1. What conflicts exist in your country between different types of water uses (e.g. agriculture, industry, tourism, among others?) What are the main challenges in your country concerning water resources and wastewater management that impact the realization of human rights?

Germany is a water rich country. It uses only 20% of its available freshwater resources. There are some regions, where water quantity may cause seasonal problems in case of extreme dry periods. Therefore water quality issues are in the focus of German water management, not quantity issues. The water quality issues are tackled on the basis of national and EU water law, with regard to pollution by point and diffuse sources, the latter especially with regard to nutrients. The river basin management plans and programmes of measures according to the EU Water Framework Directive as well as measures based on national law are the main instruments to prevent or to reduce discharges of dangerous substances, which cause problems for chemical and ecological water status. Further information is available, if needed.

With regard to access to water and sanitation there are no main challenges in Germany:

**Water supply**

In Germany, around 99.2% of the population are connected to the centralised public water supply. Around 700,000 citizens were supplied with water from some 185,000 private wells (assigned to private houses or villages). While the level of connection to central water supply is expected to increase slightly in future, a significant proportion of the rural population will continue to be supplied from private wells. This is expedient for hygiene, technical and economic reasons. The pipelines of the central drinking water supplies that supply only one or only a few delivery points in remote areas can experience lengthy periods of stagnation, representing a hygiene risk. In certain cases, connecting remote properties to the central drinking water supply via pipework would also entail significant costs, not always ensuring proportionality of technical and economic input. One central task is to improve access to information and support for owners of private wells, enabling them to continuously supply drinking water that meets the requirements of the Drinking Water Ordinance.

The Joint Monitoring Programme (JMP) of the World Health Organisation (WHO) and the United Nations International Children’s Emergency Fund (UNICEF) makes a distinction between drinking water supplies that, by virtue of their design or the type of raw water, are better-suited to adequately protect against contamination and therefore supply safe drinking water (improved sources), and those which are unsuitable or less suitable for this purpose (unimproved sources).

All facilities in the central public drinking water supply system in Germany are rated as the JMP category improved. The drinking water sources primarily used in Germany for private
wells (such as protected boreholes, protected dug wells and protected springs; on properties with a purely piped design) are likewise classed as improved according to JMP categories. Thus, according to JMP-definition 100 % of the population in Germany have access to improved drinking water supplies.

**Sanitation**

100 % of the German population are connected to collective sanitation systems or other means of sanitation.

The Joint Monitoring Programme (JMP) of the World Health Organisation (WHO) and UNICEF makes a distinction between sanitation systems that, by the nature of their construction, ensure that human waste is hygienically separated from human contact (improved sanitation facilities), and those which do not (unimproved sanitation facilities).

All sanitation facilities in Germany are rated as the JMP category improved. According to JMP report, 100 % of the German population has access to a hygienic sanitation facility as defined by the JMP.

96 % of the German population is connected to public sanitation facilities. The remainder of the population has decentralised sanitation systems such as small-scale waste-water treatment plants or septic tanks, the contents of which are disposed of at regular intervals. The remaining small percentage has access to decentralised sanitation. There are no plans for a general increase in the level of connection to central systems. In rural regions, the choice of centralised or decentralised sanitation is a cost consideration.

2. How are different water uses prioritized in national legislation and policies? How are these priorities implemented in practice? Are there any implementation challenges? If yes, please elaborate them and on measures taken to overcome them.

There is no legally based prioritisation of water uses in Germany, due to the above mentioned sufficient water resources.

The Federal Water Act contains a general provision according to which at the application of an affected party or by official initiative, the nature, scope and periods of exercising permits, licences, existing rights and existing authorisations may be regulated or limited by a compensatory procedure if the quantity and quality of the water is not adequate for all uses, or if the uses adversely affect one another, and provided this is in the public interest, particularly in the interest of public water supply.

3. What strategies, approaches and mechanisms guide water resources and wastewater management? How do these ensure that the basic needs of the entire population are met?

Legal provisions on national and EU level are the bases for the competent authorities and bodies responsible for drinking water production and waste-water management in Germany. High technical standards have been developed in both sectors.

See more detailed information below, which could be further specified, if needed:
**Water supply**

Under the German Drinking Water Ordinance, the requirements governing drinking water quality must be met by all drinking water supplies, regard-less of their size, the quantity supplied, the number of persons served or organizational and ownership structures.

The quality of water supplied by the public drinking water supply in Ger-many is good. "Large-scale" water supplies (> 1,000 m³ per day or > 5,000 supplied individuals), which supply around 80 % of the population in Ger-many with drinking water, deliver a very good quality on average; meas-urements performed within the context of regulatory surveillance revealed that requirements were met and parametric values not exceeded in more than 99% of the cases for most microbial and chemical quality parameters.

The rate of water loss, as an average for Germany as a whole, is extremely low at 8.9 %.

In Germany, all groundwater is subject to the principle of national protec-tion. This has been fixed in national law, and more recently at the level of EC law, for example with the EC Water Framework Directive (Directive 2000/60/EC) and its Daughter Directive on the protection of groundwater against pollution and deterioration (Directive 2006/118/EC) which have been transposed into national law.

