Systemic relationship between SDG Goal 6 Targets and SDG Goal 1 Targets

SDG # 6 Ensure availability and sustainable management of water and sanitation for all	**SDG # 1: End poverty in all its forms everywhere**						
	1.1 **Eradicate extreme poverty for all people everywhere,** currently measured as people living on less than $1.25 a day	**1.2 Reduce at least by half the proportion of men, women and children of all ages living in poverty** in all its dimensions according to national definitions	1.**3 Implement nationally appropriate social protection systems and measures** for all, and achieve substantial coverage of the poor and the vulnerable.	1.4 Ensure that **all men and women, in particular the poor** and the vulnerable, **have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources,** appropriate new technology and financial services, including microfinance	1.5 **Build the resilience of the poor and those in vulnerable situations** and **reduce their exposure and vulnerability to climate-related extreme events** and other economic, social and environmental shocks and disasters	1.a Ensure **significant mobilization of resources from a variety of sources**, including through enhanced development cooperation, in order **to provide adequate and predictable means** for developing countries, in particular least developed countries, **to implement programmes and policies to end poverty** in all its dimensions	1.b **Create sound policy frameworks** at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, **to support accelerated investment in poverty eradication actions**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all.	**Indirect/ Inverse relationship** Provisioning and delivery of clean, safe and affordable drinking will no doubt have an increasing monetary value in the future as water becomes more scarce, and will require some form of technology and infrastructure investment to treat and deliver potable water to different people. Moreover, the ability of people to pay for this resource (as it is doubtful that it will be free given its scarcity) is dependent on eradicating poverty will be key to ensure equitable access.	**Indirect/ inverse relationship** Similar relationship to 6.1, since reducing by half or more the proportion of people living in poverty will likely assist with having more people, especially women and children, be able to afford and access clean and safe drinking water. This is not guaranteed though.	**Direct / Parallel relationship** UN Social Protection Floor (SPF) initiative is made up of two main elements. The first is: "ensuring the availability, continuity and access to essential services, such as water and sanitation, food and adequate nutrition, health, education, housing and other social services." If the percentage of the population covered by social protection floors/systems is higher, then this should directly ensure that more people are able to have equitable access to safe and affordable drinking water.	**Direct / Parallel relationship** By increasing rights to economic resources (such as development loans and grants) and access to basic services, such as clean and safe delivery of drinking water in households, schools, and communities there will be a positive change (increase) in access to safe drinking water. Moreover, ownership of land and natural resources, especially forest and surface water resources will allow people more rights to determine the quality of resource delivery like water.	**Direct / Parallel relationship** The poor are the most vulnerable to the impacts of climate related events especially to meet the basic need like water and sanitation. By building resilience systems for the poor and marginalized, their vulnerability is significantly reduced . A resilient system in this case would be access to safe and affordable drinking water that would be able to withstand most climate-related disasters.	**Indirect / Parallel relationship** Significant mobilization of financial, material and human resources through development cooperation to developing countries can (though not guaranteed) help these countries to better provide essential and universal services such as universal access to safe and affordable drinking water to all their people.	**Direct / Parallel relationship** With strengthened policy frameworks established at all levels and for all people, the opportunity for explicit legislation and policy to ensure access to safe clean drinking water for all people will be greatly enhanced, as policy is essential to creation of budgets, plans, programmes and projects in most all countries.
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)	**Direct / inverse relationship** Reducing poverty will have a direct affect on the ability of people to develop and improve their sanitation and hygiene by increasing infrastructure (e.g. toilets). show that that reducing poverty has a direct affect on the ability of people to develop and/or improve sanitation and hygiene	**Direct / inverse relationship** Research and observation show that that reducing poverty has a direct affect on the ability of people to develop and/or improve sanitation and hygiene through both peer pressure (alienation and shaming) and infrastructure development (e.g. toilets) within individual households	**Direct / Parallel relationship** UN Social Protection Floor (SPF) initiative made up of two main elements. The first is ensuring the availability, continuity and access to essential services, such as water and sanitation. If the majority of the population covered by social protection floors/systems is significantly higher in a particular country, then this should directly ensure that more people are able		**Direct / Parallel relationship** The poor are vulnerable to the impacts of climate related events that can have especially significant negative impacts on their ability to meet the basic need like access to clean water and sanitation. Providing universal access to adequate / equitable sanitation services and infrastructure that is itself, designed with potential disasters in mind, will directly increase overall sustainable reliance in the communities.	**Indirect / Parallel relationship** Ensuring significant mobilization of financial, material and human resources from a variety of sources, including those allocated by the government directly to poverty reduction programmes and on essential services (education, health and social protection) as % of total government spending will indirectly contribute to ensuring that more people able to have access to adequate and equitable	**Direct / Parallel relationship** Creating sound policy frameworks to support accelerated investment in poverty eradication actions is directly linked (through policy and targeted investment) increasing universal access to sanitation services and infrastructure.

		or community.	to access adequate and equitable sanitation and hygiene services and infrastructure, which can directly end open defecation.			sanitation and hygiene, which can directly end open defecation.	
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally			**Indirect / Parallel relationship** Implementing nationally appropriate social protection systems and measures should also include, if not directly, at least indirectly, the provisions (e.g. strict laws) for eliminating dumping and release of hazardous chemicals and other pollutants into surface and underground water resources, thus improve water quality for all people.		**Direct / Parallel relationship** Reducing point and non-point sources of pollution and thereby improving water quality is directly linked with building the resilience of poor and vulnerable, as they proportionally suffer the most from water pollution and poor water quality in many aspects of their life. Climate disruption and its associated weather events and other impacts will certainly add to this vulnerability when combined with poor water quality.		
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity					**Direct / Parallel relationship** Proactively increasing water use efficiency to reduce drawdowns on fresh water sources and reduce water stress will, in the intermediate and long-term, directly reduce the exposure and vulnerability of communities to climate-related extreme events and other economic, social and environmental shocks and disasters, thus resulting in strengthened climate resilience.		
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate			**Direct / Parallel Relationship** Implementation of IWRM, as it is defined internationally, would have a direct impact on the effective delivery of social protection systems that achieves substantial coverage of the poor and the vulnerable, as IWRM is conceptualized to be a comprehensive, planning and implementation tool for managing and developing water resources in a way that balances social and economic needs, and that ensures the protection of ecosystems.		**Direct / Parallel relationship** Implementation of IWRM, as it is defined internationally, would have a direct impact on the building the resilience of the poor and those in vulnerable situations in order to reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters due to the very "integrated" nature of IWRM is the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of key		

					ecosystems.		
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.					**Indirect /Parallel relationship** Protecting freshwater ecosystems, which are the source of much water consumed, will ultimately build the long-term resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters		
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.			**Direct / Parallel relationship** Implementation of the first element of the Social Protection Floors at the national level will certainly be directly influenced by an increased percentage of ODA through international cooperation and capacity building support for water and sanitation activities and programmes. ODA support can come in terms of funding, technology transfer, know-how, case studies, including activities and programmes, etc.		**Indirect/ Parallel relationship** Expanding international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies will help to increase the resiliency of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters, however, the programme will be effective when there is strong participation from local communities	**Indirect / Parallel relationship** Expanded international cooperation and increasing Official Development Assistance (ODA) for water and sanitation related activities and Programmes (including capacity building) can indirectly help support the national governments' spending on essential services (education, health and social protection), which hopefully a adequate percentage will be earmarked for water and sanitation programmes and activities (including infrastructure).	**Direct/ Parallel relationship** Having sound policy frameworks at all levels of government that are based on pro-poor and gender-sensitive development strategies to support accelerated investment in poverty eradication will make it easier for international cooperation in the form of ODA to be more easily directed at water and sanitation activities and programmes.
6.b - Support and strengthen the participation of local communities in improving water and sanitation management.			**Direct / Parallel relationship** Increasing the percentage of the population covered by social protection floors/systems can be directly influenced by significantly strengthening the participation of local community (administration) through operational policies and procedures to improve water and sanitation management in their own areas.	**Direct / Parallel relationship** Strengthening the participation of local community (regional and local administration) through operational policies and procedures to improve water and sanitation management in their own areas can directly help to ensure that the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services (such as access to clean and affordable water and sanitation infrastructure and services).	**Direct/ Parallel relationship** Strong participation of local community in improving water and sanitation management will help the community to be more resilience to any climate related extreme events, especially in the poor communities.		**Direct/ Parallel relationship** Sound policy frameworks, especially at the national level that are based on pro-poor and gender sensitive can directly facilitate the inclusion of more local community people of all persuasions to participate in implementing community management policy, plans, programs, projects and activities targeted at water and sanitation development and delivery.

Systemic relationship between SDG Goal 6 Targets and SDG Goal 2 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all.	**SDG # 2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture**							
	2.1 **End hunger and ensure access by all people**, in particular the poor and people in vulnerable situations, including infants, **to safe, nutritious and sufficient food all year round**	2.2 **End all forms of malnutrition**, including achieving internationally agreed targets on stunting and wasting in children under 5 years of age, **and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons**	2.3 **Double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples**, family farmers, pastoralists and fishers, including **through secure and equal access to land, other productive resources and inputs, knowledge, financial services,** markets and opportunities for value addition and non-farm employment	2.4 **Ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production**, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	2.5 **Maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species,** including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	2.a **Increase investment,** including through enhanced international cooperation, **in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks** in order to enhance agricultural productive capacity in developing countries, in particular least developed countries	2.b **Correct and prevent trade restrictions and distortions in world agricultural markets**, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round	**2.c** Adopt measures to **ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information**, including on food reserves, in order to help limit extreme food price volatility
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all.		**Direct/ Inverse relationship** Safe and affordable drinking water help reduce risk to illness and diseases which can cause stunting and wasting						
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)			**Indirect / Parallel relationship** Significantly increasing universal access to adequate and equitable sanitation and hygiene so that human waste can be centrally collected (even in a DEWAT system) this indirectly can contribute to increasing agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples if human waste is recycled into usable compost and natural fertilizer.	**Indirect / Parallel relationship** Significantly increasing universal access to adequate and equitable sanitation and hygiene so that human waste can be centrally collected (even in a DEWAT system) this indirectly can contribute significantly (if scaled) to sustainable food production systems and resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, disasters, and that progressively improve land and soil quality.				

6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.		**Indirect/inverse relationship** Water quality will effect human health. Good water quality help to reduce risk to illness and diseases which is one of the cause for stunting and wasting. Thus, improving water quality by eliminating pollution and illegal dumping of chemicals and untreated waste will Indirectly help to improve nutrition.	**Indirect / Inverse or Parallel relationship (dependent on type of farming)** Doubling the agricultural productivity and incomes of small-scale food producers, could have adverse effects on water quality by accumulatively increasing water pollution from agricultural runoff of pesticides and fertilizers. However, if other agricultural policies promoting and increasing organic farming then this could be a different (parallel) situation.	**Direct/ Parallel relationship** Agricultural practice has direct impact to the overall quality of water and environment, so an increase in organic farming, permaculture farming systems, or integrated pest management (IPM) with significantly reduced chemical use, will certainly play an important and direct role in reducing pollution runoff from agricultural fields and improve water quality.				
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.	**Indirect/inverse relationship** An increase in water use efficiency will have an indirect but significant role to play, especially if in the agricultural sector, to decrease the prevalence of population with moderate or severe food insecurity		**Direct/ Inverse relationship** Doubling agricultural productivity and incomes of small-scale food producers could likely use more water in farming and processing the products, which shows the dilemma faced with having direct links between two such targets. However, if water use efficiency were achieved through simple and affordable technology and better methods, then this cold have an important direct influence on doubling agriculture productivity and incomes.	**Direct/ Parallel relationship** Sustainable food production systems and implementation of resilient agricultural practices that can both increase productivity and production, help maintain ecosystems, and strengthen capacity for adaptation to climate change would certainly have direct influencing links to increasing water use efficiency.		**Indirect/ Parallel relationship** Increase investment in research will allow to have more research that can help to inform the most appropriate agricultural technology, technic and practice to save water while increase productivity		
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as				**Direct / Parallel relationship** Effective implementation of IWRM will directly influence the success of sustainable food production systems and will greatly aid the		**Indirect/ Parallel relationship** IWRM can be advanced and strengthen, especially with regards to agricultural farming sector if there is increased investment in rural infrastructure, agricultural research and		

appropriate.				implementation of resilient agricultural practices that increase productivity and production.		extension services, technology development that takes into account and support (via targeted policy and budgets) IWRM.		
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Indirect/Inverse relationship** Most vulnerable communities located in rural areas. Protecting and restoring water related ecosystems (forest, wetland, etc) will ensure food security for the people in the areas	**Indirect / Inverse relationship** Rich ecosystems will help to ensure food security for the underserved communities which reduce the risk to stunting and wasting in children under 5 years old	**Direct/ Parallel relationship** Protecting fresh water ecosystems will directly help farmers to have high(er) farm productivity due to sufficiency of water	**Direct/ Parallel relationship** Sustainable food production systems and implementation of resilient agricultural practices will be crucially important and directly relevant to protecting and restoring water related ecosystems, as they are quite vulnerable to agricultural runoff, encroachment (e.g. drainage of peatland swamps for oil palm plantations).	**Direct / Parallel relationship** Protection and restoration water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes will have direct significance on maintaining the genetic diversity of seeds and animals, many of which are both found in natural and domesticated / cultivated systems. This genetic diversity bank is key to the long-term resilience and sustainability of human species.	**Indirect/ Parallel relationship** Increase investment in research will allow to have more research that can help to inform the most appropriate agricultural technology, technic and practice to ensure sustainability of fresh water ecosystems while increase productivity		
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.			**Indirect/ parallel relationship** Increased capacity of small scale food producers in water harvesting, water efficiency, wastewater treatment reuse technologies and recycling of waste will help to them to both reuse human waste for agricultural purposes , thus increasing yield (Humanure) will contribute to increased agricultural productivity.	**Direct/ Parallel relationship** Expanding international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, leading to an increased capacity of farmers in water harvesting irrigation systems, eco-friendly fertilizer, water treatment will help to ensure sustainable food production systems		**Indirect/ Parallel relationship** Increase investment in research will allow to have more research that can help to inform the most appropriate agricultural technology, technic and practice to ensure sustainability of fresh water ecosystems while increase productivity		
6.b - Support and strengthen the participation of local communities in improving water and sanitation management		**Direct/ parallel relationship** Strengthening the participation of local communities in improving water and sanitation management can directly contribute to significantly reducing all forms of malnutrition, including achieving		**Direct/ Parallel relationship** Increase in participation of local community in water and sanitation management will encourage farmers to practice sustainable production technic and systems.				

		internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons						

Systemic relationship between SDG Goal 6 Targets and SDG Goal 3 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 3 - Ensure healthy lives and promote well-being for all at all ages**									
	3.1 **Reduce the global maternal mortality ratio** to less than 70 per 100,000 live births	3.2 **End preventable deaths of newborns and children under 5** years … aiming to reduce neonatal mortality….	3.3 … **Combat hepatitis, water-borne diseases and other communicable diseases…**	3.4 **Reduce** by one third **premature mortality from non-communicable diseases through prevention and treatment** and promote mental health and well-being.	3.5 **Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol**	3.6 **Halve the number of global deaths and injuries from road traffic accidents** Number of road traffic fatal injury deaths per 100 000 population (age-standardized)	3.7 **Ensure universal access to sexual and reproductive health-care services,** including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	3.8 A**chieve universal health coverage, including financial risk protection,** access to quality essential health-care services and access to medicines and vaccines for all.	3.9 Substantially **reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution** and contamination	3.a **Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control i**n all countries, as appropriate
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all	**Indirect / Inverse relationship** Equal access to safe and affordable drinking water can certainly contribute to reducing the global maternal mortality ratio, especially due to the risk of infection during /after give birth. However, there are many factors involved.	**Direct / inverse relationship** Achieving universal and equitable access to safe and affordable drinking water can likely have a more direct contribution to ending preventable deaths of newborns and children under 5 years, especially as 9% of post neonatal (under 5) death are caused by diarrhoea. Having safe and affordable drinking water will help to reduce the risk to diarrhoea.							**Direct / inverse relationship** Universal and equitable access to safe and affordable drinking water can directly reduce the number of deaths and illnesses from hazardous chemical and contamination, particularly since many, if not most hazardous chemicals end up with water resources that people use for direct consumption.	
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)	**Direct / inverse relationship** Sanitation and hygiene help to reduce the risk of infection during /after give birth	**Direct / inverse relationship** 9% of post neonatal death caused by Diarrhoea. Access to adequate and equitable sanitation and hygiene can directly and significantly the risk to diarrhoea and mortality from diarrhoea, or other gastro-intestinal problems arising	**Direct / inverse relationship** Improving basic water, sanitation, and hygiene services and infrastructure for all people and groups and significantly reducing open defecation will have a direct impact on reducing cases of **h**epatitis, water-borne diseases and							

		from ingesting contaminated water and food.	other communicable diseases.							
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally			**Direct / inverse relationship** Proper treatment of wastewater and halting direct discharge of polluted waste and effluent from livestock yards, etc. will directly contribute to reducing water - borne diseases	**Indirect/ Inverse relationship** Hazardous chemicals and materials discharged into water bodies in can cause higher risks of cancer in some people, depending on amount, concentration and time.					**Direct / inverse relationship** Reducing pollution entering into water systems through halting illegal or unsustainable discharges and safely treating wastewater will improve water quality and directly reduce the number of deaths and illnesses from hazardous chemical and contamination.	
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity										
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate									**Indirect/ Inverse relationship** Implementation of IWRM in its full scope can indirectly help reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers,										

aquifers and lakes										
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.	**Indirect / Inverse relationship** Expanded ODA targeted at capacity building in water and sanitation related activities and programmes can contribute to reducing the global maternal mortality ratio, though not by itself, as there are a host of other factors involved.	**Direct / inverse relationship** Expanded ODA targeted at capacity building in water and sanitation related activities and programmes can significantly reduce number of case of under 5 mortality due to poor sanitation and hygiene.	**Direct / inverse relationship** Capacity building in water and sanitation will reduce number of case of water-borne diseases and some neglected tropical diseases	**Indirect / Inverse relationship** Increase capacity building programme in waste water treatment to ensure good water quality will help reduce the risk of cancer					**Direct / inverse relationship** Expanded capacity building training programmes and other assistance related to waste water and sanitation, through international cooperation and ODA, can directly contribute to reducing the risk the illness from water pollution and contamination if provided to the right people.	
6.b - Support and strengthen the participation of local communities in improving water and sanitation management.	**Indirect/ inverse relationship** Participation of local community in water and sanitation management will create the most impactful results which help to reduce risk of infection during /after give birth	**Direct / inverse relationship** Participation of local community in water and sanitation management will create the most impactful results, which help to reduce number of case of under 5 mortality due to poor sanitation and hygiene (Diarrhea).	**Indirect/ inverse relationship** Participation of local community in water and sanitation management will create the most impactful results which help to reduce number of case of water-borne diseases and some neglected tropical diseases						**Indirect / Inverse relationship** Participation of local community, through participatory involvement in local government policy setting, can contribute in reducing the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution through relevant and enforced laws and regulations on waste water treatment and discharge.	

