



HDR-Net Respuesta Consolidada

DISCUSION: IDH 2006 - Agua y Desarrollo Humano

Anunciado en HDR-Net, EE-Net, Gender-Net y Semfin-Net

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Contenido:

- [Pregunta original](#)
 - [Resumen de Respuestas](#)
 - [Recursos](#)
 - [Lista de contribuidores](#)
 - [Respuestas individuales](#)
-

Pregunta Original

[Kevin Watkins](#), Director, Oficina del Informe sobre Desarrollo Humano, PNUD

Estimados/as amigos/as:

Quisiera aprovechar esta oportunidad para anunciar oficialmente a nuestra red que el Informe sobre Desarrollo Humano del próximo año (IDH 2006) tratará el tema del Agua. Adjunto la [propuesta conceptual del IDH 2006](#) que ha resultado de una primera ronda de discusiones. Sin duda, el ámbito del Informe aun se modificará, según se vayan recibiendo los documentos de fondo y como respuesta a nuevas aportaciones. No obstante, esperamos que esto les parezca un punto de partida adecuado.

Yo por mi parte quisiera subrayar la utilidad e importancia de nuestras discusiones, asegurándoles que la Oficina del Informe sobre Desarrollo Humano (HDRO) las toma muy seriamente en consideración. En el transcurso de la investigación sobre agua y saneamiento intentaremos aprovechar en cuanto sean posibles los conocimientos y experiencias de los distintos países presentes en la red. Aunque estamos abiertos a cualquier contribución, espero que les sea útil si les señalo algunas cuestiones prioritarias. Estas incluyen:

- Evidencia de **la relación entre acceso a agua y saneamiento y desarrollo humano**.
- **Problemas de medición** relacionados con el agua y saneamiento y la medición de progreso hacia los Objetivos de Desarrollo del Milenio (ODM).
- El uso de **indicadores desagregados a nivel de sub-grupos (género, espaciales, étnicos etc.) para medir desigualdades** de acceso a agua y saneamiento.
- Consideraciones sobre las razones por las que **el progreso en saneamiento ha sido menos marcado que el progreso en acceso al agua**.
- **¿Cuán efectivamente han sido integrados los ODM relativos a agua y saneamiento en los documento de estrategia de lucha contra la pobreza** y otros amplios marcos para la reducción de pobreza?
- **Ejemplos de países particulares** que representan algunos de los problemas centrales mencionados en la propuesta conceptual (incluyendo la competición entre usuarios diferentes, los problemas que enfrentan los productores de secano, etc.)
- Ejemplos de **cooperación pública-privada-comunitaria** que haya resultado exitosa en el esfuerzo de ampliar el acceso a agua y saneamiento.
- Reflexiones sobre el significado diverso del **término ‘crisis del agua’** según regiones y países diferentes.
- **Experiencias de Oriente Medio y de África del Norte** sobre (i) problemas relativos al abastecimiento de agua para la agricultura y sobre (ii) agua y saneamiento en zonas urbanas.
- **Ejemplos del uso con y sin éxito de los mercados del agua** y la regulación necesaria para sostenerlos.

Me doy cuenta de que esto parece una lista de la compra pero les aseguro que todas las aportaciones serán tenidas en consideración por parte del equipo de redacción. En particular, nos interesa asegurarnos de recurrir a toda la amplitud y riqueza de los conocimientos propios de los diferentes países dentro de nuestra red.

Quisiera dar de nuevo las gracias a la red por la valiosa contribución al trabajo de la Oficina del Informe sobre Desarrollo Humano. Esperamos que esta cooperación positiva continúe al redactar el IDH 2006.

Saludos cordiales.

Kevin

Kevin Watkins
 Director
 Oficina del Informe sobre Desarrollo Humano
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Resumen de Respuestas:

Estimados colegas:

La respuesta a la discusión acerca del IDH2006 ha sido extraordinaria. Déjenme comenzar

agradeciendo a todos ustedes por sus valiosos aportes. Me gustaría enfatizar cuan importantes son estas discusiones de la red para el proceso preparatorio del IDH global. Este proceso apoya la visión de la ODH de recurrir más efectivamente a la investigación, ideas y redes de IDHs nacionales y regionales para construir un sentido de propiedad más amplio y profundo del informe y promover sus mensajes, tanto dentro de nuestra organización como con nuestros socios externos para el desarrollo.

Durante el curso de esta valiosísima discusión, los miembros de la red compartieron importantes ideas, información, capacidad y experiencias de país, permitiendo a nuestro equipo beneficiarse del conocimiento que el PNUD y nuestros socios externos tienen para ofrecer en el tema de agua y saneamiento. Ustedes han sacado a relucir importantes cuestiones que han sido muy útiles para el trabajo del equipo, muchas de las cuales serán tratadas en el próximo IDH global. En particular, ustedes encontrarán ahora una extensa discusión sobre cambio climático en este informe, verán que la dimensión desde el punto de vista de género en cuestiones de agua y saneamiento, han sido abordadas a lo largo de todo el informe, y que el objetivo clave de este IDH ha sido "sacar a la luz" la discusión altamente sensible de suministro público vs. privado, para ver, en una dimensión real la cuestión y de que manera el sub financiamiento y la débil gobernabilidad, están fracasando con los pobres, cualquiera sea la combinación utilizada.

Tenemos la esperanza que ustedes encontrarán que hemos hecho justicia con algunas de las cuestiones críticas que ustedes plantearon. La discusión completa se encuentra más adelante, de manera que el detalle y matiz no se perderán. En este documento hemos tratado de resumir algunos de los puntos clave que podrían tomarse de esta discusión.

Tema y documento base del IDH2006

En conjunto, los miembros de la red expresaron su apoyo de enfocar el IDH de este año en agua y saneamiento y elogiaron el documento base que recoge las cuestiones y complejidades acerca del tema de manera muy adecuada. Sin embargo, los miembros de la red anotaron que sería importante explicar como este informe fundamentará y complementará el Informe Mundial del Agua de Naciones Unidas que fue lanzado en marzo de 2006.

Crisis del agua: escasez de agua, calidad del agua y soluciones alternativas

Los miembros de la red señalaron que la contaminación contribuye de manera significativa a la escasez general del agua. Por ejemplo, en **India**, casi todas las ciudades enfrentan una escasez crónica de agua durante los meses de verano. Las agencias gubernamentales están fracasando cada vez más en atender las demandas de las crecientes poblaciones urbanas. La capa freática esta disminuyendo permanentemente debido a una excesiva extracción de los acuíferos subterráneos y de los ríos; y otras fuentes de agua están siendo cada vez más contaminadas, invadidas, urbanizadas y utilizadas como lugares de defecación, o simplemente, como desagüe de aguas servidas. En muchos lugares del país, aún la calidad del agua subterránea se ha vuelto peligrosa. Los desechos agrícolas, urbanos e industriales plantean una amenaza interminable al agua subterránea

En los países post comunismo en **Europa Central y Oriental y en la Región de los Balcanes**, también

la contaminación del agua contribuye en gran manera a la escasez general de agua. Esta situación tiene su origen en las políticas industriales de los regímenes comunistas anteriores, y se ha perpetuado debido a instituciones ambientales débiles, falta de regulación y ordenanzas sobre desechos de emisión y, sobre todo, por el cumplimiento deficiente de ellas. Por ejemplo, en **Serbia**, estudios epidemiológicos recientes sobre salud y medio ambiente han encontrado nexos entre las condiciones de vida, la calidad de agua potable y la salud. La situación es particularmente grave en los tugurios urbanos, poblados por refugiados, Misión Roma y Personas Desplazadas Internamente puesto que ellos carecen de los medios para adquirir agua embotellada.

Otro factor que tiene gran impacto sobre la calidad y cantidad de recursos de agua fresca, es *el cambio climático global y la amenaza del creciente nivel de los mares*, particularmente para **Pequeños Estados Insulares en Desarrollo** y sus atolones de bajo nivel con relación al nivel del mar.

Los miembros de la red hicieron notar que **la crisis del agua** es, esencialmente, **una crisis de abastecimiento**. Las restricciones en el abastecimiento incluyen diversas dificultades que involucran la cadena de abastecimiento, tales como acceso/movilización del agua convencional, acondicionamiento del agua, distribución y mantenimiento. Por lo tanto, es importante explotar soluciones alternativas, que son más fructíferas, basadas en tecnologías modernas no convencionales. (desalinización del agua de mar) o en tecnologías tradicionales descentralizadas (recuperación del agua de lluvia).

Por ejemplo, **Argelia**, ha adoptado la desalinización del agua de sus mares como una fuente complementaria de agua, además del agua convencional (represas y agua subterráneas). Los costos adicionales por metro cúbico de esta agua no-convencional son elevados (alrededor de 10 veces más alta que por metro cúbico de agua convencional), pero su contribución a la reducción en el déficit de agua muestra que es de carácter altamente estratégico. La política de tarifas se basa en un sistema de compartir costos, asegurando que las cuentas de agua sean asequibles para los hogares, y que el consumo de agua se mantenga en un nivel mínimo (principio de tarifas progresivas en relación a los niveles de consumo).

Con respecto al **saneamiento**, se sugirió explotar la cuestión de saneamiento no basado en agua, que proporciona el mismo nivel de higiene y dignidad que el saneamiento basado en agua.

El agua como derecho humano

Varios miembros de la red destacaron *la dimensión del agua y del acceso al agua para consumo básico como un derecho humano fundamental*. Se señaló que las relaciones de poder asimétricas amenazan el principio de equidad en el uso y distribución del agua, lo cual resulta en individuos y grupos excluidos y/o privados de acceso al agua. Se requieren, por lo tanto, “derechos” para tratar efectivamente esta discriminación y marginalización. En el ámbito nacional, se han reconocido en varios países, por ejemplo **Colombia, Sudáfrica y Uganda**, derechos explícitos al agua o deberes del Estado para asegurar acceso al agua. En **Argentina**, en 1966, El Defensor Público de Menores demandó y ganó un requerimiento judicial) contra el gobierno local por no haber evitado la contaminación del abastecimiento de agua de una comunidad indígena.

Gobernabilidad del agua: gestión de los recursos acuíferos, estructuras de precios, mercados de agua

Gestión de recursos acuíferos

Los colaboradores señalaron que, dadas las fuertes tensiones entre la visión del agua como un derecho humano con acceso universal y la visión del agua como un bien privado escaso donde el acceso no puede ser libre, se requerirá control del agua a lo largo del tiempo, espacio, disponibilidad y acceso (a quien pertenecen los recursos acuíferos en cualquiera de sus modalidades de presentación; y quien debe determinar las prioridades para los diferentes usos del agua).

Generalmente estas cuestiones deben abordarse en diferentes niveles: Debe existir una respuesta institucional más concertada en el **ámbito global** que conduzca a un esfuerzo global en la gobernabilidad del agua, puesto que este recurso cubre una porción significativa del planeta y es, en general, perjudicial para las futuras generaciones, para la seguridad humana y para la prosperidad, en general. Sin embargo, en ausencia de agencias fuertes en el **ámbito nacional**, con adecuada capacidad para planificar y brindar dirección estratégica y regulación para la administración de los recursos acuíferos, la participación de otros actores (sector privado, ONGs, etc.) no será tan efectiva como podría serlo. También es importante considerar buenos ejemplos de sistemas de administración del agua, de conocimiento tradicional/comunitario en el **ámbito local** y aprovechar las ventajas de una gobernabilidad descentralizada del agua.

Por ejemplo, en **Estados Unidos de Norteamérica** (Norte de Nuevo México, Sur de Colorado) han existido por cientos de años una serie de redes de administración comunitaria de recursos acuíferos para la irrigación de granjas, basadas en administración comunal y control de acequias. Estas son, primordialmente, comunidades de indígenas rurales Chicano y Pueblo (americanos nativos). Estos ejemplos muestran una administración cooperativa que mantiene un recurso común, aún en una sociedad altamente privatizada como es la de Estados Unidos de Norteamérica.

También se señaló que, considerando que existen por encima de 260 ríos internacionales en el mundo, uno de los retos más grandes es *administrar estos recursos transfronterizos acuíferos en forma equitativa y de una manera ambiental, social y económicamente sostenible*—en ausencia de una autoridad superior o un régimen legal vinculante. Por ejemplo, el [IDH 2005 de Asia Central](#) sobre cooperación para el desarrollo y seguridad humanos, subraya que el principal reto sobre recursos naturales esta en la administración de recursos acuíferos regionales, que requiere de un cuidadoso equilibrio entre irrigación, consumo humano, generación de electricidad y protección de la fragilidad de ambientes naturales. En vista de los diversos intereses nacionales, los años posteriores a la independencia han visto un serio debilitamiento del antiguo acuerdo soviético sobre intercambio de agua y energía entre países del Asia Central. Algunos de los retos de la administración de aguas transfronterizas y cuestiones relacionadas al tema de agua, también han sido señaladas por los **INDH de Kazajstán** y **Tayikistán** en 2003.

Estructura de precios

Se señaló que es muy difícil determinar el “precio correcto” del agua, puesto que, deben cubrirse tanto su dimensión como una necesidad básica y su condición de derecho humano esencial; y debe tomarse

en consideración su valor como un bien privado escaso. Algunos mecanismos podrían ser una redistribución de impuestos sobre ciertas regulaciones legales internacionales. En contexto, también podría discutirse [el concepto de agua virtual](#) que es particularmente importante en países áridos y que también es relevante para el costo de transferencias de agua, cuando el agua es, o se planea que sea transferida a través de largas distancias.

Mercados de agua

Se señaló que los mercados/privatización del sector acuífero son introducidos y se basan en la suposición que la privatización beneficiará a las personas de escasos recursos y a los consumidores rurales y mejorará el acceso al saneamiento y al agua limpia. Sin embargo, los miembros de la red sugirieron que este no es siempre el caso y que, si bien existen historias exitosas, la privatización del sector acuífero ha fracasado en muchos otros casos.

A lo largo de la década de los 90, muchos **países africanos** adjudicaron contratos a empresas multinacionales. Para 2004, había 20 contratos en curso en África Subsahariana. Después de las privatizaciones hubo numerosas protestas y descontento popular, y los contratos concluyeron en **Gambia, Kenia, Guinea, Zimbabwe, Mozambique y Sudáfrica**. Una de las principales razones fue que las alzas de tarifas después de la liberalización, no eran asequibles a los consumidores de bajos ingresos:

Sudáfrica: En municipios donde el subempleo es cercano al 70 por ciento, una tarifa para obtener conexión de este servicio en dólares estadounidenses y cobros por volumen fue seguida de brotes de cólera. En KwaZulu Natal, el número de víctimas mortales fue de 250, con más de 100.000 casos de enfermedad como resultado del uso de agua de ríos y pozos estancados.

Zimbabwe: Una empresa británica dio por terminado su contrato de suministro de agua declarando que los usuarios eran muy pobres para pagar las tarifas que les hubiera permitido obtener una ganancia razonable.

Guinea: La privatización del mantenimiento, facturación y cobranza por el consumo de agua resultó en un incremento de \$EUA 0,02 por m³ en 1989 a \$US 0,83 por m³ en 1996. En efecto, se conectaron más clientes en un año, alcanzando a 23.000, en relación con los 12.000 del año anterior. El número de clientes privados a quienes se medía el consumo subió de 5 a 93 por ciento. Prácticamente todas las instituciones gubernamentales también se conectaron al agua transportada en cañerías. *Al final, solamente 24 por ciento de las nuevas conexiones de agua estaban en funcionamiento.*

América Latina: En promedio en América Latina, el costo de conexión alcanzó al 20 por ciento del ingreso personal disponible.

Problemas de medición e indicadores

Los miembros de la red señalaron que la forma en la que se mide y define el acceso seguro al agua y a los servicios de saneamiento, necesita ser cuestionada y probablemente revisada. *Los indicadores de acceso al agua y a las técnicas de saneamiento actualmente utilizados tienen defectos.* Por ejemplo, altos índices de conexión a redes de agua potable, por si solos, no dicen nada acerca de la disponibilidad real de agua potable. También se sugirió desarrollar indicadores para medir la correlación entre agua, saneamiento y desarrollo humano, aún en forma aproximada. Se sugirió medir esta

correlación mediante la resistencia con la que los ODM reaccionan a las mejoras en el acceso al agua y saneamiento.

Agua y ODMs

Los colaboradores subrayaron que el Informe debería poner la discusión sobre agua y saneamiento con mayor énfasis dentro del *contexto de los ODM*. Para ello, se sugirió que el Informe podría plantear la pregunta de cuales cambios en la estructura de gobernabilidad y financiamiento deben realizarse con objeto de asegurar que las metas de acceso universal a instalaciones de agua y saneamiento puedan alcanzarse (por ejemplo, movilización de comunidades locales para promover resultados rápidos).

Agua y conflicto/seguridad

Los miembros de la red subrayaron que el agua es un factor fundamental para el logro de paz y seguridad humana en todo el mundo. La restricción al acceso al agua es utilizada como una herramienta militar y política durante los conflictos. El agua se ha utilizado como un blanco militar en los conflictos y también es una preocupación como un objetivo del terrorismo. Por ejemplo, la destrucción de fuentes de agua se ha utilizado en varias zonas de conflicto para desolar y desplazar por la fuerza a la población, tanto internamente como fuera de las fronteras, como parte de una estrategia de guerra (por ejemplo en el área de las Montañas Nuba en **Sudán**).

El área fronteriza Kenia/Uganda/Sudán: en esta región prolífica en armamento del área fronteriza de Kenia/Uganda/Sudán, los varones tradicionalmente cuidan ganado y la necesidad de asegurar agua y forraje para sus animales ha conducido a los hombres a transportar armas cada vez más sofisticadas, que, a su vez, ha incrementado la letalidad de incursiones y disputas por recursos naturales para el ganado. Más aún, se señaló que el acceso al agua es particularmente problemático para poblaciones civiles en zonas de guerra, afectando principalmente a mujeres y niños.

Algunos colaboradores también han tocado la cuestión de conflictos causados por *la degradación de la calidad del agua por contaminación trans fronteriza y accidentes industriales*.

Agua y equidad de Género y otorgamiento de poder a las mujeres

Se enfatizó que *la dimensión de género al acceso al agua y cuestiones de brindar derecho y administración*, deberían ser descritas de forma destacada en todo el Informe. Los miembros de la red subrayaron que las mujeres son las más afectadas por la crisis del agua. Más de la mitad de los 1.200 millones de personas que no tienen acceso al agua, son mujeres y niñas. Más aún, en la mayor parte de los países en desarrollo, las mujeres son responsables de la administración del agua en los ámbitos doméstico y comunitario. Por ejemplo, se estima que las mujeres y niñas utilizan más de 8 horas al día, viajando de 10 a 15 km. para transportar entre 15 a 20 litros de agua en cada viaje.

Nuevamente, a nombre del equipo del IDH global, deseo agradecerles por esta discusión tan estimulante y por sus reflexiones y guías para el próximo IDH2006. Tengo la esperanza que este

intercambio de ideas no concluirá con el cierre de esta discusión en red. Por favor, continúen enviándonos ejemplos específicos que estén alineados con el tema del informe de este año, puesto que nos agrada inspirarnos en el trabajo de IDHs nacionales y regionales que enfocan el tema de agua y saneamiento.

El Informe de este año será lanzado en **noviembre de 2006** y tenemos la esperanza de inspirar a nuestros socios de desarrollo en el campo, a traducir estos mensajes críticos en acciones, preparatorias, antes, durante y después del lanzamiento.

Un cordial saludo,

Kevin

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Recursos:

[General](#) | [Water Scarcity](#) | [Water governance and management](#) | [Financing the Water Sector](#) | [Water and Energy & Environment](#) | [Water and Gender](#) | [Water as a Human Right](#)

I. General

Publications

1st United Nations World Water Report “[Water for People, Water for Life](#)”, March 2003

The WWDR is targeted to all those involved in the formulation and implementation of water-related policies and investment strategies, as well as to professionals at all levels. Although it offers a broad global picture, it focuses particularly on the situation in developing countries, where the need for better infrastructure and governance is highest. With this report, WWAP is aiming to show where systems are failing, and to provide the information needed for efficient and effective capacity-building throughout the world. This 1st edition of the WWDR laid the foundation for subsequent editions, concentrating essentially on evaluating what progress has been made, and not made, since the Rio Summit and on developing effective assessment methodologies. The Report encompasses a broad range of components, focusing on human stewardship of freshwater, that complex aggregation of policies, legislation, social programmes, economic approaches and management strategies through which we seek to achieve water sustainability.

