65 and 80 per cent), the large amounts of non-revenue water (approx. 20 per cent of the supplied water), and overstaffing.²²⁴ The effects become apparent in the quality of the service, e. g. in the poor provision of water supply in the upper floors of buildings due to an insufficient pressure in the distribution network.²²⁵

The most important agency for the monitoring and enforcement of legislation is the **General Agency for Specialized Inspection (GASI)**. Founded in 2002 and directly reporting to the deputy prime minister, GASI is in charge of supervising the meeting of the many standards of relevance in the context of water and sanitation.²²⁶ More than 1,700 state inspectors control the implementation of the more than 140 laws and 3,600 standards, norms, rules, and resolutions issued by the Mongolian parliament and government on behalf of GASI and make it the most influential agency for environmental monitoring

213 Bock 11/25/2013

214 Vitens Evides International n.d.b

215 Bock 11/25/2013

216 Vitens Evides International n.d.a, pp. 2–3

217 Vitens Evides International n.d.a, p. 3

218 Bock 11/25/2013

219 Bock 11/25/2013

220 Bock 11/26/2013

221 Japan International Cooperation Agency 2013, p. 3–31

222 ADB 2013b, Appendix 9, p. 1

223 Ministry of Environment and Green Development of Mongolia 2012a, p. 652

224 ADB 2013b, Appendix 9, p. 7

225 ADB 2013b, Appendix 9, p. 1

226 Sigel 2012, p. 34; ADB 2013b, Appendix 9, p. 5

in Mongolia.²²⁷ Yet, the agency's intervention options are limited by the scale of available penalties and thus ineffective against e. g. legally ill-defined acts of pollution.²²⁸

The *Law on Water 2004* first introduced **River Basin Councils (RBC)** with the purpose of fostering citizen participation in the local management and protection of water resources.²²⁹ A RBC comprises of representatives of the local government and environmental authority, NGOs, industrial and agricultural water users, scientists, professional inspectors of GASI and of course citizens.²³⁰ While the responsibilities of the RBCs initially remained vague due to the ambiguous wording in the *Law on Water 2004*, the role of the organisations was clarified by the amended version of the law in 2012.²³¹ Among their tasks is to assist in the development and consult in the implementation of the *River Basin Management Plans* while taking into account the citizens' comments and opinions and to give a statement on all principle policies affecting water resources.²³² As of December 2013, 18 of the 29 identified water basins in Mongolia have established a RBC.²³³ The **Tuul River Basin Council (TRBC)**, the area of authority of which includes Ulan Bator, was established in August 2010 and consists of a director, a secretary and 15 more members.²³⁴ As it is not stipulated in law under which budget the activities are to be funded, the council is financially supported by the *Strengthening Integrated Water Resources Management in Mongolia* project.²³⁵

RBCs are not to be confused with **River Basin Authorities (RBA)**, which were established based on the *Law on Water 2012*.²³⁶ RBAs are the responsible agencies for the development and the planning and supervision of the implementation of the *River Basin Management Plans*. Furthermore, they are assigned to establish and maintain a comprehensive water database. Finally, one of the most important rights of RBAs certainly is to make recommendations concerning the extraction of mineral resources within the river basin area.

Among the ministries and other government bodies with relevance for the water and sanitation sector are²³⁷

- the **Ministry of Health** and the affiliated **Public Health Institute**, a research institute, for the development of public health policy and water quality standards,
- the **Ministry of Finance** for the allocation of budgets and the collection of water use fees,
- the **Ministry of Food, Agriculture and Light Industry** for policy-making in the fields of irrigation and rural and industrial water supply,
- the **Ministry of Mineral Resources and Energy** for the development of hydropower policy, and
- of course the **government bodies at local level** (Aimag, Soum) as defined by law, cf. section 4.

²²⁷ Sigel 2012, p. 34

²²⁸ World Bank 2007, p. 225

²²⁹ Parliament of Mongolia 2004, Art. 19

²³⁰ Parliament of Mongolia 2012b, Art. 20.2

²³¹ Ministry of Environment and Green Development of Mongolia 2012a, p. 648

²³² Parliament of Mongolia 2012b, Art. 20.4; Ministry of Environment and Green Development of Mongolia 2012a, p. 648

²³³ Bock 10/23/2013

²³⁴ Ministry of Environment and Green Development of Mongolia 2012b, p. 473

²³⁵ Ministry of Environment and Green Development of Mongolia 2012b, p. 474

²³⁶ Parliament of Mongolia 2012b, Art. 17

²³⁷ Sigel 2012, pp. 35–36; Ministry of Environment and Green Development of Mongolia 2012a, p. 643

6

GER AREA REDEVELOPMENT PROGRAMME

The *Ger Area Redevelopment Programme* (GARP) is a policy of the UB Municipality based on the *Master Plan 2030*, striving to restructure the Ger area of Ulan Bator by building large apartment houses that will be provided with basic public services such as water supply and sanitation services, central heating and waste collection.²³⁸ The programme was approved under the *City Council Resolution No. 3/31*, on 25 February 2013, and details regarding the procedure, the selection of implementing agencies as well as the functions of the involved state agencies were specified.²³⁹ Several agencies were newly created for the realisation of the programme – among them the *Ger Area Redevelopment Agency* (GARA), ten *Working Departments* representing the mayor's office in the Ger area, and USUG's *Ger Area Development Department*.²⁴⁰ The UB Municipality attempted to establish public participation, research on technical conditions and infrastructure as well as a sound financial and economic planning as the cornerstones of GARP.²⁴¹ GARA is responsible for the implementation of the programme which was scheduled initially for twelve sites²⁴² and extended by further eight sites in mid-2013.²⁴³

The implementation procedure begins with the division of the sites into blocks.²⁴⁴ For each of these blocks an invitation to tender is issued to private developers, i. e. construction companies. GARA then tries to foster a contract between the residents of each plot and the private developers under which the respective residents agree to give up their land title in exchange for the right to live rent-free in one of the apartments after completion of the construction. The residents are assured that they will be accommodated free of charge in rented apartments during the construction time. A *Working Group for Ger Area Development*²⁴⁵ selects the winning tender which has to prove, among other things, that no less than 75 per cent of the land owners agreed to participate in the programme and entered a contract. The construction companies expect their investments to be amortised by the sales revenues of the supernumerary apartments while the necessary construction of infrastructure facilities as well as schools and kindergartens will be financed by the UB Municipality.²⁴⁶

In theory, GARP may seem a promising approach to provide the residents of the Ger area with public services and tackle more than one problem at the same time – e. g. the severe air pollution by burning large amounts of coal and the soil and groundwater contamination due to pit latrines. However, the implementation of the ambitious approach proves to be very challenging and has been criticised in several respects. Among the points of criticism are the following:²⁴⁷

- The development plans lack consideration of the basic principles of urban planning and the construction of a apartment complex of 16 storeys leads to the rupturing of the structure of the Ger area – which is a settlement of family homes.

²³⁸ ADB 2013b, Appendix 1, p. 28

²³⁹ ADB 2013b, Appendix 22, p. 11

²⁴⁰ Bock 11/26/2013; ADB 2013b, Appendix 1, p. 28

²⁴¹ ADB 2013b, Appendix 2, p. 4

²⁴² The twelve sites are (1) Songino Khairkhan, Khoros 5/6/7, close to "Khaniin Metarial", (2) Songino Khairkhan, Khoroo 10, close to the leather factory, (3) Chingeltei, Khoroo 7, close to "Mongolian National Broadcasting", (4) Chingeltei, Khoros 13/15, close to School No. 72, (5) Sakhbaatar, Khoroo 15, Dambadarjaa, (6) Bayanzurkh, Khoros 8/16, close to the University of Defense, (7) Bayanzurkh, Khoroo 12, Amgalan, (8) Sakhbaatar, Khoros 9/10/11, Apartment District No. 7, (9) Bayanzurkh, Khoros 13/14, Apartment District No. 14, (10) Chingeltei, Khoros 9/10/11, Denjiin 1000, (11) Chingeltei, Khoros 7/8, MNB, and (12) Bayangol, Khoroo 16, Gandan, cf. ADB 2013b, Appendix 2, p. 4. Further information on all 20 sites can be found online on the homepage of the UB Municipality (in Mongolian only).