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 3 - Ensure healthy lives and promote well-being for all at all ages**		
	3.b **Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries**, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all	3.c Substantially **increase health financing and the recruitment, development, training and retention of the health workforce** in developing countries, especially in least developed countries and small island developing States	3.d **Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all			**Direct / Parallel relationship** Equal access to safe and affordable drinking water will directly strengthen the capacity of countries, in particular developing countries, for overall risk reduction and management of national and global health risks
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)			**Direct / Parallel relationship** Achieving access to adequate and equitable sanitation and hygiene and end open defecation will directly strengthen the capacity of countries, in particular developing countries, for overall risk reduction and management of national and global health risks
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally			**Direct / Parallel relationship** Improving water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater will significantly strengthen the capacity of countries, in particular developing countries, for risk reduction and management of national and global health risks
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity			**Indirect / Parallel relationship** Increasing water-use efficiency across all sectors and ensuring sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity will contribute to strengthening the capacity of countries, in particular developing countries, for overall risk reduction and management of national and global health risks.
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate			**Indirect / Parallel relationship** Implementing integrated water resources management at all levels will indirectly strengthen the capacity of countries, in particular developing countries risk reduction and management of national and global health risks

6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes			**Direct / Parallel relationship** Protecting and restoring water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes will directly strengthen the capacity of all countries, in particular developing countries, overall risk reduction and management of national and global health risks (e.g.. mangroves protect coastal areas against force of tsunami; forest protect communities from landslides, etc.)
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .			**Indirect / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes can be directed at strengthening these countries for early warning, risk reduction and management of national and global health risks related to water pollution incidents and accidents, as well as water related disasters.
6.b - Support and strengthen the participation of local communities in improving water and sanitation management			**Direct / Parallel relationship** Strengthening the participation of local communities in improving water and sanitation management will directly strengthen the capacity of all countries, in particular developing countries, overall risk reduction and management of national and global health risks

Comment [ASN1]: Added in July

Systemic relationship between SDG Goal 6 Targets and SDG Goal 4 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**									
	4.1 Ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	**4.2** Ensure that **all girls and boys have access to quality early childhood development, care and pre-primary education** so that they are ready for primary education	4.3 **Ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education**, including university	4.4 Substantially **increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship**	4.5 **Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable,** including persons with disabilities, indigenous peoples and children in vulnerable situations	4.6 **Ensure that all youth and a substantial proportion of adults**, both men and women, **achieve literacy and numeracy**	4.7 Ensure that all le**arners acquire the knowledge and skills needed to promote Sustainable Development, including through ESD and sustainable lifestyles …**	4.a **Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments** for all.	**4.b Expand the number of scholarships available to developing countries for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes…**	4.c **Increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries,** especially least developed countries and small island developing States
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all Percentage of population using safely managed drinking water services	**Indirect / Parallel relationship** Ensuring that all girls and boys complete free, equitable and quality primary and secondary education will indirectly contribute to ensuring universal access to safe / affordable drinking water since schools are more able to have access and infrastructure / resources to provide safe water.	**Direct / Parallel relationship** Having access to safe drinking water will help to ensure that children under 5 years of age has developmentally on track in health.						**Direct / parallel relationship** When Percentage of schools with access to basic drinking water increase, this mean more people will be able to access to safe and affordable drinking water services.		
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls) Percentage of population using safely managed sanitation services	**Indirect / parallel relationship** With an increase in the number/ % of girls and boys completing primary and secondary education there will likely be increased access to sanitation and hygiene infrastructure and behavioural practices that carry on into adult life	**Direct / parallel relationship** Achieving access to adequate and equitable sanitation and hygiene and end open defecation will directly impact the programs to ensure that children under 5 years of age have developmentally on track in health.			**Indirect / Parallel relationship** Eliminating gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, will contribute towards increasing an end to open defecation, especially for women and girls.		**Indirect / Parallel relationship** An increase in ESD learning will indirectly help strengthen and increase sanitation and hygiene and help reduce open defecation.	**Indirect / Parallel relationship** Building and upgrading education facilities will help to increase sanitation infrastructure and strengthen good hygiene behaviour.		

6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally							**Direct / Parallel relationship** Learned knowledge and skills, including those that promote Sustainable Development through ESD and sustainable lifestyles, can, given the right circumstances, translate into habitual behaviour that directly improves water quality via eliminating and reduction of pollution and discharge of untreated waster water into the environment, but there will be a delay.			
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity							**Direct / Parallel relationship** Learned knowledge and skills, including those that promote Sustainable Development through ESD and sustainable lifestyles, can, given the right circumstances, translate into habitual behaviour increases water use efficiency by promoting good practices in the community			
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate							**Direct / Parallel Relationship** Knowledge and skills learned, including those that promote Sustainable Development through ESD and sustainable			

							lifestyles can, with some delay, eventually have a direct impact on the effective implementation of IWRM as their will be an improved systemic thinking of both policy makers and people in general.			
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes							**Direct / parallel relationship** SD knowledge and skills help to develop environmental awareness and understanding of cause and effecting of environmental damage to human life which could translate into action to protection and restoration of water related ecosystems, though there will be some lag time on this as mainstream mindsets change.			
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies. Official Development Assistance (ODA) for water and sanitation related activities and programmes			**Indirect / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes could be indirectly strengthen in a reciprocal way by ensuring equal access for all women and men to affordable and quality technical, vocational and tertiary education	**Direct / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes could have a direct impact towards strengthening the expert base, by increase the number of youth and adults who have relevant skills, including technical and vocational skills.				**Direct / parallel relationship** ODA could contribute to education facilities in term of infrastructure for basic drinking water, handwashing and sanitation facilities as well as capacity building for maintenance of those infrastructure.		

6.b - Support and strengthen the participation of local communities in improving water and sanitation management.							**Indirect / Parallel relationship** SD knowledge and skills help to develop understanding of systemic cause and effect of different issues (including water related issues) and the importance of taking different perspectives and voices into account could help to drive local administrative unit to open up for more effective local community participation in water and sanitation projects			

Systemic relationship between SDG Goal 6 Targets and SDG Goal 5 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 5 – Achieve gender equality and empower all women and girls**								
	5.1 **End all forms of discrimination against all women and girls** everywhere	5.2 **Eliminate all forms of violence against all women and girls in the public and private spheres,** including trafficking and sexual and other types of exploitation	5.3 **Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation.**	5.4 **Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies** and the promotion of shared responsibility within the household and the family as nationally appropriate	5.5 **Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life**	5.6 **Ensure universal access to sexual and reproductive health and reproductive rights** as agreed in accordance with the Programme of Action of the International Conference on Population and Development	5.a **Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services**, inheritance and natural resources, in accordance with national laws	5.b **Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women**	5.c Adopt and **strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls** at all levels.
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all					**Direct / Parallel relationship** Ensuring women's full and effective participation and equal opportunities for leadership at all levels of decision-making in government, business and community groups/councils would at least indirectly positively reinforce the achievement of universal and equitable access to safe and affordable drinking water since a disproportionate percentage of women deal directly with water access issue for their households.		**Direct/ Parallel relationship** Women's equal rights to land ownership and control will enable women to manage to get safe and affordable drinking water.		
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)		**Direct / Inverse relationship** By increasing sanitation infrastructure and access by women and girls (especially to reduce open defecation) there will be a reduction in sexual violence against females in a number of countries.			**Direct / Parallel relationship** Ensuring women's full and effective participation and equal opportunities for leadership at all levels of decision-making in government, business and community groups/councils would at least indirectly positively reinforce the		**Direct/ Parallel relationship** Undertaking reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial service will have a direct impact on the push for significantly		

					achievement of universal and equitable access to safe and affordable drinking water since a disproportionate percentage of women deal directly with water access issue for their households.		improved access to adequate and equitable sanitation service and facilities to improve hygiene and end open defecation.		
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally									
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity									
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate							**Indirect / Parallel relationship** Giving women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources can indirectly support the effective implementation of Integrated water resources management.		

6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.							**Indirect / Parallel relationship** Giving women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources can, in certain circumstances indirectly protect water related ecosystems.		
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.					**Direct/ Parallel relationship** Ensuring women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life (such as in government leadership roles, corporate roles, local leadership roles) can be directly linked to foreign ODA directed at water and sanitation system improvement as women are closer to this problem and bear the burden more often than men.				
6.b - Support and strengthen the participation of local communities in improving water and sanitation management.					**Direct/ Parallel relationship** Change in proportion of seats held by woman in national parliaments and local government will most likely push the local administrative units to establish and implement policies		**Direct/ Parallel relationship** Giving women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources,	**Direct/ Parallel relationship** Access to communication technology like telephone will help to promote participation of local community which will push the local administrator to establish and implement policies and procedure for	**Direct/ Parallel relationship** Sound policies and enforceable legislation to promote gender equality and empowerment of all women and girls will help to push the local administrative units to establish and implement policies

					and procedures for participation of local communities in water and sanitation management.		will no doubt have a direct impact on their ability to participate at the local level in leadership / decision-making positions on water and sanitation management.	local community participation.	and procedures for participation of local communities in water and sanitation management.

Systemic relationship between SDG Goal 6 Targets and SDG Goal 6 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all.	**SDG # 6 - Ensure availability and sustainable management of water and sanitation for all**							
	6.1 - **Achieve universal and equitable access to safe and affordable drinking water for all**	6.2 - **Achieve access to adequate and equitable sanitation and hygiene and end open defecation,** (special attention to the needs of women and girls)	6.3- **Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater** and substantially increasing recycling and safe reuse globally Percentage of wastewater safely treated , disaggregated by economic activity	6.4 - **Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater** to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.5 - **Implement integrated water resources management at all levels, including through transboundary cooperation** as appropriate	6.6 - **Protect and restore water-related ecosystems**, including mountains, forests, wetlands, rivers, aquifers and lakes	6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies	6.b - **Support and strengthen the participation of local communities in improving water and sanitation management**".
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all		**Indirect/ Parallel relationship** It is logical that achieving universal access to adequate and equitable sanitation and hygiene, and thus significantly ending open defecation, can contribute (indirectly) to greatly improving water quality which can then better ensure availability and access to safe and affordable drinking water.	**Direct / Parallel relationship** Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater will directly contribute to giving more people the ability to access safe and affordable drinking water.	**Direct/ Parallel relationship** Increase water-use efficiency and ensure sustainable withdrawal of water directly help to ensure more water available for drinking for more people	**Indirect/ Parallel relationship** Integrated water related management (IWRM), which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems, should directly contribute to the restoration of water related ecosystems and thus indirectly ensure the sustainable of fresh water that goes towards providing universal safe and affordable drinking water.	**Direct/ Parallel relationship** Protecting and restoration of water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes, will also help to ensure availability of water for all directly, given the fact that most of Asia's population (over 60%) currently or soon will be living in cities. Where will these cities get their water? Some will come form desalinasation. Some from recycling of waste water. But this will not be enough without natural sources from mountains, wetlands, and other sources.	**Direct/ Parallel relationship** Expanded international cooperation (in the form of ODA) and capacity-building support to developing countries in water- and sanitation-related activities and programmes will have a direct impact on the provisioning and delivery of safe and affordable drinking water to marginalized and un-served populations.	**Direct / Parallel relationship** Increasing the level of community participation in policy setting and decisions can have a direct and profound effect on the provisioning of safe and affordable drinking water to all people if there is of course representative government and little corruption.
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women			**Direct / Parallel relationship** It is logical that achieving universal access to adequate and equitable sanitation and hygiene,			**Indirect / Parallel relationship** Reducing open defecation and improved sanitation infrastructure will	**Direct/ Parallel relationship** Official Development Assistance (ODA) for water and sanitation related activities and Programmes can help	**Direct / Parallel relationship** Level of engagement of local community will ensure the maintaining of infrastructures and

and girls).			and thus significantly ending open defecation will directly help to improve water quality by reducing the direct discharge of untreated waste into water sources.			help to protect water related ecosystems.	to build capacity of local community in maintaining the infrastructure and ensure that the good practice is implemented among the local people.	water & sanitation practices of local population
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally				**Direct/ Parallel relationship** By recycling and reusing of water this increase both efficiency and reduce pollution inputs into water bodies.	**Direct/ Parallel relationship** Implementation of holistic integrated water resources management will directly support the improvement of water quality via reduced pollution discharges from all sectors.	**Direct/ Parallel relationship** Improving water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, will protect and restore water-related ecosystems.	**Direct/ Parallel relationship** Official Development Assistance (ODA) for water and sanitation related activities and Programmes (such as wastewater treatment) can help to improve water quality.	**Direct/ Parallel relationship** Participation of local communities in improving water and sanitation management is crucial to the improvement of water quality.
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity					**Direct/ Parallel** Implement integrated water resources management at all levels, including through transboundary cooperation can contribute to promote efficiency use of water and ensure sustainable withdrawal & supply of fresh water.	**Indirect/ Parallel** Increase water use efficiency will indirectly contribute, with some delay, in helping to protect and restore water-related ecosystems.	**Direct/ Parallel** Official Development Assistance (ODA) for water and sanitation related activities and Programmes can help to build capacity of local community in efficient use of water through sharing of know-how, technologies, knowledge and research.	**Direct/ Parallel** Strengthen participation and necessary skills for local communities in water-use efficiency know-how, knowledge, technologies will help to ensure sustainable withdrawal & supply of fresh water
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate						**Direct/ Parallel Implement** Integrated water resources management through transboundary cooperation will ensure that water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes will be protected and/or restored**.**	**Direct/ Parallel relationship** Official Development Assistance (ODA) for water and sanitation related activities and programmes can directly supports the planning and implementation of effective holistic IWRM programmes nationally and transboundary.	**Direct / Parallel relationship** Increases the percentage of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management directly supports an effective holistic IWRM programme.
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes							**Direct/ Parallel** By increasing international cooperation and capacity-building support to developing countries in water- and	**Direct/ Parallel** Strengthen participation and necessary skills for local communities in water and sanitation management will help

							sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies will help to protected & restore water related Ecosystems.	to reduce pollution and contamination in water related ecosystems and ensure the sustainable withdrawal & supply of fresh water which will help to protect water related ecosystems.
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.								**Direct/ Parallel** Official Development Assistance (ODA) for water and sanitation related activities and Programmes including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies will help to support and strengthen the participation of local communities in improving water and sanitation management
6.b - Support and strengthen the participation of local communities in improving water and sanitation management								