2nd United Nations World Water Report “[Water – A Shared Responsibility](#)”, March 2006

The Report builds on the conclusions of the 1st United Nations World Water Development Report. It presents a comprehensive picture of freshwater resources in all regions and most countries of the world as it tracks progress towards the water-related targets of the UN Millennium Development Goals and examines a range of key issues including population growth and increasing urbanization, changing ecosystems, food production, health, industry and energy, as well as risk management, valuing and paying for water and increasing knowledge and capacity. Sixteen case studies look at typical water resource challenges and provide valuable insights into different facets of the water crisis and management responses.

UN Millennium Project Task Force on Water and Sanitation, Final Report, “[Health, Dignity and Development: What will it take?](#)”, 2005

At least 1.1 billion people lack access to safe water and 2.6 billion lack access to basic sanitation, resulting in the deaths of 3900 children per day. Health Dignity and Development highlights the global water and sanitation crisis and advances a comprehensive set of strategies to tackle the problem, including national elaboration, government and stakeholder commitments; focusing on sustainable service delivery, empowering communities, support from private partners, promoting innovation and improving global structures.

A.K. Chapagain and A.Y. Hoekstra, “[Water Footprints of Nations](#)”, Volume 1: Main Report, November 2004, UNESCO – IHL, Research Report Series, No. 16

The internal water footprint of a nation is the volume of water used from domestic water resources to produce the goods and services consumed by the inhabitants of the country. The external water footprint of a country is the volume of water used in other countries to produce goods and services imported and consumed by the inhabitants of the country. The study aims to calculate the water footprint for each nation of the world for the period 1997-2001.

Report of the Secretary-General, “[Actions taken in organizing the activities of the International Decade for Action, ‘Water for Life’](#)”, 2005-2015”, 25 July 2005, A/60/158

Report of the Secretary-General, “[Sanitation - Progress in meeting the goals, targets and commitments of Agenda 21, the Programme for the Further Implementation of Agenda 21 and the Johannesburg Plan of Implementation](#)”, 10 February 2004, E/CN.17/2004/5

Human Development Reports

[Central Asia Human Development Report 2005 - Bringing down barriers - Regional cooperation for human development and human security](#), December 2005

Chapter 4 of the Report looks at the question of regional cooperation on water, energy and environment. Water, energy and environmental resources are critical for human development and human security. In Central Asia, they are closely linked, through both geography and the vast infrastructure systems put in place during Soviet days. The republics are tightly interconnected with each other in managing these resources, even as each country had different endowments and priorities.

[Kazakhstan Human Development Report 2003 – Water as a Key Factor of Human Development in Kazakhstan](#)

The NHDR 2003 provides a comprehensive analysis of the water situation in Kazakhstan. Regional development studies and MDGRs have revealed that water plays a key role in Kazakhstan's human development. As 55% of national water needs are satisfied by rivers crossing Kazakhstan and its neighboring nations, water may affect not only the country's internal security but also the overall economic development of Central Asia, China and Russia.

[Tajikistan Human Development Report 2003 – Water Resources and Sustainable Human Development](#)

The 2003 Tajikistan National Human Development Report on Improving Water Governance was launched at the International Fresh Water Forum in Dushanbe on August 30, where over 400 participants from 45 countries had gathered. The NHDR 2003 seeks to promote dialogue amongst a broad range of actors involved in water management with the goal of enhancing sustainable human development for the people of Tajikistan.

[Egypt Human Development Report 2004 – Choosing Decentralization for Good Governance](#)

Chapter 8 of the Report looks at the question of decentralization in the sectors of Irrigation and Sanitation in Egypt.

[Thailand Human Development Report 2003 – Community Empowerment and Human Development](#)

In the first chapter of the Report, people from local communities themselves describe how they have struggled to gain power to improve their lives and prospects, giving great importance to having access to clean and safe water.

[Websites:](#)

UNDP/Water Wiki: http://europeandcis.undp.org/WaterWiki/index.php/Main_Page

A website for knowledge sharing and on-line collaboration among Water Governance practitioners and UNDP-partners in Eastern Europe, Caucasus and CIS.

UNDP

Water Governance: <http://www.undp.org/water/>

Water and MDGs: <http://www.undp.org/water/crosscutting/mdgandwater.html>

Water and Gender Mainstreaming: <http://www.undp.org/water/crosscutting/gender.html>

Public Private Partnerships for the Urban Environment – Case Studies: <http://www.undp.org/pppue/gln/case.htm>

UNESCO Water Portal <http://www.unesco.org/water/>

UNESCO Official Site of the International Year of Freshwater 2003 http://www.wateryear2003.org/en/ev.php-URL_ID=1456&URL_DO=DO_TOPIC&URL_SECTION=201.html

UN Department for Economic and Social Affairs/Division for Sustainable Development <http://www.un.org/esa/sustdev/sdissues/water/water.htm>

Water Related Database of the United Nations System http://www.un.org/esa/sustdev/tech_coop/water/watbase.htm

World Bank – Water Supply and Sanitation <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTWSS/0,,menuPK:337308~pagePK:149018~piPK:149093~theSitePK:337302,00.html>

Water Supply and Sanitation Collaborative Council <http://www.wash-cc.org/>

The Council exists under a mandate from the United Nations and focuses exclusively on those people around the world who currently lack water and sanitation. It has a special interest in sanitation and hygiene and emphasizes the need to view water, sanitation and hygiene (WASH) as an inseparable trinity for development.

Water Footprint: <http://www.waterfootprint.org/>

Ecologic (Institute for International and European Environmental Policy)

Water: http://www.ecologic.de/modules.php?name=News&new_topic=15

Development: http://www.ecologic.de/modules.php?name=News&new_topic=59

IRC International Water and Sanitation Centre <http://www.irc.nl/>

Provides news and information, advice, research and training on low-cost water supply and sanitation in developing countries

Conferences

4th World Water Forum, Mexico, March 2006 <http://www.worldwaterforum4.org.mx/home/home.asp?lan=>

The World Water Forum is an initiative of the World Water Council that has the aim of raising the awareness on water issues all over the world. As the main international event on water, it seeks to enable multi-stakeholder participation and dialogue to influence water policy making at a global level, thus assuring better living standards for people all over the world and a more responsible social behavior towards water issues in-line with the pursuit of sustainable development.

Financing water supply and sanitation in EECCA, November 2005: http://www.oecd.org/document/33/0,2340,en_2649_34291_35221537_1_1_1_1,00.html

Conference of EECCA Ministers of Economy/Finance, Environment and Water and their partners from the OECD, 17-18th of November 2005, Yerevan, Armenia

Background papers available on:

- [Progress on implementing the Almaty Guiding Principles for the Reform of the Urban Water Supply and Sanitation Sector in EECCA](#)
- [Meeting the MDG Drinking Water and Sanitation Target in the EECCA region – A goal within Reach?](#)
- [Water supply and sanitation in rural areas of EECCA](#)
- [Reform of Water Supply and Sanitation in EECCA at the Municipal Level](#)
- [Financing Water Services and the Social Implications of Tariff Reform](#)
- [Position Paper by The International Private Sector on its Role in The Reform of Water and Wastewater Utilities in Eastern Europe, Caucasus and Central Asia](#)
- [Domestic Private sector Position Paper](#)
- [Assessing the costs and benefits of water supply and sanitation improvement in EECCA \(contributed by the World Health Organisation\)](#)
- [NGO Position paper](#)

II. Water Scarcity

Lester Brown, “[Water Scarcity Spreading](#)”, Earth Policy Institute, 2002

Water scarcity may be the most underestimated resource issue facing the world today. As world water demand has more than

tripled over the last half-century, signs of water scarcity have become commonplace. Some of the more widespread indicators are rivers running dry, wells going dry, and lakes disappearing.

Lester Brown, “[Troubling New Flows of Environmental Refugees](#)”, Earth Policy Institute, January 2004

The number of cross-border migrants which could rightly be characterized as environmental refugees is probably increasing. When a boat with dead and surviving refugees from Somalia, by way of Libya, shores on the coast of Italy nobody can tell how many of them were political, economic or environmental refugees - failed states produce all three. The greatest source of future environmental refugees will be water scarcity. Hundreds of villages in Iran, Pakistan and the inner parts of China have already been abandoned by their inhabitants. Within this decade Quetta, a provincial capital in Pakistan, may have to be abandoned, as might the capital of Yemen, Sana'a. Added risks stem from spreading deserts, and further on into the century, rising sea levels.

III. Water governance and management

- **General**

Andrew Allan and Dr Patricia Wouters, “[What Role for Water Law in the Emerging “Good Governance” Debate?](#)”, University of Dundee, Scotland, March 2004

Inter-Parliamentary Union, “[Water: The means required to preserve, manage and make the best use of this essential resource for sustainable development](#)”, Resolution unanimously adopted by the 100th Inter-Parliamentary Conference, Moscow, 11 September 1998

Inter-Parliamentary Union/UNITAR, [Global Capacity-Building Initiative for Parliaments on Sustainable Development – Report on the Working Group on Water](#), A joint Project of the Inter-Parliamentary Union and the United Nations Institute for Training and Research, Paris, 22 – 23 April 2005

Inter-Parliamentary Union/UNITAR, [Global Capacity-Building Initiative for Parliaments on Sustainable Development – Regional Seminar for the Parliaments of the Arab States](#), 29-30 November 2005

Focuses on water management as an essential factor in achieving sustainable development in the Arab region.

Websites:

World Bank – Water Resource Management <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTWRM/0,,contentMDK:20441122~menuPK:1304933~pagePK:148956~piPK:216618~theSitePK:337240,00.html>

Third World Centre for Water Management, Mexico: <http://www.thirdworldcentre.org/english.html>

International Water Law Project

Bibliography: International Water Law: <http://www.internationalwaterlaw.org/Bibliography/IWL-general.htm>

- ***Public-Public Partnerships***

David Hall, [Water in Public Hands](#), Public Services International, June 2001

In the last 10 years many organizations have promoted privatization, invariably through a concession or lease arrangement on the French model (sometimes described as a public-private partnership – (PPP)), as the way forward for urban water supply and sanitation. This is the position taken by the multinational water companies, and is the dominant view in the World Bank. The purpose of this study is to show that the challenges facing developing and transition countries can be met by restructuring and development of water undertakings within the public sector – providing a public service directly owned and controlled by a democratically elected authority. It is intended to complement the existing literature on water and sanitation, much of which concentrates on the question of how to privatize management through PPPs - but does not spend much time discussing whether it is in fact the best of the possible options.

Aldo Baietti, William Kingdom, Meike van Ginneken, [Characteristics of Well-Performing Public Water Utilities](#), World Bank Water Supply & Sanitation Working Notes, May 2006

In essence, private financing has only accounted for less than 5 percent of the total investment in water supply and sanitation over the last 20 years. At the same time, some public utilities have become more autonomous and accountable. Some have improved their performance without involving the private sector and working totally within a public environment of key stakeholders and funding sources.

- ***Public-Private Partnerships***

Andrew Nickson and Richard Franceys, [Tapping the Market - The Challenge of Institutional Reform in the Urban Water Sector](#), Palgrave MacMillan, August 2003

This book examines the challenge of reform of the urban water supply sector in developing countries, based on case studies of state-owned water companies in Ghana, India, Sri Lanka and Zimbabwe. The growing public private partnership for urban water supply is analyzed, focusing on the concession contract model. The implications for meeting the water needs of the urban poor, for the regulatory role of the state and for state capacity building are also discussed.

Andrew Nickson, [“The role of the Non-State sector in Urban Water Supply”](#), International Development Department (IDD) The University of Birmingham, October 2002, presented at the '[Making Services Work for Poor People](#)'. World Development Report (WDR) 2003/04 Workshop held at Eynsham Hall, Oxford 4-5 November 2002;

Mukami Kariuki and Jordan Schwartz, ["Small-Scale Private Service Providers of Water Supply and Electricity – A Review of Incidence, Structure, Pricing and Operating Characteristics"](#), World Bank Policy Research Working Paper 3727, October 2005

Case Studies on public-private partnerships by the [Commonwealth Foundation](#)

- **Bangladesh**: Case study on Provision of Water Points in Low Income Communities in Dhaka - Professor M M Akash, University of Dhaka and Dr D Singha, Dushthya Shasthya Kendra, Dhaka, Bangladesh.
- **Ghana**: Case study on Community Public Sector Partnership for the Provision of Water Services in Savelugu - Patrick Apoya, Community Partnerships for Health and Development, Ghana.
- **Guyana**: Case study on Water Sector Reform in Guyana - Randolph Williams, Researcher, Guyana.
- **Papua New Guinea**: Case study on Privatization Of Water - 'Eda Ranu' - Dr Julienne Kaman, The Melanesian People's Forum, Papua New Guinea.
- **South Africa**: Case study on The Nelspruit Water Concession: Testing the Limits of Market-Based Solutions to the Delivery of Essential Services in South Africa - Dr Laïla Smith, Shauna Mottiar and Fiona White, Centre for Policy Studies.
- **Synthesis**: Financing and Provision of Basic Infrastructure: Synthesis, Commentary and Policy Implications of Water and Electricity Service Case Studies

Websites:

World Bank - Privatizing Water and Sanitation Services/ Papers and Links: <http://rru.worldbank.org/PapersLinks/Privatizing-Water-Sanitation-Services/>

Public-Private Partnerships for Water Supply and Sanitation – Policy Principles and Implementation Guidelines for Sustainable Services: <http://www.partnershipsforwater.net/en/start.html>

This multi-partner initiative focuses on enabling successful PPPs in water supply and sanitation projects in order to promote overall water sector development. The partner's goal is to assist local, national and international private and public actors (including small-scale providers) by proposing formal approaches for good water governance in PPP projects.

Public Services International - Campaign to resist privatization of water services: <http://www.worldpsi.org/TemplateEn.cfm?Section=Water&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=32&ContentID=2404>

- ***Water and local government***

International Council for Local Environmental Initiatives (ICLEI), [Local Government Implementation Guide for the Johannesburg Plan of Implementation and the Millennium Development Goals](#)
[Volume 1: Water, Sanitation and Human Settlements](#)

ICLEI Water campaign <http://www.iclei.org/index.php?id=799>

ICLEI's Water Campaign is designed to assist local governments in their efforts to manage water sustainably. The Campaign provides a framework that encourages the development of local water action plans to achieve tangible improvements in local water quality, conservation and access. Participants in the campaign work towards achieving holistic integrated water resources management.

Projects:

- **Integrated Water Management Information System**

With the support of the EU ASIA URBS Programme the City of Mödling (Austria) in partnership with the Cities of Venice and Hyderabad and the involvement of several technical partners, including ICLEI, the City of Hyderabad is developing an Integrated Water Management Information System (HyWaMIS). All aspects of water management (e.g. water supply, wastewater discharge, industry, agriculture...) are being included.

- **Pilot Demonstration Activity, Philippines**

A Pilot Demonstration Activity (PDA) is taking place in the City of Baguio, Philippines. The project looks at critical issues currently challenging the city, including water quality and access, watershed and river basin management, and drainage and flood control.

- **LoGoWater, Africa**

In Africa, a new water project has been established with eight cities, towns and communities in the Limpopo river basin acting as the model for the local government water (LoGoWater) project with funding from the European Commission. Participants are located along the Limpopo river basin, bordering four countries: South Africa, Botswana, Mozambique and Zimbabwe.

- ***Community-led rainwater harvesting***

[The Barefoot College – Rain Water Harvesting, India](#)

Since 1986, the College has focused on rain water harvesting and piped water systems as the emphasis has moved beyond providing clean drinking water to providing easy access to drinking water. 13 villages, 1200 connections and 15000 people now benefit from community piped water supply systems, designed, planned and implemented entirely by the village people. These communities pay Rs. 30/ month for two hours of water per day.

[Jal Bhagirathi Foundation – Natural Resource Management Project, India](#)

The project in the Marwar region is a Natural Resource Management Project with special emphasis at building the capacities of backward rural communities for management of critical water resources. While the project seeks to support traditional institutions of managing common property resources, it seeks to decrease biotic pressure on the fragile eco-system. The project will provide drought relief to a region extremely distressed with repeated droughts and also focus on community driven solutions for long term drought proofing of the Project Area.

Civil Society Organizations:

Friends of the Earth: <http://www.foe.org/>

World Development Movement: <http://www.wdm.org.uk/>

Public Citizen: <http://www.citizen.org/cmep/Water/humanright/un/>

- ***Water as transboundary source***

[Environmental Security Initiative](#)

The Environment and Security (ENVSEC) Initiative aims at increasing co-operation and security within and between communities by assessing and addressing the interdependency of natural environment and human security.

GEF/UNDP/UNOPS, [Improved land and water resource management in the Upper Syr Darya basin in the context of Sustainable Development](#)

The Upper Syr Darya basin is threatened by the lack of a coordinated water management strategy that integrates land and water use in a sustainable manner. This project, in coordination with the UNDP Energy and Environment Practice and the UNDP, UNEP, OSCE and NATO Environmental and Security (ENVSEC) initiative will address transboundary integrated land and water management through a dual prong approach. The first part is preparation of a transboundary diagnostic analysis complemented by a stakeholder analysis and causal chain analysis that will assist in development of a set of eco-system quality objectives (EQOs) that will serve as the basis for the regional strategic action programme and the national action plans. The second part of this approach is the testing of these EQOs as instruments for sustainable use of land and water resources in the region. These EQOs will be scaleable for the whole region to down to small villages. Once these EQOs are established, two community level demonstration projects that emphasize issues of sustainable development in transboundary cooperation in water resource utilization and economic development will be implemented to test their practicality. The projects will be monitored and evaluated for their application throughout the basin.

UNEP Regional Office Europe, [Rapid Environmental Assessment of the Tisza River Basin](#)

Almost five years after a cyanide spill from a gold mine in northern Romania traveled down the Tisza river in Hungary, leaving a trail of ecological destruction in its wake, local communities in the region remain at risk from floods and industrial pollution.

GEF/UNDP Bratislava Regional Office/UNOPS, [Establishing Mechanisms for Integrated Management of Land and Water Resources in the Tisza River Basin](#)

The Tisza river system is an internationally significant river system, which is significantly degraded and continues to be threatened. The Tisza River Basin is in need of a coordinated regional effort to develop harmonized national and regional policies for integrated land and water management. This project will address the issues of flooding, pollution, loss of biodiversity, adaptation to climate change, and the need for sustainable development in the Tisza River Basin. A major product will be the development of a regionally owned Strategic Action Programme, which will to the extent possible be streamlined with an EU River Basin Management Plan for the Tisza, meeting the requirements of the Water Framework Directive, and a Flood Prevention and Risk Management Strategy, while at the same time addressing wider sustainability issues in the water, agriculture, energy, industry and navigation sectors, highlighted by the work of the UNDP in their Tisza Basin Sustainable Development Strategy.

IV. Financing the Water Sector

Tim Kessler and Nancy Alexander, [Citizens' Network on Essential Services, Financing and Provision of Basic Infrastructure: Synthesis, Commentary and Policy Implications of Water and Electricity Service Case Studies](#)

A.K. Chapagain and A.Y. Hoekstra, '[Virtual water flows between nations in relation to trade in livestock and livestock products](#)', Value of Water Research Report Series No. 13, August 2003, UNESCO-IHE.

This study aims to develop a methodology to assess the virtual water content of various types of livestock and livestock products and to quantify the virtual water flows related to the international trade in livestock and its products. *Virtual water content* – [The virtual water content](#) of a product is the volume of water used to produce the product, measured at the place where the product was actually produced (production site specific definition). The virtual water content of a product can also be defined as the volume of water that would have been required to produce the product in the place where the product is consumed (consumption site specific definition).

Aldo Baietti and Paolo Curiel, "[Financing Water Supply and Sanitation Investments](#)", World Bank Water Supply & Sanitation Working Notes, October 2005

USAID [Case Studies of Bankable Water and Sewerage Utilities](#)

OECD, [Financing Water Services and the Social Implications of Tariff Reform](#), November 2005

- ***Water and Microfinance***

WELL Factsheet – [How Small Water Enterprises can contribute to MDGs for water](#)

Meera Mehta and Kameel Virjee, "[Financing Small Water Supply and Sanitation Service Providers - Exploring the Microfinance Option in Sub-Saharan Africa](#)", WSP – Water and Sanitation Program, December 2003

The paper provides several examples of water projects and touch on the issues that impede or facilitate small enterprises, giving particular attention to the access to credit.