²⁴³ Bock 12/19/2013; ADB 2013b, Appendix 2, p. 4

²⁴⁴ ADB 2013b, Appendix 22, p. 12

²⁴⁵ If these organisations indeed are the Working Departments in representation of the mayor as mentioned above is unclear.

²⁴⁶ Bock 12/16/2013

²⁴⁷ Bock 12/19/2013, 1/8/2014

- In spite of the UB Municipality claiming participation to be one of the basic principles of GARP, there has been a lack of communication between those responsible for the realisation of the programme and the residents of the implementation sites.
- The apartments offered to the Ger area residents in exchange for their land titles should provide them with an equivalent living space. Yet, only the ground area of their houses is being considered, not the size of their plot – let alone the economic loss many of the residents will be suffering as they today use their land for small businesses (renting out Gers to students, etc.).
- With the improving economic conditions of many people living in the Ger areas, their willingness to give up their own land in order to move into an apartment complex is shrinking. Instead, their willingness to take out a loan and to invest in the improvement of their plots and in individual connections to the water and sewerage network is increasing.

7 ASSESSMENT AND POLICY RECOMMENDATIONS

7.1 SWOT ANALYSIS

Carrying out a full SWOT analysis that links the identified *strengths* and *weaknesses* with the *opportunities* and *threats* and derives appropriate strategies for the development of the sector presents a challenge. That is not only because even the internal factors apply to possibly several different agencies to varying degrees. More importantly, there are only few particular *strengths* of and *opportunities* for the sector and improvement strategies will have to be found rather in spite of the existing *weaknesses* and *threats* than based on the helpful factors. Hence, the following SWOT analysis is instead to be understood as a tool to display the different internal and external factors as well as the links between them concisely and in a structured manner.

Table 2 provides an overview of the determinants affecting the provision of water supply and sanitation services in Mongolia:

Table 2: Strengths, Weaknesses, Opportunities, and Threats in the water sector of Mongolia²⁴⁸

Internal	
Strengths	Weaknesses
<ul style="list-style-type: none"> Flexibility 	<ul style="list-style-type: none"> Inconsistency Fragmentation Insufficient implementation capacity Lack of coordination Lack of cooperation Reluctance to share information Insufficient information management Insufficient financial resources Investment backlog Insufficient infrastructure maintenance Risk of an "Infrastructure Collapse" Poor law enforcement
External	
Opportunities	Threats
<ul style="list-style-type: none"> Technical Assistance (TA) by international donor organisations Financial Assistance (FA) by international donor organisations Economic development 	<ul style="list-style-type: none"> Political change Harsh climate Urban growth Climate change Shrinking water resources Water pollution Insufficient training of future experts Insufficient awareness of the people Insufficient participation of the people

A graphical illustration of the most important links between the determinants can be seen in Figure 9:

²⁴⁸ Own compilation

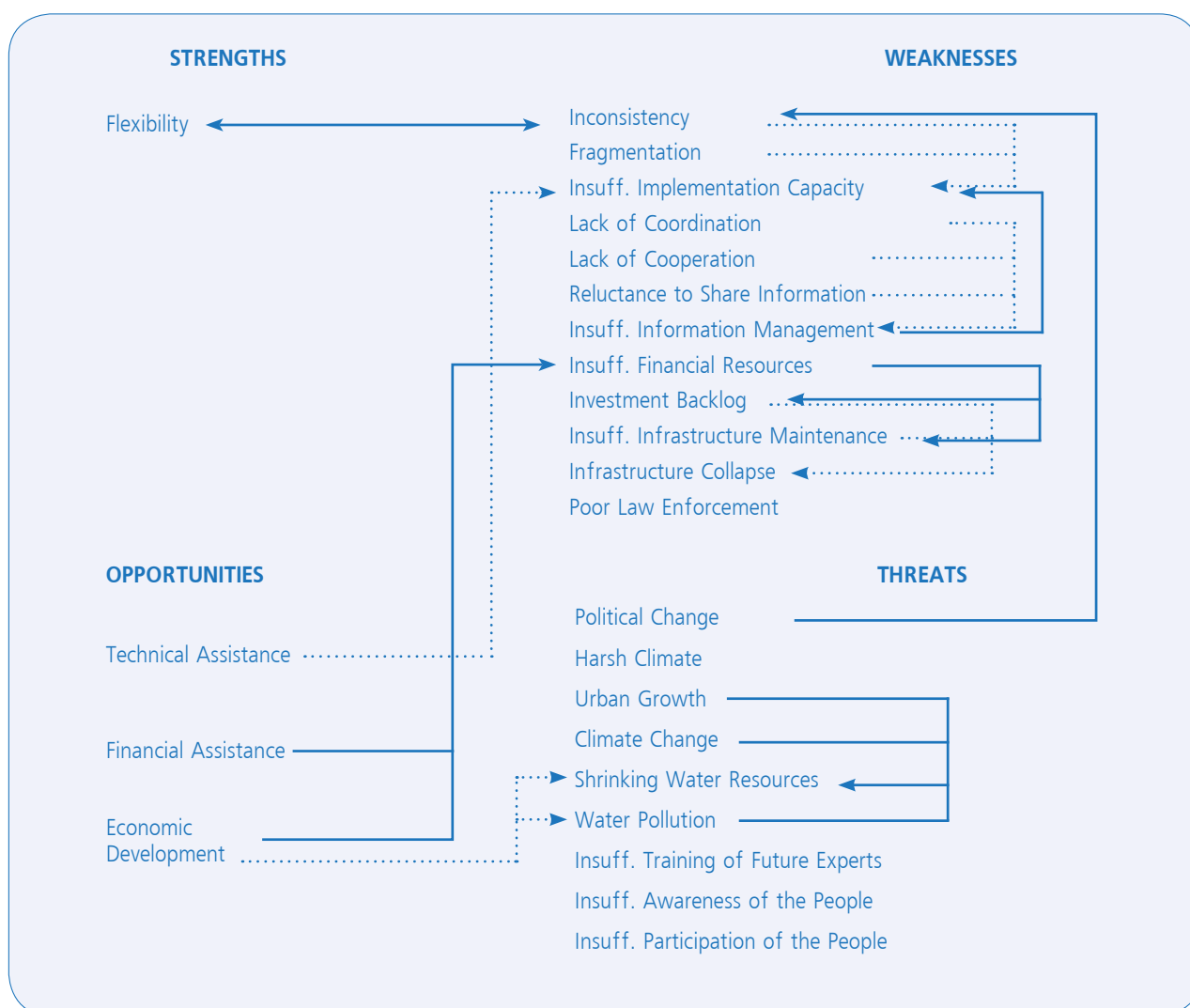


Figure 9: Links between the Strengths, Weaknesses, Opportunities, and Threats identified in the water sector of Mongolia²⁴⁹

Political change crucially influences the development of the water sector in Mongolia. The organisational changes caused by the government reforms of 2012 as described in section 5 are but one example of how a new party taking power can result in a drastic restructuring of the country's public administration. The creation, disbanding, and reshaping of state organisations, including whole ministries, is a common result following political elections in Mongolia. The obvious consequence is a large degree of **inconsistency** in the assignment of activity fields and responsibilities. A second mechanism works through the organisations' personnel: As leading politicians try to place like-minded candidates or family members in strategically important positions, even implementing agencies such as USUG experience a high staff turnover with political changes – causing the capacity building efforts of international donors (**technical assistance**) to evaporate.²⁵⁰ Both influences have a significant negative impact on the currently **insufficient implementation capacity** of the sector. Although several international donor organisations have been providing **technical assistance** to different agencies trying to build up the implementation capacity, their efforts oftentimes are not permanent and newly trained staff members are let go for political reasons. As a matter of course, the sector inconsistency can likewise be interpreted as **flexibility** and considered a vital strength. While there are major constraints to an immediate reorganisation of the public administration sector in many countries, Mongolian agencies are able to make decisions quickly and