Systemic relationship between SDG Goal 6 Targets and SDG Goal 7 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all.	**SDG # 7 - Ensure access to affordable, reliable, sustainable and modern energy for all**				
	7.1 **Ensure universal access to affordable, reliable and modern energy services**	7.2 **Increase the share of renewable energy in the global energy mix**	7.3 **Double the global rate of improvement in energy efficiency**	7.a **Enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology**, and promote investment in energy infrastructure and clean energy technology	7.b **Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries,** in particular least developed countries, small island developing States, and land-locked developing countries.
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all	**Direct / Parallel relationship** With universal availability to affordable and reliable modern energy services there should be a proportional increased ability to scale up the treatment of water to make water safe for drinking at an affordable price for most people. This of course depends on the source, type and relative cost of energy that is utilized for this purpose If from renewable sources such as solar, wind, biomass or local micro-hydro, and the infrastructure in localized, then this can more easily have direct impact on this target.	**Indirect / Parallel relationship** As mentioned with SDG 7.1, the greater the share of renewable energy in the total primary energy mix, the more affordable it will be over time to provide safe drinking water to more people in a country.		**Indirect / Parallel relationship** International cooperation to facilitate access to clean energy research and technology, and the promotion of investment in energy infrastructure and clean energy technology can indirectly contribute to achieving universal access to safe and affordable drinking water for all by enabling households and communities more local capacity and ability to treat and deliver water themselves at very affordable cost.	**Indirect / Parallel relationship** Expanding infrastructure and upgrading technology for supplying sustainable energy services can indirectly contribute to increasing access to safe and affordable drinking water by communities and households, as both energy and technology are required in most instances to delivery safe, clean water.
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)		**Direct/ Parallel relationship** Higher share of renewable energy in the overall energy mix will have a direct impact on helping to achieve universal access to sanitation and hygiene and ending open defecation, as there will be markets for human waste as an renewable energy source for local energy needs (e.g. household kitchen or even larger scale)			**Indirect / Parallel relationship** Expanding infrastructure and upgrading technology for supplying sustainable energy services can indirectly contribute to increasing access to hygiene and sanitation services, and help end open defecation by communities and households, as toilet and sanitation systems (DEWATS) can be easily integrated into a mixed renewable energy scheme for local community.
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.	**Indirect / Parallel relationship** With increased availability to energy services there is an increased capacity and opportunity to effectively treat wastewater or to manage waste from various economic activities through safe and affordable methods, including recycling of sludge, sewage and other waste and DEWATS. .	**Direct/ Parallel relationship** Higher share of renewable energy in the overall energy mix will have a direct impact on the level and types of pollution released to the environment (air, water, soil) either from the power plant or energy users. Burning of coal , oil and nuclear energy all have very negative impacts on water quality.		**Indirect / Parallel relationship** Increase international cooperation and investment in infrastructure and clean energy technology will help to increase the possible access to affordable, reliable and modern energy service for water treatment and increasing recycling rate.	**Indirect / Parallel relationship** Expanding infrastructure and upgrading technology for supplying sustainable energy services will help to improve water quality as some water treatment and recycling technologies that use electrical machines.
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	**Direct / Parallel or Inverse relationship** With increased access to affordable, reliable and modern energy services there can easily be seen a direct impact on water-use efficiency in a number of sectors (Industrial, agriculture, mining,	**Direct / Parallel or Inverse relationship** By increasing renewable energy's share in the total final energy consumption (%)" or "renewable energy share in the total primary energy consumption (%) there can be a direct link to water use	**Direct / Inverse relationship** Doubling the global rate of improvement in energy efficiency will have direct implications for water use efficiency since the majority of water pumping extraction and transport requires major energy inputs and	**Indirect / Parallel relationship** Enhanced international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology will indirectly contribute in the long-term	**Direct/ Parallel relationship** Expanding infrastructure and upgrading technology for supplying sustainable energy services will directly impact water use efficiency in all sectors.

	etc.), depending on the source and rate of electricity. However, If subsidized and/or relatively inexpensive, there could be a tendency to be wasteful with water pumping and over exploit water resources – what is often referred to as the "rebound effect" – i.e. the saving you get in one areas is neutralized by shafting the cost to another area, often unrealized	efficiency across all sectors, especially in regards to water extraction and waste water recycling and reuse.	expenditures.	to water use efficiency improvements.	
6.5 - Implement integrated water resources management (IWRM) at all levels, including through transboundary cooperation as appropriate					**Direct / Parallel relationship** Expanding infrastructure and upgrading of technology for supplying modern and sustainable energy services for all, in developing countries, can have a direct impact of IWRM both national and regionally (transboundary) energy is a critical factor in coordinated development and management of water, land and related resources, especially in the case of micro and macro hydropower, irrigation and overall water resource management
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes .	**Direct / Parallel or Inverse Relationship** Ensuring universal access to affordable, reliable and modern energy services can have direct impact on certain water related ecosystems in both positive and negative ways, depending on the type of energy and the ecosystem. If talking about hydropower electricity which needs a dam and reservoir the electricity could be a destroyer of the environment. IF talking about renewable energy or natural gas, then in the Himalaya countries this modern energy source can help protect forests.	**Direct/ Parallel relationship** Higher share of renewable energy in the overall global energy mix means there should be less pollution released to the environment (air, water, soil) either from the power plant or energy users (such as oil) which has direct connection to protect and restore water related ecosystems, especially forest and river.	**Direct/ Parallel relationship** Higher energy efficiency will help to reduce the energy sources input, land to produce energy (power plant) and waste from energy production process release to the environment which will affect the water related ecosystems		**Direct / Parallel relationship** Similar to the relationship with 7.1, expanding infrastructure and upgrading technology for supplying modern and sustainable energy services for all, particularly in developing countries, often contributes to, or diminishes, the protection of water related ecosystems. It can go either way relative to project design and operations. In this case we may think of large hydropower dams, coal-fired power plants and need for water cooling holding ponds and sources, etc.
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.	**Direct / Parallel relationship** Access to electricity will enable water and santitation programmes funded by ODA to work easier and more effectively.				**Indirect / Parallel relationship** ODA earmarked for water and sanitation programmes and activities in less developed countries could certainly be indirectly linked with the expansion of infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries. This would greatly facilitate the sustainable use of water and sanitation systems that require energy to work.
6.b - Support and strengthen the participation of local communities in improving water and sanitation management.					

Systemic relationship between SDG Goal 6 Targets and SDG Goal 8 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**									
	8.1 **Sustain per capita economic growth in accordance with national circumstances** and, in particular, **at least 7 % GDP growth** per annum in the least developed countries	8.2 **Achieve higher levels of economic productivity through diversification, technological upgrading and innovation,** including through a focus on high-value added and labour-intensive sector.	8.3 **Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises,** including through access to finance services.	8.4 **Improve global resource efficiency in consumption and production and work to decouple economic growth from environmental degradation**, in accordance with the **10-year framework of programmes on sustainable consumption and production,** with developed countries taking the lead	8.5 **Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities**, and equal pay for work of equal value	8.6 **Reduce the proportion of youth not in employment, education or training**	8.7 **Eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers**, and by 2025 end child labour in all its for	8.8 **Protect labour rights and promote safe and secure working environments for all workers,** including migrant workers, in particular women migrants, and those in precarious employment	8.9 Devise and **implement policies to promote sustainable tourism that creates jobs and promotes local culture and products**	8.10 **Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all	**Indirect / Parallel relationship** In general, improving GDP has a positive impact on improving overall per capita access to safe and affordable water, by reducing poverty and investment in infrastructure development.	**Direct / Parallel relationship** Achieving higher levels of economic productivity through diversification, technological upgrading and innovation can possibility have significant direct impact providing the means and opportunities (business case) for accelerating the provisioning of safe and affordable water to more people.	**Indirect / Parallel relationship** Development oriented policies targeted at increasing entrepreneurship and innovation can easily be used to support increasing access to safe and affordable water through local initiatives and technologies via financial support	**Indirect / Parallel relationship** Improved global resource efficiency in consumption and production and work to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production can indirectly support increasing access to safe and affordable water through local initiatives and technologies via financial support						**Indirect / Parallel relationship** If tied to assisting entrepreneurs to build and scale up innovations and technology directly related to provision, delivery and distribution of safe, clean drinking water.
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)	**Indirect / Parallel relationship** In general, improving GDP has a positive impact on improving overall per capita access to adequate and equitable sanitation and hygiene by investment in	**Direct / Parallel relationship** Achieving higher levels of economic productivity through diversification, technological upgrading and innovation can possibility have significant direct							**Indirect / Parallel relationship** Sustainable tourism if built on neutralizing social and environment impacts by tourist on local community, culture and environment so	

	infrastructure development and peer pressure linked behaviour change.	impact providing the means and opportunities (business case) for accelerating the provisioning of safe and affordable water to more people.							this would have a indirect affect on improving the sanitation and hygiene situation in targeted communities	
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally **.**	**Direct / but can be either parallel (positive) or inverse (negative)** Economic activity that supports increasing GDP most often does not immediately lead to improve water quality, but is the opposite affect. However, more investment resources are available to improve the situation.	**Direct / but can be either parallel (positive) or inverse (negative) relationship** Increasing economic productivity through diversification, technological upgrading and innovation can directly improve the conditions and environment for reducing pollutions and discharge of contaminated and hazardous waste water to external water sources if these waste are now seen as raw materials and commodity for up-cycling for power or development into new products.		**Direct / Parallel relationship** Improved global resource efficiency in consumption and production and work to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production will likely have direct positive impact on overall water quality improvement as pollution will be greatly reduced due to many reasons, including recycling / up-cycling of waste water and other materials and implementation of circular economic thinking and practice.					**Direct / Parallel relationship at local level** Communities and Operators who subscribe to Sustainable Tourism principles and market accordingly will work to improve water quality in local level as the community and environment is the resources that tourist are coming to experience.	
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity		**Direct / Parallel relationship** Achieving higher levels of economic productivity through diversification, technological upgrading and innovation will have significant impact on increased water use efficiency as businesses realize the cost saving and value added that saving		**Direct / Parallel relationship** Improved global resource efficiency in consumption and production and work to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production will likely have direct positive impact on					**Indirect / Parallel relationship** Implementing policies to promote sustainable tourism that creates jobs and promotes local culture and products can indirectly and sometimes directly help to increase water-use efficiency at a local	

		water and reusing water in multiple ways will make them more resilient and profitable.		water use efficiency at the national and local level through the influence of the global supply chain becoming more sustainable with higher environmental compliance standards and reporting. It is a given!					community level.	
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate				**Direct / Parallel relationship** Implementation of integrated water resources management at all levels, including through transboundary cooperation will directly contribute to global resource efficiency in consumption and production and work to decouple economic growth from environmental degradation						
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes				**Direct / Parallel relationship** Significantly improving global resource efficiency in consumption and production and decoupling economic growth from environmental degradation will have a direct positive impact on water related ecosystem protection and restoration.					**Direct / Parallel relationship** Implementing policies to promote sustainable tourism that creates jobs and promotes local culture and products can directly and effectively help protect fragile water-related ecosystems.	
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water		**Direct / Parallel relationship** Higher levels of economic productivity through diversification, technological	**Direct / Parallel relationship** International cooperation and capacity-building support to developing countries in water- and sanitation-	**Direct / Parallel relationship** Improve global resource efficiency in consumption and production and work to decouple economic growth from environmental						

harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.		upgrading and innovation, including are enabled by expanded international cooperation and capacity building	related activities and programmes can directly link to and influence development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises.	degradation would be directly influenced by expanded international cooperation and capacity building in water and sanitation related programmes (particularly water harvesting, water use efficiency, recycling, etc.0.						
6.b - Support and strengthen the participation of local communities in improving water and sanitation management.			**Direct / Parallel relationship** Development oriented policies targeted at increasing entrepreneurship can directly influence local participation (through policy and initiatives) in water and sanitation.						**Indirect / Parallel relationship** Implementing policies to promote sustainable tourism that creates jobs and promotes local culture and products can indirectly influence local participation through local administrative policy initiatives to improve water and sanitation management.	

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**	
	8.a **Increase Aid for Trade support for developing countries, in particular least developed countries**, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries	8.b **Develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all		
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)		
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally		
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity		
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate		
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes		
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.	**Indirect / Parallel relationship** **Aid for Trade could be stipulated and earmarked for** international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes	
6.b - Support and strengthen the participation of local communities in improving water and sanitation management		

Systemic relationship between SDG Goal 6 Targets and SDG Goal 9 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 9 - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**							
	9.1 **Develop quality, reliable, sustainable and resilient infrastructure**, including regional and transborder infrastructure, **to support economic development and human well-being,** with a focus on affordable and equitable access for all	9.2 **Promote inclusive and sustainable industrialization** and, significantly **raise industry's share of employment and gross domestic product**, …	9.3 **Increase the access of small-scale industrial and other enterprises to financial services, including affordable credit**, and their integration into value chains and markets	9.4 **Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes**, ….	9.5 **Enhance scientific research, upgrade the technological capabilities of industrial sectors** in all countries, in particular developing countries…..	9.a **Facilitate sustainable and resilient infrastructure development** in developing countries **through enhanced financial, technological and technical support** ….	9.b Support **domestic technology development, research and innovation** in developing countries, including by **ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities**	9.c **Increase access to information and communications technology** and strive to provide universal and affordable access to the Internet in least developed countries by 2020
6.1 - Achieve **universal and equitable access to safe and affordable drinking water** for all.	**Direct / Parallel relationship** The development of quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being can have a significant direct impact on providing universal access to safe and affordable drinking water for all,		**Indirect / Parallel relationship** Increasing access of small-scale industrial and other enterprises to financial services, including affordable credit, and their integration into value chains and markets can directly support achieving universal and equitable access to safe and affordable drinking water for all.			**Direct / Parallel relationship** Increased development of interconnected water treatment and delivery infrastructure in both rural and urban areas in less developed countries to ensure safe and clean drinking water will directly benefit from financial, technological and technical support to get started and sustain over time.	**Direct / Parallel relationship** Support for domestic technology development, research and innovation in developing countries could be focused on achieving universal and equitable access to safe and affordable drinking water for all/ this could have direct impact on this outcome but would need accompanying and conducive policy environment for, inter alia, industrial diversification and value addition to commodities.	**Indirect / Parallel relationship** Increase access to information and communications technology can indirectly help to achieve universal and equitable access to safe and affordable drinking water for all through linking communities with NGOs, government ministries (and services) and with Business, who can support building infrastructure, building capacity and introducing low cost technology to deliver safe, affordable drinking water to marginalized communities.
6.2 - Achieve **access to adequate and equitable sanitation and hygiene and end open defecation**, (special attention to the needs of women and girls)	**Direct / Parallel relationship** If so called "resilient and sustainable" infrastructure development addresses the SDGs and directed at local community sanitation then this will have a direct impact on reduced open defecation and improved sanitation.					**Direct / Parallel relationship** Sustainable and resilient infrastructure development through enhanced financial, technological and technical support would directly improve access to sanitation and improve hygiene in poor and marginalized communities, if it was directed in this area.		**Indirect / Parallel relationship** Increase access to information and communications technology can indirectly support increased access to adequate and equitable sanitation and hygiene and end open defecation by linking communities with NGOs, government ministries (and services) and with Business, who can support building infrastructure, building capacity and introducing low cost technology to facilitate improved sanitation and hygiene for marginalized communities and vulnerable groups like women and girls.