Mukami Kariuki and Jordan Schwartz, "[Small-Scale Private Service Providers of Water Supply and Electricity A Review of Incidence, Structure, Pricing and Operating Characteristics](#)", World Bank Policy Research Working Paper 3727, October 2005

V. Water and energy and environment

UNDP Serbia and Montenegro, [Stuck in the Past – Energy, Environment and Poverty in Serbia and Montenegro](#), 2004

This report takes up into the poor household to understand how the poor respond to external circumstances. It suggests that if the poor were able to heat more living space with less energy, more energy could be diverted to productive use, creating jobs providing goods and services, empowering local communities, reducing poverty and facilitating development.

UNDP Serbia and Montenegro, [Field assessment mission of UNDP to the flooded areas in Vojvodina](#), 10 May 2005,

Upon the flooding of several municipalities in the Banat region of Vojvodina, north Serbia, 21 April 2005, UNDP Serbia and Montenegro undertook a one-day assessment field mission to the affected areas in order to identify possible programmatic interventions in the reconstruction and recuperation process of the region.

American University, Trade and Environment Database (TED) [Case Study: Danube Pollution](#), November 1997

Five major rivers and 165 million people in 17 countries pour pollution into the Danube River. The river absorbs raw sewage from cities, pesticides and chemicals from farmers' fields, waste from factories and bilge oil from ships. Virtually enclosed once it begins to weave its way through Europe the Danube retains most of the pollution reaching its waters.

Websites:

The Trade & Environment Database <http://www.american.edu/ted/ted.htm>

The Trade & Environment Database (TED) is a collection of categorical case studies that began with a focus on solely environmental issues, but did not include the economic consequences of other social policy choices, such as culture, rights, or other issues.

- ***Cleaner/new technology in water and sanitation context***

UNDP/GEF, [Transfer of Environmentally Sound Technologies \(TEST\) to Reduce Transboundary Pollution in the Danube River Basin – Final Evaluation Report](#), March 2005

The UNDP/GEF Pollution Reduction Programme identified 130 major manufacturing enterprises of concern (known as hot spots) within the Danube River Basin; a significant number of these were contributing to transboundary pollution in the form of nutrients and/or persistent organic pollutants. In spite of the environmental problems they were causing, there was a lack of convincing evidence that it is possible to comply with environmental norms while still maintaining or perhaps enhancing their competitive position. This project set out to build capacity in existing cleaner production institutions in five Danubian countries to apply the UNIDO programme on Transfer of Environmentally Sound Technology (TEST) at selected pilot enterprises that were contributing to transboundary pollution in the Danube River Basin and the Black Sea. The aim of the assistance was to bring these pilot enterprises into compliance with environmental norms of the Danube River Protection Convention while at the same time taking into account their needs to remain competitive and to deal with the social consequences of major technology upgrading. The enhanced institutional capacity would then be available to assist other enterprises of concern in these countries as well as other Danubian countries.

Malcolm Farley and Steve Kilbey, [Environmentally-friendly hygienic dry sanitation technology](#), 25th WEDC Conference, Integrated Development for Water Supply and Sanitation. Addis Ababa, Ethiopia, 1999

Florian Wieneke, "[Acceptance Analysis of New Technology for Sustainable Water Management and Sanitation: A Case Study of Operating Farm Households in the Mekong Delta, Vietnam](#)", PhD thesis, August 2005

Recent development in agricultural and industrial production leads to increasing pollution of the water sources in the Mekong Delta of Vietnam. According to the "Vietnam Environment Monitor 2003 – Water", no safe drinking water is provided to approximately 40 % of the total population. Thus, environmental institutions and governments became aware of the looming fresh water crisis. As a result, the "National Rural Clean Water Supply and Sanitation Strategy" (NRWSS) was elaborated as part of the national "Poverty Reduction Strategy Paper" to take responsibility for the Millennium Development Goals.

Websites:

US Environmental Protection Agency - Environmental Justice: <http://www.epa.gov/compliance/environmentaljustice/>

VI. Water and Gender

UNDP, [Mainstreaming Gender in Water Management – A Practical Journey to Sustainability – A Resource Guide](#), February 2003

The Gender and Water Resource Guide has been developed to assist practitioners in mainstreaming gender within the context of integrated water resources management (IWRM). The mainstreaming of gender is critical to reach the Millennium Development Goals as well as the Johannesburg Plan of Implementation. The resource guide consolidates available materials and gives a quick guide to accessing existing information. UNDP and its partners will aim to continually update the guide in order to keep abreast of new materials, information and concepts.

UNIFEM, [Concept Paper – Promoting and Protecting Women’s Right to Water in the Context of Globalization and Feminized Poverty](#)

The paper provides a rights-based analysis of economic policies relating to water as well as a usage perspective in light of women’s care work. It benefited from an extensive review of relevant literature, human rights provisions esp. the general recommendation on the right to water, as well as the discussions in relation to the World Water Forum held in Kyoto in 2004.

Ben Crow, "[Water: Gender and Material Inequalities in the Global South](#)", Center for Global, International and Regional Studies, University of California, September 2001

Because water is pivotal for health and livelihoods, inadequate access to water may be a significant cause of poverty and conflict. Poor access to clean water for drinking causes ill health. Poor access to water for agriculture and other livelihoods may be a cause of material deprivation. Water deprivation is widespread, and at the beginning of the twenty-first century it has to be tackled under unpromising conditions. Scarcity is increasing and government action is becoming more constrained. These circumstances demand innovation if water deprivation is to be tackled effectively. That innovation will require us to understand the technical, social and natural dynamics of the main modes of water access.

Ben Crow and Jessica Roy, "[Gender Relations and Access to Water: What We Want to Know About Social Relations and Women's Time Allocation](#)" Center for Global, International and Regional Studies, University of California, March 2004

Inadequate access to safe water has severe consequences for health and livelihood. More than one billion people do not have access to safe water. This paper addresses three questions: 1) How could a focus on social relations illuminate access to water? 2) Is there statistical evidence of a water-poverty connection? 3) How could time allocation studies improve our understanding of access to water?

Ana Elena Obando, [Women and Water Privatization](#), Association for Women's Rights in Development (AWID), November 2003

T. Jahnavi, [Water and Women](#), The Flow, March 2003

Websites:

UNESCO Water at the core of women’s traditional tasks, Facts and Figures: Women and Water
http://www.wateryear2003.org/en/ev.php-URL_ID=2543&URL_DO=DO_TOPIC&URL_SECTION=201.html

World Bank Gender, Water Supply and Sanitation [http://web.worldbank.org/WBSITE/EXTERNAL/ TOPICS/EXTGENDER/0,, contentMDK:20205024~menuPK:489481~pagePK:148956~piPK:216618~theSitePK:336868,00.html](http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTGENDER/0,,contentMDK:20205024~menuPK:489481~pagePK:148956~piPK:216618~theSitePK:336868,00.html)

Gender and Water Alliance <http://www.genderandwater.org/>

Global Development Research Center - Gender Perspective in Water Management <http://www.gdrc.org/uem/water/gender/>

VII. Water as a Human Right

John Scanlon, Angela Cassar, and Noemi Nemes, "[Water as a Human Right?](#)", IUCN Environmental Policy and Law Paper, No. 51, 2004

Rosemarie Baer, "[Why we need an International Water Convention](#)", Swiss Coalition of Development Organizations, March 2004

Hilda L. Solis, "[Environmental Justice: An Unalienable Right for All](#)", American Bar Association

Upala Devi Banerjee, "[Lessons learned From Rights Based Approaches in the Asia-Pacific Region](#)", September 2005

Sebastian Silva Leander, "[What can a Human Rights Based Approach Bring to Water Governance?](#)"

Water and Indigenous People

[Indigenous Peoples Kyoto Water Declaration](#) Third World Water Forum, Kyoto, Japan. March 2003

Websites:

Website of the Public Citizen - Online Water Rights Library: <http://www.citizen.org/cmep/Water/articles.cfm?ID=10840>

Indigenous Environmental Network – USA: http://www.ienearth.org/water_campaign.html

Indigenous Water Initiative: <http://www.indigenouswater.org>

Contribuidores:

1. [Vanessa Farr](#), UN Institute for Disarmament Research
2. [Carlos A. Linares](#), UNDP/BDP ([message 1](#), [message 2](#))
3. [Francesca Cook](#), UNDP/BCPR
4. [Jens Wandel](#), UNDP/BOM
5. [Tek B. Gurung](#), UNDP Nepal
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8. [Ram Shankar](#), UNDP Nigeria
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49. [G. Uyanga](#), UNDP Mongolia
50. [Elena Malanova](#), UNDP Russia

Respuestas individuales

[Vanessa Farr](#), UNIDIR, wrote:

Dear Kevin

In the sections on 'Water and Human Development' and 'Managing water as a trans-boundary resource', I would also urge you to consider the **impacts of sustained armed conflict on people's access to water**. From my own field observations, I conclude that:

- The destruction of water sources has been used in several conflict zones to distress and forcibly displace people as part of the war strategy (a prime example is the Nuba Mountains area of Sudan); this displacement can be internal or across borders;
- Gender-based violence is exacerbated:
 - When small arms and light weapons proliferate, the collection of water becomes even more burdensome for women, whose freedom of movement becomes increasingly constrained because of the heightened threat of rape and/or abduction at the hands of armed combatants or roving gangs.
 - In some weapons-prolific areas where males traditionally care for cattle (e.g., the Kenya-Uganda-Sudan border areas), the need to secure water and pasture for their animals has led to men carrying increasingly sophisticated arms, which has increased the lethality of cattle raids and disputes over natural resources.

There is also quite a lot of research on the ways in which prolific small arms hamper humanitarian assistance and deny development and progress, which will be useful for you to consult.

Please let me know if I can offer further assistance on defining these areas for discussion in the Report.

Regards

Vanessa Farr
UN Institute for Disarmament Research (UNIDIR)

[Carlos A. Linares](#), UNDP/BDP, wrote:

Dear Kevin and colleagues from HDRO,

I will send detailed comments next week to concept note circulated date November 2005. However, I am sending this initial reaction to clarify one important issue reflected throughout the concept note. Whenever the concept of access to water is mentioned, we need to be correct about referring to access to **safe** water or safe water sources (for consumption).

The argument that I am supporting is that **everyone has access to water**. But not everyone has **access to safe water**. Thus, the MDG target 10 clearly indicates access to **safe water**. Who serves the officially unserved population? – informal sector providers do, in addition to a multiplicity of other ways in which people and communities provide access for themselves (from un-safe sources). **In many cases, where supply of safe water is inadequate, local entrepreneurs have stepped in to provide affordable services, filling the gaps left by official providers.** Statistics do not count or include informal sector providers, deficits only reflect those not connected to official systems. Coverage from any source of water is indeed 100% for those living on this planet. There is no official accounting for informal provision. Everyone has water to drink on a daily basis. Let's get this right from the beginning.

Attached please find [recent World Bank publication](#) on this issue. I will be happy to discuss this further.

Best regards,

Carlos

Carlos A. Linares
Sr. Water Policy Adviser
Energy and Environment Group
Bureau for Development Policy
United Nations Development Programme, UNDP

[Francesca Cook](#), UNDP/BCPR, wrote:

Dear Kevin,

What an excellent choice of topic for the next HDR. The following short paragraphs (excerpts from: [The DAC Guidelines Helping Prevent Violent Conflict](#)) contain interesting information that may be of use to you as you move forward in the process. They outline the **links between water (environmental resources) and conflict, including issues around regional management of natural resources.**

Access to water will increasingly be at the **centre of national and international tensions.**

Best regards,

Francesca Cook
Bureau for Crisis Prevention and Recovery
UNDP

[Jens Wandel](#), UNDP/BOM, wrote:

Dear Kevin,

It was a real pleasure to read the concept note, which indeed captures issues and complexities around water well and in a comprehensive way. I will make two comments here; **i)** an example of how progress can be made in water management for human consumption if one thinks about it as a “common”; and **ii)** how important it is for us to emphasize the need to develop capacities to understand these issues.

In Turkmenistan, in 1998 onwards there was high water consumption per inhabitant in the major cities and still people had very little access to water. The situation was that water was provided free or charge but in reality there were so many leaks, so that people only had irregular access to water. What

happened in that scenario was that the more wealthy people bought pumps, so they would suck the water to their houses first reducing already scarce water to everyone else.

At the same time, with its newly acquired independence there was a complete vacuum around who owned houses, pipes, who should finance maintenance and overall ability to formulate any kind of water management policy and plan. In this environment it was not possible for the development banks or any large donor to operate, so the water situation for individuals declined significantly year on year.

We managed to make some progress by treating this as a problem of how to manage a common good and avoid "*tragedy of the commons*". The idea was simple.

Thousands lived in buildings with 5 – 6 floors. When water pressure was up, the upper floors would not get much mainly because of three things: **i)** people filled all kind of tanks and containers with water when something was there and those at the end of the grid got little; **ii)** as water was not there normally, leaking toilets and open taps (people forgot to close last time some drops came), resulted in serious waste and **iii)** the pressure was not high enough.

The solution was to organize dwellers building by building and install pressure pumps at the basement of each stairwell. The pumps worked when there was water and ensure that all floors would get water. When you open your tap, pressure goes down and the pump will work. In areas where the dwellers manage to get this to work, the result was astounding. Water consumption dropped significantly, and willingness to collaborate went up. The main reasons were that the pumps only work if there is no leakage in the building (otherwise the pressure can not be kept up), so when one apartment did not fix a leakage everybody could hear the pump going all the time and they would find the leakage and insist it gets fixed. Secondly those on the upper floors no longer had to go down to the first floor and carry water up, so they liked the arrangement. The first floor dwellers no longer had to constantly give water to their upper floor neighbors so they liked the arrangement. Finally, we achieved to create nascent community organization in a country where NGOs were illegal. When each building saw the water as a common limited good and organized around this – they would reduce their water consumption significantly leaving more water to everybody else and they were happier with the outcome. However, there are many issue around this type of investment and also in the development context in Turkmenistan, so I am not sure the solution was sustainable. However, the fact remains that water consumption could be reduced significantly for those involved in this scheme and they felt empowered by approaching water management this way.

The second point is simple to make. As the paper captures well, management of water as a resource is a complex issue that requires real expertise to analyze. The debate is polarized and research of what works in terms of securing people access to reasonable amount of water per day – in particular in cities – both small and large, suffers in this environment. We could also use the 2006 HDR as an opportunity to outline how we can measure their capacity to analyze, create policies and manage water resources. This type of analysis would help everybody to decide which approach to use and may also break up the current polarization between the market/pricing approach and the fact that people must drink water everyday to survive.

With best regards

Jens

Jens Wandel
Director
Center for Business Solutions/ Bureau of Management
UNDP

[Tek B. Gurung](#), UNDP Nepal, wrote:

Dear Kevin,

I'll go into details of the concept note and hopefully make more substantive comments. However, when I just scroll down the 8 pager concept note, I could not see the "Water and Energy" in bold heading. Perhaps this dimension is completely missing (I'll have to get into details). For now, I believe that "**Water and Energy**" dimension should receive a very important place in the HDR. From, almost everywhere in the world, one can find evidences how important water is for power/energy generation and thereafter, how important is energy for achieving MDGs and Human Development. Since it is very obvious, I suggest including this dimension in the concept note and hopefully it will then get through all the way!

Best regards,

Tek

Tek B. Gurung
UNDP Nepal

[Abdou Kolley](#), UNDP Banjul, wrote:

Dear colleagues,

As Carlos put it, I want to agree that everyone has access to water, and as far as I am concerned, two issues stand out as important for the 2006 HDR to address. The first is that of **water safety** as articulated by Carlos. There will be need to look at how safe and adequate is the water for consumption purposes, as unsafe drinking water, though satisfies the immediate need, thirst, may lead to several undesirable health-related consequences. The second issue for me is that of **affordability**. Given that in many places, public provision is not enough and is complemented by private provision, safe drinking water may be available/accessible but unaffordable by the poor, and as a result, they turn to other options that could be hazardous to their health.

Regards,

Abdou Kolley
UNDP Banjul

[Raghda Jaber](#), UNDP Lebanon, wrote:

Greetings,

Most of the water issues and some other resources issues as well like oil, or minerals, in the case of the Middle East, center around land ownership and rights, which in many cases suffer from tensions between traditional forms of ownership and modern legal proofs. The tension in the land tenure arena is very high, and is a direct input, if not the main one, into the water resource availability. Should this issue be tackled in the HDR of 2006, or does it merit a separate note/report, etc.?

Raghda

Raghda Jaber
UNDP Lebanon

[Ram Shankar](#), UNDP Nigeria, wrote:

Thank you for the opportunity to comment on the HDR 2006 concept note. Water and human development is an excellent choice given the increasing depletion of water resources around the world and the increasing levels of conflict around this valuable resource. A couple of observations on the concept note:

1. Explicit reference to **the issue of water conservation techniques** would greatly add to a discussion and analyses on water issues in this HDR – this might be appropriate under the section on water and human development. I believe a detailed discussion on water conservation techniques would be appropriate in this HDR dealing with water. Water harvesting of course is well known especially given its success in Asia. But, can this be replicated on a cost-effective basis in Africa? Such replication is likely to encourage South-South cooperation. There are numerous other water conservation techniques that are being used around the world that deserve elucidation.

2. **Link to the MDGs** - I think a HDR on water would also wish to consider issues surrounding large dams and the consequent conflicts that the construction of these dams have caused around the world – whether in Latin America, Asia (specifically, in India and China – the cases of the dam on the Narmada river, the Tehri dam and the Three Gorges dam). The destruction caused by these dams has been both ecological and social (skewed rehabilitation of project affected people). Are large dams really the answer to increasing the availability of water or are there other ways by which this water can be more effectively harnessed? Though normally a politically sensitive topic, a HDR on water could be an appropriate place to discuss the viability of large dams including the Report by the Commission on Large Dams in 2000-01. Rehabilitation problems are likely to have a direct linkage to a lack of achievement of MDG issues in the affected areas.

3. Traditionally, I realize that the HDR focuses on the needs of less developed countries and their

citizens. However, given that the growing crisis over water resources is truly a **global problem**; the rapid depletion of water resources in North America (especially in western and mid-west US) may deserve some discussion.

Sincerely,

Ram Shankar
Program Specialist, UNDP
UN House, Abuja - Nigeria

[Juerg Staudenmann](#), UNDP/Bratislava Regional Centre, wrote:

Dear Kevin,

Once again I would like to congratulate you and the HDRO for the choice of the theme for HDR 2006. “**Water**” with its various facets is certainly one of the key issues for (human) development and I’m looking forward to a period of in-depth analysis and stimulating discussions. In addition to the points you mentioned, I would like to quickly highlight a couple of aspects *that I believe deserve special attention in the further discussion and development of the HDR concept*:

- The ‘**Water-Security nexus**’. Water often plays the central role when it comes to human security, both as object over which conflicts erupt, and as means to resolve or prevent conflicts. This is particularly true in the former Soviet Union (Central Asia, Caucasus, the Balkan) where the water-security nexus has direct (negative and positive) impacts on the daily live and living condition for people from these countries.
- **Assessment of the real situation**: The way we define and measure “*safe access to water and sanitation services*” needs to be questioned and probably revised. For example, as illustrated by Jens, the currently used indicators have proven to be flawed: The comparably high connection rates to drinking water networks in the RBEC region do not tell us anything about the actual availability (or essentially the lack), as well as the quality of the water. There seems to be a need to (re-) define “Water-poverty”.
- **Financing the Water Sector**: From the above, a logical next challenge (not only in transition economies) is how to attract investors to help improve the situation, and how to introduce sustainable and fair pricing schemes for water services. Technical cooperation and development projects alone will not do; we definitely need to look into innovative ways of “Public-Private-Partnerships”. Such aspects are lending an additional dimension to the term “Water Crisis” and have been dominating recent discussions, conferences, roundtables (and will also be the main topic of the next Ministerial Conference under the “Environment for Europe” process in Belgrade, 2007). UNDP/RBEC has intensified its collaboration with OECD, WHO, the EU and other partner organizations on that, and also started recently – in cooperation with colleagues in BDP – to explore the potential to “twin-up” a private Dutch bank with current and future water-related projects.

- In addition to the Middle East & North Africa, Central Asia (keyword **Aral Sea**) would probably provide interesting material and cases to investigate “water use in agriculture”, and the so called **water-energy nexus**. I would like to draw your attention to the launch of the new **Central Asian HDR** on 07 December, which features a strong chapter on this.

Best Regards,

Juerg

Juerg Staudenmann, Water Governance Advisor
UNDP, Europe and the CIS
Bratislava Regional Centre

[R. Andreas Kraemer](#), Ecologic, wrote:

Dear Kevin,

Your list of issues closes with "**Examples of successful/unsuccessful use of water markets and the regulation needed to support them**". [Ecologic](#) (Institute for International and European Environmental Policy) produced two reports (see below) with case studies, one generally on economic instruments, another specifically on "rights markets" for water pollution. Both reports lead to further sources.