249 Own compilation
250 Bock 12/13/2013, 1/8/2014

instantaneously start working on the implementation of these.²⁵¹

The large degree of **fragmentation** has both a direct and an indirect negative effect on the implementation capacity. As the realisation of every project necessarily requires the contribution of several different agencies, a progress of implementation can be radically slowed down by only one agency failing to meet its responsibilities. This of course directly reduces the implementation capacity. Indirectly, a higher degree of fragmentation necessitates also a higher degree of **coordination**. However, the coordination in the water sector is, as shown in section 5.4, particularly weak. Under the assumption of the common objective of a reliable provision of water and sanitation services, a certain level of intra- as well as interagency **cooperation** should be fostered but as of now can hardly be seen. Together with a generally observable **reluctance to share information**, the lack of appropriate coordination and cooperation accounts for the **insufficient information management** which itself negatively influences the implementation capacity. Especially a comprehensive database – as imposed by the *Law on Water*, cf. section 4.1 – could strengthen the competence of the sector to meet its obligation. The fact that this database has been legally introduced already in 2004 and is yet to be realised as of 2014 – possibly by *Mongol Us*, as mentioned in section 5.6 – is only one of many examples of poor **law enforcement** in Mongolia.²⁵²

In spite of Mongolia's fast **economic development** and the **financial assistance** of organisations such as the World Bank or ADB, a pervasive **lack of financial resources** paralyses the sector and limits the implementing agencies' ability to meet their responsibilities appropriately. Large parts of the piping network are in dire need of renewal and the two thirds of the population of Ulan Bator living in the Ger area have no individual connection to the network at all, resulting in an enormous **investment backlog**. The **poor maintenance of** wastewater and sewage treatment **infrastructure** contributes to the problem of **water pollution**, as large amounts of sewerage are discharged into the Tuul river with little or no treatment. With the passing of time without sufficient investments in the infrastructure there is an increasing risk of an **infrastructure collapse**, e. g. the breaking of a major pipe connecting a neighbourhood to the central water network and thus cutting the people off from the supply with drinking water.

At the same time, several threats pose further obstacles to the sector performance. Due to the **harsh climate**, finding feasible technical solutions that are suitable for the distribution and treatment of water in the extreme cold without being prohibitively expensive is extremely challenging. Moreover, **urban growth, climate change**, and economic development cause an increasing demand for water and the **shrinking of the available natural resources** at the same time. Still, **people's awareness** for the hazards of water pollution and a lack of proper sanitation and greywater disposal is far too low, and their **participation** in finding solutions to strengthen the sector performance needs to be facilitated and encouraged.

7.2 POLICY RECOMMENDATIONS

Albeit the improvement of fundamental institutional and organisational issues – e. g. law enforcement in the context of water pollution fines – is vital to a well-working provision of water services and management of water resources in Mongolia, giving recommendations on how to obtain these is beyond the scope of this report. Nonetheless, tackling problems on a smaller scale may lead to a significant strengthening of the performance of and transparency in the water sector. The following section will formulate potential starting points for improvements, make suggestions on strategies and assess the prospects of success.

²⁵¹ Bock 12/13/2013

²⁵² While the general poor law enforcement in Mongolia may be considered an external threat, here it was chosen to consider it an internal weakness instead as it is often organisations belonging to the water sector – at least in the broader sense – that are in charge of monitoring the implementation of standards and regulations, e. g. GASI. In any event, the classification in this case does not affect the further analysis.

7.2.1 IMPROVE SECTOR FINANCING

Water tariff reforms

Both USUG and OSNAAG struggle to ensure a reliable provision of water services to the people of Ulan Bator because of a persistent lack of financial resources. Their financial situation could be improved significantly by raising the water tariffs for both non-profit and for-profit costumers to a cost-recovering level.

Next steps	<ul style="list-style-type: none"> • Consult the WSRC in designing a <u>cost-recovering water tariff</u>: <ul style="list-style-type: none"> ○ The tariff design should take into account <u>environmental aspects</u>, i. e. encourage water saving. Although the responsible members of the organisation are well aware of the necessity to save water, presenting examples of different tariff designs and the difficulties in implementing these successfully could help them to adjust the tariff to the Mongolian context. ○ As stipulated in Art. 10.3 of the <i>Law on Utilization of Urban Settlement's Water Supply and Sewerage</i>, <u>all non-profit customers should pay the same price per litre</u>, irrespective of whether they buy water through an individual connection or a water kiosk, i. e. a cross-subsidisation of water supply in the Ger areas by residents of the apartment area (cf. Footnote 164).²⁵³ This component is particularly important and the members of the WSRC should be convinced of the importance of a pro-poor tariff design. • Both the WSRC and other (international) organisations oftentimes apply the so-called <i>conventional affordability ratio</i> (CAR), the ratio of household expenses for water to household income, to measure the affordability of water services. If the CAR value is below a normative target of e. g. 5 per cent, they draw the conclusion that there is no affordability problem and the tariff can be increased. However, the CAR does not take into account non-monetary barriers which are particularly high in Mongolia, e. g. the inconvenience of fetching water from a water kiosk at very low temperatures in winter. Thus, the application of <u>alternative affordability measures for the assessment of pro-poor water tariffs</u> should be promoted.²⁵⁴ • Find allies in the water sector, coordinate a <u>strategic alliance</u> and campaign for a reliable and sustainable provision of water services. • Introduce the alliance to the public and <u>strengthen public awareness</u> for the matter.
Target organisation	WSRC

²⁵³ The implementation of a single tariff for all costumers may require solving practical problems such as the payability of partial MNT amounts for a water price of less than one MNT per litre at water kiosks.

²⁵⁴ For further information see Gawel et al. 2011.

Power structure	While the WSRC on paper is the only responsible agency for setting water tariffs, any proposed tariff change has to be approved by the AFCCP before it can be implemented. However, the AFCCP has shown itself reluctant to permit an increase of water tariffs due to its being a direct subordinate to the first deputy prime minister, i. e. for political reasons.
Allies	USUG, OSNAAG, whole water sector, international organisations
Complexity	High; Designing a tariff structure meeting all of the requirements stated above is very challenging and the structure may need to be adjusted repeatedly. Moreover, the implementation of a cost-recovering tariff structure requires the overcoming of political barriers.
Urgency	High; Revenues currently are far from cost-recovering and the financial situation is deteriorating quickly.
Assessment of prospects of success	Albeit increasing the water tariff is very challenging, it is strictly necessary. Supporting the WSRC is undeniably beneficial. However, the key issues lies in convincing the AFCCP of a new, cost-recovering tariff design. One strategy to overcome the political obstacles is to introduce the issue to the public through a strategic alliance of the relevant agencies in the water sector. Roughly two thirds of the population of Ulan Bator live in the Ger areas and suffer from an unreliable water supply and insufficient sanitary conditions. Mobilising these voters may have a large impact on the development of a pro-poor water tariff. ²⁵⁵
Time frame	Medium term; Although the issue needs to be tackled as soon as possible, on overcoming of the political obstacles in the short term seems unlikely.

Water metering

A well-designed water tariff can set the right incentives for an efficient use of water and thus help to conserve natural water resources. However, it requires the installation of metering systems that measure the water consumption per household. Currently less than half of the households in Ulan Bator have a water metering system – this share needs to be increased.

²⁵⁵ The newly founded campaign “Value of Water” seems to be such a strategic alliance introducing the issue to the public and should thus be strengthened, cf. Zorig 2014.