6.3- **Improve water quality** by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	**Direct / Parallel relationship** The development of quality, reliable, sustainable and resilient infrastructure, especially regional and transborder infrastructure, such as waste water treatment facilities and legal hazardous material disposal centers will have a direct impact on improving water quality and reducing pollution.	**Direct / Parallel relationship** Sustainable industrialization must be inclusive of the negative externalities of manufacturing and industrial processes and by-products that degrade water quality and actively incorporate systems that reduce this impact.	**Direct/ Parallel relationship** Increasing the access of small-scale industrial and other enterprises to financial services, including affordable credit, and their integration into value chains and markets can directly improve water quality by providing the financial (and thus, technology and capacity) to reduce pollution, eliminate dumping and minimize the release of hazardous chemicals and materials. However the appropriate incentives, policy and supporting infrastructure must be present, along with a business case for doing this.	**Direct / Parallel relationship** Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes will directly have a positive effect on improving water quality by reducing the pollutants coming from industry sources.	**Direct / Parallel relationship** Enhanced scientific research and upgrading the technological capabilities of industrial sectors can directly improve water quality by providing access to appropriate technology and capacity (human and institutional) to reduce pollution, eliminate dumping and minimize the release of hazardous chemicals and materials. However, research and technical capabilities will need to be focused on this area, which means that government policy and international cooperation must be in place to support the efforts.	**Direct / Parallel relationship** Facilitating sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support would have a direct and measurable impact on terrestrial inland and near shore coastal marine water quality by reducing direct discharge of untreated domestic, agricultural and industrial waste water. More treatment facilities could be built as well as investment in recycling and reuse technology and infrastructure.	**Direct / Parallel relationship** Support for domestic technology development, research and innovation and ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities directed at reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials can direly improve water quality.	**Direct / Parallel relationship** Increase access to information and communications technology can directly lead to reducing pollution illegal dumping and release of hazardous chemicals and materials, and release of untreated wastewater, especially in least developed countries where information access is problematic If local communities are able to have access to Internet and can freely use social media and other communication channels to fight against illegal dumping and waste water discharge into water sources. This would likely lead to improved water quality in a country, and may stimulate increasing recycling and safe reuse.
6.4 - **Increase water-use efficiency across all sectors and ensure sustainable withdrawals** and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	**Indirect / Parallel relationship** The development of quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, can have an indirect benefit of increasing water use efficiency in many if not all sectors, particularly if it involves municipal and/or agricultural ear-marked water delivery.	**Direct / Parallel relationship** Promoting sustainable industrialization will directly influence a corresponding Increase in water-use efficiency across different sectors, especially manufacturing, agriculture, energy, and will help to support sustainable withdrawals of water through various technologies.	**Direct / Parallel relationship** Significant increased access of small-scale industrial and other enterprises to financial services, including affordable credit, and their integration into value chains and markets will certainly have a direct impact on the Increase in uptake of water-use efficiency technology across all sectors and ensure sustainable withdrawals if this financing is tied to water efficiency KPIs (terms and conditions)	**Direct / Parallel relationship** Upgrading infrastructure and retrofitting industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes can directly Increase water-use efficiency across the different sectors and ensure sustainable withdrawals of fresh water, and thus build resilience to water stress periods.	**Direct / Parallel relationship** Enhancing scientific research and upgrading the technological capabilities of industrial sectors in all countries, particularly developing and less developed countries will directly support the implementation of water use efficiency in most all sectors as this is of utmost priority for most countries and especially industry and agricultural sectors now.	**Direct / Parallel relationship** Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support that can directly increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	**Direct / Parallel relationship** Support for domestic technology development, research and innovation in developing countries can directly Increase water-use efficiency across all sectors and better ensure more sustainable withdrawals in the region and in individual countries. This can be supported by ensuring a conducive policy environment for, inter alia, industrial diversification and a focus on value addition to commodities and products that use water in their life cycle.	**Indirect / Parallel relationship** An increase in access to information and communications technology could indirectly, especially using SMART Grid / SMART system technology by industry could directly increase the level of water-use efficiency across in this sector and indirectly help to ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
6.5 - **Implement integrated water resources management at all levels,** including through transboundary cooperation as appropriate	**Direct / Parallel relationship** Implement integrated water resources management at all levels, including through transboundary cooperation will				**Indirect / Parallel relationship** Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries should indirectly contribute	**Indirect / Parallel relationship** Implementation of holistic and government supported / enforced IWRM programme at all levels could indirectly help to facilitate the development of	**Indirect / Parallel relationship** Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter	**Indirect / Parallel relationship** The effective implementation of integrated water resources management (IWRM) at all levels can indirectly be supported and facilitated by an increase in access to

	directly impact and lead to the development of quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being,				to the ability of countries to implement policy and actions for IWRM.	sustainable and resilient infrastructure earmarked for water and sanitation management.	alia, industrial diversification and value addition to commodities will certainly indirectly contribute to the successful implementation of IWRM nationally and regionally across boundaries.	information and communications technology.
6.6 - **Protect and restore water-related ecosystems**, including mountains, forests, wetlands, rivers, aquifers and lakes.								**Indirect / Parallel relationship** Increase access to information and communications technology can indirectly support the protection and restoration of water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes if there are good social media campaign strategies and government policy that supports this type of communication flow.
6.a - Expand **international cooperation and capacity-building support in water- and sanitation-related activities and programmes,** including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .	**Indirect / Parallel relationship** Increased international cooperation in support of water and sanitation activities, if directed through infrastructure development could certainly improve water harvesting, desalinisation, water efficiency, wastewater treatment, recycling, etc.		**Direct / Parallel relationship** If directed at water and sanitation technology installation and utilization, international cooperation and capacity-building can directly and indirectly (depending on the situation) support an increase in access to financial services, including affordable credit, by small-scale industrial and other enterprises, and their integration into value chains and markets. This would especially be true for social enterprise development and innovation support in this regards (to provide safe drinking water for instance)	**Direct / Parallel relationship** Expand international cooperation and capacity-building support in water- and sanitation-related activities and programmes has the potential to directly accelerate the upgrading of infrastructure and retrofitting of industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, which can include water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .	**Direct / Parallel relationship** Expanding international cooperation and capacity-building support can directly enhance scientific research, upgrade the technological capabilities of industrial sectors towards water- and sanitation-related activities and programmes if policy and political support is also in place.	**Direct / Parallel relationship** The facilitation of sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support can be directly supported by expanding the scope and level of international cooperation and capacity-building. This support can in turn be earmarked and focused on the design, planning, and implementation of water- and sanitation-related activities and programmes.	**Direct / Parallel relationship** Expanded international cooperation and capacity-building support in support of domestic water- and sanitation technology development, research and innovation, coupled with ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities can be a game changer if there is sufficient return on investment and created shared value to all parties.	**Indirect / Parallel relationship** International cooperation and capacity-building support in water- and sanitation-related activities and programmes can lead to an increase in access to information and communications technology on such information. This depends on the country's particular internet laws and public access to information from government and business.
6.b - Support and **strengthen the participation of local communities in improving water**	**Direct / Parallel relationship** Thru proper and adequate public participation in					**Direct / Parallel relationship** Facilitate sustainable and resilient infrastructure development in		**Direct / Parallel relationship** Increase access to information and communications

and sanitation management	development project through good EIA process, this certainly can directly influence the development of quality, reliable, sustainable and resilient infrastructure in support of economic development and human well-being but not at the cost of the environment.					developing countries through enhanced financial, technological and technical supports can directly support and strengthen the participation of local communities in improving water and sanitation management by providing local community administration with the hard and soft resources they need to effectively manage the complexities of water and sanitation systems at the local level.		technology will directly support and strengthen the participation of local communities in improving water and sanitation management by providing the necessary means for accessing data and information from the central data base and other sources that will inform their own decisions.

Systemic relationship between SDG Goal 6 Targets and SDG Goal 10 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 10 - Reduce inequality within and among countries**									
	10.1 Progressively **achieve and sustain income growth of the bottom 40 % of the population** at a rate higher than the national average	10.2 **Empower and promote the social, economic and political inclusion** of all…	10.3 Ensure **equal opportunity and reduce inequalities of outcome,** including by **eliminating discriminatory laws, policies and practices** and promoting appropriate legislation, policies and action in this regard	10.4 **Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality**	10.5 **Improve the regulation and monitoring of global financial markets and institutions** and **strengthen the implementation of such regulations**.	10.6 Ensure **enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions** in order to deliver more effective, credible, accountable and legitimate institutions	10.7 Facilitate orderly, **safe, regular and responsible migration and mobility of people,** including through the **implementation of planned and well-managed migration policies**	10.a **Implement the principle of special and differential treatment for developing countries**, in particular least developed countries, **in accordance with World Trade Organization agreements**	10.b **Encourage official development assistance and financial flows, including foreign direct investment**, to States where the need is greatest, … in accordance with their national plans and programmes	10.c **Reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors** with costs higher than 5 per cent
6.1 - Achieve **universal and equitable access to safe and affordable drinking water** for all.	**Indirect / Parallel relationship** If sustained income growth of the bottom 40 % of the population does happen, and there is real and sustained growth in household income, there should be a corresponding increase in the equitable access to safe drinking water, though affordability will be a factor in whether this is actually the case.		**Direct / Parallel relationship** Ensuring equal opportunity for all and reducing inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action can have a direct and significant impact on achieving universal and equitable access to safe and affordable drinking water, especially for the poorest and most marginalized communities.						**Indirect/Parallel relationship** Were development assistance and financial flows to increase in many countries, including from foreign direct investment, there is certainly the opportunity to provide increase access and affordability of safe drinking water to the poor through various water markets.	
6.2 - Achieve **access to adequate and equitable sanitation and hygiene and end open defecation**, (special attention to the needs of women and	**Indirect / Parallel relationship** If sustained income growth of the bottom 40 % of the population does happen, there should also be a corresponding increase in the	**Indirect / Parallel relationship** Increased social, economic and political inclusion of all people in each country will have an indirect and parallel	**Direct / Parallel relationship** Ensuring equal opportunity for all and reducing inequalities of outcome, including by eliminating discriminatory laws, policies and practices and						**Indirect/Parallel relationship** Were development assistance and financial flows to increase access to adequate and equitable sanitation and hygiene and help end open	

girls)	equitable access to sanitation and hygiene, particularly at household level in terms of toilet and investment in plumbing	relationship with achieving more access to sanitation and hygiene education and supporting infrastructure and services.	promoting appropriate legislation, policies and action can have a direct and significant impact access to adequate and equitable sanitation and hygiene and end open defecation , especially for the poorest and most marginalized communities.						defecation, especially in relation to women and girls.	
6.3- **Improve water quality** by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally		**Indirect/ Parallel relationship** If there truly is significant improvement in social inclusion in economic, social, legal and political spheres, there is the real opportunity that vulnerable, poor, marginalized communities, where much illegal dumping of effluent and hazardous waste happens, can be empowered to stop this practice, and thus reduce overall unregulated pollution and improve water quality.							**Direct/Parallel relationship** Increasing ODA and financial flows, including FDI, can directly improve the technology for treating waste water and processing hazardous chemicals and materials so that they do not end up dumped into water sources. Thus water pollution should reduce and overall water quality improved.	
6.4 - **Increase water-use efficiency across all sectors and ensure sustainable withdrawals** and supply of freshwater to address water scarcity and substantially reduce the number of people suffering				**Indirect / Parallel relationship** Adopting policies, especially fiscal, wage and social protection policies, and progressively achieving greater equality will directly impact water use efficiency through declining operational					**Direct/Parallel relationship** Increasing ODA and financial flows, including FDI, can directly improve the technology for water extraction and utilization in industry and for domestic use in cities so that water use efficiency is	

from water scarcity				subsidies (for instance) and incentivizing ownership and accountability of water use.					improved in all sectors.	
6.5 - **Implement integrated water resources management at all levels,** including through transboundary cooperation as appropriate									**Indirect/Parallel relationship** Increased development assistance can help countries and communities to implement IWRM at all levels, if there is good governance, transparency and accountability,	
6.6 - **Protect and restore water-related ecosystems**, including mountains, forests, wetlands, rivers, aquifers and lakes.						**Indirect and Parallel relationship** Having an enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions can add increased on the ground inclusive support for the Protection and restoration of water-related ecosystems.			**Indirect/Parallel relationship** Increased development assistance can help to increase protection of water related ecosystems, if there is good governance, transparency and accountability, as well as local empowerment and participation.	
6.a - Expand **international cooperation and capacity-building support in water- and sanitation-related activities and programmes,** including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .		**Direct/Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes can directly link to and influence social, economic and political inclusion.				**Indirect / Parallel relationship** With more voice in international financial organisations and institutions, there can be an increase in opportunities for focused attention and increased investment from these institutions in funding capacity building programmes to support water and sanitation related activities.			**Direct/Parallel relationship** Expanding international cooperation and capacity-building support specifically targeted at water- and sanitation-related activities and programmes, can directly encourage ODA and financial flows, including foreign direct investment, to States where the need is greatest, … in accordance	

									with their national plans and programmes.	
6.b - Support and **strengthen the participation of local communities in improving water and sanitation management**		**Direct / Parallel relationship** Significantly increasing the empowerment and inclusion of all socio-economic strata in political, social and economic decision-making and activity can support the participation of local communities in improving water and sanitation in their own local communities.	**Direct / Parallel relationship** Ensure equal opportunity and reducing inequalities by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard can have a direct influence in increasing participation of local communities in improving water and sanitation systems at the local level.			**Indirect / Parallel Relationship** Strengthening the participation of local communities in improving water and sanitation management via involvement in policy setting can have an indirect influence and impact on strengthening the representation and voice for developing countries in decision-making in global international economic and financial institutions.				

Systemic relationship between SDG Goal 6 Targets and SDG Goal 11 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 11 - Make cities and human settlements inclusive, safe, resilient and sustainable**									
	11.1 **Access for all to adequate, safe and affordable housing and basic services and upgrade slums**	11.2 **Access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations**.	11.3 **Inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management**.	11.4 **Protect and safeguard the world's cultural and natural heritage**	11.5 **Reduce the number of deaths and the number of people affected and decrease the direct economic losses caused by disasters, including water-related disasters,**	11.6 **Reduce the adverse environmental impact of cities (e.g. air quality and municipal and other waste management)**	11.7 **Universal access to safe, inclusive and accessible, green and public spaces**	11.a **Positive economic, social and environmental links between urban, per-urban and rural areas** by **strengthening national and regional development planning**	11.b **Increase the number of cities and human settlements adopting and implementing integrated policies and plans towards, holistic disaster risk management at all levels**	11.c **Support least developed countries in building sustainable and resilient buildings utilizing local materials**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all	**Direct / Parallel relationship** There is a direct and parallel relationship that exist between improving and increasing the amount of adequate, safe and affordable housing and basic services and upgrade slums with the provisioning and delivery of safe and affordable drinking water to more people, as basic services in this case would include delivery of water to communities and households.		**Direct / Parallel relationship** There is a direct and parallel relationship between inclusive participation and increasing capacity for integrated / sustainable human settlement planning and providing increased access to safe/affordable drinking water (esp. in relation to development of supportive infrastructure.		**Direct / Inverse relationship** Achieving universal access to safe and affordable drinking water has a direct relationship with reducing the number of death caused by disasters, including water-related disasters. This increases the resilience of countries / cities to climate change and other natural disasters, as one of the greatest causes of death during disaster response and recovery period is from dirty and unsafe water used for human consumption.			**Direct / Parallel relationship** There is a direct and parallel relationship between making strong systemic linkages between the three dimensions of SD through strengthening national / regional development planning and significantly increasing access to safe and affordable drinking water. This would involve water investment and markets for sure	**Direct / Parallel relationship** Increasing the number of cities and human settlements adopting and implementing integrated policies and plans towards, holistic disaster risk management at all levels will have a direct impact on more rapidly achieving universal and equitable access to safe and affordable drinking water in all countries.	
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)	**Direct / Parallel relationship** There is a direct and parallel relationship that would exist between improving and increasing the amount of		**Direct / Parallel relationship** Inclusive and sustainable urbanization and strengthening capacity for participatory, integrated and sustainable human settlement planning and		**Direct / Inverse relationship** Achieving access to adequate and equitable sanitation and hygiene and end open defecation has a direct	**Direct / Inverse relationship** Reducing open urine and defecation (for example) by improving access to sanitation (especially in slum		**Direct / Parallel relationship** There is a direct and parallel relationship between making strong systemic linkages between the three		**Direct / Parallel relationship** Using local materials like straw and mud, hygienic, strong and attractive earthen (dry compost) toilets can be

	adequate, safe and affordable housing and basic services (particularly in slums) with increasing access to sanitation and healthcare since the very core of basic services should entail the establishment of well staffed health clinics and the enabling and provisioning of proper sanitary toilets and others infrastructure to communities and households.		management will directly support the improvement in access to sanitation services and infrastructure and improved hygiene, particularly in the case of women and girls. Example: DEWATS implementation.		relationship with reducing the number of death caused by disasters, including water-related disasters. This increases the resilience of countries / cities to climate change and other natural disasters, as one of the greatest causes of death during disaster response and recovery period is from dirty and unsafe water used for human consumption.	areas) will reduce waste related environmental impacts (both from solid waste and particulate matter in the air)		dimensions of SD and between urban, per-urban and rural areas in national / regional development planning and achieving universal access to adequate and equitable sanitation and hygiene and ending open defecation, as this is both an urban and rural development and human wellbeing issue.		constructed easily and at very low cost that will improve the situation for access to sanitation infrastructure and improve overall hygiene
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	**Direct / Parallel relationship** Improving the living conditions and basic services of slums, such as through improved sanitation facilities and infrastructure, will have a positive impact on reducing pollution and improving water quality.		**Direct/ Parallel relationship** Inclusive and sustainable urbanization and strengthen capacity for participatory, integrated and sustainable human settlement planning and management can indirectly assist with the overall improvement in water quality through the reduction of pollution from all sectors.	**Direct / Parallel relationship** Significant reduction in pollution to water resources in all aspects will directly contribute to the protection and safeguarding of the world's cultural and natural heritage.		**Direct / Parallel relationship** A significant reduction of the environmental impact of cities (e.g. air quality and municipal and other waste management will have a strong and direct impact on improving water quality in local and regional water resources.	**Direct / Parallel relationship** Universal access to safe, inclusive and accessible, green and public spaces in urban areas will have a direct and significant impact at some point on improving water quality, particularly in the case of reducing the impacts from storm runoff washing oil and other toxic pollutants from pavement directly into water sources.	**Direct / Parallel relationship** Strengthening economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning will directly improve water quality thru pollution reduction from all sectors.		
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water			**Direct / Parallel relationship** Inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management directly supports	**Direct / Parallel relationship** Ensuring the sustainable withdrawals of water from water resources (through increased water use efficiency) can directly				**Direct / Parallel relationship** Strengthening national and regional development planning to incorporate strongly a systemic and integrative approach with the three SD	**Indirect / Parallel relationship** Since in many instances water scarcity is brought on directly by human activities, implementing integrated	