The main conclusions (for me) are:

- 1) Designing and administering such schemes is complex and monitoring requirements high;** many developing countries will find it impossible to establish the necessary institutions;
- 2) Regulation** is required to ensure that monopoly, oligopoly or other competition-restraining features do not affect the market;
- 3) Efficiency gains are small in water pollution trading and in water rights markets,** but they can be considerable when water (rather than water rights) is traded;
- 4) Water users associations** resemble many of the features of (successful) water markets; it may be useful to look at the relevant (empirical) research by, inter alia, [Elinor Ostrom](#).

You find detailed conclusions in the reports (see links below) and more information on our relevant work on the thematic web site sections for

Water: http://www.ecologic.de/modules.php?name=News&new_topic=15

and

Development: http://www.ecologic.de/modules.php?name=News&new_topic=59

Best regards,

Andreas

Andreas Kraemer
Ecologic

[Lenni Montiel](#), UNDP Vietnam, wrote:

Dear Kevin and the HDRO Team,

Thank you for the opportunity to comment on the HDR 2006 concept note. The selected topic for the HDR 2006 is not only relevant for its own merits given the rapid advance of the water crisis in this millennium, but it will certainly be a significant contribution/reference to the 4th World Water Forum to be organized next year in Mexico. Water is a complex and multidimensional issue and I guess you will be receiving several comments and contributions. I would like to provide a complementary view, to what has already been suggested by other colleagues, mainly from the perspective of linking democratic governance and water considerations. Hope they will be useful.

I. Water and Governance

“Water and Governance” seems to be an area that will require more “explicit” attention. The intention to explore “wider governance structures that exclude poor people from water” is a good start. Attention is been given to markets and non-governmental organizations in the provision of water, and this seems to be also good and very much necessary.

However, while reading the concept note the perception is that practically no reference is made to state organizations. I refer here not only to national government agencies – Ministries and Executive agencies of different nature. I also consider national parliaments, the judiciary and the systems of justice, local government. As per, national executive agencies, it is clear that without strong national agencies with good capacities to plan and provide strategic direction and regulation to the management of water resources, the involvement of other players (private sector, NGOs, communities, etc...) will not be as effective as it could be. In this section I will say that Capacity development for Integrated Water Resources Management should be considered explicitly and be systematically emphasized.

1. Water and Parliaments

I also think that some attention needs to be put to the role of National Parliaments as the entities that are responsible for setting up the legislative framework in which water is managed, financed and regulated at

national and at local levels. Parliaments are also important as political arena for the representation of people's interests and concerns around water issues and problems – not few in many cases. It would be interesting to present some few cases in which people's voice is represented in national parliaments to sort out water problems, linking this with parliamentary efforts in terms of poverty reduction and MDGs. Parliaments do play a fundamental role in exercising oversight functions over Executive agencies, and if there are water problems in a country, then it is clear that parliaments could do more to hold governments accountable to the people for their inaction or ineffective interventions in this area. Finally, parliaments are the institutions that ultimately allocate financial resources for different objectives and priorities. The analysis of their roles in securing appropriate consideration of water priorities and programmes in national budgets could contribute to better policy-making in this area. Parliamentary practices in national budget planning, ratification and overseeing in relation to water priorities could be an interesting subject for analysis, not to mention that it would be relevant to look at it also from the perspective of gender budgeting. Let's not forget, that the role of Parliaments in the achievement of MDGs has been pointed out as of a paramount importance during the Summits in years 2000 and 2005 (see Summit Outcome Document). For your reference:

- The Inter-Parliamentary Union has a resolution on the subject **“WATER: THE MEANS REQUIRED TO PRESERVE, MANAGE AND MAKE THE BEST USE OF THIS ESSENTIAL RESOURCE FOR SUSTAINABLE DEVELOPMENT”** Resolution unanimously adopted by the 100th Inter-Parliamentary Conference. Moscow, 11 September 1998. <http://www.ipu.org/conf-e/100-2.htm>
- On the role of Parliaments and Parliamentarians in addressing water issues, see conclusions of a recent seminar between Inter-Parliamentary Union and UNITAR - Paris, 22 and 23 April 2005:
<http://www.ipu.org/splz-e/unitar05.htm>
http://dcp.unitar.org/spip/IMG/pdf/Report_WG_Water2.pdf
- IPU- UNITAR Regional seminar for the parliaments of the Arab States Beirut (Lebanon), 29 and 30 November 2005. It focused on water management as an essential factor in achieving sustainable development in the Arab region. <http://www.ipu.org/splz-e/beirut05.htm>

2. Water and Justice

The concept note is providing a good framework for linking water, human development, human rights, inequality and justice. The amount of conflict and tension that exists around water resources within and between countries inevitably leads to the fact that a very important component of the governance of water is related to the functioning (or not) of justice systems. Justice systems and access to justice have fundamental implications in ensuring access to water, especially for the poor and disadvantaged groups of populations. Access to justice is important when considering challenges such as management of water resources in remote areas, water resources and the rights of indigenous peoples, controlled access to water as a discriminatory practice against groups of population due to ethnic, religious or class

considerations. The role of traditional and aboriginal systems of justice in the resolution of water disputes may also be important, particularly when they clash with more formal and modern legislative frameworks and obviously are a source of conflict between State organizations and indigenous peoples. In fact, water for many is perceived as an “indigenous right”. Enforcement of environmental laws and water law is undoubtedly a relevant issue.

3. Water and Local Government

Effective management of water resources in cities but also in rural areas is often linked to the actual capacities of local government to perform these functions. From a technical and managerial point of view these capacities are often not present in local government. About the roles of local government in water management much has been written and analysed during recent years. But, most of times with regards to the capacity of local government as a provider of services. I believe attention also needs to be put to “local representative bodies” as the ‘link” between providers and people, consumers, citizens. The role of individual local councilors in terms of key players in the public policy making around water issues needs to be highlighted. Individual Councilors do make significant contributions to poverty reduction initiatives, human rights protection, fight against discrimination and racial and gender equality and their connection with the management of water problems and needs could be positively analysed in the report.

4. Water and Corruption

Since the report is about “power, entitlements and scarcity” it is fundamentally important to consider the fact that water and corruption are intrinsically associated in many places around the world. This is related first of all to political corruption, but also to corruption in the provision of services, in the implementation of public works, in the manipulation of levels of tariffs and fees, in the process of privatisation of water companies, etc. If we are committed to the advancement of good governance and the observation of the UN Convention against corruption, reference to this subject should be considered in the report.

II. Water and Conflicts

Today it is clear that a significant amount of conflicts in the world are associated to “natural resources”. Water among them. Conflict is unquestionably associated to bad governance, often can be linked to democratic deficits that make difficult the resolution of disputes between different groups in the society. Restriction of access to water is used as a military and political tool in conflicts, access to water is particularly problematic for civilian populations in war zones, affecting especially women and children. Water has been used as a military target and certainly is a concern as a target of terrorism. Water is the source of major tensions between state and non-state actors in the context of general development plans. Thus, water is inevitably a fundamental factor in the achievement of peace and human security in many localities, countries and regions of the world. The Summit Outcome Document has raised the importance of peace and collective security, pacific settlement of disputes, democracy, human rights and the rule of law and it is clear that water plays a fundamental role in these processes. These issues could be explored from a broad perspective and they will support very much the development of the section on “managing water as a trans-boundary resource”. The role of water and water management initiatives in

post-conflict countries is certainly another issue of great significance in today's world.

III. Water and Emergency responses

Water is some times - too much, and some times – too little. Water is thus a frequent cause of natural disasters: floods, tsunamis, droughts. Consequences of natural disasters have significant negative impact in the efforts to alleviate poverty and for improvement of living conditions of men and women. The social/economic/legal impact of water-related natural disasters as a consequence of the increase of global warming and climate change needs to be addressed as well in the HDR. A quick review of Tsunami areas in Asia will provide lots of evidence (and lessons!) about how power and entitlements have changed around water resources in the last few months after the disaster. Similar situation can be analysed in affected zones of Latin America after storms and rains associated to El Nino during recent years. Again, national governments, local governments, parliaments, systems of justice, private sector, civil society and communities need to be prepared to deal not only with the emergency but also with the social, economic and legal consequences to avoid the increase of inequalities; the increase of poverty and to progress in the integration of human rights based approach to development. Recent ecological/water disaster in China and the multidimensional impact it had in urban residents makes us think about the issue of water refugees <http://www.irc.nl/page/8122> and environmental refugees <http://www.edcnews.se/Cases/EnvRefugeesBrown.html> as important consideration as well.

IV. Gender Equality and empowerment of women

The concept note and certainly the report itself could be strengthened by ensuring appropriate incorporation of gender perspectives to the analysis. As presented now, the concept note seems to be “gender blind”. Linking water and efforts to promote gender equality is not a problem in terms of available literature, evidence and cases. Water as a theme of the 2006 HDR is a good opportunity to address new perspectives on gender equality as a human rights issue and to reflect/expand on recent considerations presented in the Summit Outcome Document. A gender specialist with experience on water/poverty/governance could undoubtedly facilitate very much the development of a report with significant analysis and transformative messages promoting Gender Equality going beyond numbers and statistics. The UNDP Mainstreaming Gender in Water Management guide is a key reference in the subject, see <http://www.undp.org/water/>

V. Latin America

I am sure the report will provide appropriate analysis of regional specificities on how water issues do affect sustainable development, inequalities, human rights, governance and peace. Some references related to the case of Latin America could be found at the Third World Centre for Water Management in Mexico <http://www.thirdworldcentre.org/epublicaciones.html> Over there specific cases and publications can be found on water management and women; integrated river basin management and water policies and institutions in Latin America.

VI. Some relevant references

- On Water governance see “What Role for Water Law in the Emerging “Good Governance”

Debate?” by Andrew Allan (a.a.allan@dundee.ac.uk) and Dr Patricia Wouters (p.k.Wouters@dundee.ac.uk) University of Dundee, Scotland. <http://www.dundee.ac.uk/iwlri/Documents/Conferences/2004/woutersGovernancearticleforAWRA.pdf>

- With regards to **institutional reforms** from a wide governance perspective see
 - “*Tapping the Market: The Challenge of Institutional Reform in the Urban Water Sector*” Palgrave MacMillan. 2003, by Andrew Nickson (r.a.n@bham.ac.uk) and Richard Franceys (r.w.a.franceys@cranfield.ac.uk)” from The University of Birmingham and the University of Cranfield in the UK respectively.
See: <http://www.palgrave.com/products/catalogue.aspx?is=0333736206>
 - “*The role of the Non-State sector in Urban Water Supply*”. Andrew Nickson International Development Department (IDD) The University of Birmingham, England October 2002. Prepared and Presented at the 'Making Services Work for Poor People'. World Development Report (WDR) 2003/04 Workshop (<http://www.ids.ac.uk/ids/govern/wdrwkshp.html>) held at Eynsham Hall, Oxford 4-5 November 2002;
 - Knowledge Service for Private Sector Development. World Bank. Papers and Links, available at: <http://rru.worldbank.org/PapersLinks/Privatizing-Water-Sanitation-Services/>
 - UNDP Public-Private Partnership for the Urban Environment website. Case Studies, available at: <http://www.undp.org/pppue/gln/case.htm>
- On **gender, inequalities and water** you can see the works of Ben Crow (bencrow@ucsc.edu)
 - “*Water: Gender and Material Inequalities in the Global South*”. Ben Crow, University of California, Santa Cruz. USA
 - “*Gender Relations and Access to Water: What We Want to Know About Social Relations and Women's Time Allocation.*” Jessica Roy and Ben Crow, University of California, Santa Cruz, USA
- **Indigenous Environmental Network – USA**. A good portal on water and indigenous issues around the world. See: http://www.ienearth.org/water_campaign.html
- **Indigenous Peoples Kyoto Water Declaration Third World Water Forum**, Kyoto, Japan. March 2003 <http://www.indigenouswater.org/IndigenousDeclarationonWater.html> - From the **Indigenous Water Initiative** -<http://www.indigenouswater.org>
- **Gender and Water Alliance** - <http://www.genderandwater.org/>
- Gender, Water Supply and Sanitation. World Bank. See links at: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTGENDER/0,,contentMDK:20205024~menuPK:489481~pagePK:148956~piPK:216618~theSitePK:336868,00>.

[html](#)

- Gender Perspective in Water Management. Link list: <http://www.gdrc.org/uem/water/gender/>
- On **water as a human right**, see
 - “Water as a human right?” UNDP and IUCN.
 - The website of Public Citizen, USA [http://www.citizen.org/cmep/Water/humanright/un/ and its Online Water Rights Library](http://www.citizen.org/cmep/Water/humanright/un/and_its_Online_Water_Rights_Library), available at: <http://www.citizen.org/cmep/Water/articles.cfm?ID=10840>.
- On **environmental justice**, the USA has several initiatives. Among them,
 - Environmental Justice. US Environmental Protection Agency. See: <http://www.epa.gov/compliance/environmentaljustice/>
 - Environmental Justice: An Unalienable Right for All. American Bar Association. See: <http://www.abanet.org/irr/hr/fall03/unalienable.html>
 - NYU Center for Environmental & Land Use Law. Program on Land Use Law. U.S. Environmental Justice. See: <http://www.nyu.edu/pages/elc/ej/>
- On **water and local government** it's useful to have a look at ICLEI – the Council for Local Environmental Initiatives, international association of local governments committed to sustainable development.
 - Local Government Implementation Guide for the Johannesburg Plan of Implementation and the Millennium Development Goals
Volume 1: Water, Sanitation and Human Settlements, available at: <http://www3.iclei.org/implementationguide/>
 - *ICLEI Water campaign*. See: <http://www.iclei.org/index.php?id=799>
- For **transparency and anti-corruption in water issues**, see the IRC International Water and Sanitation Centre at: <http://www.irc.nl/page/17346>
- **Water E-Law Library** (WELL) http://www.dundee.ac.uk/iwlri/Research_WELL.php at the International Water Law Research Institute – Links page, available at: <http://www.dundee.ac.uk/iwlri/IWLR Links.php>
- Bibliography: **International Water Law**. International Water law Project <http://www.internationalwaterlaw.org/Bibliography/IWL-general.htm>

My best wishes to you and your team in the preparation of this challenging report.

Lenni

Lenni Montiel, STA

[Khalil Tian Shahyd](#), UNDP India, wrote:

Dear Kevin, HDRO Team and all,

It may also be worth considering that **governance options** exist outside of both markets and formal state institutions and agencies without making a value judgment for either/or but letting local context fuel the best options.

For instance, in Northern New Mexico and Southern Colorado, there has existed for hundreds of years a series of community managed water resource networks for farm irrigation, based on communal management and control of the Acequias (ditches).

<http://www.lmacequia.org/>

<http://www.acequiaweb.org/>

These Acequias were dug and expand for hundreds of miles throughout the region to capture the melting snow from the mountain caps in the spring. They serve as examples of cooperative management and sustaining of a common resource, even in such a highly privatized society as the United States. However due to the effects of global climate change as in most places the snow caps are getting smaller and melting away much earlier, leaving less irrigation water for local farms. These communities are largely rural Chicano and Pueblo Indian (Native American) communities.

Dr. Devon Pena [dpena@u.washington.edu] at the University of Washington Department of Anthropology has done extensive work in this area and would be a great resource for further consultation.

Khalil Tian Shahyd
Human Development Resource Center
UNDP-India

[Mamour A. Jagne](#), UNDP Banjul, wrote:

Dear colleagues,

Just to add a quick comment to that of my colleague Abdou Kolley. One perhaps obvious consideration is

sustainable consumption of water resources. Here in Banjul we are facing the distinct potential of exhausting our shallow water aquifer, leading us to consider more expensive options which in turn may limit universal access. Which leads to the age old debate, should water be provided free of charge, or should be priced on the basis of sustainable production cost? To sum up, I think the topic "water and human development" is a very interesting one, with many possible dimensions, and I looking forward to learning from the diverse experiences of other countries across the globe.

Mamour A. Jagne
Program Analyst (Energy and Environment)
UNDP Banjul

[Paul Paryski](#), **Blue Ribbon Water Task Force**, wrote:

Dear Kevin,

I noticed your mention of **New Mexico** and **Acequias**. I am a semi-retired UNDP CTA and now work on water issues in New Mexico, primarily on Governor Richardson's Blue Ribbon Water Task Force. New Mexico is using its scant water resources on a totally non-sustainable basis due to uncontrolled development, inefficient water use and mining existing aquifers. This situation is creating considerable conflict between cities, the developers, the agricultural sector (which uses 75% of the water very inefficiently), the first nations and the traditional Hispanic Acequia communities. In effect, the old saying "whiskey is for drinking; water is for fighting" is coming true. Developers and municipalities are trying to purchase water rights from Acequia members and first nations, destroying the successful community based stewardship of water in these communities. In addition, the first nations claim and have good legal reason to do so, most of the state's waters. And New Mexico water law is archaic, based on frontier, "cowboy" principles.

In this situation of conflict, attempts are being made to find negotiated settlements through consensus stakeholder processes such as state sponsored town halls and through water basin active management. These initiatives meet with initial success, but usually only on abstract and broad principles and real agendas are often hidden. We are now trying a problem based problem solving solution based on the common agreement that water is necessary for sustainable human development and that it must be managed as a limited resource linked to healthy ecosystems. Establishing water resources policy boards with members from government agencies, professional hydrologists and watershed scientists, and stakeholders, is another solution being proposed.

So perhaps the Acequia model which is also used in Haiti and has been affected by violence, where I also worked, is now unfortunately breaking down.

Hope this adds to your dialogue.

Best regards,

Paul Paryski
Governor Richardson's Blue Ribbon Water Task Force
New Mexico

Mohamed Bayoumi, UNDP Egypt, wrote:

Dear Colleagues,

Once more I would like to congratulate UNDP for the selecting water as the topic for its HDR 2006. In this respect, I would like to share with you the following comments:

Under the first core thematic area of the report, I believe that globalization will introduce new concepts and tools to the water sector that will affect human development. Accordingly I would like to raise with you some of these issues that you might consider addressing it in the report under Human Development area or the other core thematic areas of the report. Among these issues are the following:

1. Globalization promotes establishment of global forums and networks such as Global Water Partnership and World Water Council and other think tanks and activists' groups that benefited from IT advancement in providing cheap means of communication and technology transfer that allows fast exchange of opinions and experience as well as awareness raising on the global water crisis. Accordingly I believe that the role of these new key players in influencing the world water policies and how this impact human development might need to be addressed.
2. Globalization is boosting a worldwide wave of privatization of the water supply and sanitation sector that was addressed very well in the HDR on MDGs (2003). Meanwhile, WTO agreements and liberalization of exports and imports are promoting the agribusiness Transnational Corporations (TNCs) to purchase agricultural land all around the world, and it would not be a long time before few TNCs may dominate large portion of the global food production. Operations of these companies will be based on the comparative advantage concept in agricultural production to maximise economic returns but the impacts of this approach on the current water use trends for irrigation and on the environment may need to be analysed. More important some experts are arguing that implementing comparative advantages concepts worldwide instead of ongoing subsistence irrigation in many places in the world would increase economic benefits for farmers but might lead to global food production imbalances.
3. Water rights may have new definition under GATT/WTO agreements that need to be highlighted and analysed. This applies to water rights for individuals, TNCs, service providers for water supply and sanitation services as well as water rights for countries in (trans-boundary) shared water resources. Currently in several developing countries, private sector investors in water supply and/or agriculture businesses are negotiating with governments in developing countries these water rights while governments are still sceptical about what could be the consequences of these given rights to private sector. Also water trade between countries may need to be addressed as well as the water rights these type of trade may develop.
4. Globalization is also introducing international conventions and commitments on countries related to water such as the MDGs and WSSD. Among these commitments that need to be analyzed is the WSSD

target for countries to develop its IWRM plans by 2005. Globalization is also offering financial mechanisms to support cooperation between countries such as the GEF which provides opportunities for developing countries.

5. When addressing water supply and sanitation, I would emphasize what was mentioned by my colleagues on the need to set clear definitions to these services that should include reliability and quality for drinking water supply and treatment of wastewater for sanitation.

Best regards

Mohamed Bayoumi
Environment Specialist
UNDP Egypt

[Sukhrob Khoshmukhamedov](#), UNDP Tajikistan, wrote:

Dear Colleagues,

I would like to support the concentration of HDR 2006 on Water. However, the overview of the Water & Energy problems might also be included into the report. These problems are very much interconnected in Central Asia and most of the cross-country discussions on the water issues are closely linked with the discussions on Energy.