Next steps	<ul style="list-style-type: none"> • As of now, the installation of metering systems is voluntary based on the idea, that a high enough flat rate for unmetered households will be incentive enough for them to install meters. However, the flat tariff is not high enough to provide such an incentive. <u>The installation of a water meter should thus be compulsory.</u> • At present the cost of installing a water meter has to be borne by the household itself. Usually four meters per flat are required and lead to an amount to be paid between 200.000 to 230.000 MNT. For reasons of equality and in order to speed up the process, the <u>installation should be financed on the public budget</u> instead and <u>conducted by a public agency</u> such as USUG or OSNAAG. • Explaining the necessity of water metering to the public is crucial for creating acceptance and increasing transparency in the sector. Thus, a <u>public awareness campaign</u> should be launched.²⁵⁶
Target organisation	MCUD, USUG, OSNAAG
Power structure	
Allies	USUG, OSNAAG
Complexity	High; As in the case of a water tariff reform, making water metering systems compulsory is a potentially politically sensitive topic. Due to the generally difficult financial situation of the sector, convincing policy makers of financing the installation of water metering systems will be challenging. Moreover, according to the WSRC there are technical issues to be considered – the installation of a water meter in buildings with old and rusty pipes is not always possible and these first have to be renewed. ²⁵⁷
Urgency	High; The average water consumption in the apartment area currently is as high as 270 litres per capita and day ^{258,259} and needs to be reduced significantly in order to reach an ecologically sustainable level. A vital step to lower consumption is the implementation of a water tariff incorporating a volumetric charge. For it to be effective, every household must be provided with a water metering system.
Assessment of prospects of success	The prospects of success depend on the financing options for the installation process. Making water metering compulsory may be an option only if the installation costs are borne by a public agency or a donor organisation. If, however, the households themselves have to cover the costs, policy makers may decline the water meter obligation for fear of the loss of voters.
Time frame	Medium to long term; Even under the assumption of a compulsory, fully financed installation for all households, the installation process will take some time.

²⁵⁶ The public awareness campaign should cover all relevant topics, e. g. both the issues of water tariff reforms and of water metering.

²⁵⁷ Bock 12/27/2013

²⁵⁸ Kamata et al. 2010, p. 28

²⁵⁹ More recent but unconfirmed sources suggest lower values.

Develop a microfinance approach for individual household connections in the Ger areas

Almost 800,000 people in Ulan Bator have no sufficient access to water and sanitation services. Even if the *Ger Area Redevelopment Programme* proves successful, it will take many years before the living conditions of all these people can be improved significantly. In addition to this top-down approach, however, the development of a microfinance programme to finance on-plot improvements for households in the Ger areas may be an option to increase their standard of living in the medium term.

Next steps	<ul style="list-style-type: none"> • Assess the prospects of a microfinance approach: <ul style="list-style-type: none"> ○ Do households in the Ger areas have both a sufficient <u>ability and willingness to pay</u> for investments of their plots? ○ What options are <u>both technically and financially feasible</u>, e. g. individual household connections, septic tanks, etc.? ○ Which <u>Khorroos</u> come into consideration regarding the average income of their residents and their distance to existing infrastructure networks? ○ What monthly repayments are affordable for the households? Which interest rate is appropriate? • Find <u>allies</u> for financing and implementing the project: <ul style="list-style-type: none"> ○ Who can provide the necessary <u>funds</u> for issuing microloans? Who is capable of conducting the lending process? ○ Who can <u>raise awareness</u> among the residents of the respective Khoroo? Are there any local NGOs or CBOs in the communities which could <u>encourage the people to participate</u> in the project and – if necessary – help them to improve their financial literacy?
Target organisation	International organisations
Power structure	The immediate participation of any government bodies in the project is not necessary. However, their indirect support is required, e. g. for granting building permits.
Allies	NGOs, CBOs
Complexity	High; Building water infrastructure in the Ger areas is technically highly challenging, even more so if the costs need to be kept low for reasons of affordability. The disposal of wastewater is particularly difficult as the existing central wastewater treatment system already is severely overloaded and there may not be sufficient free space in the Ger areas for the construction of decentralised solutions, e. g. septic tanks shared by several households.
Urgency	Medium
Assessment of prospects of success	Low to Medium; As the government agencies currently are focusing on GARP, it is unclear if there would be any support for a microfinance approach. Moreover, it remains to be seen if there indeed are an ability to pay high enough to bear the costs for the improvements and international and local organisations willing and able to participate in such a project. Nonetheless, issuing microloans to Ger area residents may be an effective addition to GARP, especially as it could help to strengthen local communities through participation.
Time frame	Medium term

7.2.2 STRENGTHEN THE INFORMATION CAPABILITY OF THE SECTOR

Albeit stipulated by law, there still is no comprehensive database covering the different areas of the water sector in Mongolia and data on water quality and consumption is not always easily accessible even for those working for the relevant agencies. However, improving information management in the sector could help to operate more efficiently and be the basis for well-grounded policy and decision making.

Next steps	<ul style="list-style-type: none"> • The <u>management of data and information</u> in the water sector needs to be <u>institutionalised and coordinated by a single agency</u>, for example the NWC: <ul style="list-style-type: none"> ○ The responsible agency should <u>analyse the information capability</u> of the sector, identify its deficiencies and develop a plan to improve the information management – which information is needed, who can provide it, and how can the data be made accessible? ○ <u>Standardising</u> the process of passing on information from the different organisations to the coordinating agency helps to generate a routine and to ensure a steady flow of information. ○ <u>Setting incentives</u> encouraging information sharing and rewarding cooperation strengthen the information capability of the sector. • The coordinating organisation should prepare and realise the implementation of a <u>comprehensive database</u>: <ul style="list-style-type: none"> ○ Ideally, the database should cover both aspects of the water supply and sanitation as well as the management of water resources for all of Mongolia in order to enable the actors in the water sector to a well-informed decision making. ○ The data should be <u>easily accessible</u> by all actors involved in the water sector as well as to interested outsiders. ○ The database should be accessible <u>online</u>.
Target organisation	NWC, whole water sector
Power structure	There are no immediate political obstacles. However, a general reluctance to share information can be observed oftentimes in Mongolia.
Allies	Whole water sector
Complexity	Medium; While the complexity of the development of a information management plan and the provision of the technical infrastructure seems to be manageable, ensuring a high quality of information is more challenging and it needs to be well defined which agency is the most appropriate to collect information on water quality and water resources.
Urgency	Medium to high; A better foundation for decisions and policies can increase the sector performance significantly.
Assessment of prospects of success	The success of an effective management of information depends on the participation of the different organisations and their employees in particular. Integrating them into the process and providing them with incentives to share their knowledge and information are vital. Moreover, ensuring a high quality of information is crucial and measuring physical and chemical variables may require advanced technology and well-trained staff.
Time frame	Medium term

7.2.3 STRENGTHEN THE ORGANISATIONAL SETUP

Although the NWC already has been improved considerably, coordination and cooperation between the agencies in the water sector still are weak.

Next steps	<ul style="list-style-type: none"> • Further <u>strengthen the NWC</u>: <ul style="list-style-type: none"> ○ <u>Meetings</u> of the <i>National Committee</i> should take place <u>on a regular basis</u>, for example once every three to four months. ○ <u>New instruments and tools</u> to coordinate the sector have to be developed in addition to the meetings of the <i>National Committee</i>. ○ According to the NWC, a major obstacle to a good performance is the lack of <u>human resources</u>. Thus, the possibilities to employ new well-trained members of staff should be explored. • Currently the sector is highly fragmented, both on a horizontal and a vertical scale. This <u>fragmentation should be decreased</u> in order to reduce the need for inter-agency coordination and cooperation in the sector. One option might be to <u>structure the sector based on functions</u> as suggested by Livingstone et al.²⁶⁰ By ensuring that the responsibilities for policy making, regulation and monitoring, etc. are concentrated each in one single organisation, water resources and services can be managed more efficiently, see Figure 11.
Target organisation	NWC
Power structure	It is likely that there are significant political barriers, especially with respect to the restructuring of the sector based on functions, e. g for the fear of losing power of current policy makers. Also expanding the staff of the NWC may face difficulties, particularly due to the lack of financial resources.
Allies	
Complexity	<p>Medium to high;</p> <p>The development of well-working coordination instruments needs to consider the specific political conditions in Mongolia but is a feasible task. Restructuring the sector, on the other hand, is a very complex problem. Finding an organisational setup that not only reduces fragmentation and rests upon the different functions of the sector but is also politically realisable is exceedingly difficult and many different opinions and preferences have to be balanced. To which degree a resulting compromise indeed would improve the performance of the sector is unclear.</p>
Urgency	Low to medium
Assessment of prospects of success	It is necessary to strengthen the organisational setup of the water sector in order to enable it to work both effectively and efficiently. A reorganisation based on functions certainly is very challenging in terms of political resistance and complexity. Hence, strengthening the NWC should be the first step to stabilise the sector and foster a better coordination.
Time frame	<p>Short term (Strengthening the NWC);</p> <p>Long term (Reducing fragmentation, restructuring the sector)</p>

²⁶⁰ Livingstone et al. 2009

7.2.4 REDUCE INCONSISTENCIES AND THE INFLUENCE OF POLITICAL CHANGE

The direct effects of political changes on the water sector weaken its performance and create inefficiencies. One of the results is a piecemeal development of the policy and legal framework which includes inconsistencies and unclear lines of responsibility.