Article 7, paragraph (3) of the EC Water Framework Directive calls for the protection of bodies of water used for drinking water abstraction, with the aim of avoiding a deterioration in their quality and minimising the level of purification treatment required in drinking water production.

For example, water protection areas have been legally enforced for several decades in order to protect groundwater or surface water resources that are used or will be used for drinking water abstraction. Depending on the spe-cific protection needs of the area, certain activities such as the operation of petrol stations or agricultural fertilisation are prohibited in these 13,500 or so areas, which are generally comprised of three protected zones. This pre-vents groundwater resources from becoming contaminated with pollutants. In many areas, voluntary cooperation arrangements have existed between farmers and water supply companies for many years, which provide farmers with fixed-rate compensation for the loss of earnings associated with land use or fertilisation restrictions.

The EC Nitrates Directive (Directive 91/676/EEC) requires the observance of good agricultural practices and the preparation of action programmes to reduce nitrate discharges, whose effectiveness must be monitored. In Ger-many, the Nitrates Directive was transposed into national law in the Fertili-sation Ordinance (Düngeverordnung), which regulates the use of fertilisers, the storage of slurry etc. For more than ten years, various more extensive programmes have been in place in the Länder as well as the aforementioned cooperation arrangements between water utilities and agriculture aimed at reducing nitrate pollution.

Germany has comprehensive monitoring networks with numerous measur-ing sites for both surface waters and groundwater. The requirements govern-ing these monitoring networks are derived from national and European guidelines. They continuously monitor the water status and the impacts of any measures implemented, and serve as the basis for decision-making on the need for further measures.
The requirements of the Drinking Water Ordinance are considered to have been met, provided the generally acknowledged technical standards for water abstraction, water treatment and water distribution are applied. These standards are, amongst others, published by the Deutscher Verein des Gas- und Wasserfaches e.V. (German Technical and Scientific Association for Gas and Water, DVGW) as part of their technical regulations. There are currently some 300 technical standards in place detailing recognised good practices in planning, construction, operation and maintenance throughout all stages in the drinking water supply chain. Collective compliance with these good practices is intended to ensure a safe drinking water supply. The technical standards are updated regularly to reflect the latest scientific and technical developments.

The Ordinance on the General Conditions for Water Supply (AVB-WasserV), which regulates supply conditions between the water utilities and their connected customers, stipulates that the customer's equipment (i.e. the drinking water installations in buildings) must also comply with generally acknowledged technical standards.

Alongside technical standards, the DVGW's Technical Safety Management (TSM) system is a sector-specific management system for voluntary use by the water utilities which can also be subject to external auditing. Using the TSM strengthens the structural and procedural organisation of water utilities, raises qualification standards, and above all, boosts knowledge and application of the technical standards, which in turn promotes safe water supply. Germany currently has some 350 (as at the end of 2010) water utilities confirmed by a TSM.

**Sanitation**

The high level of performance achieved by sanitation systems in Germany is based on the relevant legislation and technical guidelines. These include Directive 91/271/EEC (Urban Waste Water Treatment Directive), the Federal Water Act (WHG) and the Ordinance on Requirements for the Discharge of Waste Water into Waters (Waste Water Ordinance) adopted on the basis of the Federal Water Act, together with the legislation and technical guidelines of Germany's 16 Federal Länder.

Directive 91/271/EC calls for the collection of waste water from households and small businesses and the reduction of organic pollution. It also requires the removal of at least 75% of phosphorous and nitrogen by public waste water treatment plants. Germany meets or exceeds these requirements. In Germany, around 90% of phosphorous and around 81% of the nitrogen is removed in public waste water treatment plants.

The Federal Water Act stipulates minimum nationwide requirements on the discharge of waste water into waters and therefore regulates the incidence, avoidance and treatment of waste water. Since 1996, these minimum requirements have been based on the best available technology. The permissible pollutant load is determined by the extent to which emissions can be minimised in a particular industry branch while observing technically and economically viable progressive techniques.

The Waste Water Ordinance adopted in 1997 defines the best available technology for waste water discharges, and now has 57 industry-specific Annexes, e.g. concerning domestic and public waste water as well as individual sectors of trade and industry. The individual segments regulated by the Annexes are subject to specific waste water requirements, which are updated in accordance with the development of best available technology.
The Federal Water Act also stipulates that waste water installations may only be constructed, operated and maintained in accordance with the generally acknowledged technical standards. These technical standards may be based on the regulations of the respective trade associations or DIN standards.

In Germany, there are currently some 10,000 public and around 3,300 company and industrial waste water treatment plants. The majority of public waste water treatment plants are small to medium-sized plants. There are some 545,000 km of public sewers in Germany.

Decentralised sanitation must likewise comply with the technical standards – for example, as a general principle, small-scale waste water treatment plants must fulfil the requirements of Annex 1 to the Wastewater Ordinance.