UNDP Tajikistan devoted its publication of 2003 NHDR specifically to the water issues. The NHDR covers different topics linked to the water issues and explains the problems that are common for many developing countries. (The NHDR may be downloaded from http://www.undp.tj/Publications/NHDR_2003.pdf.)

For the last few years, Tajikistan hosted two internal events devoted to the water issues: International Fresh Water Forum in 2003 and International Conference on Regional Cooperation in Transboundary River Basins in 2005. Both of these events brought together decision makers and experts from several countries both within the region and outside of it. The publication with results of the Water Forum may be accessed at <http://www.untj.org/library/?mode=details&id=192> and the publication of the Transboundary River Conference should also be posted to our website shortly.)

I hope that the information will be useful for you and would be happy to provide you with more information, if necessary.

Best regards,

Sukhrob Khoshmukhamedov

ARR/Programme
United Nations Development Programme in Tajikistan

Upala Devi Banerjee, UN Office of the High Commissioner for Human Rights/ Asia Pacific Regional Office, Bangkok wrote:

Dear All

In response to the message for inputs and contributions, may I take the opportunity to draw your attention to one of the country case studies on Laos which is on the rights-based approach and its use in accessing fresh water and sanitation. Some of the priority areas listed in Kevin's message have been explored through this case study. The case study was documented as a part of the lessons learning exercise on the rights-based approach to development under the UN-Inter-Agency Asia-Pacific Lessons Learned Project.

To access the case studies and more importantly the Laos one, please visit the following weblink at: http://www.un.or.th/ohchr/sr/Regional_Office/forums/llp_regional_consultation/LLP_Documentation_of_case_studies.pdf

Upala Devi Banerjee

Asia-Pacific Regional Project Coordinator - UN Inter-Agency Lessons Learned Project
UN Office of the High Commissioner for Human Rights
Asia Pacific Regional Office, Bangkok, Thailand

Paola Pagliani and Christina Hansson, UNDP Serbia and Montenegro, wrote:

Dear Kevin and colleagues,

Thanks for the opportunity of commenting the HDR 2006 concept.

An overall comment of the concept note of HDR 2006 is that the evident focus in this stage is on the QUANTITY of the available water and not so much of the QUALITY. In countries and regions where the climate and available water bodies (and the lack of conflicts) contributes with a sufficient quantity of water the scarcity is linked in a larger extent to the quality. When quality issues are to be addressed as water poverty (as in many temperate climates and more industrialized regions) the political and economic instrument to prevent this situation are in many cases different from the one addressing the issue of lack of a sufficient amount.

Highlight the issue of pollution within the concept of water scarcity and water poverty: Scarcity as mentioned also reflects the lack of water with good quality although the total availability is good. Not only the physical access to water but the access to good quality water i.e. non-polluted water should be

highlighted in the HDR to address the water scarcity issues related to the various regions not facing serious droughts and low precipitation in the same extent as arid or semi arid regions. Such example of water scarcity (pollution) could be illustrated by the China National Petroleum Corp accident in Harbin, China that polluted a northeastern river with benzene and prompted the government to cut off running water to 3.8 million people.

In post communist countries in Central and Eastern Europe and the Balkan region, the pollution of water contributes in a major extent to the overall water scarcity. This situation has its origin in the industrial policies of the previous communist regimes and it has been perpetuated by weak environmental institutions, lack of regulations and by-laws on effluent discharges and above all efficient enforcement of them. Not only “push” mechanisms as taxes on effluents, regulations on polluting limits, polluting penalties in case of an accident are lacking, also introduction of “pull” mechanisms are sparse i.e. provision of economic incentives as introduction of the Cleaner Production principles (UNEP/UNIDO) in the industrial sector or the (discussed within EU and related to the Water Framework Directive and in other parts of the world) trading with water polluting rights (compare with CO2 trading) etc. When integrated river basin management in many cases tend to focus on risk management emphasizing on drinking water and irrigation the link to pollution of water from point sources as effluent discharges could be made stronger and the economic and legal instruments to disseminate the Concept of Cleaner Production in a larger extent in recently developed and developing countries could be more highlighted, especially for the Balkan region. There are numerous reports and publications on this issue, one of them is <http://gurukul.ucc.american.edu/ted/danube.htm>

Water for human consumption and sanitation. All have the right to equal amounts of water. However, for sanitation is water needed at all? The HDR should advocate for saving of water resources and pollution from un treated waste water by promoting non-water based sanitation to combat poverty. These technological solutions are provides the same level of hygiene and dignity as water borne sanitation and also provides for the technological possibilities to re-use resources as urea and faeces on a local level for e.g. small-scale agriculture (aerobic composting). As to illustrate one of many, many good examples, I quote a paper from the 25th WEDC conference in Addis Abbeba 1999 on [Environmentally Friendly and Hygienic Sanitation by Farley & Kilbey](#):

“Waterborne sanitation systems are the traditional technologies used in urban developments. However, these are not sustainable in water-scarce situations. The annual volume of water (almost invariably potable water) needed to flush away the 550 litres of waste produced annually per person is 15000 litres. Water-scarce communities cannot afford such luxury. Even communities with sewerage systems frequently do not have a sewage treatment capacity, or one which only serves part of the city – the World Resources Institute claims that 95 per cent of sewage in the Third World is discharged untreated. Environmentally and economically, there is a clear case in favour of composting latrines, if they can reduce pollution, reduce health risks, and still enable the user to perform, his or her functions hygienically and with dignity.”

From a country and regional perspective, according to the Poverty Reduction Strategy for Serbia (Belgrade, 2003), *“Health status data indicate that in Serbia water related diseases are not a significant contributor to the burden of chronic or acute disease (WHO, 2000; UNICEF, 2001). Mortality among infants and children under five, a common indicator of water supply and sanitation conditions, has declined by one half during the 1990s and is associated with improved household sanitation and improved treatment for diarrhoea and acute respiratory disease. The under-five mortality rate for*

diarrhoea declined by 38.2% during the 1990-97 period (UNICEF 2001). However there are some indications that the situation is changing. Deterioration in the situation of drinking water may well reverse the positive trend in under-five mortality rate. Recent epidemiological studies on health and environment have found linkages between living conditions, drinking water quality and health. The situation is particularly acute for urban slums, populated by refugees, Roma and IDPs, as they lack the resources to purchase bottled water." Statistical evidence regarding the access to safe water and sanitation can be found in the vulnerability survey undertaken by UNDP Regional Office in Bratislava (<http://sowhat.sk/vulnerable/>), whereby disparities emerges significantly between the majority population and the Roma. I am reporting here data related to south-eastern Europe, but also data disaggregated at the country level are available on the website.

Share of population not having acces to:	Majority population in close proximity to Roma	Roma	IDP's / Refugees
improved sanitation	22	72	27
improved water source	6	22	7

Managing water as a transboundary resource. Again, the issue of quality or in this case arising conflicts from quality degradation and not quantity thus caused by transboundary pollution and from industrial accidents could be highlighted. Please see the *Environmental Security initiative web page*: <http://www.envsec.org/> that focuses on environmental security risks in south eastern Europe, and the CIS: Improved Land and Water Resource Management in the Upper Syr Darya Basin, Transboundary cooperation and sustainable management of the Dniester river, Monitoring and Assessment of Heavy Metal Pollution in River Prut, an important Transboundary Water Resource, Rapid Environmental Assessment of the Tisza River Basin, including environment & security, etc. Two workshops focusing on transboundary water management at the border of the European Union and the role of the EU Water Framework Directive will be held in autumn 2005. The first one targeting the North-Eastern border of the EU will be held in Debe (Poland) on 18 and 19 October 2005, at the invitation of the Government of Poland and the European Commission (for the information notice click [here](#)). The second one targeting South-Eastern Europe will be held in Belgrade (Serbia and Montenegro) at the beginning of 2006, at the invitation of the Government of Italy. More information can be found on the website <http://www.unece.org/env/water/welcome.html>

Nexus water-energy. References to the nexus between water and energy (already raised by other colleagues in the network), with a focus on its impact on poverty in Serbia, can be found in the UNDP publication "*Stuck in the Past Energy, environment and poverty in Serbia and Montenegro*", at page 73. (<http://www.undp.org.yu/tareas/reports/details.cfm?id=6&navPage=6>)

Water related natural disasters. Together with droughts, the report should also analyse the impact on human development of devastating floods, which are becoming increasingly common in both developed

and developing countries. There are well documented evidences that floods, as well as other natural disasters, cost less lives in rich than in poor countries, and that even within rich countries those who are most affected are the poorest and the most vulnerable. Most of the consequences of these natural events could be avoided with sound disaster management and proper spatial planning. I am attaching a [report on the human security effect of a flood in Vojvodina \(northern Serbia\) prepared by UNDP](#).

Best regards

Paola & Christina

Christina Hansson
Environmental Programme Officer
UNDP Serbia and Montenegro

Paola Pagliani
Policy Specialist
UNDP Serbia and Montenegro

[Degol Hailu](#), UNDP Caribbean SURF, wrote:

Dear colleagues,

Here is a contribution to the discussion focusing on - "**Examples of successful/unsuccessful use of water markets and the regulation needed to support them**"

Water Privatisations versus Public-Sector Provision

Markets in the water sector are introduced on the grounds that public provision is associated with wastage, failure to collect substantial outstanding bill payments, low subsidized tariffs, lack of investment in expanding network and decaying infrastructure. A number of studies supporting this view show that state monopolies failed to provide services to poor and rural households. It is often suggested that privatizations in the utility sector would benefit the poor and rural consumers and improve access to sanitation and clean water. Among others Chad, South Africa, Mali, Gabon, Burkina Faso and Mozambique awarded contracts to multi-national companies throughout the 1990s. By 2004 there were 20 ongoing water contracts in Sub-Saharan Africa

But the story is more complicated. We have seen various protests and public outrage following privatizations in the water sector. Contracts have been terminated in Gambia, Kenya Guinea, Zimbabwe, Mozambique and South Africa mainly because the tariff hikes, following liberalization, were not affordable to low-income consumers. According to an IDRC report, in South African townships, where unemployment is close to 70 per cent, a US\$10 connection fee and volumetric charges were followed by cholera outbreaks. In KwaZulu-Natal, the death toll was 250 with more than 100,000 cases of illness as a result of using water from rivers and stagnant ponds. In Zimbabwe, a UK company terminated its water provision contract claiming that the customers are too poor to pay tariff rates that would have enabled the firm to make a decent profit.

In Guinea, the privatization of water maintenance, billing and payment collection resulted in a tariff

increase from US\$0.02 per m³ in 1989 to US\$0.83 per m³ in 1996. Indeed, more customers were connected in one year reaching 23,000 from 12,000 in the previous year. The number of metered private customers went up from 5 to 93 per cent. Nearly all government institutions were also connected to piped water. *In the end, only 24 per cent of the new water connections were working.* In fact, tariffs reached higher than those charged in developed countries and the growth in investment was less than expected - wastage of water remained at 40 per cent. In Puerto Rico, another example, privatized water management was associated with failure in maintenance repair and frequent cut offs in water supply.

Initially, markets in the water sector look rosy. Governments provide assurances in the form of purchase guarantees and tax holidays, up to 20-30 years. Such contracts are motivated by the argument that there are low investor interests and some enticement is necessary. Utility tariffs and connection fees also rise simply because full cost recovery schemes are introduced. In many cases tariffs actually increase even before privatization as part of restructuring programs. In Latin America, on average, the cost of connection reached 20 per cent of personal disposable income.

Proponents of privatization in water sector argue that universal provisions of public services through subsidies do not discriminate among those who deserve and those who can afford to pay for the services. But privatization is not always a solution. Ability and willingness to pay are important issues to consider. Based on individual cases and sector-specific situations, universal access to basic services must be the principle to reduce poverty levels. A case-by-case study goes beyond the assumption of replicating one successful privatization in one sector to another or from one country to another. It is worth remembering that the developed countries have already reached high levels of access to basic services, when they liberalized their utility sector.

The challenge is financing the initial up-front investment cost, for instance, when building dams. The debate needs to focus more on constraints for public provision, possible improvements, and potential for alternative ownership under a poverty reduction framework. There are state-owned enterprises which performed well. Two examples are from Botswana and Namibia. Botswana's Water Utilities Corporation (WUC) saw a 9 per cent increase in the proportion of the population served by piped water between 1999 and 2003. The Namibian Water Corporation Ltd (NamWater) has undergone restructuring and provides services adequately. In the utility sector state-owned companies such as Electricité de France (EdF), Sweden's Vattenfall and Finland's Fortum-IVO competed successfully in the European market without privatization.

Do markets in the water sector increase access to sanitation and clean water? The evidence is not there to conclusively support liberalizing markets in low-income countries, at least in their current form.

A full paper with references is available for those interested.

Degol Hailu
Policy Advisor
UNDP Caribbean SURF

[Bharati Sadasivam](#), UNDP/BRSP, wrote:

Dear Kevin,

Congratulations on this great choice of subject for HDR 2006. It would be worthwhile to examine closely the extent to which public-private partnerships have helped the cause of wider access to water and sanitation. (According to one statistic, PPPs in this area have grown from almost none in the early nineties to more than 2000 today, but private companies serve only five per cent of the world's population.) A comparative analysis with community-managed water systems and / or public-community partnerships would yield useful lessons and experiences. While sustainability is often an issue in community-managed systems (**Bangladesh**), they have also led to equitable pricing and efficient provision (**Ghana**).

These and other findings are in a comparative study of nine countries in the provision of two basic services - water and electricity - (seven of them on water), commissioned by the Commonwealth Foundation: http://www.commonwealthfoundation.com/resource/downloads/index.cfm?mode=cat&cat_id=69

The synthesis with conclusions from these case studies is at: <http://www.commonwealthfoundation.com/uploads/documents/ACFqiRWSN.pdf>

PPPs are the instrument of choice in many development areas today; it would be very useful to have a section of the HDR devoted to examining the record of community-led models and provide a comparative analysis.

Community-led rainwater harvesting efforts in **India** by the **Social Work and Research Centre** have had some impressive results: http://www.barefootcollege.org/prog_rwh.htm and the **Jal Bhagirathi Foundation** in the desert region of **Marwar in Rajasthan** is supporting rural communities in managing crucial water resources and work towards community driven solutions for long-term drought proofing : http://www.jalbhagirathi.org/pro_profile.htm

On the CSO advocacy front, **Public Services International** has looked at evidence to support the case for public sector water undertakings:

<http://www.world-psi.org/TemplateEn.cfm?Section=Water&CONTENTID=10168&TEMPLATE=/ContentManagement/ContentDisplay.cfm> and campaigns worldwide to resist privatization of water services: <http://www.world-psi.org/TemplateEn.cfm?Section=Water&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=32&ContentID=2404>.

Friends of the Earth, **World Development Movement**, and **Public Citizen** are just a few of many international CSOs making the case for water as a public good, and presenting successful efforts in developing countries. Some of these campaigns and experiences are catalogued on the [PSI site](#).

Regards,

Bharati

Bharati Sadasivam
Policy Advisor
UNDP/Bureau for Resources and Strategic Partnerships
Civil Society Organizations Division

[Anuradha Rajivan](#), Asia Pacific Regional HDR Initiative (APRI) UNDP RCC, wrote:

Dear Colleagues,

Water is indeed an excellent choice as a theme for a global HDR and I want to add my more than full support for that. Here are some of my comments that I had shared at a request from RBAP which I now send to the network:

What I liked:

1. The topic is well thought out: it covers consumption (drinking and sanitation) and productive uses (irrigation, industrial...); public goods dimensions; trans-boundary issues, and considers access and overall availability, which is very good.
2. Climate change: it is a controversial issue, as no one really knows what is happening and emotions run high on both sides internationally. Moreover research tends to be influenced by commercial business interests.

A suggestion:

It might be good to start with the fact that water does not respect national/political boundaries and so is a natural topic to discuss at a multi-country level.

What I did not see:

1. There is no attention given to excess of water and uncontrolled water like flooding, which plague many countries where droughts and floods alternate and governments are helpless, leading to disasters, losses of life and property. These incidences can be repeatedly seen to trump development, affecting both developed (e.g., recent US experience, Katrina or the increasing desertification in California due to water shortage) and developing countries. It is a universal concern for human development, regardless of the level of development.
2. Water control over time (by seasons) and space is also a core issue, not just availability and access and could be considered as part of governance.
3. Big dams versus small dams and other water control options: Gravity and slopes determine the natural course of water. It would be interesting to look at the question to what extent can /should man-made

structures alter the natural course of water and under what circumstances?

4. Ground and surface water and the question of conjunctive use of both types.

5. Water as a source of conflicts is not just a cross-country issue; it is an all pervasive issue even within a country, villages and even the same urban settlement. In this context it might be interesting to look at what the common principles/pointers/examples and institutional options are to prompt water co-operation and avoid violent conflicts.

6. Good examples of local traditional knowledge / community water management systems: what insights can they provide for larger systems?

7. Water quality: It might be interesting to add something about water quality. Quality issues are both natural (arsenic or fluorides in water) as well as man-made, linked to development/growth, including industrial and other pollution as the recent experience in China showed.

I look forward to seeing more on this excellent choice of subject.

Best,

Anu

Anuradha Rajivan
Asia Pacific Regional HDR Initiative (APRI) UNDP RCC

Juerg Staudenmann, UNDP, Bratislava Regional Center, wrote:

Dear colleagues,

Paola and Christina have highlighted a couple of very important aspects, most of which are relevant not only in the Balkan context. I just would like to add some more information:

- For “Cleaner Technology” in the water-context, we don’t necessarily have to look outside UNDP for successful examples. We have just finalized a [terminal evaluation](#) on our regional [Danube-TEST project](#) (Transfer of Environmentally Sound Technology). I have attached the report [“Transfer of Environmentally Sound Technologies \(TEST\) to Reduce Transboundary Pollution in the Danube River Basin”](#) (very informative and highly recommendable). We are currently working on a “replication strategy” for the region and beyond.
- For those interested, more information on the transboundary projects mentioned by Paola/ Christina can be found on our [WaterWiki](#) (e.g. [Land and Water Resource Management in the Upper Syr Darya Basin](#); The [Rapid Environmental Assessment of the Tisza River Basin](#), and our new regional [UNDP project in the Tisza River Basin](#)).

Best Regards,

Juerg

Juerg Staudenmann, Water Governance Advisor
UNDP, Europe and the CIS
Bratislava Regional Centre

Thord Palmlund, UNDP/BDP wrote:

Dear Kevin,

For HURIST, Dr. Sebastian Silva-Leander wrote a paper on human rights and water. Find it enclosed ("[What can a Human Rights Based Approach Bring to Water Governance?](#)"). I trust it can be useful in the work on the 2006 HDR. Sebastian is presently serving as JPO in Rwanda and, I am sure, available if you are interested in his work.

Best regards,

Thord Palmlund
UNDP/BDP

Florian Wieneke, German Agro Action, wrote:

Dear Kevin,

I just finished my PhD thesis working in an **interdisciplinary research project on water and sanitation in the Mekong Delta, Viet Nam**. Maybe you are interested in getting a deeper impression of people's attitudes and acceptance behavior, accordingly.

The thesis is specifically about attitude and acceptance behavior concerning an integrated approach of water management and sanitation (ecosanitation). Apart from general information about national strategies (PRSP) and theoretical models, the information goes down to the grassroots, the households in the rural and suburban area. At the end of each result-chapter the thesis provides a summary and conclusion of acceptance-factors and recommendations. Further, I enclose here the [final part of the thesis](#) which sums up the main issues/findings/recommendations.

You find the thesis online (pdf for download) by the following link: http://hss.ulb.uni-bonn.de/diss_online/landw_fak/2005/wieneke_florian/wieneke-abstract-engl.htm or/and visit the project's website: <http://www.>

sansed.uni-bonn.de/ (see under publications).

Best regards,

Florian

Dr. Florian Wieneke
Coordinator Millennium Villages Programme
Deutsche Welthungerhilfe / German Agro Action
Bonn, Germany

[Ines Raimundo](#), Eduardo Mondlane University, wrote:

Dear colleagues,

In fact Anu has covered almost all the issues related to water. So I would like to congratulate her. I am from an African country, Mozambique, which has been badly affected by floods and drought. As well as deaths and diseases related to the poor quality of water. Water and disaster management are faces of the same coin. The question is:

To what extent has our governments seen and considered community water management as well as strategies to cope with scarcity of water and its excessive abundance (in the case of floods)?