Next steps	<ul style="list-style-type: none"> • Ideally, the legal framework – namely the <i>Law on Water</i> and the <i>Law on Utilization of Urban Settlement’s Water Supply and Sewage</i> – should be revised based on an <u>in-depth legal analysis</u>: <ul style="list-style-type: none"> ○ Where are there gaps and/or overlaps leading to <u>unclear responsibilities</u>? ○ Is it possible and useful to <u>ensure the political independence of key organisations</u> such as the NWC <u>by law</u>? ○ Where are there inconsistencies and <u>vague definitions</u> that need to be specified? • One way to reduce the influence of political change on the sector is the <u>participation of the private sector</u>. However, a commercial provision of water and sanitation services involves the risk of an increase in water prices and resulting affordability problems of low income households. The opportunities and threats of a private sector participation thus at first have to be analysed and evaluated: <ul style="list-style-type: none"> ○ Is a private sector participation in the provision of water services legally possible or does the <u>legal framework</u> need to be adjusted? Are there specific requirements and rules for private companies that wish to operate in the water sector? ○ As a private company provides water services only in expectation of making profit, a strong institutional setup of the government agencies is required in order to guarantee an affordable service provision to all parts of the population under consideration of environmental concerns. Are the <u>institutional setup and the law enforcement in Mongolia</u> strong enough?
Target organisation	MCUD, MEGD, UB Municipality
Power structure	
Allies	International organisations
Complexity	As a provision of water services in Mongolia is very expensive because of the harsh climate, a private company would have to charge comparatively high water prices in order to make a profit. Finding a compromise between the demands of the private sector and social requirements is challenging. Moreover, the development of a governmental organisation to supervise the service provision is strictly necessary.
Urgency	Low

<p>Assessment of prospects of success</p>	<p>The experience of many developing countries in opening the water sector to private participation shows that establishing a well-working water service provision without denying low-income households the access to water is very difficult. A successful balancing of social and environmental concerns and profit-seeking requires a very strong institutional setup and law enforcement. In Mongolia, this is not the case. Given the current financial difficulties and the strong impact of political change, investigating the opportunities and risks of a private sector participation certainly is advisable. Nonetheless, it should be kept in mind that the decision to privatise the provision of water services can be very difficult to reverse and should thus not be made lightly.</p>
<p>Time frame</p>	<p>Medium to long term</p>

8

PUBLICATION BIBLIOGRAPHY

Action Contre La Faim Mongolia (2013a): Ministry of Construction and Urban Development. Organizational Structure and Strategy. Ulan Bator, Mongolia.

Action Contre La Faim Mongolia (2013b): Ministry of Environment and Green Development. Strategy, management and activity for implementation of water policy. Ulan Bator, Mongolia.

ADB (2013a): Ulaanbaatar Urban Services and Ger Areas Development Investment Program. Draft Final Report. Vol. I - Main Report. Municipality of Ulaanbaatar; Japan Fund for Poverty Reduction. Ulan Bator, Mongolia.

ADB (2013b): Ulaanbaatar Urban Services and Ger Areas Development Investment Program. Draft Final Report. Vol. II - Appendices. Municipality of Ulaanbaatar; Japan Fund for Poverty Reduction. Ulan Bator, Mongolia.

Basandorj, D.; Singh, S. (2008): Improving local service delivery for the millennium development goals. Restoring the image of Blue Mongolia: Rural Water Supply & Sanitation. UNICEF; UNDP. Ulan Bator, Mongolia.

Bock, Franziska (10/23/2013): Water Governance in Mongolia. Interview with a representative of the Division of River Basin Management of the Ministry of Environment and Green Development of Mongolia. Ulan Bator, Mongolia.

Bock, Franziska (10/29/2013): Water Governance in Mongolia. Interview with representatives of the National Water Committee. Ulan Bator, Mongolia.

Bock, Franziska (11/6/2013): Water Governance in Mongolia. Interview with a representative of the Ministry of Construction and Urban Development. Ulan Bator, Mongolia.

Bock, Franziska (11/13/2013): Water Governance in Mongolia. Interview with a representative of the Administrative Department of the Water Services Regulatory Commission. Ulan Bator, Mongolia.

Bock, Franziska (11/25/2013): Water Governance in Mongolia. Interview with representatives of the Water Supply and Sewerage Authority of Ulaanbaatar City USUG. Ulan Bator, Mongolia.

Bock, Franziska (11/26/2013): Water Governance in Mongolia. Interview with a representative of the Ger Area Development Department of the Water Supply and Sewerage Authority of Ulaanbaatar City USUG. Ulan Bator, Mongolia.

Bock, Franziska (12/11/2013): Water Governance in Mongolia. Interview with a representative of Mongol Us. Ulan Bator, Mongolia.

Bock, Franziska (12/13/2013): Water Governance in Mongolia. Interview with a representative of the Japan International Cooperation Agency. Ulan Bator, Mongolia.

Bock, Franziska (12/16/2013): Water Governance in Mongolia. Interview with the Head of the Working Group of the Ulaanbaatar Municipality in Naran. Ulan Bator, Mongolia.

Bock, Franziska (12/19/2013): Water Governance in Mongolia. Interview with a lecturer of the Mongolian University of Science and Technology. Ulan Bator, Mongolia.

Bock, Franziska (12/27/2013): Water Governance in Mongolia. Interview with a representative of the Tariff Department of the Water Services Regulatory Commission. Ulan Bator, Mongolia.

Bock, Franziska (1/8/2014): Water Governance in Mongolia. Interview with a representative of the Asian Development Bank. Ulan Bator, Mongolia.

english.news.mn (2012): Action plan to develop Ulaanbaatar city approved. Ulan Bator, Mongolia. Available online at <http://english.news.mn/content/125806.shtml>, checked on 11/5/2013.

Gawel, Erik; Sigel, Katja; Bretschneider, Wolfgang (2011): Affordability of Water Supply in Mongolia - Empirical Lessons for Measuring Affordability. Helmholtz-Centre for Environmental Research (UFZ Discussion Papers, 09/2011).

Governor of Capital City and Mayor of Ulan Bator (2012): Action Plan for 2013-2016. Annex of decree 5/18. Ulan Bator, Mongolia.

Houdret, Annabelle; Dombrowsky, Ines; Horlemann, Lena (2014): Evolving River Basin Management in Mongolia? In Dave Huitema, Sander Meijerink (Eds.): The Politics of River Basin Organizations. Cheltenham: Edward Elgar.

Japan International Cooperation Agency (2009): The Study on City Master Plan and Urban Development Program of Ulaanbaatar City. Final Report Vol. I. Ulan Bator, Mongolia.

Japan International Cooperation Agency (2012): Study on the Strategic Planning for Water Supply and Sewerage Sector in Ulaanbaatar City in Mongolia. Interim Report. NJS Consultants Co., Ltd.; Tokyo Metropolitan Sewerage Service Cooperation. Ulan Bator, Mongolia.

Japan International Cooperation Agency (2013): Study on the Strategic Planning for Water Supply and Sanitation Sector in Ulaanbaatar, Mongolia. Draft Final Report: Supporting Report. Ulan Bator, Mongolia.

Kamata, Takuya; Reichert, James; Tsevegmid, Tumentsogt; Kim, Yoonhee; Sedgewick, Brett (2010): Managing Urban Expansion in Mongolia. Best Practices in Scenario-Based Urban Planning. Edited by World Bank. Washington D.C., USA.

Livingstone, Andrew J.; Erdenechimeg, Ch.; Oyunsuvd, A. (2009): Needs Assessment on Institutional Capacity for Water Governance in Mongolia. Government of Mongolia; UNDP Mongolia. Ulan Bator, Mongolia.