scarcity			increased water use efficiency to ensure that withdrawals of fresh water do not exceed recharge capacity.	contribute to the protection of the world's cultural and natural heritage				dimensions that takes into consideration population growth projections and resource needs will increase water-use efficiency across all sectors and contribute to ensuring sustainable withdrawals and supply of freshwater	policies and plans towards, holistic disaster risk management at all levels can lead to increased water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater in times of disaster.	
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation			**Direct/ Parallel relationship** There is a direct and parallel relationship between IWRM and inclusive participation and increased capacity for integrated / sustainable human settlement planning, since human settlement impacts are the main contributing factor impacting water resources.	**Direct / Parallel relationship** Implement IWRM at all levels, including through transboundary cooperation, can directly contribute to the protection and safeguarding of the world's cultural and natural heritage.				**Direct / Parallel relationship** Strengthening national and regional development planning to incorporate strongly a systemic and integrative approach with the three SD dimensions will directly support the implementation of IWRM at all levels, including through transboundary cooperation.		
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes			**Indirect / Parallel relationship** Sustainable urban planning that uses a systems based holistic approach will indirectly help to protect water related ecosystems, particularly those in within the boundaries of urban cities and in close proximity. Example: DEWATS implementation.	**Direct / Parallel relationship** By adequately and permanently protecting / restoring water related ecosystems at the country level, this would protect and safeguard the world's cultural and natural heritage	**Direct / Inverse relationship** Protection for restore water-related ecosystems, can directly reduce the number of deaths and the number of people affected and decrease the direct economic losses caused by disasters, including water-related disasters (e.g. mangrove forest buffering coast against tsunami waves, forest that	**Direct / Inverse relationship** By reducing the adverse environmental impact of cities (e.g. air quality and municipal and other waste management) there can be significant improvement in the protection of water related ecosystems since cities are the main consumers of resources coming from these areas, and the waste again impacts the environmental	**Indirect / Parallel relationship** Adequate and on-going protection and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes will indirectly contribute to increasing the accessibility of people in all countries to green and	**Direct / Inverse relationship** Developing and strengthening positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning can go a very long way to directly protecting and restoring water-related ecosystems.	**Indirect / Parallel relationship** An increase in the number of cities and human settlements that adopt and implement integrated and holistic disaster risk management policies and plans at all levels can contribute to the protection and restoration of water-related ecosystems,	

					prevent landslides, etc.)	quality of natural ecosystems. This is particularly relevant to riverine and coastal marine ecosystems, which bear the brunt of environmental impacts from cities.	public spaces.		including mountains, forests, wetlands, rivers, aquifers and lakes as these are seen as aiding in the prevention and reduction of disaster effects such as floods, tsunami wave power, drought prevention, etc.	
6.a - Expand international cooperation and capacity-building support in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .			**Direct / Parallel relationship** Expanded international cooperation and capacity-building support in water- and sanitation-related activities and programmes will directly support the efforts towards sustainable urbanization and increasing capacity for participatory, integrated and sustainable human settlement planning and management.			**Indirect / Parallel relationship** Expanded international cooperation and capacity-building support in water- and sanitation-related activities and programmes can assist in reducing the adverse environmental impact of cities, though not directly.			**Direct / Parallel relationship** Expanded international cooperation and capacity-building support in water- and sanitation-related activities and programmes will directly support the efforts towards	
6.b - Participation of local communities in improving water and sanitation management	**Direct / Parallel relationship** Participation of local communities in improving water and sanitation management can directly support the equitable provisioning of basic services in cities (especially slums) like municipal drinking water systems and sanitation infrastructure (e.g. DEWATS)		**Direct / Parallel relationship** Inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management directly supports the pparticipation of local communities in improving water and sanitation management Sustainable urban.	**Direct / Parallel relationship** Participation of local communities in improving water and sanitation management can directly help to protect and safeguard the cultural and natural heritage sites, especially in this case, water related sites.		**Indirect / Inverse relationship** The participation of local communities in improving water and sanitation management can indirectly contribute to improvements in the protection of water related ecosystems.		**Indirect / Parallel relationship** Building systemic linkages and understanding cross dimensional dynamics between economic, social and environmental sphere, and between urban, per-urban and rural areas through national and regional development planning can effectively support the participation of local communities in improving water and sanitation management.	**Indirect / Parallel relationship** The increased adoption by cities and settlements of integrated holistic disaster risk management policies and plans should add support to having local communities participate in improving water and sanitation management as this is a key aspect of disaster preparedness and response.	**Indirect / Parallel relationship** The participation of local communities in improving water and sanitation management can support building sustainable and resilient buildings utilizing local materials in local communities (e.g. DEWATS infrastructure at household and community levels)

Systemic relationship between SDG Goal 6 Targets and SDG Goal 12 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 12 - Ensure sustainable consumption and production patterns**								
	12.1 **Implement the 10-year framework of programmes on sustainable consumption** and production, all countries taking action, …	12.2 **Sustainable management and efficient use of natural resources**	12.3 **Halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains,** including post-harvest losses	12.4 **Environmentally sound management of chemicals and all wastes throughout their life cycle**…	12.5 **Reduce waste generation through prevention, reduction, recycling and reuse**	12.6 **Encourage companies,** especially large and transnational companies, **to adopt sustainable practices and to integrate sustainability information into their reporting cycle**	12.7 **Promote public procurement practices that are sustainable, in accordance with national policies and priorities**	12.8 **People everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature**	12.a Support developing countries to **strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all		**Direct / Parallel relationship** The sustainable management and efficient use of natural resources will directly contribute to providing the conditions necessary to deliver safe and affordable drinking water for all as clean water will be less scarce and more cost efficient to treat and deliver to poorer communities.		**Direct / Parallel relationship** Ensuring environmentally sound management of chemicals and all wastes throughout their life cycle will directly contribute to making it easier to provide access to safe and affordable drinking water for everyone. Water that is free of chemicals and toxic substances will be easier and more cost efficient to treat for drinking standards.	**Indirect / Parallel relationship** Reduce waste generation through prevention, reduction, recycling and reuse will also indirectly contribute to making it easier to provide access to safe and affordable drinking water for everyone.				**Indirect / Parallel relationship** Strengthening scientific and technological capacity to move towards more sustainable patterns of consumption and production can indirectly support the achievement of universal and equitable access to safe and affordable drinking water for all through break-through innovation and technology.
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)					**Indirect / Inverse relationship** Improving sanitation infrastructure, awareness and behaviour which reduces open defecation can indirectly reduce overall waste generation. Human faeces can be up-cycled into natural compost fertilizer.				
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release	**Direct / Parallel relationship** The 10YFSCP is an international framework for	**Direct / Parallel relationship** The sustainable management and efficient use of		**Direct / Parallel relationship** Ensuring environmentally sound	**Direct / Inverse relationship** Improve water quality by reducing	**Direct / Parallel relationship** Encouraging companies, especially large and	**Indirect / Parallel relationship** Promote public procurement practices that are	**Direct / Parallel Relationship** People everywhere have the relevant information and	**Indirect / Parallel relationship** An increase in scientific and technological

of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	developing, replicating, and scaling up SCP and resource efficiency at national and regional levels, and decoupling environmental degradation and resource use from economic growth, so if this framework is increasingly implemented there will be a direct improvement in water quality from pollution, illegal dumping and release of hazardous chemicals and materials into the environment.	natural resources will likely have a direct and positive impact on improvement of water quality by significantly reducing pollution and hazardous chemical inputs into water sources as a result of more eco-efficient and clean technology manufacturing processes. Sustainable values will be crucial to make this happen.		management of chemicals and all wastes throughout their life cycle will directly contribute to improving water quality by reducing pollution from hazardous chemicals and materials.	pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally directly reduces waster generation.	transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle can certainly contribute to reducing pollution in water sources from waste water effluent and other types of pollution.	sustainable, in accordance with national policies and priorities can contribute reducing pollution and improving water quality.	awareness for sustainable development and lifestyles in harmony with nature	capacity to move towards more sustainable patterns of consumption and production (i.e. green patents) can improve water quality if they are directed in this area.
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	**Direct / Parallel relationship** The 10YFSCP is an international framework for developing, replicating, and scaling up SCP and resource efficiency at national and regional levels. This includes water use efficiency in factories and other business operations and products. If the 1oYFSCP is fully implemented by countries it will directly and significantly improve water use efficiency in all sectors and reduce stress on local / regional water resources.	**Direct / Parallel relationship** Substantially increasing water-use efficiency and sustainable management of natural resources across all sectors to ensure sustainable withdrawals and supply of freshwater to address water scarcity is directly supportive with sustainable management and efficient use of natural resources.				**Direct / Parallel relationship** Encouraging companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle can directly increase water use efficiency in industrial, mining, energy and agricultural sectors as this is has a strong business case (cost savings) and innovation (creating value).	**Direct/ Parallel relationship** Promote public procurement practices that are sustainable, in accordance with national policies and priorities can directly influence companies to increase water use efficiency as this can be a metric for evaluation of sustainable practice.	**Indirect / Parallel relationship** People everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature, which can directly and indirectly support increasing water use efficiency in different sectors.	**Direct / Parallel Relationship** An increase in scientific and technological capacity to move towards more sustainable patterns of consumption and production (i.e. green patents) can substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	**Indirect / Parallel relationship** Implementation of the 10-year framework of programmes on SCP indirectly	**Direct / Parallel relationship** Implement integrated water resources management at all levels, including through				**Indirect / Parallel relationship** Implementing integrated water resources management at all levels can encourage	**Indirect / Parallel relationship** Promote public procurement practices that are sustainable, in accordance with national policies and		

	supports IWRM through, for instance, managing environmentally harmful uses of substances that can have detrimental impacts on water quality and water-related ecosystems.	transboundary cooperation as appropriate directly supports the sustainable management and efficient use of natural resources, especially water.				companies, especially large and transnational companies, to adopt sustainable practices in their business operations.	priorities certainly links to supporting the Implement of integrated water resources management .		
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Indirect / Parallel relationship** Implementation of the 10-year framework of programmes on SCP indirectly supports Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Direct / Parallel relationship** The sustainable management and efficient use of natural resources directly contribute to ensuring the on-going protection and restoration of water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.		**Direct / Parallel relationship** **E**nvironmentally sound management of chemicals and all wastes throughout their life cycle will directly help in protecting and conserving water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes since chemical pollutants are probably the most ubiquitous (after plastic) pollution affecting water.	**Direct / Parallel relationship** Reduce waste generation through prevention, reduction, recycling and reuse directly helps to protect water related ecosystems like rivers, streams, lakes and wetlands, as well as near shore beach and estuaries.	**Indirect / Parallel relationship** Encouraging companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle will indirectly contribute to the protection and restoration of water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes .	**Indirect / Parallel relationship** Promote public procurement practices that are sustainable, in accordance with national policies and priorities can indirectly contribute to the protection and restoration of water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.	**Indirect / Parallel relationship** People everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature can help to protect water related ecosystems.	**Indirect / Parallel relationship** Supporting developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production will indirectly help in protecting water related ecosystems.
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .	**Direct / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes can directly contribute to the Implementation of the 10-year framework of programmes on sustainable consumption and production.	**Direct / Parallel relationship** Expanding international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes directly supports the sustainable management and efficient use of natural resources such as water, land, soil, etc.			**Direct / Parallel relationship** Expanding international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes directly supports the target of reducing waste generation through prevention, reduction, recycling and reuse, especially given the up-cycling potential of human waste for agriculture				**Direct / Parallel relationship** International cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes is directly linked with an increase in scientific and technological capacity to move towards more sustainable patterns of consumption and production (such as through water harvesting, desalination, water efficiency, wastewater

					use and energy production (methane). ODA can go a long way in capacity building and resource / infrastructure development in this case.				treatment, recycling and reuse technologies).
6.b - Support and strengthen the participation of local communities in improving water and sanitation management		**Direct / Parallel relationship** Support and strengthening participation of local communities in improving water and sanitation management directly links to and contributes to the sustainable management and efficient use of natural resources (particularly water, forest, water-related ecosystems, etc.).						**Indirect Parallel relationship** Support for strengthening the participation of local communities in improving water and sanitation management can indirectly improve the information people receive and awareness for sustainable development and lifestyles in harmony with nature.	

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 12 - Ensure sustainable consumption and production patterns**	
	12.b **Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products**	12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by **removing market distortions, in accordance with national circumstances,** including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts,….
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all		
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)		
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally		
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity		**Direct / Parallel relationship** Removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out harmful subsidies, where they exist, to reflect their environmental impacts, can directly lead to increased water use efficiency, especially in the agriculture sector. This is were we see the nexus of food, energy and water strongly.
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate		
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Direct / Parallel relationship** Monitor sustainable development impacts for sustainable tourism can indirectly link to the protection and restoration water-related ecosystems,	
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling		

and reuse technologies .		
6.b - Support and strengthen the participation of local communities in improving water and sanitation management	**Direct / Parallel relationship** Support and strengthening of participation of local communities in improving water and sanitation management can directly support the development and implementation of tools to monitor sustainable development impacts for sustainable tourism	

Systemic relationship between SDG Goal 6 Targets and SDG Goal 13 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 13 - Take urgent action to combat climate change and its impacts**				
	13.1 **Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters** in all countries	13.2 **Integrate climate change measures into national policies, strategies and planning**	13.3 **Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction** and early warning	13.a Implement the commitment undertaken by developed-country parties to the **United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020** from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and **fully operationalize the Green Climate Fund through its capitalization as soon as possible**	13.b **Promote mechanisms for raising capacity for effective climate change-related planning and management** in least developed countries and small island developing States, including **focusing on women, youth and local and marginalized communities**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all	**Direct / Parallel relationship** By increasing access to safe and affordable drinking water for all people, this strengthens resilience and adaptive capacity to climate related hazards and natural disasters.			**Indirect / Parallel relationship** Implementation of the commitment undertaken by developed-country parties to the **United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020** to address the needs of developing countries can include provisions to ensure universal access to safe and affordable drinking water, which can be supported through the Green Climate Fund.	**Direct / Parallel relationship** Mechanisms for raising capacity for effective climate change-related planning and management can directly support improving access to safe and affordable drinking water for all people as a key provision in climate change disaster risk management and sustainable development.
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)	**Direct / Parallel relationship** By increasing access to adequate and equitable sanitation and hygiene, this directly strengthens resilience and adaptive capacity to climate related hazards and natural disasters.				**Direct / Parallel relationship** Mechanisms for raising capacity for effective climate change-related planning and management can directly support access to adequate and equitable sanitation and hygiene as a key provision in climate change disaster risk management and sustainable development.
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	**Direct / Parallel relationship** Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater will directly strengthen the resilience and adaptive capacity to climate related hazards and natural disasters in all countries.	**Indirect / Parallel relationship** Integration of climate change measures into national policies, strategies and planning can indirectly contribute to reducing pollution and minimizing release of hazardous chemical and materials into water source, thus improving overall water quality nationally.	**Direct / Parallel relationship** Improving education, awareness-raising and human and institutional capacity curriculum) on climate change mitigation, adaptation, impact reduction and early warning can directly contribute, with some delay, to overall reducing pollution and improving water quality.	**Indirect / Parallel relationship** Implementation of the commitment undertaken by developed-country parties to the **United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020** to address the needs of developing countries can include provisions to improve water quality through pollution reduction in all sectors, though this will really be driven by priority needs and commitments at the country level.	
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	**Direct/ Parallel relationship** An increase in water-use efficiency across all sectors and to ensure sustainable withdrawals and supply of freshwater to address water scarcity directly strengthens resilience and adaptive capacity to climate-related hazards and natural disasters.	**Direct / Parallel relationship** If climate change measures are integrated into national policies, strategies and planning as called for, there will be direct impact on increase of water use efficiency across all, if not most sectors. The energy, food, water nexus will play a role in linkage to leverage movement.	**Indirect / Parallel relationship** Improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning may indirectly lead to increasing water-use efficiency across the different sectors to ensure sustainable withdrawals and supply of freshwater to	**Indirect / Parallel relationship** Implementation of the commitment undertaken by developed-country parties to the **United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020** to address the needs of developing countries can include provisions to increase water use efficiency in all sectors, though this will really be driven by priority needs and	**Indirect / Parallel relationship** Promote mechanisms for raising capacity for effective climate change-related planning and management, which can indirectly contribute to increase water-use efficiency through the energy, food, water nexus across the different sectors so as to ensure sustainable withdrawals and supply of freshwater to address water scarcity

			address water scarcity as a result of climate change. This would be most important in the industrial and agricultural sectors.	commitments at the country level.	
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	**Direct / Parallel relationship** IWRM can assist communities to adapt to changing climatic conditions that limit water availability or may lead to excessive floods or droughts. In this way IWRM has a direct linkage to the strengthening of national and local community resilience and adaptive capacity to climate-related hazards and natural disasters	**Direct / Parallel relationship** Integrating climate change measures into national policies, strategies and planning will have a direct effect and impact on the nature of IWRM planning and implementation nationally and transbourdary. IWRM can assist communities to adapt to changing climatic conditions that limit water availability or may lead to excessive floods or droughts.	**Direct / Parallel relationship** Improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction will have a direct impact on both national and transboundary planning and implementation of IWRM at all levels, as climate change will be the greatest challenge in water resource management going forward for almost all countries.		
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Direct / Parallel relationship Protection and restoration of water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes can directly lead to strengthened resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	**Direct / Parallel relationship** Integrate climate change measures into national policies, strategies and planning can directly support increased protection and restoration of water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.	**Direct / Parallel relationship** Improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction will have a direct impact on current and future measures at both national and international levels to protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes, as these ecosystems are crucial for both climate change mitigation and adaptation measures and disaster risk reduction strategies.	**Indirect / Parallel relationship** Full implementation of the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 can indirectly help to support the protection of water related ecosystems as many of these ecosystems are crucial to both mitigation and adaptation measures.	**Direct / Parallel relationship** Increased and strengthened mechanisms for raising capacity for effective climate change-related planning and management will lead to the direct protection and restoration of water-related ecosystems, as planning and management are at the core of system design and transformation in all sectors for mitigation and adaptation to climate change. Healthy ecosystem are essential in climate change mitigation and adaptation strategies.
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.	**Direct / Parallel relationship** Expanding and increasing international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies, directly contributes to resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.	**Direct / Parallel relationship** Expanding and increasing international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes will also directly support the successful Integration of climate change measures into national policies, strategies and planning in these countries, as water and sanitation management are an essential factor in preparing for climate change impacts.	**Direct / Parallel relationship** Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes will certainly directly support education and training on climate change adaptation and impact reduction due to the importance of water and sanitation planning, development and management in national climate change policies, plans and programmes.		
6.b - Support and strengthen the participation of local communities in improving water and sanitation management	**Direct / Parallel relationship** Support and strengthen the participation of local communities in improving water and sanitation management has a direct impact on the bigger overarching challenge of climate change, as it directly helps to sstrengthen resilience and adaptive capacity to climate-related hazards and natural disasters of the entire country.		**Indirect / Parallel relationship** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning can indirectly support the strengthening of participation of local communities in improving water and sanitation management.		**Direct / Parallel relationship** Promotion of mechanisms in raising capacity for effective climate change-related planning and management, especially focusing on women, youth and local and marginalized communities, is directly supported by the strengthening the participation of local communities on water and sanitation management, as these two areas are essential to adaptive capacities for facing climate change.