I wish everybody a Happy New Year.

Ines Raimundo
Eduardo Mondlane University
Faculty of Arts and Social Sciences
Mozambique

[Aster Zaoude](#), UNDP/BDP, wrote:

Dear Kevin

I join Bharati in congratulating you for choosing this important theme for HDR 2006. It is an important aspect of our work on gender equality and women's empowerment and I hope the gender dimensions of access to water, issues of entitlement and management will feature prominently the role of women. I have included below for your consideration some interesting work done around the world on this issue and hope to contribute more to the discussions on the outline of the report.

- [Women and Water Privatization, Association for Women's Rights in Development \(AWID\)](#)
- [Water at the core of women's traditional tasks, Facts and Figures: Women and Water, UNESCO](#)
- [Water and Women – The Flow, Boloji.com](#)

With best regards

Aster Zaoude
Senior gender adviser
UNDP

[Carlos A. Linares](#), UNDP/BDP wrote:

Dear Kevin and Colleagues,

I am pleased to join very positive contributions made by colleagues, with a **Country-specific example** that captures some of the central problems set out in the HDR 2006 concept note, mainly focusing on competition between different users and reflections on **what the widely used term 'water crisis' means** in a specific region and country.

Protecting the Golden Fish: Small Town Case Study, El Salvador

Nahuilingo is a small town of about 10,000 people, endowed with an abundant underground spring named "The Golden Fish" after a native myth about a fish in its waters. Water supply in Nahuilingo is a municipal responsibility. This small town has the luxury of high quality, high pressure water from every pipe 24 hours a day, 7 days a week. Other towns this size in El Salvador often get water only 2 to 4 hours a day, every other day.

In 1993, the National Water and Sewerage Administration (ANDA) began digging a trench and laying a "14" pipe from the nearby city of Sonsonate (population 100,000) to extract water from the Golden Fish. Nobody in Nahuilingo knew until they saw the bulldozers coming, and they convened an emergency town meeting by tolling the church bells.

The town quickly organized a Committee for the Defense of the Golden Fish and traveled to the capital to seek help from the authorities. But despite their pleas, there was no positive response from private organizations, legislators, the United Nations, or government agencies. Indeed, the Legislative Assembly's Commission for Public Works confirmed ANDA's right to take water from the Golden Fish.

The town folk of Nahuilingo decided to take matters into their own hands. Miguel Angel Mejia and many of his neighbors, men, women and children, stood in front of the machinery and stopped the Water Agency from completing the pipeline.

As the government workers left, town folk worked day and night to pull out the pipes. Miguel Angel Mejia was a role model, at the head of the job, and the whole community got involved. Passing tractor drivers unhooked their trailers loaded with sugar cane and helped

pull the pipes from the trenches.

The police and the army surrounded the town, but did not interfere. The situation was tense, but the town folk went about their business and handed out refreshments and corn tortillas to the soldiers who simply stood and watched. Over several weeks, members of the community, strangers from the street and truck drivers worked side by side to pull out two kilometers of piping. They placed the pipes in a big pile in front of the church in the city square.

Four months later, in March of 1994, Miguel Angel Mejia won the municipal elections. Mayor Mejia's campaign slogan was: "This water belongs to us, to our children and to their children for generations to come."

The new mayor traveled to the capital city to press the Legislative Assembly to recognize the town's legal right to the Golden Fish as its own water source. When the votes were counted, the Golden Fish belonged to the town of Nahuilingo, and not one drop of blood had been shed. On the day the Mayor returned home with the good news the bells tolled again to call people to the largest impromptu party Nahuilingo had ever seen.

Over the next few days, the government picked up their pipes, and the Mayor signed off the final inventory.

Still, in El Salvador, there is no mechanism for allocating water rights. Communities, municipalities, farmers, land developers, and national agencies all compete for the use and ownership of the country's water, to the point where this competition has led to social conflict, not only in Nahuilingo, but in other small towns (Ataco and Pnachimalco), where blood has been shed.

Carlos A. Linares

Sr. Water Policy Adviser
Energy and Environment Group
Bureau for Development Policy
UNDP

[Nisreen Alami](#), Gender Responsive Budgets Program, UNIFEM, wrote:

Dear All,

I want to reiterate Aster's point on the centrality of access to water to gender equality and women's rights.

Very briefly, I would like to share with you some resources and information regarding UNIFEM's involvement in gender and water work. Last year, UNIFEM initiated a small project to identify the gender

implications of access to water, specifically examining the question of the impact of privatization of water on women access to it. In developing this project, we drafted a concept note, [Promoting and Protecting Women's Right to Water in the context of Globalization and Feminized Poverty](#), which I am attaching herewith for your information. The paper provides a rights-based analysis of economic policies relating to water as well as a usage perspective in light of women's care work. It benefited from an extensive review of relevant literature, human rights provisions esp. the general recommendation on the right to water, as well as the discussions in relation to the World Water Forum held in Kyoto in 2004. We had also organized a panel at the CSW of 2004 on the topic which included a number of experts from Bolivia and human rights organizations.

We are also in the process of finalizing two case studies in Ghana and Bolivia which we will be happy to share with you.

I would like to share with you some interesting information that we came across

- On average, women and children travel 10-15 kilometers, spending as much as 8 hours per day collecting water
- Women carry up to 20 kilos or 15 liters of water per trip
- In South Africa alone, women collectively walk the equivalent distance of 16 times to the moon and back per day gathering water
- 24 buckets of water is needed per day to care for a person living with AIDS – 29.4 million people are living with HIV/AIDS in sub-Saharan Africa alone, women are their primary care givers.
- The estimated national cost of women fetching water in India is 150 million women working days per year
- 80% of all illnesses are transmitted through contaminated water and 80% of all deaths in developing countries are due to water-related diseases

I hope you find this information useful and I would be happy to provide any additional input for a strong gender perspective in the 2006 HDR.

All the best

Nisreen Alami
Gender Responsive Budgets Program
UNIFEM

[Girma Hailu](#), UNDP Ethiopia, wrote:

Dear Colleagues,

I want to take this opportunity to thank the UNDP HDR team led by Kevin Watkins because the 2006 HDR theme touches on one of the most fundamental issues of human civilization and continued prosperity - Water and Human Development.

Water is indeed the pillar of the MDGs; it is the basis for the achievement of the hunger, education, gender, and health goals in addition to MDGoal 7 per se.

In the Ethiopian Poverty Reduction Programme called Sustainable Development and Poverty Reduction Programme, Water features as one of the five pillars to attain the MDGs. This was achieved through a proactive participatory dialogue involving all the stakeholders in the water sector including government, civil society, community based organizations, faith based organization and development partners. UNDP played a pivotal role in facilitating the incorporation of water in the above mentioned programme through its leadership of the Development Assistance Group (DAG) Water Technical Working Group.

Referring to the subject matter, most of the substantive issues asked by the moderator have been touched at great length including sanitation, public/private, quality, access, tariff, market, pollution, scarcity, crisis etc. I just want to add the following dimension to this rich discussion.

Considering the whole global dialogue on water and human development in the context of the Dublin Principles, MDGs and WSSD 2002 Global directions, one has to be mindful that in addition to the ecological, economic, social and political dimensions, which most colleagues in the network have alluded to, there should also be a more concerted institutional response that will lead the global effort in water governance since that resource covers significant portion of the globe and is detrimental for future generation, human security and prosperity in general.

The basic tenet of sustainable water use rests on equity, efficiency, and ecological integrity forming the basis for the establishment of a cooperative international system, which will form the basis for national and inter-state security (Yacob Arsano, 2005.)

Governments and regional institutions have all strived for a possible cooperative arrangement that could facilitate the use of water bodies around the globe that are either inter- or intra- state flowing natural resources. In addition to the competing demands, the challenge is, most often than not, determining the planning unit of a particular water body; i.e., the catchments and or the basin from which the water is recharged and flowing. So the question remains how to enrich the recharge when the basin and or catchment as it were falls under two or more political sovereign entities. This has been seen in most of the continents where some have successfully managed the process by establishing sub regional institutions thereby minimizing trans-boundary water scarcity and possible conflict.

Due to the increased global environmental crisis resulting in depletion of water bases around the world, the sub regional institutions/units etc have to further come together and discuss how to enrich the water base this time on a much more holistic manner considering issues such as inter basin and other methods of water transfer. In the long term and given the continued global environmental degradation of natural resources more so in fresh water resources, the community of nations could consider not only the ecological and economics of water crisis but also think of managing the process through an institutionalized multilateral cooperation dedicated to global/regional/national governance of water. The 2006 HDR may want to touch on the need for a holistic institutional approach to address not only the qualitative and quantitative aspects but also long term institutional response to the global water crisis building on the lessons learnt from Danube, Rhine, Senegal, and others.

At the sub regional level in Africa, the 1999 Nile Basin Initiative is also actively engaging the 10 riparian nations including Burundi, DR Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda. The Nile, as you all know, is one of the longest rivers (67,000 km) and there are 300 million people living in the basin, which are mostly affected by food insecurity and economic backwardness.

In line with all these positive cooperative developments, UNDP CO on the other hand has/is actively supporting the Ethiopian Government in its endeavor to implement its first Water Resources Management policy/strategy/legislation and water sector development programme that in a much more holistic fashion addresses the issue of integrated water resources management, rural/urban water supply and sanitation, regional/federal inter play, licensing aspects and also covers trans-boundary water resource management. The policy/strategy/legislation have not yet been tested in terms of effectiveness in addressing the competitive sectoral water demands and or community water rights related conflicts that occur from time to time especially between/among the pastoral and agricultural communities.

With Best Holiday Greetings

GIRMA HAILU
Assistant Resident Representative (P)
Energy, Environment and Water programmes
UNDP Ethiopia
P.O.Box 5580
Pvt. P.O.Box 6833 Addis Ababa, Ethiopia

[Shahin Yaqub](#), UNDP/HDRO, wrote:

Dear Colleagues,

This discussion is generating lots of interesting viewpoints and knowledge for the HDR team. As a member of the writing team, I would like to tap your experiences on a more specific issue. **I would like to ask colleagues on the network to help identify experiences and impact evaluations (if any) of small enterprise development and microfinance, as applied to water or sanitation.** This covers service provision in three related but distinct sectors – safe water for consumption, water for household-level production and household sanitation. I would be interested especially in service provision in rural sanitation, where the knowledge-base is less documented and the population unserved is largest.

- To kick things off, I imagine examples from the network might help illustrate:
- the main factors blocking or facilitating small enterprise development in water or sanitation
- importance of water as a productive input in small enterprises undertaken by the poor (e.g. poultry farming financed by microcredit)
- the employment impact of small enterprises in water or sanitation
- how microfinance can stimulate a supply response from small enterprises in water or sanitation
- whether microfinance stimulates household demand, especially in the case of sanitation where low demand is a widely-cited concern
- how different financing mechanisms can be combined to develop the supply chain by mixing

public subsidy, microfinance, user-fees and in-kind inputs

Thanks for your help.

Shahin

Policy Specialist
Human Development Report Office (Room 1266)
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[Vijaya Singh](#), UNDP Nepal, wrote:

Dear Colleagues,

I am happy to contribute to the process of preparing the global HDR 2006 which is going to focus on the theme of “water”. The concept note is a good starting point to initiate a discussion on which area the report needs to focus on and in what depth. I congratulate the expert team involved in preparing the report. I am taking the liberty to share my thoughts from my observations in Nepal where the rural population is still far from receiving safe water and sanitation facilities and a lot of issues ranging from policy/institutions to practice remain to be resolved. I expect the report will give emphasis on water and sanitation as a basic need for human development and look into how they are related to poverty alleviation; where are the gaps; and what needs to be done globally and nationally to achieve the MDG of universal access to water and sanitation by 2015. Water has many dimensions in terms of scale (household, community, village or municipal; corporate; sub-national national) and purpose (drinking and sanitation, irrigation, power generation, industry, etc) giving out different options and systems of management where a range of stakeholders including the community to local government; the state agencies, as well as the private sector and civil societies have a role to play. In reality this level of complexity makes water management much more difficult to address. As rightly reported in the concept note, the issue is not only the availability problem but also the issue of distribution and the value system which is related to governance. Water management, therefore, instead of contributing to maintain peace and security and generate income and opportunities often creates inequalities leading to chaos and conflicts.

I am trying to focus my contribution on the following three main issues that should be looked at in depth:

- a) Clarity on fundamental principles of water use related to access, rights, ownership, tenure and benefits;
- b) Clarity on how water management strategies can be made pro-poor to contribute to achieve MDG 1, halving poverty by 2015 and other MDGs

c) Focus on reducing barriers in access of water and sanitation facilities in the rural areas

a) Fundamental principles of water use:

The report may explain the principles determining ownership and access issues related to water resources and try to generate agreeable answers to some of the interrelated questions which are discussed below:

i) who owns the water resources in whatever form (underground or surface or seas and oceans or snow water); and if water is considered as a free gift of nature to humankind then should the rights to use the water be only limited to any particular state, class, or society? One may argue that since the natural water systems are governed by territorial systems of governance between the states (or within the state); rights of use should be defined in terms of territorial boundaries of the states or sub-states. Nevertheless, we can not ignore the fact that crediting political territories to natural systems may lead to conflicts (we can see several examples in the world) as the natural drainage systems normally share the common trajectories while passing from one end to another; and produce multiple utility potentials for the humankind at different points; that make the use-claims and priorities difficult to handle. At the regional level, when a common river system divides the two nations (for example India and Nepal) or is shared commonly creating downstream and upstream effects, the issue of claims and priorities often create political misunderstandings between the nations.

ii) who should determine priorities for different uses of water (either for irrigation or domestic or industrial purpose) among different levels of users as priority determination, if not handled prudently, may evoke conflicts within and between the parties (the communities and the state or between the states)? Next question related to this is who should decide on the use of water, for example, whether to construct a dam to support the power supply to the nations or a tunnel to supply water for the distant urban users; or simply to use the water locally for the benefits of the local population who are devoid of the basic water and sanitation facilities. It has been proven time and again that regional or national level undertakings such as construction of high dams to generate power or tunnelling water from distant sources to supply the urban population do not create much incentive for the local people to offset the costs of displacement or pay for mitigating risks posed to them. At the regional scale the same rules applies where the weak country sacrifices and the strong country gets the benefits.

b) Clarity on water management strategies:

The report may also suggest clear policy directives with concrete plans of actions to ensure sustainable and just use of water resources to be ensured by the national governments for achieving the MDGs. Focus may be given on country level analysis regarding use of water for different purposes and the ways to deal with issues related to access; tenure; distribution; quality; availability; trans-boundary; and pricing in favour of those who primarily depend upon water resources for their subsistence livelihood (for example, the communities deriving livelihood directly from the wetland resources vs. those who make commercial use of water); and enhancing national and regional policy frameworks followed by effective empowerment programmes to enable local communities to manage water resources on a sustainable basis.

To alleviate poverty in line with achieving MDG 1, it is important that appropriate water management

strategies favouring the marginalized and indigenous communities are formulated and practiced. Management of water resources for any purpose must guarantee “no harm” under all conditions to the targeted beneficiaries and produce additional opportunities for them. It is generally taken for granted that managing water for irrigation or industry produces incentives for the local people, which may not always be the case. More important than the financial feasibility of such an undertaking is the wise apportionment of social costs and benefits - who pays the costs and who gets the benefits - which are often compromised through unequal negotiations where local claims are ignored.

Here are two examples that elaborate this issue further:

Example 1: Use of water for Irrigation: Making use of surface water for irrigation is generally considered as important for developing the local as well as the national economy, as it directly influences the production systems. But to what extent it can help reduce poverty is debatable. In many countries, only the large farmers benefit from irrigation facilities and the poor farmers who are either landless or possess only small areas of land (less than one ha) depend on rain water for irrigation. The profits from the increased agricultural production using the modern irrigation facilities often goes to the government coffer through taxes or in the pockets of the large farmers, and virtually, nothing filters down to the poor farmers’ level except some opportunities for seasonal employment. How can we say that it is pro-poor use of water then?

Example 2: Use of water for Industry: There is a big disparity in the end use of water between those who use water for industrial purpose in order to make profits and those who use water to support their daily lives. The industries in many developing countries are not switched to cleaner production systems, therefore, they pollute natural water systems, which exacerbate the life risks of the economically marginalized populations who neither have access to piped water, nor can they afford for other safe substitutes. In developing counties, where corporate social responsibilities are lacking and the governments are perceived too weak to control those, profits are made only by the few industrialists who use water as a free commodity at high cost to the poor.

The report should highlight recommendations aiming to resolve the water conflict issues through: a) practice of decentralized water governance based on the “principle of subsidiary” through an integrated system of governance from the centre to local level; b) guarantee through legal provisions of traditional use rights in terms of access, ownership, tenure and benefits; c) institutionalise price structures for different water uses; and d) provide sufficient space for equal negotiations between the parties to take decisions.

The report may also urge for adopting “traditional use rights approach” based on a “prior appropriation principle”, which has been used in Nepal and many other countries to resolve water use conflicts. Wherever rights the state has over water resources, it must follow the principle of “distributive justice” i.e. providing maximum benefits to a maximum number of people. This requires a balance among varying interests between traditional users and other beneficiaries along the distribution line. There will be a need for explicit legal provisions that recognize traditional use rights.

c) Focus on reducing barriers in improving service delivery:

Access to safe water and sanitation services are fundamental to human development as they are key to

reducing poverty and play an important role in achieving the MDGs. However, at the present rate of success, it is difficult to assure that the MDG targets for water and sanitation will be met unless the barriers, listed below, are removed:

- Inadequate prioritization in national PRSPs leading to insufficient financing by governments and donors.
- Weak water governance due to institutional fragmentation, slackness in providing services by the state or the municipalities; lack of transparency and public consultation on service requirements, quality and tariffs;
- Weak donor co-ordination in harmonizing aid for improving water and sanitation conditions;
- Pre-dominance of centralized, high-cost licensing for urban water supply over low-cost community-managed small water systems that are unable to access funds;
- Lack of focus in planning and building standards for the provision of household and public sanitation facilities;

The targets of universal access to water and sanitation facilities can be achieved by making anticipated changes in the structure of governance and financing as suggested below:

Governance:

- The Government needs to specify and enforce provisions of water and sanitation services to the rural and urban poor by engaging the private sector in partnership with the public sector, for example, the municipalities;
- A monitoring framework needs to be designed and used to measure progress in the achievement of national targets, and to report on this progress to the public;
- The Government needs to specify and enforce provisions of water and sanitation services to the rural and urban poor by engaging the private sector in partnership with the public sector, for example, the municipalities;
- A monitoring framework needs to be designed and used to measure progress in the achievement of national targets, and to report on this progress to the public;
- Opportunity for all levels of stakeholders including the consumers, the un-served, the providers, regulators and others to be involved in setting the quality standards for services, including the pricing structure (stakeholder reviews, citizens' reporting & citizens' juries, etc.) should be provided;

Institutions:

- Public utility needs to be made operationally and financially autonomous to ensure that political expediencies do not play havoc with the operating targets and rules.
- Municipalities' capacity needs to be increased;
- Community managed services in both rural and urban areas remains an important approach in the development of services and achieving the pre-set target for which supportive regulatory and financial environment needs to be made.
- Mechanism for citizens to play an active role in setting priorities and goals of water and sanitation service provisions, as well as in monitoring has to be defined;
- Small and medium-scale private service providers need to work in co-ordination with the central

utilities operating in the same areas.

Financing:

- Public financing needs to increase and should be linked to national investment plans which should be reflected in public accounts.

Mr. Vijaya P. Singh
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Prema Gera, UNDP India, wrote:

Dear Colleagues,

I have been keenly following this stimulating discussion and at this point would like to raise the following issues:

(i) The discussion so far seems to be largely driven by water needs for consumption (human beings and livestock) and productive uses (as input for generating income/livelihoods). However, any discussion in the water sector will need to be guided by the broader ecological and environmental concerns that ensure a sustainable supply of freshwater both for the present and the future. For instance, the water needs of natural ecosystems which actually sustain precious water flows become important. In the concept note for HDR 2006, this could become a cross cutting issue across the four core thematic areas and will require some advance and innovative thinking and experience sharing on (a) how do we allocate water for meeting diverse needs including the water needs of the natural ecosystem. (b) institutional mechanisms, both within the country and between countries, to ensure water flows.

(ii) The concept note mentions the issue of pricing structures reflecting scarcity value where water is used for production. In the Indian context, this is a difficult proposition to implement as water is projected as an unlimited resource to farmers, industry etc, in spite of the fact that water scarcity at a particular site is affecting the economics of a production system. Assigning scarcity value will require consensus building among all stakeholders in small units such as watershed/river basins to macro level (such as state) where decisions on water allocation for production are taken. Examples or best practices in consensus building (including from India) can be included in HDR 2006.