Ministry of Environment and Green Development of Mongolia (2012a): Integrated Water Management. National Assessment Report Volume II. Integrated Water Resources Management Project. Ulan Bator, Mongolia.

Ministry of Environment and Green Development of Mongolia (2012b): Tuul River Basin. Integrated Water Resources Management Assessment Report. Integrated Water Resources Management Project. Ulan Bator, Mongolia.

Mongol Us (n.d.): Монгол Ус. Төрийн Өмчит Уйлдвэрийн Газар. Leaflet in Mongolian.

National Water Authority of Mongolia (2011): Urban Water Vulnerability to Climate Change in Mongolia. Government of Mongolia; UNEP. Ulan Bator, Mongolia.

National Water Committee (n.d.a): Introduction of the National Water Committee. National Water Committee. Ulan Bator, Mongolia. Available online at <http://www.water.mn/index.php/en/ds/introduction>, checked on 10/30/2013.

National Water Committee (n.d.b): Structure of the National Water Committee. National Water Committee. Ulan Bator, Mongolia. Available online at <http://www.water.mn/index.php/en/ds/plan>, checked on 10/30/2013.

news.mn (2013): Яамны зарим үүргийг “Монгол ус”-д шилжүүлжээ. Online article on the activities that recently have been assigned to Mongol Us in Mongolian. Ulan Bator, Mongolia. Available online at <http://www.news.mn/content/164960.shtml>, updated on 12/12/2013, checked on 1/4/2014.

Parliament of Mongolia (1996): Law on State and Local Property, revised 1996.

Parliament of Mongolia (2004): Law on Water. Ulan Bator, Mongolia.

Parliament of Mongolia (2010): National Water Programme. Ulan Bator, Mongolia.

Parliament of Mongolia (2012a): Law on Utilization of Urban Settlement's Water Supply and Sewerage. Ulan Bator, Mongolia.

- Parliament of Mongolia (2012b): Law on Water. Ulan Bator, Mongolia.
- Prime Minister of Mongolia (11/26/2012): Rules and Regulations of the National Water Committee. Attachment to the Prime Minister Decree No. 75, dated 2012.
- Saleth, R. Maria; Dinar, Ariel (2004): The Institutional Economics of Water. A Cross-Country Analysis of Institutions and Performance. Cheltenham, UK, Northampton, MA, USA: Edward Elgar Publishing.
- Saleth, R. Maria; Dinar, Ariel (2005): Water institutional reforms: theory and practice. In *Water Policy* 7 (2005), pp. 1–19.
- Sigel, Katja (2012): Urban water supply and sanitation in Mongolia: A description of the political, legal, and institutional framework. Helmholtz-Centre for Environmental Research (UFZ Discussion Papers, 01/2012).
- UNCTAD (2012): Voluntary Peer Review of Competition Law and Policy. Mongolia. Edited by UN. New York, USA, Geneva, Switzerland.
- UNDP Mongolia (2013): Mongolia's National Strategy on Green Development. Leaflet on UNDP Mongolia's 4th Development Dialogue on 29 March 2013. Ulan Bator, Mongolia. Available online at <http://www.undp.mn/dialogues/dd/dialogue4eng.pdf>, checked on 10/25/2013.
- Unger, Janine (2013): Institutional Analysis of the Urban Drinking Water Supply and Sanitation Services in Ukraine and Mongolia. A Comparative Study. Master's Thesis. Humboldt University of Berlin. Faculty of Agriculture and Horticulture.
- Vitens Evides International (n.d.a): Capacity Development to Improve WSS Services. Internal report identifying the results of the Water Operators' Partnership with USUG.
- Vitens Evides International (n.d.b): Fact Sheet Mongolia. Available online at <http://www.vitens.nl/english/international/Documents/VEI-Mongolia-factsheet.pdf>, checked on 11/5/2013.
- Vitens Evides International (2012): New contracts for Vitens Evides International in Kenya and Mongolia. Available online at <http://www.vitensevidesinternational.com/news/new-contracts-for-vitens-evides-international-in-kenya-and-mongolia/>, updated on 6/22/2012, checked on 11/14/2013.
- Water Services Regulatory Commission (n.d.): Water Services Regulatory Commission of Mongolia. Undated leaflet. Ulan Bator, Mongolia.
- Water Services Regulatory Commission (2013): Presentation Introducing the Water Services Regulatory Commission. WaSH Forum 2013. Ulan Bator, Mongolia, 9/25/2013.
- World Bank (2007): Foundation for Sustainable Development. Rethinking the Delivery of Infrastructure Services in Mongolia. Washington D.C., USA.
- Zorigt, E. (2014): "Value of Water" campaign: UB's water supply risk. *Mongolian Economy*. Ulan Bator, Mongolia. Available online at <http://mongolianeconomy.mn/en/i/5154>, updated on 17.02.02014, checked on 3/10/2014.

9 ANNEX I: MISCELLANEOUS

9.1 LIST OF CONDUCTED INTERVIEWS

Table 3: List of Conducted Interviews

23 October 2013	Ministry of Environment and Green Development
29 October 2013	National Water Committee
06 November 2013	Ministry of Construction and Urban Development
13 November 2013	Water Services Regulatory Commission
25 November 2013	USUG
26 November 2013	USUG (Ger Area Development Department)
11 December 2013	Mongol Us
11 December 2013	Head of the Working Group Bayankhoshuu
12 December 2013	Governor of the 7th Khoroo of Songino Khairkhan
13 December 2013	JICA
13 December 2013	Head of the Working Group Tolgoit
16 December 2013	Head of the Working Group Naran
17 December 2013	Governor of the 3rd Khoroo of Songino Khairkhan
17 December 2013	Vice Governor of Bayanzьrkh
19 December 2013	MUST
27 December 2013	Water Services Regulatory Commission
08 January 2014	ADB
09 January 2014	UNICEF