The German Waste Water Charges Act regulates the levying of charges for the direct discharge of waste water into a water body. The charge is based on the volume and toxicity of certain discharged constituents, further details of which are regulated in an Annex to the Act. The fee per contaminant unit is currently € 35.79.

Fees for the treatment of waste water are payable by all producers of waste water, including private households. The fee levels vary according to region. They are determined by the local authorities responsible for waste water disposal based on the local conditions (location, geology, density of population, development stage of waste water treatment plants etc.). The average waste water fee was € 2.29 per m³.

4. How does your government ensure transparency, access to information and participation in decision-making regarding water resources and wastewater management?

In Germany and Europe, there is a wealth of information available regarding the quality of drinking water, bathing waters and other water quality-related criteria.

**Water quality and waste water**

There is a wealth of information available from the Federal Environment Ministry and the Environment Ministries of Germany's 16 Federal Länder regarding the quality of water and water bodies. Cf. http://www.bmu.de/english/water_management/aktuell/3868.php and the homepages of the Länder, a list of which may be found under the following link, http://www.lawa.de/Links.html. Links to the websites of international river basin commissions and national river basin communities, which regularly publish reports on water quality, can also be found here. These pages are updated at regular intervals, generally in line with the mandatory reporting cycles, especially at European level.

**Examples**
The German Länder and the competent water and/or health authorities publish information on the quality of bathing waters on the Internet and in up-to-date brochures. For a selection of links, reference is made to the home-page of the Federal Environment Ministry at http://www.bmu.de/themen/wasser-abfall-boden/binnengewaesser/badegewaesser/

European Directives such as the EC Public Waste Water Directive (cf. point e) above) require EU Member States to submit regular reports for evaluation by the European Commission and publication on its homepage.

At regular intervals, the Federal Statistical Office (www.destatis.de) compiles official national data on various aspects of public and non-public water resources management, such as water abstraction and water use, water supply and waste water disposal, differentiated according to the 16 German Länder, industry segments etc. For example, reference is made to the extensive collection of data on the nature and extent of the sewer system and rainwater treatment in Germany published in September 2009, at https://www.destatis.de/DE/ZahlenFakten/GesamtwirtschaftUmwelt/Umwelt/UmweltstatistikheErhebungen/Wasserwirtschaft/Wasserwirtschaft.html. The statistical surveys are based, inter alia, on the German Environmental Statistics Act.

The European Water Information System WISE http://water.europa.eu/, provides information on European water protection directives and the status of their implementation in the 27 EU Member States, alongside up-to-date data on water quality etc.

**Water supply**

As required by Article 13 of the EC Drinking Water Directive, every three years the BMG and the UBA publish a consumer information report on the quality of drinking water in Germany. This report, which is drawn from annual drinking water quality reports from the Federal States (Länder), covers large-scale water supplies, including the related pipeline network and domestic drinking water installations, that deliver more than 1,000 m³ per day on average, or that supply more than 5,000 people, for which reporting is mandatory. It does not include small-scale water supplies that supply fewer than 5,000 people and deliver less than 1,000 m³ per day, nor does it include private wells.

Under the Drinking Water Ordinance, the competent authorities are responsible for ensuring that consumers receive accurate information about their drinking water. The water utilities must provide the necessary up-to-date information. They publish information on the general quality of drinking water in the daily newspapers, in their own or official bulletins or on the Internet. Water utilities must notify the general public, home-owners and residents about the condition of a drinking water installation if there are potential restrictions on usage, for example in the case of lead pipes.

In the event of a deviation from parametric values or temporary drinking water usage restriction, the authorities and water utilities must immediately disclose the precise circumstances surrounding the reduction in drinking water quality, the actual or potential effects, and possible remedial action. Under the EC Drinking Water Directive and Drinking Water Ordinance, there is a special obligation to notify particularly vulnerable population groups.
Participation in decision-making

The national water acts on Federal and federal states level as well as general acts on administrative procedures foresees participation of the public or relevant stakeholders in licensing procedures concerning special water uses or water management projects and plans or programmes. Those provisions are in conformity with relevant EU directives on public consultation and information, on environmental impact assessment (e.g. Directives 85/337/EC or 2001/42/EC) and water management directives (e.g. the EU Water Framework Directive 2000/60/EC) as well as with relevant interna-tional law like the UNECE Espoo and Aarhus Conventions.
More detailed information can be provided, if needed.

5. In your Government’s view, should water resources and wastewater management be reflected in the Sustainable Development Goals/post-2015 development framework?

There is no fully coordinated position of the German Government on the elements of the Sustainable Development Goals/post 2015 development framework yet. However, given its crucial role for sustainable development and poverty eradication water as a whole (including sanitation) should be given adequate attention in the post 2015 agenda. Access to clean drinking water and sanitation for all, water resources and wastewater management are key components for human development due to their important inter-linkages with energy and food security as well as with human health and protection of ecosystems and biodiversity. These interlinkages should also be given adequate attention in the post 2015 agenda. Germany is committed to a human rights-based approach in all sectors and priority areas of cooperation and supports its partners around the world in implementing the hu-man right to water and sanitation.