Best,

Prema

Prema Gera
Programme Advisor
Sustainable Environment & Energy Division
UNDP India

[Luc Franzoni](#), UNDP/BRSP, Geneva, wrote:

Dear Kevin and colleagues from the networks,

I join Aster's congratulations! As I am ill I will be very short. I would like to encourage that the cultural dimension of water be fully taken into consideration in the report as this dimension between human beings, human societies and water is of a fundamental nature. Water is linked to system of thinking, interacting between groups, conception of life, of development. This dimension will have to be fully reflected in the report by giving the floor to as many representatives of the civil societies as possible. We will have to hear them, to hear from the communities about these multiple and diversified links more than to give receipts of development.

Thanks for your attention!

Luc

Luc Franzoni
UNDP/BRSP
Geneva

[Taib Diallo](#), UNDP Senegal, wrote:

[*Le texte en français suit le texte en anglais*](#)

TRANSLATED MESSAGE

Dear colleagues,

With the following, I would like to make a small contribution to the discussion on the topic of the next global human development Report (HDR) on water. Given the fact that access to water is crucial to meet a number of MGDs, I think that the chosen topic is of great importance.

In developing countries, where the importance of equal access to water is evident, it seems to be both pertinent and strategic, as the work carried out in the framework of the Need Assessments in certain pilot

countries has shown, to take stock of urban and rural hydraulic facilities. This should take place especially with regard to access to drinking water within the framework of the MDGs and the 2015 horizon, as well as with regard to the volume of investments necessary to meet the goals in both rural and urban zones. It is about equipped boring stations, modern wells of water - treatment, - collection and - transfer centers, and about water production facilities, etc.

Moreover, the report should deliver meaningful answers to questions, such as:

1. Is the water sector subject to a disengagement from the State and is it being privatized?
2. High price of water with regards to the poorest parts of society.
3. The role of the women in the management of water points;
4. Fossil river valleys and retention basins;
5. The fight against the Guinea-Worm Disease or other diseases in certain regions;
6. Water pollution by the industrial sector and other human activities;
7. The quality of the distributed water and public health;
8. The necessary synergy between projects that have a strong hydraulic component;
9. Diarrheic diseases resulting from the consumption of non-drinkable water;
10. The incomprehensive billing mechanisms of the water distribution companies (semi-public or private), which place most of the burden on the poor and not the rich.
11. Financial constraints in the realization of hydraulic projects;
12. Measurement indicators and their relevance for achieving universal access to drinking water;
13. How to reconcile the poverty line of one dollar a day with the coverage of the minimum need of 35 liters per day?
14. Water: peace or conflict factor in and between nations;

Best wishes

Taïb

Taïb Diallo
UNDP Senegal

ORIGINAL MESSAGE:

Chers Collègues,

Nous voudrions par les lignes qui suivent, faire une petite contribution sur la problématique du projet de thème du futur rapport mondial sur le DH qui porte sur celui de l'eau potable.

Nous estimons qu'il s'agit là d'un thème d'importance, tant il est évident que l'accès à l'eau potable représente une pierre d'angle incontestablement cruciale pour la réalisation de nombre d'OMDs.

Dans les pays en développement où la prégnance de l'équité de l'accès à l'eau potable est plus qu'une évidence, il semble à la fois pertinent et stratégique, comme l'ont d'ailleurs montré les travaux dans le cadre du Need Assessment entamés dans certains pays (pilotes) avec l'appui du MP, de faire l'état des lieux en matière d'hydraulique urbaine comme rurale avec notamment à la clef, la situation de l'accès à l'eau potable par rapport aux OMD et les perspectives à l'horizon 2015 ainsi que le volume des investissements à réaliser en zone rurale comme en zone urbaine pour atteindre les objectifs. Il s'agit de la réalisation de forages équipés, de puits modernes de stations de traitement et de potabilisation de l'Eau et de centres de captage et de transfert d'eau, de centres de production etc.

Aux termes des résultats qui seront issus de l'investigation des experts qui auront la charge de la rédaction de ce rapport, l'on sera certainement en droit d'attendre des réponses pertinentes à des questions comme:

1. Le secteur de l'eau fait-il l'objet d'un désengagement des Etats et assiste –t-on à une privatisation du secteur ?
2. Le coût élevé de l'eau par rapport aux couches les plus pauvres ?
3. Le rôle des femmes dans la gestion des points d'eau ;
4. Les vallées fossiles et les bassins de rétention ;
5. La lutte contre le ver de Guinée dans certaines régions, voire d'autres maladies;
6. La pollution des ressources en eau par les industries et par les activités humaines ;
7. La qualité de l'eau fournie et la santé publique ;
8. La nécessaire synergie entre les projets ayant une forte composante hydraulique ;
9. Les maladies diarrhéiques résultantes de l'utilisation de l'eau non potable ;

10. L'incompréhension de la facturation réalisée par les sociétés (para publiques ou privées) de gestion de la distribution de l'eau dans les centres ruraux et urbains qui est telle que les pauvres paient généralement plus chers que les non pauvres?
11. Les contraintes financières dans la réalisation des projets hydrauliques ;
12. Les indicateurs de mesure et leur pertinence dans l'objectif d'accès universel à l'eau potable ;
13. Comment concilier le concept de pauvreté c'est à dire moins d'un dollar US par jour avec la couverture des besoins minimum de 35l/h/jour.
14. L'eau, facteur de paix ou de conflit au sein et entre nations;

Meilleures Salutations

Taïb

Taïb Diallo
UNDP Senegal

Marthe Yansomwe, UNDP DRC, wrote:

Le texte en français suit le texte en anglais

TRANSLATED MESSAGE

Dear colleagues,

I am particularly interested in the question of **drinking water**. I live in a country where water is flowing abundantly, but where the population has not entirely realized how important it is not to waste it. Abundance can sometimes lead to this kind of effect. However, one also has to realize that both the redistribution of water and access to water is inequitable.

Drinking water has become such an important question that it is more than recommendable to undertake a study on it. Resolving the problem of drinking water will also contribute to the achievement of the MDGs and to the fight against poverty. Indeed, by resolving the problem of access to drinking water, we can achieve the following results:

- Primary related health is improved (reduction of diarrhea, typhus, and other water-related diseases);
- Savings in the health-care sector, contributing to poverty reduction, are realized;

- Time and energy savings are realized, especially for women who have to collect water from distant places;
- Fair distribution of the population in uninhabited spaces is realized;
- Rural exodus is reduced;
- Population development and the creation of light, non-polluting industries are ensured.

Furthermore, I suggest that all forms of precipitation (rain, snow) are exploited in order to recover water that could be used, inter alia, by the industrial sector.

It is important that the “planet” is getting engaged in the constitution of international law on efficient water management, which will become a scarce commodity in the years to come. Water has not any substitute, and even somebody who drinks wine throughout the day drinks at least a drop of water coming from the grapevine that needed water in order to produce the wine.

Best wishes

Marthe

Marthe Yansomwe
UNDP/ Democratic Republic of Congo

ORIGINAL MESSAGE:

Chers collègues,

Je suis particulièrement intéressée par le problème de **l'eau potable**. Je suis dans un pays où l'eau coule à flots mais où les populations n'ont pas encore réellement saisi l'importance du non gaspillage de l'eau. L'abondance peut parfois conduire à ce genre d'effet. Il faut cependant relever une redistribution de l'eau et un accès à l'eau inéquitables.

Le problème de l'eau potable devient au fil des années une question si importante qu'y consacrer une étude n'est que recommandable. Résoudre le problème de l'eau potable, c'est aussi résoudre une bonne partie des objectifs des OMDs et par surcroît lutter contre la pauvreté. En effet, il n'est plus à démontrer qu'avec l'accès à l'eau potable, nous pouvons obtenir les effets suivants:

- Santé primaire liée améliorée (moins de diarrhées, typhoïde, et autres maladies hydriques)
- Économie sur les soins de santé réalisée engendrant la réduction de la pauvreté
- Économie de temps et d'énergie réalisée surtout pour les femmes qui font des distances à la recherche de l'eau
- Répartition équitable de la population dans les espaces inhabités réalisée
- Exode rural réduit
- Développement des populations et créations des industries légères non polluantes assuré

Par ailleurs, je suggère que toutes les formes de précipitations (pluies, neige) soient exploitées dans le sens de récupérer de l'eau qui pourrait servir dans des industries ou autre.

Il est important que la "planète" se penche sur la constitution de lois internationales sur la gestion efficace de l'eau qui deviendra une denrée rare dans les années à venir. L'eau n'a pas de substitut car même celui qui boit du vin à longueur de journée a au moins bu une goutte d'eau provenant de la vigne qui a dû boire de l'eau de pluie pour produire le vin.

Meilleures salutations.

Marthe

Marthe Yansomwe
PNUD/ République démocratique du Congo

Aruna Bolaky, UNDP Algeria, wrote:

Dear colleagues,

I think that it is an excellent idea to focus attention in 2006 on a specific MDG target (target 10) linked to MDG 7 (ensure environmental sustainability) though access to water carries implications as well for MDG 1 on poverty and MDG 6, relating to health and combat against diseases.

There are, as the note highlights, various dimensions to the issue:

First water has a human poverty and quality of life dimension and thus a human rights dimension: water can be thought of as a basic necessity and associated with this, there is a notion of equity in use and distribution: water is a need that everyone is entitled to, its access has to be universal to all, no one should be excluded from its supply and coverage. However, since it has a private consumption value and since it is a scarce resource, water has to be paid for its use but then it cannot be priced so as to exclude anyone from its use. The challenge is then what is the "right price" for water, such that both its dimension as a basic necessity and an essential human right is covered while its value as a scarce private good is accounted for? Should we impose a redistribution tax on citizens and companies, taxing the rich to redistribute to the poor so that the latter can be given subsidies to pay for their own water? Should we review our legal and judiciary instruments to allow those who are excluded from it to exert their "human" rights towards water, especially when they are being deprived from water through asymmetric power-relations? Should international legal texts reflect these rights? If as the note suggests access to water is not limited mainly through physical availability, but there is a power-relations story behind it (and thus perhaps a story of "abuse of human rights", then one has to look into the institutional (mainly legal) solutions to address the problem of access to water.

Second, water is also an economic and finite (limited in supply) resource, an essential input in any kind of production. Since its use is excludable and rivalrous, one cannot think of water as a public good, its

industrial uses by firms and companies diminish its availability for private consumption uses. If we accept water as a human right, then one may even venture into thinking that the private sector should obligatorily be taxed for the use of water with the tax used as a transfer to compensate the poor for reduced availability of water or a tax to finance investments in building and maintaining water physical infrastructural networks.

Third water is a global environmental resource, its utilization and management carries implications on global environmental stability (construction of dams having environmental impact, water is also a necessity for survival of animal and plant life, let's not forget our green and animal friends as well in all this, its over-exploitation can entail natural disasters with spillover effects across borders) and as such it is a global resource that needs to be internationally regulated and managed at some level.

It will be interesting perhaps for the report to start from the premise of access to water for basic consumption as a human right and examine the implications of this premise on pricing of water and the industrial structure that should govern its harvest and distribution. It will be also interesting to analyze the tensions that exist between viewing water as a human right, with universal access and viewing water as a scarce private/economic good where access cannot be free. The question is then how to ensure universal access to use/consumption of water while at the same time exacting payment for people to use it? What redistributive mechanisms to put in place at both a country level and a global level? What are the obligations of the private/economic sphere to the non-private one? What are the obligations of water-abundant countries to water-poor countries? And what institutional and legal safeguards do we need to put in place nationally and globally in order to reconcile these various facets of water as a basic human right, an economic/productive input and a global environmental resource? It will be very interesting for the Report to clearly highlight how starting from the premise of water as key to human rights, combined with the premise that water access is a political economic problem based on asymmetric power relations, should change conventional wisdom regarding addressing water-related problems.

A last point: since there is a UN World Water Development Report, it will be good to understand how this UNDP HDR will build upon this last report or even complement it.

Kind Regards

Ms Bineswaree Aruna Bolaky
Assistante du Représentant Résident
Chargée de la Programmation et de la Coordination PNUD Algérie

[Helena Naber](#), UNDP Jordan, wrote:

Dear colleagues,

I think water is an excellent choice as a topic for the HDR, as water plays a vital role in every aspect of human life. I would like to highlight the following issues:

1. I think the *role of technological advances* may be highlighted both in enhancing water supply and managing demand. For example, due to advances in technology water desalination costs decreased making this technology more accessible. Also, the issue of water demand management is an important aspect in reducing the water budget deficit in water scarce areas.

2. The *issue of virtual water* may be discussed, which is especially important for arid countries. This is especially relevant where the costs of water resources development and delivery are becoming too high for production sector, should tariff reflect the real cost of water. This may be relevant also to the cost of water transfers (both nationally and internationally), where water is / is planned to be transferred over long distances or through international borders.

3. Even though the needs of environment / negative impacts are mentioned under water for production section, in terms of *factoring in of ecological costing into the price of water*, I think it deserves to be given more attention in the HDR. Water for ecosystem needs seems to be missing from the HDR. An integrated approach should be applied in tackling the water issue for human development, and water should be treated as part of a water cycle, which includes ecosystem demand for water. Not looking into interaction of human water needs and ecosystem has the risk of telling only "half the story".

4. *Sanitation water* is discussed from a health perspective, but it also could be discussed from a resource viewpoint, as reclaimed water is a useful water resource.

5. The issue of *development of water resources through alternative means* such as water harvesting etc. could be emphasized additionally as an alternative / additional supply.

Best regards,

Helena

Helena Naber
Environment Analyst
UNDP Jordan

[Laurent Rudasingwa](#), UNDP/BCPR, wrote:

Dear all,

In joining Aruna's comments, our field experiences have showed that water is always taken as a primary need for grassroots' communities. Participatory needs assessment exercises in Africa has shown a clear prioritization of water needs through mid term expenditure frameworks (decentralized) and district development plans. Yes indeed, water is a human rights need and we cannot pretend to do development without considering the "human rights based" dimension of development.

Laurent

Laurent RUDASINGWA
Regional Programme Specialist (West Africa)
Bureau for Crisis Prevention and Recovery
UNDP

[Sergio Feld](#), UNDP/Regional Center Bangkok, wrote:

Dear Kevin,

This is to echo Prema's observations as well as to reiterate earlier comments on the draft HDR concept note, which you shared with us. It seems as if we have hardly learned lessons about sustainability, perhaps because we do not look enough at failures as a source of knowledge. Our compartmentalized view of natural resources from a utilitarian perspective obscures the reality that human needs are part of the broader ecological and environmental concerns. The utilitarian view serves to blur the socioeconomic impacts of unwise resource management. Further, land and water management is often framed as a matter of good technical practice in a way that obscures the existing power structures. Or put another way, limited political participation may be "safely" excused in the case of issues that are deemed administrative or technical in nature. This is often the case of trans-boundary water management. Civil society voices have challenged this false divide between the technical and political, calling for a different type of policy process. The HDR must serve to advocate for that change.

Twenty years ago I co-authored a study titled "The role of water diversions in the decline of fisheries of the Delta- San Francisco Bay and other estuaries," which was presented by a San Francisco State University team at California State Senate Hearings and served -together with other legal and scientific evidence -to put a final stop to plans for the "peripheral canal." This was a giant scheme concocted by the Reagan Administration (when he was governor, not president) which would have further diverted freshwater inflows from the San Joaquin Delta toward the massive State and Federal irrigation systems of the California Central Valley (a direct subsidy to corporate agribusiness) and the sprinklers of the ever-thirsty lawns of Los Angeles suburbia. The study showed how the drastic drop in important commercial traditional anadromous fisheries in California was related to the on-going reduction of freshwater flowing to the Bay with the consequence that the important brackish-freshwater "mixing zone" was being altered and the Delta islands salinized. Similar situations were recorded in Australia, Egypt and Russia where freshwater flows into estuarine areas had been reduced below key annual and seasonal ecological thresholds over a 20-year period of intense urbanization, dam construction and channelization.

Ten years ago, I conducted an environmental assessment for FAO in Bangladesh of the intensification of irrigated agriculture. The assessment indicated that irrigation pumps were depleting the shallow aquifer to such an extent that it was taking up to two or three months longer than usual for runoff to be available for seasonal ponds, thus effectively decimating the ponds. These, incidentally, were the main source of protein and income for women and minority fisher folk who, being landless could not dig a well and share the free bounty of freshwater.

I bring these two examples from my own experience because they illustrate how water management

decisions lie usually in the hands of people who count water in terms of millions of cubic feet delivered and are fairly ignorant of complex ecosystem linkages that take place on a real-time basis and not on an engineering-convenient time average. In both cases the better connected reaped the quick profits; the long-term detriment of fragile ecosystems was ignored, while the needs of the vulnerable and less powerful were not considered until damage was done. The key question for consensus building mechanisms, whether on the scale of a small watershed or river basin, is how to ensure the participation (or at least consideration) of those who may not even know they hold a stake.

Regards and best wishes for 2006

Sergio

Sergio Feld
UNDP/Regional Center Bangkok

[Emilie Filmer-Wilson](#), UNDP/BDP/Oslo Governance Centre, wrote:

Dear colleagues,

I join with other colleagues in congratulating the HDR for this excellent choice of subject. My contribution to the rich discussion so far is to elaborate on the latest response highlighting the **dimension of water as a human right**. Water is increasingly recognised as an integral part of the human rights framework. The argument for recognising water as a human right goes further than the fact that water is a basic need, essential for human well being and human dignity. It rests on the notion of 'justice'. Asymmetric power relations threaten the principle of equity in use and distribution of water, which results in individuals and groups, being excluded and/or deprived from access to water. 'Rights' are therefore needed to effectively address this discrimination and marginalisation.

In addressing the dimension of water as a human right and its related implications, the report will find that **General Comment no. 15 on the human right to water** provides an important guide and authority. In November 2002, the Committee on Economic, Social and Cultural Rights adopted General Comment No. 15 (GC 15) on the right to water. The Committee stated that the human right to water entitles *everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses*. GC 15 is an authoritative interpretation of the International Covenant on Economic, Social and Cultural Rights (ICESCR), a human rights treaty ratified by 149 States. Although GC 15 does not have the force of law of an international treaty, it does give the right to water legitimate juridical and political status. Regardless of their available resources, all State parties to the ICESCR have an immediate obligation to ensure that the minimum essential level of the right is realised.

GC 15 can shed light on some of the key implications in recognising water as a human right, such as: quantity of water; domestic vs. non-domestic uses of water; and water as a social or economic good. Equally, together with national legal standards on the right to water, GC 15 highlights the important role that the rule of law and the human rights framework can play in addressing and resolving conflicts over water.

Water for Basic Human Needs: The essence of the right to water resides in the implementation of the principle that no person may be deprived of enough water to satisfy basic human needs. Whilst recognising the importance of water for industry and agriculture, GC 15 states that priority in allocation of water should be given to water for personal and domestic uses.

Privatisation of Water: While not precluding appropriate public/private cost sharing arrangements, GC 15 states that no person should be deprived of minimum requirements simply by reason of his or her inability to pay. Nevertheless, the Committee does recognise that free water is one method of implementing the right, and a direct entitlement if a person cannot afford to pay for the essential minimum amount of water. The principle of affordability thus seeks to balance the idea of water as an economic good with social and environmental concerns.

In the context of privatisation, GC 15 states that Governments have a duty to ensure that in any privatisation efforts they adequately address issues such as the need to provide for basic human needs, equitable access for the poor and affordability. When States do relinquish their management responsibilities for water services to private actors, GC 15 emphasises the importance of ensuring that adequate monitoring mechanisms are in place to ensure that people's right to water is not compromised.

Water and the Rule of Law: at the national level, explicit rights to water or State duties to ensure access to water have been recognised in a number of constitutions. These include Colombia, South Africa and Uganda. In these contexts legal redress has been obtained by the courts for the violation of the Constitutional right to water. Progressive courts in other parts of the world have also ruled on water issues by linking the right to other fundamental rights, such as the right to health and life. In Argentina in 1996, the Children's Public Defender of Minors filed and won an injunction against the local government for failing to prevent the polluting of an indigenous community's water supply. The case was won on the grounds that the provincial government neglected its obligation to safeguard the health of the population. In India too, the judiciary has linked water to the right to life, in finding that dam projects were impinging on people's right to life.