9.2 THE ORGANISATIONAL SETUP OF MONGOLIA'S WATER SECTOR

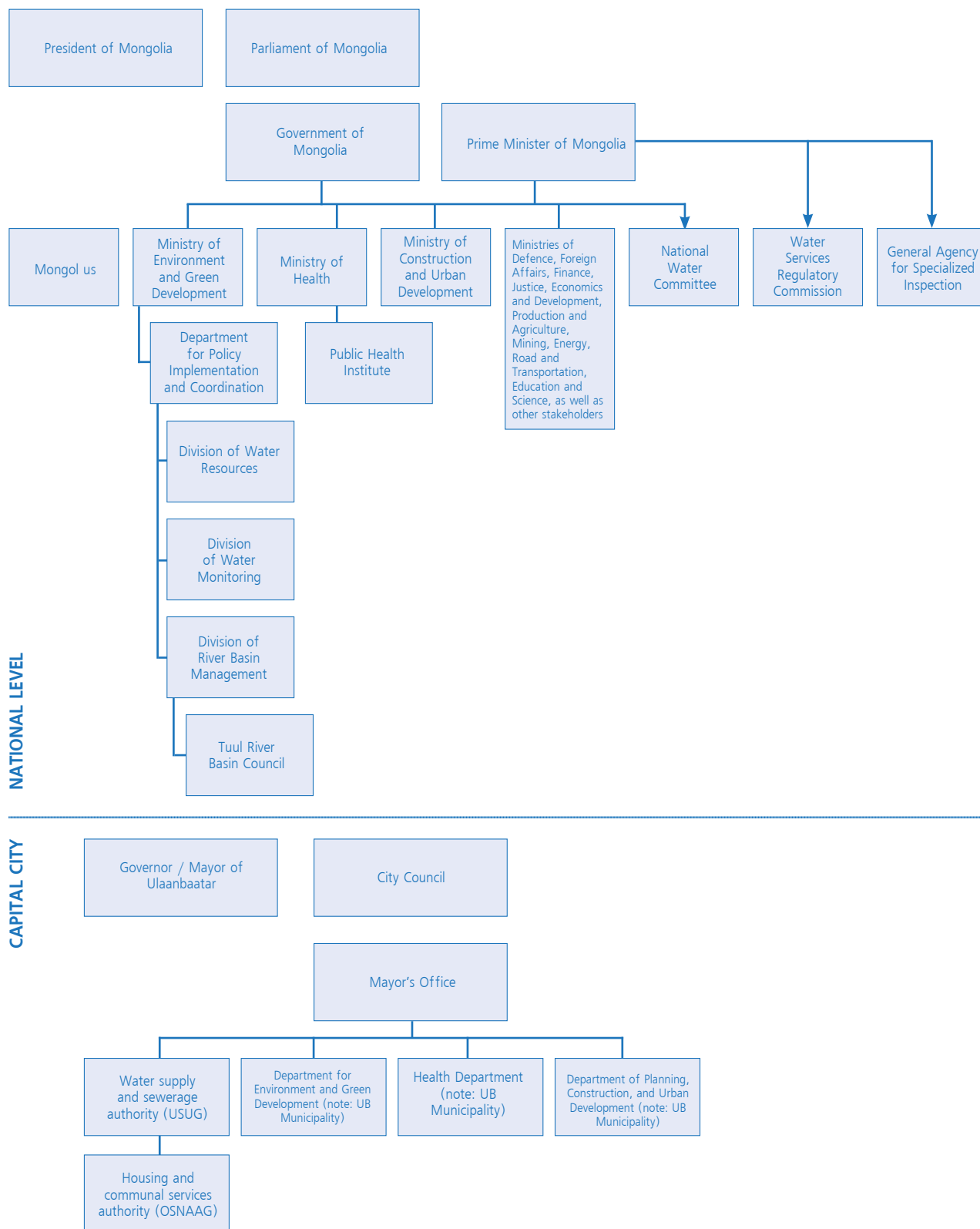


Figure 10: Organisational Structure of the Water Sector of Mongolia and Ulan Bator²⁶¹

261 Own compilation loosely based on Houdret et al. 2014; Unger 2013; Sigel 2012

9.3 PRESENT TARIFF SCHEDULE FOR WATER SUPPLY AND SANITATION SERVICES

Table 4: Retail Tariff Schedule of USUG²⁶²

Service Category		MNT / m ³ (VAT excl.)
Central area water supply	Citizens in Ger area	250.91 *
	Residential apartments (metered)	167.27
Central area sewerage	Citizens in Ger area	147.00 *
	Residential apartments (metered)	98.00
Truck water supply area	Citizens in Ger area (supplied via kiosk)	909.09
	Citizens in Ger area (directly supplied by truck)	1,818.18

The most recent tariff revision was approved in 2010²⁶³; The respective components are marked with an asterisk (*).

Table 5: Retail Tariff Schedule of OSNAAG²⁶⁴

Service Category		MNT / m ³ (VAT incl.)
Residential uniform linear tariff (metered)	Water	319.78
	Wastewater	183.48
Residential fixed tariff (unmetered)	Water	3,201.58
	Wastewater	1,465.93
Wholesale price from USUG to OSNAAG	Water	281.00
	Wastewater	161.70

These tariffs, too, were revised in 2010 based on the Decree No. 55.

9.4 FINANCIAL STATUS OF USUG

Table 6: Summary of USUG's income statement²⁶⁵

	2010 (mio. MNT)	2011 (mio. MNT)
Revenue from water supply	12,900	14,851
Cost for water supply	14,065	14,947
Subtotal	- 1,165	- 96
Revenue from wastewater treatment	7,261	8,364
Cost for wastewater treatment	5,805	6,735
Subtotal	1,456	1,629
Other revenues (net)	171	230
Profit from operations	462	1,763
- Operating expenses	3,457	3,253
Total	- 2,995	- 1,490

²⁶² Japan International Cooperation Agency 2013, pp. 3–17

²⁶³ Bock 11/13/2013

²⁶⁴ Japan International Cooperation Agency 2013, pp. 3–18

²⁶⁵ Japan International Cooperation Agency 2012, pp. 3–45

Table 7: Revenues and expenditure for the provision of water services in the Ger area²⁶⁶

	2011 (mio. MNT)
Water supply by truck in the Ger area	
Revenue	593.7
Expenditure	3,778.8
Subtotal	- 3,185.1
Water supply by water kiosk in the Ger area	
Revenue	692.4
Expenditure	3,714.2
Subtotal	- 3,021.8
Total	- 6,206.9

Unfortunately, hard data and especially financial data are hard to come by. Hence, information on 2012 could not be found. However, an interviewee from USUG stated that operational losses during the last years have been increasing.²⁶⁷

²⁶⁶ Japan International Cooperation Agency 2012, pp. 3–45
²⁶⁷ Bock 11/25/2013

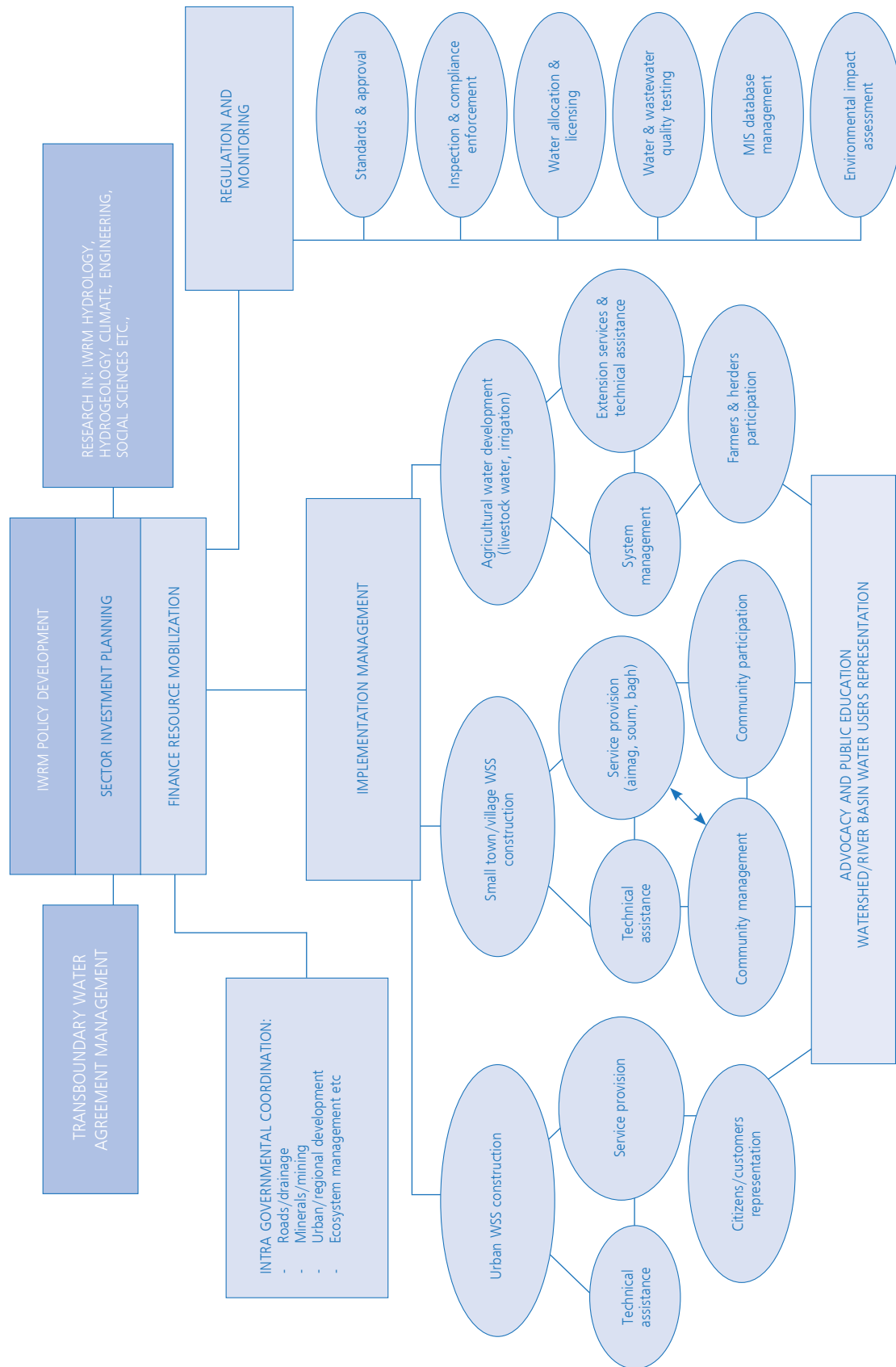


Figure 11: Structure of the Water Sector Based on Functions²⁶⁸

268 Livingstone et al. 2009, p. 32

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**ANNEX II:
WORKSHOP**

On 23 January 2014, ACF hosted a workshop for the presentation and discussion of the results of the institutional analysis in Ulan Bator.