Systemic relationship between SDG Goal 6 Targets and SDG Goal 14 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development**									
	14.1 Prevent and **significantly reduce marine pollution of all kinds,** in particular from land-based activities, including marine debris and nutrient pollution	14.2 Sustainably **manage and protect marine and coastal ecosystems** to **avoid significant adverse impacts**, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	14.3 **Minimize and address the impacts of ocean acidification …**	14.4 Effectively **regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices** and implement science-based management plans, in order to **restore fish stocks** in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	14.5 **Conserve at least 10 per cent of coastal and marine areas,** consistent with national and international law and based on the best available scientific information	14.6 **Prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing,** eliminate subsidies that **contribute to illegal, unreported and unregulated fishing** and refrain from introducing new such subsidies, …	14.7 **Increase the economic benefits** to Small Island developing States and least developed countries **from the sustainable use of marine resources,** including **through sustainable management of fisheries, aquaculture and tourism**	14.a **Increase scientific knowledge, develop research capacity and transfer marine technology,** to improve ocean health and to enhance the contribution of marine biodiversity to the development	14.b **Provide access for small-scale artisanal fishers to marine resources and markets**	14.c **Conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, …**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all	**Direct / Inverse relationship** Any significant reduction in illegal dumping, effluent waste water discharge, marine debris and nutrient loading (pollution) entering into marine coastal areas from the land will of course improve water quality significantly, as these are the main sources of water quality degradation.	**Direct / Parallel relationship** One of the most important ways to improve water quality and to sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, is to halt, reduce, limit pollution that enters waterways that flow to the sea along with dumping at sea.	**Direct / Inverse relationship** Improving water quality, which will help with reducing impacts of increasing acidification of near shore marine waters, will be significantly improved by reducing pollution and minimizing release of hazardous chemicals and materials entering inland waterways and directly the marine environment.		**Indirect/ Parallel relationship** If effectively managed and monitored, conserving 10% of coastal and marine areas can help reduce pollution from release of waste water discharge and hazardous chemicals, though given the littoral and boundary less nature of the oceans, this will have minimal impact.					
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open										

defecation, (special attention to the needs of women and girls)										
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	**Direct / Parallel relationship** Effective and holistic implementation of IWRM at all levels will directly lead to the prevention and significant reduction of marine pollution of all kinds, particularly from land-based activities.	**Direct/ Parallel relationship** Significantly reducing pollution and contamination of water sources, and thus improving water quality overall will directly assist with the Sustainable management and protection of marine and coastal ecosystems to avoid significant adverse impacts from land activities.	**Direct / Parallel relationship** Significantly improving water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater impact on reducing the rate of ocean acidification due to man-made pollutants, though CO2 emissions into the atmosphere are much more directly impacting now.		**Indirect / Parallel relationship** Protection of at least 10% of critical coals and marine areas and ecosystems and services is part and parcel of IWRM, especially in relation to near short environments like estuaries and wetlands.			**Indirect / Parallel relationship** IWRM will be indirectly impacted by Increase scientific knowledge, develop research capacity and transfer marine technology as the key indicator is budget allocation to research.		
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	**Indirect / Parallel relationship** Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater will indirectly contribute to reducing marine pollution.	**Indirect / Parallel relationship** Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater will certainly indirectly contribute to the improved management and protection of marine and coastal ecosystems.	**Indirect / Parallel relationship** Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater will indirectly contribute to minimizing the contribution of terrestrial sourced pollutants and discharges from increasing							

			acidification of ocean environments.							
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	**Direct / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, can indirectly prevent and reduce marine pollution of all kinds, in particular from land-based activities.	**Direct / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, can directly contribute to the sustainable management and protection of marine and coastal ecosystems to avoid significant adverse impacts								
6.6 - Protect and restore (freshwater) water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Direct / Inverse relationship** Supporting and strengthening the participation of local communities in improving water and sanitation management can prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	**Indirect / Parallel relationship** Supporting and strengthening the participation of local communities in improving water and sanitation management can indirectly contribute to the protection marine and coastal ecosystems. This also rest on the values and knowledge and skills capacity of the local people and their leaders along with various other factors.								
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water	**Direct / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes can directly support significantly reducing marine pollution of all kinds, in	**Direct / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes can directly support and impact the sustainable management and protection of marine and coastal	**Direct / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes can directly support							**Indirect/ Parallel relationship** Conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS will certainly, indirectly have influence on the expansion of international cooperation and capacity-building support to developing

efficiency, wastewater treatment, recycling and reuse technologies .	particular from land-based activities, including marine debris and nutrient pollution.	ecosystems to avoid significant adverse impacts, particularly from waste and pollution entering near shore fragile and high value marine environments.	minimizing the contribution of terrestrial sourced pollutants and discharges from increasing acidification of ocean environments.							countries in water- and sanitation-related activities and programmes as they related to marine / ocean protection, conservation and sustainable use.
6.b - Support and strengthen the participation of local communities in improving water and sanitation management	**Direct / Parallel relationship** Strengthening the participation of local communities in improving water and sanitation management can directly contribute to the prevention and reduction of marine pollution of many different kinds, especially from coastal communities and cities.	**Direct / Parallel relationship** Strengthening the participation of local communities in improving water and sanitation management can directly contribute to the improved management and protection of marine and coastal ecosystems, especially if it has direct relevance to their livelihoods and cultural significance.								

Systemic relationship between SDG Goal 6 Targets and SDG Goal 15 Targets

	SDG # 15- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss									
SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	15.1 Ensure the **conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands,** mountains and drylands, in line with obligations under international agreements	15.2 Promote the **implementation of sustainable management of all types of forests**, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	15.3 **Combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods,** and strive to achieve a land degradation-neutral world	**15.4 Ensure the conservation of mountain ecosystems, including their biodiversity**, in order to enhance their capacity to provide benefits that are essential for sustainable development	15.5 **Reduce the degradation of natural habitats, halt the loss of biodiversity** and, by 2020, protect and prevent the extinction of threatened species	15.6 Promote fair and **equitable sharing of the benefits arising from the utilization of genetic resources** and promote appropriate access to such resources, as internationally agreed	15.7 **Urgent action to end poaching and trafficking of protected species of flora and fauna** and address both **demand and supply of illegal wildlife products**	15.8 **Prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems** and control or eradicate the priority species	15.9 **Integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies a**nd accounts	15.a Mobilize and significantly **increase financial resources from all** sources **to conserve and sustainably use biodiversity and ecosystems**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all.	**Direct / Parallel relationship** Conserving and restoring (and sustainable management) of terrestrial and inland freshwater ecosystems will directly and strongly ensure the continued long-term natural provisioning of safe water for drinking in most every country.	**Direct /Parallel relationship** Implementation of universal sustainable management of all types of forests in all countries will directly have implications for securing the natural source (the water cycle) for the provisioning by nature of safe and affordable drinking water for all.		**Direct /Parallel relationship** Ensuring the conservation of mountain ecosystems in particular, particularly snowfields, glaciers, forest and alpine vegetation, which is where the water cycle starts, will contribute indirectly to providing clean, safe and affordable drinking water to lowland populations)					**Indirect / Parallel relationship** Integrating ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts will indirectly have a positive effect on sustaining natural sources of drinking water in most countries.	**Indirect / Parallel relationship** Mobilizing sufficient financial resources from all sources to conserve and sustainably use biodiversity and ecosystems will in an indirect way help to secure the long-term provisions of safe, clean and affordable drinking water to all people.
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)										
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing	**Direct / Parallel relationship** Halting and reducing pollution, dumping and release of				**Direct / Inverse relationship** Improving water quality by halting & reducing pollution will undoubtly reduce				**Direct / Parallel relationship** If people, especially company CEOs, mangers, and government policy makers have a	

release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	hazardous chemical and materials, and untreated wastewater into surface water sources will have significant direct positive impact on the conservation and restoration of terrestrial and inland freshwater ecosystems.				the degradation of natural habitats, halt the loss of biodiversity protect and prevent the extinction of threatened species				stronger environmental ethic and greater ecological literacy, there is a much greater chance that these values will be incorporated into and influence ,national and local planning, development processes, poverty reduction strategies	
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	**Direct / Parallel relationship** Significantly improving water use efficiency across all sectors through sustainable use management, particularly with respect to withdrawals and extraction of freshwater from natural sources, will directly help to ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services.		**Indirect / Parallel relationship** Increasing water use efficiency by industry and domestic users, and all sectors, by more efficient use, extraction and withdrawals all sources can indirectly help to combat desertification, and indirectly restore degraded land and soil.	**Indirect / Parallel relationship** Increasing water use efficiency by industry and domestic users, and by more efficient use, extraction and withdrawals from natural mountain and highland sources can indirectly help to ensure the conservation of mountain ecosystems, including their biodiversity, and also enhance these ecosystems to provide benefits that are essential for sustainable development .	**Indirect / Inverse relationship** Significantly increasing water-use efficiency across all sectors that measurably ensures sustainable withdrawals and supply of freshwater can contribute to slowing the degradation of natural habitats, and slow the loss of biodiversity.				
6.5 - Implement **integrated water resources management (**IWRM**) at all levels, i**ncluding through transboundary cooperation as appropriate	**Direct / Parallel relationship** If national government can effectively implement IWRM at all levels of government from national to local, and especially transboundary, there will be a significant progress made towards the conservation and restoration of terrestrial and inland freshwater ecosystems and	**Direct / Parallel relationship** The implementation of sustainable management of all types of forests, including reforestation efforts is a core aspect of IWRM, and can in practice be a regional transboundary effort if the appropriate agreements between countries is in	**Direct / Parallel relationship** Integrated water resource management (IWRM) should include policy, plans, programmes and projects to restore degraded land and soils as part of an overall holistic approach. Thus, the relationship is direct and parallel.	**Direct / Parallel relationship** Integrated water resource management (IWRM) can directly contribute to the conservation of mountain ecosystems, including their biodiversity in appropriate context and if effectively implemented and sustainably financed.	**Indirect / Inverse relationship** Integrated water resources management (IWRM) at all levels, including through transboundary cooperation, if implemented well, can lead to reduced degradation of natural habitats, and halt the loss of biodiversity.			**Direct / Parallel relationship** The increasing integration of ecosystem and biodiversity values into national and local planningdevelopment processes, will have direct consequences for improvement of uptake and implementation of IWRM.	**Indirect / Inverse relationship** If significant increases in financial resources from all sources are available for IWRM within all countries, especially less developed countries, these measures will indirectly contribute to the conservation and sustainable use of biodiversity

	their services through sustainable management practices,	place. IWRM drives sustainable forest management.								and ecosystems water resource management (IWRM) can directly contribute to the
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Direct / Parallel relationship** The conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services will directly lead to the protection and restoration of water related ecosystems.	**Direct / Parallel relationship** Strengthening the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests will directly contribute to adequate and sustained protection and restoration of water related ecosystems as this target is at the core of sustainable management.	**Direct / Parallel relationship** Providing adequate and sustained protection of water related ecosystems will directly help in combating desertification and restore degraded land and soil, including land affected by desertification, drought and floods.	**Direct / Parallel relationship** Ensuring the conservation of mountain ecosystems will directly contribute to ensuring the protection of water related ecosystems, particularly mountain ecosystems.	**Direct / Parallel relationship** Providing adequate and sustained protection of water related ecosystems can directly help in reducing the degradation of natural habitats and reduce loss of biodiversity.	**Direct / Parallel relationship** Ensuring fair and equitable sharing of the benefits arising from the utilization of genetic resources and ensuring appropriate access to such resources, as internationally agreed will have direct and significant implications and impact on the protection of water related ecosystems. Local ownership and governance is critical for stewardship.		**Indirect / Inverse relationship** Preventing the introduction of invasive alien species in water ecosystems will indirectly contribute to protection and conservation of these ecosystems.	**Direct / Parallel relationship** Successful integration of ecosystem and biodiversity values into national and local planning and development processes, including poverty reduction strategies can directly contribute to the protection of water-related ecosystems.	**Direct/ Parallel relationship** Significantly increasing financial resources from all sources to conserve and sustainably use biodiversity and ecosystems can directly help to protect water related ecosystems.
6.a - **Expand international cooperation** and **capacity-building support** to developing countries **in water- and sanitation-related activities and programme**s, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.	**Direct / parallel relationship** Expanding international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, can directly support conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services.				**Indirect / parallel relationship** Expanding international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, can, in certain situations help to ensure the conservation of mountain ecosystems, and biodiversity.				**Indirect / Parallel relationship** International cooperation and capacity-building in support of water and sanitation activities and programmes can indirectly help to integrate ecosystem and biodiversity values into national and local planning, development processes and poverty reduction strategies through economic conservation instruments like Payment for Ecosystem Services (PES).	
6.b - Support and strengthen the participation of local communities in improving water	**Indirect / Parallel relationship** Strengthening the participation	**Indirect / parallel relationship** Strengthening the participation	**Indirect / Parallel relationship** Strengthening the participation	**Indirect /Parallel relationship** Strengthening the participation of local communities in	**Indirect/ Inverse relationship** Strengthening the participation of local communities in					

and sanitation management	of local communities in improving water and sanitation management can indirectly lead to the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services,	of local communities in improving water and sanitation management can indirectly lead to more sustainable management local forest.	of local communities in improving water and sanitation management can indirectly help to combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods.	improving water and sanitation management can indirectly link to the conservation of mountain ecosystems and mountain biodiversity.	improving water and sanitation management can indirectly contribute to a reduction in degradation of natural habitats, reduce the loss of biodiversity.					

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 15- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**	
	15.b Mobilize significant resources from all sources and at all levels to **finance sustainable forest management and provide adequate incentives to developing countries to advance such management**, including for conservation and reforestation	15.c **Enhance global support for efforts to combat poaching and trafficking of protected species,** including by increasing the capacity of local communities to pursiue sustainable livelihood opportunities
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all.		
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)		
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally		
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity		
6.5 - Implement **integrated water resources management (**IWRM**) at all levels, i**ncluding through transboundary cooperation as appropriate	**Direct / Parallel relationship** IWRM, if implemented correctly and holistically, should provide the means to finance sustainable forest management and provide adequate incentives to advance such management, including for conservation and reforestation, at the country level.	
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Direct / Parallel relationship** With sustainable and adequate financing of sustainable forest management that can provide effective incentives for developing countries to advance such management, the protection of water related ecosystems can be directly positively affected.	**Indirect / Parallel relationship** If water-related ecosystems were given adequate and full protection, this would indirectly support efforts to combat poaching and trafficking of protected species, only if there is regulated natural resource extraction and management policy and agreements with local communities and managed by local community members (ex. Sustainable harvest of Forest non-timber products and eco-tourism that support sustainable livelihood enterprises.
6.a - **Expand international cooperation** and **capacity-building support** to developing countries **in water- and sanitation-related activities and programme**s, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .		
6.b - Support and strengthen the participation of local communities in improving water and sanitation management	**Direct / Parallel relationship** Mobilize significant resources to finance sustainable forest management and provide adequate incentives can directly strengthen the participation of local communities in water and sanitation management if these resources are earmarked for local	

	community use, with guidelines and provisions for their use.	

Systemic relationship between SDG Goal 6 Targets and SDG Goal 16 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 16- Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels**									
	16.1 Significantly **reduce all forms of violence and related death rates everywhere**	16.2 **End abuse, exploitation, trafficking and all forms of violence against and torture of children**	16.3 Promote the **rule of law at the national and international levels and ensure equal access to justice for all**	16.4 Significantly **reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime**	16.5 Substantially **reduce corruption and bribery in all their forms**	16.6 Develop **effective, accountable and transparent institutions at all levels**	16.7 Ensure **responsive, inclusive, participatory and representative decision-making** at all levels.	16.8 **Broaden and strengthen the participation of developing countries in the institutions of global governance**	16.9 **Provide legal identity for all, including birth registration**	16.10 **Ensure public access to information and protect fundamental freedoms**, in accordance with national legislation and international agreements
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all			**Direct / Parallel relationship** Promoting the rule of law at the national and international levels and ensure equal access to justice for all can directly contribute to more people having equitable access to safe and affordable drinking water, as often time anti discriminatory laws and public services do not really reach the marginalized people and communities.			**Indirect / Parallel relationship** Effective, accountable and transparent institutions at all levels will certainly help to ensure the delivery of universal and equitable access to safe and affordable drinking water for all.	**Direct / Parallel relationship** Ensuring responsive, inclusive, participatory and representative decision-making at all levels will directly contribute to achieving universal and equitable access to safe and affordable drinking water for all.			
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)			**Direct / Parallel relationship** Promoting the rule of law at the national and international levels and ensure equal access to justice for all can directly contribute to more people having equitable access to adequate sanitation and hygiene services / infrastructure, as often time anti discriminatory laws and constitutional requirement to provide public services do not really reach the			**Indirect / Parallel relationship** Effective, accountable and transparent institutions at all levels will help to ensure the delivery of achieve access to adequate and equitable sanitation and hygiene and end open defecation. But this must be supported by local communities having a voice in political decision making and budget allocation.				

			marginalized people and communities.							
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally			**Direct / Parallel relationship** Rule of law and equality in justice means that poor and marginalize communities will have recourse and legal power to fight polluters who illegally dump waste in their communities' land and water.		**Direct / Inverse relationship** A significant reduction in corruption and bribery in all their forms will no doubt directly reduce pollution, and reduce illegal dumping and release of hazardous chemicals and materials in water – related environments.	**Direct / Parallel relationship** Having effective, accountable and transparent institutions at all levels will certainly directly reduce pollution and eliminate dumping and release of hazardous chemicals and materials into water environments, thereby improving water quality.	**Indirect / Parallel relationship** Responsive, inclusive, participatory and representative decision-making at all levels can indirectly Improve water quality by reducing pollution. Communities who have a real voice in policy and development decisions will not stand for having their natural environment polluted.			**Indirect / Parallel relationship** Ensuring public access to information can lead to improve water quality by pressuring companies and others to reduce pollution, and eliminate illegal dumping of hazardous chemicals and materials into the environment.
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity			**Direct / Parallel relationship** Strengthening the rule of law at the national levels can have a direct and substantial impact on water use efficiency (e.g. Bangkok's moratorium on ground water extraction by factories is often ignored and not enforced)			**indirect / Parallel relationship** Effective, accountable and transparent institutions at all levels will certainly support increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, particularly if information is freely available for decision making.	**Indirect / Parallel relationship** Responsive, inclusive, participatory and representative decision-making at all levels will help in pushing for increase water-use efficiency across all sectors as climate change impacts add up.			**Indirect / Parallel relationship** Ensure public access to information and protect fundamental freedoms will support increase water-use efficiency across all sectors if there is equitable distribution of power and policy decision making and all sectors of society can participate.
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate			**Indirect / Parallel relationship** Promoting the rule of law at the national and international levels and ensure equal access to justice for all can indirectly contribute the effective implementation of IWRM nationally and transboundary.			**Direct / Parallel relationship** Having effective, accountable and transparent institutions at all levels will directly affect the effectiveness of IWRM policy and programme implementation nationally and transboundary	**Direct / Parallel relationship** Responsive, inclusive, participatory and representative decision-making at all levels will directly influence the effectiveness of IWRM at all levels, including through transboundary cooperation.			
6.6 - Protect and restore water-related			**Direct / Parallel**		**Direct / Parallel**	**Direct / Parallel**	**Direct / Parallel**	**Indirect / Parallel**		**Direct / Parallel**

ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes			**relationship** The rule of law and equality in justice means that everyone, including poor and marginalize communities, will have recourse and legal power to fight polluters who illegally dump waste in their communities' land and water, including protected water ecosystems that are vital for provisioning of ecological services to community social and economic development.		**relationship** A wide and effective clampdown and end to government - private sector corruption and bribery in all their forms will undoubtedly go a very long way toward better protection of water-related ecosystems, particularly in relation to illegal exploitation, encroachment, and degradation from pollution.	**relationship** Ensuring that all government and private institutions, at all levels of government and society, are accountable and transparent institutions will also have significant influence on effective protection and restoration of water related ecosystems.	**relationship** Responsive, inclusive, participatory and representative decision-making at all levels can have a direct and strong impact on the protection and restoration of water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes if the representatives have the right values and also knowledge, skills and dispositions to included ecosystem protection in their decisions .	**relationship** Broadening and strengthening the participation of developing countries in the institutions of global governance can lead to the protection of water related ecosystems, but only if they understand and value these systems for long-term services they provide to society, the economy and human wellbeing as they are.		**relationship** Ensuring public access to information and protect fundamental freedoms, in accordance with national legislation can directly assist with mobilizing support and resources to protect and restore water related ecosystems.
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .			**Direct / Parallel relationship** Promoting the rule of law at the national and international levels and ensure equal access to justice for all will directly have an influence on the level of international cooperation and capacity building in developing countries for water and sanitation programmes as donor countries and institutions, compared to the past, are more accountable and transparent in their support requirements and outcomes, and good governance and rule of law are now held very high in regards to receiving international support.		**Direct / Parallel relationship** Substantially reducing corruption and bribery in all their forms will directly influence the level of international cooperation and capacity building in developing countries for water and sanitation programmes.	**Direct and Parallel relationship** In this time of rising stakeholder expectations and radical transparency, ensuring effective, accountable and transparent institutions at all levels will have a direct influence on the expansion of international cooperation towards capacity building for water and sanitation programs, particularly in developing countries.	**Indirect / Parallel relationship** Responsive, inclusive, participatory and representative decision-making may indirectly influence the level of international cooperation to effectively work in building capacity in developing countries on water and sanitation.	**Direct / Parallel relationship** Broadening and strengthening the participation of developing countries in the institutions of global governance will positively influence the effectiveness of international cooperation to build capacity in developing countries on water and sanitation as this is a priority for most developing countries.		
6.b - Support and strengthen the			**Direct / Parallel**			**Direct / Parallel**	**Direct / Parallel**			**Direct / Parallel**

participation of local communities in improving water and sanitation management			**relationship** Promoting the rule of law at the national and international levels and ensure equal access to justice for all will have a strong and direct influence on the ability to achieve target 6.b (participation of local communities in improving water and sanitation), particularly given the case of the requirement for public participant in the Environmental Impact Assessment (EIA) process that many countries require by law.			**relationship** Accountable and transparent institutions at all levels, from national to local, is a key provision and necessary condition to support and strengthen the participation of local communities in policy setting and implementation / monitoring towards improving water and sanitation management locally.	**relationship** Responsive, inclusive, participatory and representative decision-making at all levels is another key system condition and enabler that must be in place to effectively support and strengthen the participation of local communities in improving water and sanitation management.			**relationship** Ensuring public access to information and protection of fundamental freedoms will directly support and strengthen the participation of local communities in improving water and sanitation management.

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 16- Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels**	
	16.a **Strengthen relevant national institutions,** including through international cooperation, for building capacity at all levels, in particular in developing countries, **to prevent violence and combat terrorism and crime**	16.b Promote and **enforce non-discriminatory laws and policies for sustainable development**
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all		**Direct/ Parallel relationship** Passage and enforcement of non-discriminatory laws and polices for SD would have a positive influence on forcing local and national governments to provide safe and affordable drinking water to all people.
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)		**Direct / Parallel relationship** The promotion and enforcement of non-discriminatory laws and policies for sustainable development will directly help in achieving adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls).
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally		
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity		
6.5 - Implement integrated water resources management at all levels, including through		

transboundary cooperation as appropriate		
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes		
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .		
6.b - Support and strengthen the participation of local communities in improving water and sanitation management		**Direct / Parallel relationship** Enforcement of non-discriminatory laws and policies for sustainable development will directly support and strengthen the participation of local communities directly in improving the condition and situation of water and sanitation management.

Systemic relationship between SDG Goal 6 Targets and SDG Goal 17 Targets

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	SDG # 17 - Strengthen the means of implementation and revitalize the global partnership for sustainable development									
	17.1 **Strengthen domestic resource mobilization**, including through international support to developing countries, **to improve domestic capacity for tax and other revenue collection**	17.2 **Developed countries to implement fully their official development assistance commitments,** ….	17.3 **Mobilize additional financial resources for developing countries** from multiple sources.	17.4 **Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring**, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress	17.5 **Adopt and implement investment promotion regimes** for least developed countries	17.6 **Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms,** including through improved coordination among existing mechanisms, in particular at the UN level, and through a global technology facilitation mechanism	17.7 **Promote the development, transfer, dissemination and diffusion of environmentally sound technologies** to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed	17.8 **Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries** by 2017 and **enhance the use of enabling technology, in particular information and communications technology**	17.9 **Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals,** ……	17.10 **Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization**, including through the conclusion of negotiations under its Doha Development Agenda
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all		**Direct/ Parallel relationship** Countries fulfilling their development assistance commitments (ODA) can directly support policy, programs and projects targeted at increasing universal and equitable access to safe and affordable water for all at the country level. This will depend on how this assistance is allocated in the planning and budgetary process of each country.	**Indirect / Parallel relationship** International mobilization of additional financial resources for developing countries from multiple sources (ODA + FDI) can support achieving universal and equitable access to safe and affordable water for all at the country level. This, however, all depends on how these additional financial resources are targeted by donors and investors.	**Indirect / Parallel relationship** Supporting and building the capacity of developing countries to secure long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring can indirectly help these countries redirect their budgets towards infrastructure and technology investments in meeting their basic needs of their populations such as delivery of safe and affordable water.	**Direct / Parallel relationship** Adoption and implementation investment promotion regimes (i.e. Number of national & investment policy reforms adopted that incorporate sustainable development objectives or safeguards) can directly support achieving universal and equitable access to safe and affordable water for all at the country level.	**Indirect / Parallel relationship** Enhanced North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing can support achieving universal and equitable access to safe and affordable water for all if targeted in this area.	**Direct / Parallel relationship** Increasing the total amount of approved funding for developing countries to promote transfer, dissemination and diffusion of environmentally sound technologies can directly and significantly help to achieve universal access to safe and affordable drinking water to all people in developing and less developed countries.	**Direct / Parallel relationship** If a "fully operationalized technology bank and science, technology and innovation capacity-building mechanism means all technology available for water and sanitation development for least developed countries , then it will directly support the achievement of universal and equitable safe and affordable drinking water for all.	**Indirect / Parallel relationship** International support to countries for implementing effective and targeted capacity-building in support of the implementation of a holistic policy mix directly linked to national plans to implement all the SDGs will eventually contribute to universal and equitable access to safe and affordable water for all.	

6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)		**Direct / Parallel relationship** Countries fulfilling their development assistance commitments (ODA) can directly support policy, programs and projects to increase access to adequate and equitable sanitation and hygiene and end open defecation across all countries for all people. This will depend on how this assistance is allocated in the planning and budgetary process of each country.	**Indirect / Parallel relationship** International mobilization of additional financial resources for developing countries from multiple sources (ODA + FDI) can certainly support increased access to adequate and equitable sanitation and hygiene and end open defecation across all countries for all people. This, however, all depends on how these additional financial resources are targeted by donors and investors.	**Indirect / Parallel relationship** Assisting developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring may indirectly assist with increasing access to sanitation and hygiene services and infrastructure as possibility the debt relief money can be channeled to this area.	**Direct / Parallel relationship** Adoption and implementation investment promotion regimes (i.e. Number of national & investment policy reforms adopted that incorporate sustainable development objectives or safeguards) can directly support the achievement of universal access to adequate and equitable sanitation and hygiene and end open defecation for all.	**Indirect / Parallel relationship** Enhanced North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing could help in some way to increase the level of access to adequate and equitable sanitation and hygiene and end open defecation if targeted in this area.	**Direct / Parallel relationship** Increasing the total amount of approved funding for developing countries to promote transfer, dissemination and diffusion of environmentally sound technologies can directly and s help to significantly increase the level of access to adequate and equitable sanitation and hygiene and end open defecation in developing and less developed countries.	**Direct / Parallel relationship** Fully operationalizing the technology bank and science, technology and innovation capacity-building mechanism for least developed countries to enhance the use of enabling technology, in particular information and communications technology will directly impact the improvement of providing basic services for sanitation and hygiene to un-served and underserved communities.	**Indirect / Parallel relationship** International support to countries for implementing effective and targeted capacity-building in support of the implementation of a holistic policy mix directly linked to national plans to implement all the SDGs can contribute to increase the level of access to adequate and equitable sanitation and hygiene and end open defecation in developing and less developed countries	
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	**Direct / Parallel relationship** Water quality can improve markedly if pollution from all sectors, especially industry and agriculture sectors are taxed for their wastewater discharge (polluter pay principle). This can be a significant direct link.	**Indirect / Parallel relationship** Countries fulfilling their development assistance commitments (ODA) can indirectly improve water quality through various anti pollution measures (e.g wastewater treatment and/or recycling / reusing. However, this will depend on how this assistance is allocated in the planning and budgetary process of each country.	**Indirect / Parallel relationship** International mobilization of additional financial resources for developing countries from multiple sources (ODA + FDI) can indirectly support improvement in water quality through various anti pollution measures (e.g wastewater treatment and/or recycling / reusing. This, however, all depends on how these additional financial resources are targeted by donors and investors.	**Indirect / Parallel relationship** Assisting developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring may indirectly assist with Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater as possibility the debt	**Direct / Parallel relationship** Adoption and implementation investment promotion regimes (i.e. Number of national & investment policy reforms adopted that incorporate sustainable development objectives or safeguards) can directly support improve water quality through various anti pollution measures (e.g . enforcement of stronger compliance standards, development of waster water	**Indirect / Parallel relationship** Enhanced North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing could indirectly support the improvement in water quality through various anti pollution measures (e.g wastewater treatment and/or recycling / reusing if targeted in this area.	**Direct / Parallel relationship** Increasing the total amount of approved funding for developing countries to promote transfer, dissemination and diffusion of environmentally sound technologies can directly and significantly help to reduce pollution through various technical means, and thus lead to the improvement of water quality.	**Direct / Parallel relationship** Fully operationalizing the technology bank and science, technology and innovation capacity-building mechanism for least developed countries to enhance the use of enabling technology, in particular information and communications technology will directly and significantly impact the ability of government and private sector to reduce point source discharge of pollutants into	**Indirect/ Parallel relationship** International support to countries for implementing effective and targeted capacity-building in support of the implementation of a holistic policy mix directly linked to national plans to implement all the SDGs can eventually support an improvement in water quality through various anti pollution measures (e.g wastewater treatment and/or	No Clear Connection or Connection not within 3 influence tiers away

				relief money can be channeled to this area.	treatment and/or recycling / reusing technology.			water sources.	recycling / reusing.	
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity		**Indirect / Parallel relationship** Countries fulfilling their development assistance commitments (ODA) will indirectly improved water-use efficiency across all sectors and work towards ensuring sustainable withdrawals. This will depend on how this assistance is allocated in the planning and budgetary process of each country.	**Indirect / Parallel relationship** International mobilization of additional financial resources for developing countries from multiple sources (ODA + FDI) can indirectly support improved water-use efficiency across all sectors and work towards ensuring sustainable withdrawals. This, however, all depends on how these additional financial resources are targeted by donors and investors.	**Indirect / Parallel relationship** Assisting developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring may indirectly assist with Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, as possibly countries and companies, many of which are state-owned, can redirect budgets to more clean and efficient technology that both reduce and treats waste. This debt relief can also be reinvested in sustainability.	**Direct / Parallel relationship** Adoption and implementation investment promotion regimes (i.e. Number of national & investment policy reforms adopted that incorporate sustainable development objectives or safeguards) can directly improve water-use efficiency across all sectors and work towards ensuring sustainable withdrawals, and significantly reducing the number of people suffering water scarcity.	**Indirect / Parallel relationship** Enhanced North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing could indirectly support improved water-use efficiency across all sectors and work towards ensuring sustainable withdrawals, if targeted in this area.	**Direct / Parallel relationship** Increasing the total amount of approved funding for developing countries to promote transfer, dissemination and diffusion of environmentally sound technologies can directly and significantly help in increasing water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.	**Direct / Parallel relationship** Fully operationalizing the technology bank and science, technology and innovation capacity-building mechanism for least developed countries to enhance the use of enabling technology, in particular information and communications technology will directly stengthen the ability of government, communities and private sector to Substantially increase water-use efficiency across all sectors	**Indirect / Parallel relationship** International support to countries for implementing effective and targeted capacity-building in support of the implementation of a holistic policy mix directly linked to national plans to implement all the SDGs can help in increasing water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity.	
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate		**Indirect / Parallel relationship** Countries fulfilling their development assistance commitments (ODA) can assist with the IWRM programmes nationally and via transboundary cooperation. This will depend on how this assistance is allocated in the planning and budgetary process of each country.	**Indirect / Parallel relationship** International mobilization of additional financial resources for developing countries from multiple sources (ODA + FDI) can indirectly support IWRM programmes nationally and via transboundary cooperation. This, however, all depends on how these additional financial resources are targeted by	**Direct / Parallel relationship** Assisting developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring may directly assist with Improve water quality by reducing pollution, eliminating dumping and	**Direct / Parallel relationship** Adoption and implementation investment promotion regimes (i.e. number of national & investment policy reforms adopted that incorporate sustainable development objectives or safeguards) can directly support IWRM programmes nationally and	**Indirect / Parallel relationship** Enhanced North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing can support national and transboundary IWRM if targeted in this area.	**Direct / Parallel relationship** Increasing the total amount of approved funding for developing countries to promote transfer, dissemination and diffusion of environmentally sound technologies can directly support IWRM programmes nationally and through transboundary cooperation.	**Direct / Parallel relationship** Fully operationalizing the technology bank and science, technology and innovation capacity-building mechanism for least developed countries to enhance the use of enabling technology, in particular information and communications technology will directly strengthen	**Indirect / Parallel relationship** International support to countries for implementing effective and targeted capacity-building in support of the implementation of a holistic policy mix directly linked to national plans to implement all the SDGs should certainly support national	