10.1 PARTICIPANTS

Representatives of the Ministry of Construction and Urban Development, the Ministry of Education and Science (MEDS), the Ministry of Environment and Green Development, Mongol Us, the Mongolian University of Science and Technology, the National Water Committee, UNICEF, USUG, the Water Services Regulatory Commission, and ACF participated in the workshop and the discussion groups.

10.2 DISCUSSION GROUP 1:

Decoupling the Sector from Political Change

Political change affects the sector in many different ways.

- With a new government, state agencies – even ministries – are commonly reshaped, newly created, and disbanded
- There is a large staff turnover as freshly elected leading politicians place like-minded people in important positions
- One government might reform the law, the next one the institutional setup – as a consequence, the fit between the relevant legal framework and the organisational setup is low

These inconsistencies drastically reduce the sector's implementation capability and are a crucial obstacle to the provision of water and sanitation services.

Can we overcome this issue and decouple the sector from political changes?**Results**

- The process of filling the most important political positions is highly influenced by politics at a national level. In order to tackle a problem successfully, the support of somebody at this highest level is crucial. The setting of water tariffs is a very political issue.
- While non-specialists are appointed by politicians, specialists in the water sector work at an intermediate and implementing level. However, the employment of specialists should be defined by law.
- The following ministries are responsible for developing water policy:
 - o Ministry of Environment and Green Development
 - o Ministry of Industry and Agriculture
 - o Ministry of Health

- o Ministry of Construction and Urban Development
- o Ministry of Energy
- If an existing policy programme is continued after a political change depends on the new government. Between October and December 2013, the resolutions 326, 327, 390, and 391 were approved in order to strengthen the continuity of policy programmes.
- The River Basin Organisations²⁶⁹ have been carrying on their activities and are fully financed under the government budget.
- The management of the river basins is to be done by the River Basin Organisations, not by the local administrative units. 29 River Basin Organisations in total are to be established, 23 of which were already installed.
- The National Water Programme was approved in 2010.
- The full implementation of the developed policy programmes is vital. Resolution 257, approved in 2012, was created to ensure a translation of water policy to the river basin level.
- A law introducing fines for the pollution of water was recently introduced (Law of Mongolia on Natural Resources Use).
- At least 55 per cent of the collected fines for the pollution of water are to be used for the conservation and restoration of natural water resources. However, as these funds are not sufficient, further activities will be financed under the government budget.
- The relationship between Mongolia and Russia as well as China regarding the transboundary waters has been free of conflict. The issue is discussed twice per year at regular meetings. The vice minister of the Ministry of Environment and Green Development acts as the head of this working group.
- A Russian delegation is expected to visit Mongolia for a discussion meeting in early February.
- In Mongolia, 500 NGOs are active in the field of environmental issues, 300 of which operate in the water sector. The so-called Water Partnership was established as an umbrella body to unite the NGOs and to encourage the cooperation between private and state organisations.
- MP Battsoigt is the head of the Water Partnership. In December 2013, a forum was held in order to transfer state responsibilities to the private sector.
- The group has been preparing for over six months to lobby for a better water management in the Mongolian national parliament.
- A policy dealing with technological solutions for saving water was created. It is to be introduced on a river basin level.

10.3 DISCUSSION GROUP 2:

Encouraging a Better Information Management

The water sector is characterised by a large degree of fragmentation, making a sound coordination and a close cooperation between the different agencies vital for an efficient and effective implementation. However, as of now, the information management is weak and needs to be improved.

Can we improve the information capability of the sector?

- Can we standardise the process to reduce the amount of work and complexity for the agencies' staff?
- Can we set the right incentives for a proper information management and reward the cooperation?

²⁶⁹ Author's note – it is unclear if the term River Basin Organisation refers to the River Basin Authorities or the River Basin Councils.

- Can we create a comprehensive central database that is openly accessible by all people interested in the sector?

Results

- Information management in the sector today:
 - Currently, every ministry has its own database and system of information management, e. g. information on water resources at the Ministry of Environment and Green Development, on sanitation at the Ministry of Health, on the utilisation of water at the Ministry of Construction and Urban Development, on irrigation at the Ministry of Agriculture, on hydropower at the Ministry of Energy, etc.
 - The information exchange between the ministries is insufficient. Depending on factors such as politics, convenience or interest, there is a lack of information exchange. Moreover, every ministry has its own policy on information management. Specialists working not only for a ministry but for several organisations do not share all of their information.
 - Although a better information management has been introduced into law, a proper implementation is yet to be accomplished.
 - The responsibility for information exchange in the water sector lies with the National Water Committee, which reports directly to the prime minister.
 - Belonging to the government, the National Water Committee is highly dependent on politics and regularly affected by political changes. Its members are sometimes selected due to political factors instead of based on their qualifications.
 - During the socialist regime, only one ministry was responsible for water management and thus able to collect comprehensive information on the water sector.
 - The Law on Water is not sufficient and all regulations covering the management of water should be combined.
 - In other countries such as Japan, private companies, which are not directly affected by political changes, are responsible for the provision of water services and the respective information management.
- Starting points for improving information management:
 - The establishment of one ministry where all information related to water management and the respective policies is collected
 - The creation of a centralised database independent of the ministries and under the responsibility of the National Water Committee
 - The opening of the water sector for a participation of the private sector for the provision of water services
 - Information should be readily available online
 - There are two types of information – confidential and non-confidential; the information management of the water sector should thus be under the National Security Association
 - The discussion of water-related issues should be institutionalised and take place regularly, e. g. on an annual basis on the World Water Day

10.4 DISCUSSION GROUP 3:

The Prospects of a Microfinance Approach

The financial situation of the water sector in Mongolia is notoriously weak. In spite of international donors' financial assistance and the country's recent economic development, a fully cost recovering operation will not even be reached with the currently discussed tariff reform. Moreover, the beginning implementation of the Ger Area Redevelopment Programme has been discussed controversially and not all residents of the Ger areas are willing to exchange their own land for a flat.

Is the development of a microfinance approach to support the Ger area residents in financing an individual connection of their plot to the central water and sewage network an option?

- Can we find international organisations and local financial institutions to support such a project?
- Can the residents' willingness to pay be high enough for such a project or is the construction simply too expensive given the conditions?
- How can we not only increase the residents' awareness but also encourage their participation?

Results

- Two crucial issues requiring financial investments have been identified:
 1. The maintenance of the existing infrastructure and the cost recovery of the water service provision
 2. The upgrading of the washing facilities in the Ger areas
- The structure of the water tariff needs to be revised in order to ensure a cost recovering provision of water services and the creation of a fund for the financing of the maintenance of existing infrastructure facilities.
- Moreover, a cross-subsidising component should be incorporated into the tariff structure so that the provision of water services in the Ger areas is partly financed by the revenues generated from the service provision to the residents of the apartment area.
- A study conducted on behalf of the ADB shows that many Ger area households have both the affordability and the willingness to pay to invest in the improvement of their plots, including individual water connections. This might be the starting point for the development of a new approach of infrastructure provision in the Ger area. Different tools of urban planning could be applied, e. g. cross-financing of government funds and the involvement of citizens.
- The development of feasible technical solutions for the provision with drinking water as well as the disposal and treatment of wastewater in the Ger areas must be the first step.
- The participation of the local communities in the planning process is crucial in order to overcome problems of consensus and acceptance as well as to design a microfinance approach for the Ger areas
- The discussion group suggests the following order of steps:
 1. Identify feasible technical solutions at a neighbourhood level
 2. Estimate the affordability of the residents
 3. Integrate government agencies, international organisations and the communities in the project