			donors and investors.	minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater as the debt relief money can be channeled to IWRM at national government plans, and programmes..	regionally through providing the necessary financial and materials resources required for long-term sustainability.			governments' ability to develop and implement national and regional transboundary IWRM programmes.	and transboundary IWRM.	
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes		**Indirect / Parallel relationship** Countries fulfilling their development assistance commitments (ODA) can indirectly contribute to the protection and restoration water-related ecosystems. This will depend on how this assistance is allocated in the planning and budgetary process of each country.	**Indirect / Parallel relationship** International mobilization of additional financial resources for developing countries from multiple sources (ODA + FDI) can contribute to the protection and restoration water-related ecosystems. This, however, all depends on how these additional financial resources are targeted by donors and investors.	**Direct / Parallel relationship** Assisting developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring may directly assist with Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater as the debt relief money can be channeled to the protection of water related ecosystem protection measures and programmes..	**Direct / Parallel relationship** Adoption and implementation investment promotion regimes (i.e. Number of national & investment policy reforms adopted that incorporate sustainable development objectives or safeguards) can directly lead to the protection and restoration water-related ecosystems.	**Indirect / Parallel relationship** Enhanced North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing can support the protection and restoration water-related ecosystems if targeted in this area.	**Direct / Parallel relationship** Increasing the total amount of approved funding for developing countries to promote transfer, dissemination and diffusion of environmentally sound technologies can directly contribute to the protection of water related ecosystems through various means.	**Direct / Parallel relationship** Fully operationalizing the technology bank and science, technology and innovation capacity-building mechanism for least developed countries to enhance the use of enabling technology, in particular information and communications technology will directly strengthen countries' ability to effectively project their high value water ecosystems.	**Indirect / Parallel relationship** International support to countries for implementing effective and targeted capacity-building in support of the implementation of a holistic policy mix directly linked to national plans to implement all the SDGs will indirectly support the protection and restoration water-related ecosystems if targeted in this area.	
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting,		**Direct / Parallel relationship** Countries fulfilling their development assistance commitments (ODA) can directly support expanding international cooperation and	**Direct / Parallel relationship** Expanded international cooperation for capacity building support in developing countries related to water and sanitation will	**Indirect / Parallel relationship** Assisting developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt	**Direct / Parallel relationship** Expanded international cooperation and capacity-building support to developing countries in water- and sanitation-related	**Direct / Parallel relationship** Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and	**Direct / Parallel relationship** Increasing the total amount of approved funding for developing countries to promote transfer, dissemination and diffusion of environmentally	**Direct / Parallel relationship** Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017	**Direct / Parallel relationship** International support to countries for implementing effective and targeted capacity-building in support of the	

desalination, water efficiency, wastewater treatment, recycling and reuse technologies .		capacity building support for water and sanitation programmes within developing countries.	directly influence the mobilization of additional financial resources for developing countries from multiple sources (ODA + FDI) as water and sanitation are now very high on the global risk and priority list.	relief and debt restructuring may indirectly influence future ODA towards capacity building in water and sanitation programmes for most needy countries	activities and programmes, can directly be applied at the national level through the adoption and implementation of appropriate investment promotion regimes directed at water and sanitation development and improvement based on the policy framework and capacity needs of the respective countries.	enhance knowledge sharing will directly support the expansion of international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes.	sound technologies can directly support the expansion of international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes.	and enhance the use of enabling technology, in particular information and communications technology will directly support international efforts to build capacity in developing countries for sustainability water and sanitation policy and management.	implementation of a holistic policy mix directly linked to national plans to implement all the SDGs can directly be applied at the national level earmarked for water and sanitation programme development and improvement.	
6.b - Support and strengthen the participation of local communities in improving water and sanitation management		**Indirect / Parallel relationship** Countries fulfilling their development assistance commitments (ODA) can indirectly contribute to supporting and strengthening the participation of local communities, through local administrative policy, in improving water and sanitation management**.** This will , however, depend on how this assistance is allocated in the planning and budgetary process of each country.	**Indirect / Parallel relationship** International mobilization of additional financial resources for developing countries from multiple sources (ODA + FDI) can strengthen the participation of local communities, through local administrative policy, in improving water and sanitation management**.** This, however, all depends on how these additional financial resources are targeted by the donors and investors.	**Indirect / Parallel relationship** Assisting developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring may indirectly assist governments to provide greater financial support to local administrations in water and sanitation management that involves local community participation more.	**Direct / Parallel relationship** Adoption and implementation investment promotion regimes (i.e. Number of national & investment policy reforms adopted that incorporate sustainable development objectives or safeguards) can directly support directly improved	**Indirect / Parallel relationship** Enhanced North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing can directly help strengthen the participation of local communities in improving water and sanitation management if targeted in this area.	**Direct / Parallel relationship** Increasing the total amount of approved funding for developing countries to promote transfer, dissemination and diffusion of environmentally sound technologies can directly support and strengthen the participation of local communities through appropriate and relevant policy formulation in improving water and sanitation management.	**Direct / Parallel relationship** Fully operationalizing the technology bank and science, technology and innovation capacity-building mechanism for least developed countries, and particularly enhancing the use of enabling technology such as ICT will directly support strengthening the participation of local communities in improving water and sanitation management.	**Direct / Parallel relationship** International support to countries for implementing effective and targeted capacity-building in support of the implementation of a holistic policy mix directly linked to national plans to implement all the SDGs will directly the participation of local communities, through local administrative policy, in improving water and sanitation management**.**	

SDG # 6 - Ensure availability and sustainable management of water and sanitation for all	**SDG # 17 - Strengthen the means of implementation and revitalize the global partnership for sustainable development**								
	17.11 **Significantly increase the exports of developing countries**, in particular with a view to doubling the least developed countries' share of global exports by 2020	17.12 **Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with WTO decisions**, …	17.13 **Enhance global macro-economic stability, including through policy coordination and policy coherence**	17.14 **Enhance policy coherence for sustainable development**	17.15 **Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development**	17.16 **Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals** in all countries, in particular developing countries	17.17 **Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships**	17.18 **Enhance capacity-building support to developing countries to increase significantly the availability of high-quality, timely and reliable data** ….	17.19 **Build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building** in developing countries
6.1 - Achieve universal and equitable access to safe and affordable drinking water for all				**Indirect Parallel relationship** Enhance policy coherence (mutually reinforcing policy actions across government departments and agencies creating synergies towards achieving the agreed objectives) for sustainable development will contribute to support achieving universal and equitable access to safe and affordable drinking water for all, but not directly.		**Direct / Parallel relationship** Global partnership for SD, with multi-stakeholder partnerships which both mobilize and share knowledge, expertise, technology and financial resources can directly contribute to the achievement of equitable access to safe and affordable drinking water for all people, regardless of status and location.	**Direct / Parallel relationship** Encouragement and promotion of effective public-public, public-private and civil society partnerships in each country can directly and significantly accelerate achievement of equitable access to safe and affordable drinking water for all people, regardless of status and location.	**Indirect / Parallel relationship** Enhancement of capacity-building support to developing countries to increase the availability of high-quality, timely and reliable data can indirectly support the planning, infrastructure development, and provisioning of equitable access to safe and affordable drinking water for all.	**Indirect / Parallel relationship** Developing indicators of progress on SD that complement GDP and support statistical capacity-building can provide relevant data to assist in the achievement of equitable access to safe and affordable drinking water for all.
6.2 - Achieve access to adequate and equitable sanitation and hygiene and end open defecation, (special attention to the needs of women and girls)				**Indirect Parallel relationship** Enhance policy coherence (mutually reinforcing policy actions across government departments and agencies creating		**Direct / Parallel relationship** Global partnership for SD, with multi-stakeholder partnerships which both mobilize and share knowledge, expertise, technology and	**Direct / Parallel relationship** Encouragement and promotion of effective public-public, public-private and civil society partnerships in each country can directly and significantly accelerate access to adequate and equitable sanitation and	**Indirect / Parallel relationship** Enhancement of capacity-building support to developing countries to increase the availability of high-quality, timely and reliable data can support improvement in universal access to	**Indirect / Parallel relationship** Developing indicators of progress on SD that complement GDP and support statistical capacity-building can provide relevant data to assist in facilitating access to adequate and equitable sanitation

				synergies towards achieving the agreed objectives) for sustainable development will support will contribute to support achieving universal access to adequate and equitable sanitation and hygiene and end open defecation.		financial resources can directly contribute to increasing access to adequate and equitable sanitation and hygiene and end open defecation.	hygiene and end open defecation.	adequate and equitable sanitation and hygiene and end open defecation.	and hygiene.
6.3- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally				**Direct / Inverse relationship** Enhance policy coherence (mutually reinforcing policy actions across government departments and agencies creating synergies towards achieving the agreed objectives) for sustainable development will directly support the reduction of pollution to water sources, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, since pollution comes from almost every sector (ministry) and thus is a responsibility of every sector.		**Direct / Parallel relationship** Global partnership for SD, with multi-stakeholder partnerships which both mobilize and share knowledge, expertise, technology and financial resources can directly contribute to national and global Improvement water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse of waste water.	**Direct / Parallel relationship** Encouragement and promotion of effective public-public, public-private and civil society partnerships in each country can directly and significantly accelerate reducing pollution entering water sources, eliminating dumping and minimizing release of hazardous chemicals and materials, as well as halving the proportion of untreated wastewater, and thereby have a significant impact on improving water quality both as funders and implementers..	**Indirect / Parallel relationship** Enhancement of capacity-building support to developing countries to increase the availability of high-quality, timely and reliable data can improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater	**Indirect / Parallel relationship** Developing indicators of progress on SD that complement GDP and support statistical capacity-building can provide relevant data to assist governments and businesses in reducing pollution for improved water quality.
6.4 - Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity				**Direct/ Parallel relationship** Enhance policy coherence (mutually reinforcing policy actions across government departments and agencies creating synergies towards achieving the		**Direct / Parallel relationship** Global partnerships for SD, with multi-stakeholder partnerships which both mobilize and share knowledge, expertise, technology and	**Direct / Parallel relationship** Encouragement and promotion of effective public-public, public-private and civil society partnerships in each country can directly and significantly accelerate increase water-use efficiency across all sectors, thereby ensuring	**Indirect / Parallel relationship** Enhancement of capacity-building support to developing countries to increase the availability of high-quality, timely and reliable data can provide a catalyst to increase water-use efficiency across all	**Indirect / Parallel relationship** Developing indicators of progress on SD that complement GDP and support statistical capacity-building can provide a catalyst to increase water-use efficiency across all sectors and ensure sustainable withdrawals

				agreed objectives) for sustainable development should directly support increases in water use efficiency across all sectors since water is consumed in practically all sectors (i.e. ministries) and thus they have responsibility for this.		financial resources can directly contribute as a catalyst and effective mechanism for increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity.	sustainable withdrawals and supply of freshwater to address water scarcity and substantially and reduce the number of people suffering from water scarcity both as funders and implementers.	sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity	and supply of freshwater to address water scarcity.
6.5 - Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate				**Direct / Parallel relationship** Enhance policy coherence (mutually reinforcing policy actions across government departments and agencies creating synergies towards achieving the agreed objectives) for sustainable development directly and strongly supports any integrative water resource management programme nationally and transboundary.		**Direct / Parallel relationship** Global partnership for SD, with multi-stakeholder partnerships which both mobilize and share knowledge, expertise, technology and financial resources can directly contribute to the iimplementation of IWRM at all levels, especially in regards to transboundary cooperation.	**Direct / Parallel relationship** Encouragement and promotion of effective public-public, public-private and civil society partnerships in each country can directly help with the effective implementation of national and transboundary IWRM, both as funders and implementers.	**Indirect / Parallel relationship** Enhancement of capacity-building support to developing countries to increase the availability of high-quality, timely and reliable data can indirectly assist with the implementation of IWRM at all levels, including through transboundary cooperation.	**Indirect / Parallel relationship** Developing indicators of progress on SD that complement GDP and support statistical capacity-building can indirectly support the implementation of an integrated water resources management at all levels, including through transboundary cooperation.
6.6 - Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes				**Direct / Parallel relationship** Enhanced policy coherence (mutually reinforcing policy actions across government departments and agencies creating synergies towards achieving the agreed objectives) for sustainable development will significantly and directly contribute to the protection and restoration of water-related		**Direct / Parallel relationship** Global partnership for SD, with multi-stakeholder partnerships which both mobilize and share knowledge, expertise, technology and financial resources can directly aid in the protection and restoration of water-related ecosystems, depending on the nature and focus of these partnerships.	**Direct / Parallel relationship** Encouragement and promotion of effective public-public, public-private and civil society partnerships in each country can directly aid in the protection and restoration of water-related ecosystems, through financial support and practice.	**Indirect / Parallel relationship** Enhancement of capacity-building support to developing countries to increase the availability of high-quality, timely and reliable data can indirectly aid in the protection and restoration of water-related ecosystems.	**Indirect / Parallel relationship** Developing indicators of progress on SD that complement GDP and support statistical capacity-building can provide aid efforts to protect and restore water-related ecosystems.

				ecosystems as this increases roles, responsibilities and accountability across all government ministries and thus all sectors.					
6.a - Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies .				**Direct / Parallel relationship** Enhanced policy coherence (mutually reinforcing policy actions across government departments and agencies creating synergies towards achieving the agreed objectives) for sustainable development will can strengthen opportunities for international cooperation and capacity building support for water and sanitation targeted programs by creating more cross sectorial points of action.	**Direct / Parallel relationship** Respect for each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development directly supports international cooperation and capacity building to support developing countries in water- and sanitation-related activities and programmes.	**Direct/ Parallel relationship** Global partnership for SD, with multi-stakeholder partnerships which both mobilize and share knowledge, expertise, technology and financial resources directly assists with the expansion of international cooperation and capacity building to support developing countries in water- and sanitation-related activities and programmes.	**Indirect / Parallel relationship** Encouragement and promotion of effective public-public, public-private and civil society partnerships in each country can compliment international cooperation and capacity building to support developing countries in water- and sanitation-related activities and programmes.	**Indirect / Parallel relationship** Enhancement of capacity-building support to developing countries to increase the availability of high-quality, timely and reliable data can support international cooperation and capacity building to support developing countries in water- and sanitation-related activities and programmes.	**Indirect / Parallel relationship** International cooperation and capacity building to support developing countries in water- and sanitation-related activities and programmes will support and build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building.
6.b - Support and strengthen the participation of local communities in improving water and sanitation management				**Direct/ Parallel relationship** Enhance policy coherence (mutually reinforcing policy actions across government departments and agencies creating synergies towards achieving the agreed objectives) for sustainable development will directly strengthen the policy reform and actions of local community administration in improving water and sanitation management.		**Indirect / Parallel relationship** Global partnership for SD, with multi-stakeholder partnerships which both mobilize and share knowledge, expertise, technology and financial resources directly assists with indirectly benefit local communities actions on improving water and sanitation management.	**Direct / Parallel relationship** Encouragement and promotion of effective public-public, public-private and civil society partnerships in each country can directly support the policy initiatives of local administration and local community participation in water an sanitation management.	**Direct / Parallel relationship** Enhancement of capacity-building support to developing countries to increase the availability of high-quality, timely and reliable data will directly support and strengthen the participation of local communities in improving water and sanitation management.	**Direct / Parallel relationship** Developing indicators of progress on SD that complement GDP and support statistical capacity-building can directly support and strengthen the participation of local communities in improving water and sanitation management.