Giving greater emphasis to the dimension of water as a human right will support the report's focus on structures of entitlements and enforceable claims. It will also echo the point made by the UNDP Administrator that "human rights are not only an objective but also an important development tool, with which we can support national efforts to achieve the Millennium Development Goals (MDGs) and to prevent discrimination or exclusion from the development process on the grounds of race, religion, or gender." (Human Rights Day speech, December 2005)

I hope this proves useful in your work to address the human right dimension of water in the report.

Regards,

Emilie Filmer-Wilson

HURITALK Research Officer
UNDP Oslo Governance Centre
Democratic Governance Group/ Bureau for Development Policy/ United Nations Development

[Asenaca Ravuvu](#), UNDP Fiji, wrote:

Dear Colleagues,

I strongly support the excellent idea to focus attention on water in the 2006 HDR. Of course, water can link up with several other MDGs as already mentioned and it is these cross-cutting aspects that should be highlighted. While I agree with the issues and points raised already in the excellent discussion that has been ongoing, I would like bring water issues specific to SIDS (Small Island Developing States), in particular the Pacific developing states, into this discussion.

Firstly, water resource endowments vary widely for Pacific island states where you have situations ranging from large islands with watersheds and rivers and streams with groundwater resources, to extremely fresh-water scarce smaller islands and atolls that rely heavily on rainwater for their water supply. Thus, a key issue is that of sustainable management *to ensure adequate and continuous supply of water*. This of course is particularly critical for a large number of Pacific islands, in particular atolls, that depend on freshwater "lens" groundwater resources that are increasingly subject to unsustainable extraction and increasing contamination due to inadequate waste management and planning.

Further to the *issue of sustainable management is the issue of wastewater management and urbanisation and its impact on health*. Solid waste in expanded built environments over limited land areas as in the Pacific presents a significant challenge for the region and is of increasing concern.

Secondly, while there are man-created problems that threaten water supply availability, there is also the *threat of sea level rise on the quality and quantity of freshwater resources* particularly on low-lying atolls, on top of other impacts of global climate change affecting rainfall variability.

Thirdly, in small islands, these issues are dealt with via the support of various agencies and different funding sources that demand various deliverables that do not necessarily make it easy for countries to coordinate or harmonise. Thus, impacts on the ground are minimal as the core issues of management regimes and inadequate legislation and infrastructure are often not fully addressed, or are dealt with in a piece meal approach. For those who have proceeded thus far, while they grapple with the barriers to addressing these issues, the disadvantaged often are not getting access at all. While there has been ample feedback and indication that water is the biggest need from poor and disadvantaged communities, there is little response from donors/sponsors who provide direct support specifically to assist with improved access and supply for these communities. Thus, *the role of multilateral and bilateral agencies as well as civil societies and private sectors should be examined*.

Last but not least, I join my colleague in asking how this will *build on the work done already by the UN Water Development Report*. Data for the Pacific that I saw in that seemed unrealistic but would have been largely affected by available information from Australia and New Zealand and did not really present a realistic picture for the less developed countries. This of course highlights the lack of availability of accurate data which is a real need to indicate the true state of affairs in the Pacific.

Kind regards.

Asenaca Ravuvu
Asst Resident Representative
UNDP Fiji

Mohamed Bayoumi, UNDP Egypt, wrote:

Dear Colleagues

In response to the points raised by Shahin, I would like to share with you the following:

Basically, small enterprise development in water and sanitation is blocked by the fact that simple systems and low cost techniques do not generate large profits similar to that of potable water purification units or conventional wastewater treatment facilities, which involves huge contracts in financial terms. Accordingly, this type of business is not attractive for entrepreneurs, although it is the technologies and approaches that are most needed to fulfil the targets of Goal 7 of the MDGs. It might be argued that this size of contracts can be attractive to smaller entrepreneurs but again there is a difficulty arising from the reality that most of the clients are very poor and can not afford the investment costs of constructing these systems.

However, experiences in Egypt, through the work with NGOs and CBOs (community-based organizations) to which GEF/SGP (Global Environment Facility's Small Grants Programme) has contributed, showed that very poor rural communities pay willingly the full costs of operation and maintenance of sanitation systems once an appropriate and well functioning system that responds to their needs is constructed either by the state or donor funds. But more importantly, the low economic return from this small scale projects does not encourage the investment in Research and Development to adapt imported low cost technologies to local conditions. And in many cases operation of low cost systems that has proven successful in a developing country failed in another developing country if not adapted to local conditions in terms of social, geographical, natural, cultural, etc. In this respect, financing the adaptation research of low cost technologies to various national conditions remains a problem that needs to be solved as part of the efforts necessary to encourage investment in this small business. However, if experience showed that the poor can pay for operation and maintenance of their low cost systems, the question will remain of who should pay, and how, for the construction of the infrastructure of these systems for the poor, which hopefully the report can answer.

Best regards

Mohamed

Mohamed Bayoumi
Environment Specialist

[Michel Kabalisa](#), UNDP Rwanda, wrote:

Dear Colleagues,

The Report should address the following questions:

- The process from safe water access as a strategic good (basic right and universal access principle) with necessary subsidies to a trivial private good through water commodification (cost recovery from the user) and subsequent privatisation experiences (from public monopoles to privates monopoles in certain cases).
- Safe Water access effects on households income (or more broadly, general well-being) distribution in the context of PRSPs and more frequent water pricing mechanisms (need to pay attention to the gender dimension), such as:
 - Universal access as a basic right: free limited volume for every household plus pay as you go;
 - Flat subsidies per cubic meter:
 - Full cost recovery: progressive unit costing with a ceiling or regressive pricing beyond a certain consumption level (for very large user) but subject to a minimum line (above the basic right or average cost for first trenches).
- Water access impact on health expenditures (public and households), e.g. avoidable diseases effects and occurred costs with better access to safe water, etc;
- How is it feasible to link safe water access as both a health and a development issue to the MDG funding (debt relief, other redistributive mechanisms,...) to protect vulnerable population via PRSP/ MTEF, private-public partnerships, or other cooperation arrangements out of budget support, etc.?

Best regards

Michel Kabalisa

Michel Kabalisa
Programme Officer / Sustainable Livelihoods Unit
UNDP Kigali Rwanda

[Claudio Finizio](#), UNDP Mauritania, wrote:

Dear Colleagues,

I support the view of Ms. Bolaky: "water is also an economic and finite (limited in supply) resource, an essential input in any kind of production [...] one may even venture into thinking that the private sector should obligatorily be taxed for the use of water..."

This economic facet was brought forth already back in 1992 with the [Dublin Principles](#), which represented a milestone in moving towards sustainable water development. In fact, principle no. 4 reads: "Water Has an Economic Value in all its Competing Uses and Should be Recognized as an Economic Good". I hope the HDR will consider these Principles, at least for the historical importance they bear. (Reference on Dublin Principles at: <http://www.gwpforum.org/servlet/PSP?iNodeID=1345>)

Best regards,

Claudio Finizio
Strategic Partnership Advisor
UNDP Mauritanie

[Aparna Basnyat](#), UNDP/ Regional Centre Colombo, wrote:

Dear Shahin,

Greetings from the [Regional Centre in Colombo](#). In response to your query, we are pleased to be of assistance in gathering resources on "**Water and human development**". The resources identified have been collated under the following headings that match some of the examples you hope to receive:

1. [Importance of water as a productive input in small enterprises in water or sanitation](#)
2. [Whether micro finance stimulates household demand, especially in the case of sanitation where low demand is a widely-cited concern](#)
3. [Potentials for small water enterprises in water utility sector and what is needed to strengthen that](#)
4. [The main factors blocking or facilitating small enterprise development in water and sanitation](#)

We trust that the resources identified and presented below will be useful for your purposes.

Resources identified are as follows:

1. **Importance of water as a productive input in small enterprises in water or sanitation**

There are a couple of case studies on this topic at the [IRC International Water and Sanitation Centre \(IRC\)](#). As an introduction, IRC provides the news and information, advice, research and training, on low-cost water supply and sanitation in developing countries. Working at the interface of Water Supply and Sanitation (WATSAN), and Integrated Water Resource Management (IWRM), this focus area takes a livelihoods-based approach to improving the impact of WATSAN services on poverty, and ensuring access by the poor to an equitable share of water resources. IRC's work in this theme aims to ensure access by the poor to an equitable share of water resources in IWRM processes.

Bolivia

This [case study on household level productive uses of water in Bolivia](#) focuses on two key issues:

- (1) The importance of productive activities in household water use, and the associated contributions water makes to livelihoods, and
- (2) The potential for water resources conflicts over allocations for household level productive uses.

The case study was carried out around the rapidly growing city of Cochabamba in central Bolivia. The study areas were Tarata, a small town to the south-east, and Tiquipaya, which is located on the peri-urban fringes of the city. One part of the case study involved investigation of household water-use patterns in Tarata and Tiquipaya. This research examined the multiple use of domestic water supplies, and the use by families of multiple sources to meet their water needs for both domestic and productive activities. As the city of Cochabamba expands, it is argued by the authors that productive water uses such as irrigation of gardens (huertas) are likely to make significant demands upon new domestic water supply systems. These uses are equally likely to have an important impact, whether positive or negative depending on your viewpoint, on the overall availability of water resources as well as on the livelihoods of urban and peri-urban water users.

At the household level, studies show that a significant proportion (roughly half) of so-called 'domestic' water supplied in Tarata and Tiquipaya was used by the case study families for productive activities: including irrigation of huertas, watering livestock or other enterprises. Equally, irrigation water is used, at times, for domestic purposes.

In some cases domestic water provides the sole source and makes small-scale irrigation of huertas or other enterprises possible. More often, domestic water provides an important supplementary source and reduces risks in irrigated cropping where canal water is inadequate or unreliable. In general, non-domestic sources provided a far greater quantity of water for productive purposes, but the strengths of domestic water supplies are their availability (often 24 hours a day), reliability, and convenience.

The need for multiple uses was recognised by the water supply utility in Tarata who in addition to supplying safe water from groundwater sources through the domestic network, sought to supply additional (and cheaper) water for urban and peri-urban agriculture through a system of canals. Similarly, the designers of the proposed EPSA-Macoti water and sanitation system in Tiquipaya should take account of the relatively high demand (and potential) for the use of domestic water for productive activities in Tiquipaya and the need to plan in an integrated way for multiple uses from multiple sources. Otherwise, opportunities to support livelihoods will be lost and high per capita use of water for productive

activities may compromise supplies in other tail-end parts of the system.

2. Whether micro finance stimulates household demand, especially in the case of sanitation where low demand is a widely-cited concern

Although the following example of a workshop does not address micro-finance issues directly, it does provide an illustration of how a multi-stakeholder approach help stimulates and sustain the demand side of sanitation:

In partnership with Lima's Water Utility Sedapal, SDC, PAHO-CEPIS, Water and Sanitation Program (WSP) organized a workshop (see http://www.wsp.org/06_FeaturedStories.asp?FeatureID=169) on successful solutions to sanitation services for unserved populations. Approximately 184 participants attended the workshop, among them representatives from cooperation agencies, municipalities, representatives from the Peruvian Vice Ministry of Construction and Sanitation, water utilities, non-governmental organizations and private entrepreneurs.

This workshop, together with the publication "Sanitation is a business", was a first step towards a new approach which pressures an importance to involve a local private sector in the sanitation policies in order to add dynamism to the challenge of meeting millennium development goals. According to the approach, the top-down approach of distributing latrines with subsidies or giving them free has not worked. The demand-oriented approach adopts a strong poverty focus: it stems from the idea that people have desires on hygiene and their desires are a strong change agent to be mobilized.

The approach argues that poor people, like others, should be seen as customers with a right to demand, and not as beneficiaries having to accept whatever they can get. Under this new paradigm, sanitation has to be seen as an opportunity, as a business. The promoters are not, however, suggesting a neo-liberal policy that believes in the "miracles of the free market" and policies that abandons the responsibility for managing public health to the private sector. Rather the new paradigm is based on the two pillars. The first pillar addresses the importance to put water, sanitation and hygiene very high on political agenda, but where the focus should entirely be on the demand side, on market creation and on the enabling environment. The logic of creating markets for sanitation is similar in the South and the North. However, governments, NGOs and civil society can play a very essential catalytic role in awareness creation, in conducting and implementing social mobilization campaigns and similar activities.

The latter pillar pressures that a radically more active involvement of the private sector on the supply side is needed, to deliver creative and innovative solutions that provide better services for all customers, including the poor. So when all these stakeholders come together and accomplish their role as indicated earlier, this will ultimately lead to an increase in supply chain for the water and sanitation.

3. Potential for small water enterprises in water utility sector and what is needed to strengthen that

The following resource identified, is a short paper entitled "[How Small Water Enterprises can](#)

[contribute to MDGs for water](#)” that can help shield some information on the potential role of small water enterprises and how to strengthen them in this context:-

Abstract

Water supply is among the most crucial of all the infrastructure services in the urban context. In many cities and towns of the developing world, the formal sector (public or private water utilities) has been unable to keep up with the water requirements of the growing population. Informal small water enterprises (SWEs) have moved to fill the huge supply gap left by water utilities, and are often the main suppliers of water to people, particularly those living in informal urban settlements, who are un-served or under-served by water utilities. Indeed, SWEs make a significant contribution to supplying water to people in developing countries who lack access to safe water, estimated by the United Nations to be over one billion.

Findings from recent research in Africa show that SWEs provide valued water services to up to 50% of the urban population, and even higher percentages in cities with higher proportions of the population living in informal settlements. This fact sheet attempts to shed more light on some of the key issues surrounding SWE provision of water services. It looks at the nature, role and constraints of SWEs, and why water sector managers should give attention to, and recognise, SWEs. The potential for utility-SWEs partnerships is presented, and typical interventions to improve SWEs operation are suggested. The fact sheet concludes that SWEs can contribute to increasing the proportion of people with improved water services, and hence help meet the Millennium Development Goal for water. This can be achieved through support to SWEs and development of win-win partnerships between SWEs and water utilities.

4. The main factors blocking or facilitating small enterprise development in water and sanitation

There is a paper by the Water and Sanitation Program (WSP) entitled “[Financing Small Water Supply and Sanitation Service Providers: Exploring the Microfinance Option in Sub-Saharan African](#)”, which provide several examples of water projects and touch on the issues that impede or facilitate small enterprises, giving particular attention to the access to credit.

Examples from **Kenya** dealing with unmet demand for expansion and augmentation in two community-based organization (CBO) schemes are illustrated in the paper:

Kabuku project

The Kabuku water project was first instituted through ministerial efforts by the Kenyan government in the 1970s. Poor design, together with insufficient funds, led to the collapse of the scheme in the late 1980s. In 1990, a CBO was formed to rehabilitate and manage the rehabilitated scheme with initial funding from SIDA and a private company. Since then the scheme has been managed by the CBO independent of external support. Members, who own the CBO, elect a managing committee to ensure the efficient running of the scheme.

Kabuku has managed, since its rehabilitation, to collect sufficient revenues to meet its costs, and a major expansion, the construction of a storage tank, was financed through the use of the accumulated surplus

generated from scheme revenues. However, efforts made by the CBO to raise additional funds to augment the total capacity for water production have not been successful, despite its healthy revenue base. The main constraint in this has been the inability of the CBO to offer acceptable collateral.

Gitaru self-help water project

The Gitaru self-help water project serves as an example of a successful community-run water supply project. The project was first developed in the 1970s when the area residents, without any donor or government aid, formed a self-help group. Today, the scheme delivers piped water to 600 households, as well as providing kiosk service to other households in the area.

Extension of the service depends upon available capacity, and new users pay a connection fee and agree to adhere to the scheme's bylaws. The new user is also responsible for the installation of a water meter and the local pipes to his/her dwelling. The water is charged according to a rising block tariff. The scheme relies upon three boreholes, one of which is shared with a neighbouring scheme, to meet the needs of its members. A private company provides the technical support for the boreholes and oversees water quality. The self-help group maintains a savings account at a local branch of the Kenya Commercial Bank, which used to also offer bill collection services.

The main constraints facing the scheme are difficulties in financing large repairs, as collections are not sufficient to raise adequate surplus to meet these costs directly. The CBO therefore has to rely on informal finance routes, such as the use of harambee to finance major repairs and expansions. Funds generated in this manner can be unpredictable and irregular. In such circumstances the availability of credit finance could be of great benefit. Further, the scheme would benefit from renewed bill collection services offered by its banking outlet.

We trust that the above resources will be useful for your purposes. Please do not hesitate to contact us should you have any questions or require further assistance. Thanks goes to Chune Loong Lum and Ruwanthi Senarathne for researching and consolidating this reply.

Best Regards,

Aparna Basnyat
Programme Consultant
MDG/HDR Cluster
Regional Centre Colombo

Juerg Staudenmann, Bratislava Regional Centre, wrote:

Dear Shahin,

You are indeed touching upon an area where experience and/or documentation seems rather sparse: the recognition of small enterprises as (potential) key players in the WSS sector. From our angle – and at this point in time – we can offer you the following:

- Our **Ukraine CO** has made some experiences in a water infrastructure pilot initiative under the “[Crimea Integration and Development Programme](#)”. Although focusing mainly on social mobilization and rural community participation in the water sector, a [UNDP/SDC Lessons Learned Brochure](#) gives some insights into issues around local water enterprises (please contact the Ukraine CO for more details). We are planning together with our Ukraine colleagues an evaluation exercise in the coming weeks/months aiming at upscaling (and replication) of this good practice; we shall keep you posted...
- A similar situation in the Danube River Basin / Regional Project: Although our recently concluded TEST (Transfer of Environmentally Sound Technology) project mainly involved medium and large enterprises, the (unused) potential for small/local water-related entrepreneurship became evident (see [Terminal Evaluation Report, attached](#)). A more detailed analysis of opportunities and barriers is planned for the first half of this year, and we are currently working on TOR for both a technical report and a “How-to-Guide”, as well as on replication strategies.
- We have also started to explore ways of collaboration in the water-sector with a Private Bank recently. The Dutch SNS Bank has established a new Water Fund that shall concentrate on small and medium enterprises (those between micro-credit and IFI-loan size). UNDP is expected to assist in project and stakeholder identification, and implementation. – Again, we will be able to provide more information in the near future.
- Last but not least a few documents/ and links that might be useful (if you haven't come across them already). – I give the [WaterWiki-links](#) (where the reports can be downloaded) instead of attaching them all:
 - [Small-Scale Private Service Providers of Water Supply and Electricity](#): A WB Literature Review Report
 - [Financing and Provision of Basic Infrastructure: Synthesis, Commentary and Policy Implications of Water and Electricity Service Case Studies](#)
 - The Swiss (SDC) [Public-Private Partnerships for Water Supply and Sanitation](#)
 - [USAID Case Studies of Bankable Water and Sewerage Utilities](#)
 - I hope you have come across and browsed the various OECD / EAP Task Force documents already (see e.g. [background papers for the recent Yerevan Meeting](#): particularly [Financing Water Services](#), [WSS in Rural Areas](#), etc)
 - The just recently launched “[Partnership Database](#)” (OECD with partners, under the EAP Task Force / Environment for Europe initiative) might also contain some useful information.

I hope this is useful.

Best Regards,

Juerg

Juerg Staudenmann
Water Governance Advisor
UNDP, Europe and the CIS
Bratislava Regional Centre

[Karin Svadlenak-Gomez](#), UNV, wrote:

Dear colleagues,

Joining the chorus – what an excellent choice of topic for the next HDR.

Ram Shankar mentioned the importance of discussing the controversial dam issue, and I would like to support his point. Just today I came across [an article](#) about a water conflict currently topical in Pakistan, which is around the planned building of a dam. This article clearly shows how there might be winners and losers in creating access to water resources for some, while destroying livelihoods for others. I believe this is an important aspect which clearly impacts on human development and the MDGs, and as such should be covered in the report.

Please see the (short) article at the attached link: [Thousands Protest Musharraf Dam Plan in Pakistan](#)

Best regards,

Karin

Karin Svadlenak-Gomez
Programme Specialist
UN Volunteers Programme

[Mohamed Bouchakour](#), UNDP Algeria, wrote:

TRANSLATED MESSAGE

Dear colleagues,

Please find below the comments by UNDP Algeria on the concept note for the HDR 2006 on water.

With best wishes

M. Mohamed Bouchakour
Programme Analyst
UNDP - Algeria

1. Preliminary remarks

The theme of the next global Human Development Report (HDR 2006) is “**water**”, which is an excellent choice. This topic is closely linked to the question of human poverty, which consequently gives water the status of a human right in the most salient ways. Water is a major input, certainly renewable but not substitutable. It strongly determines the course of the MDGs both directly and indirectly. Therefore, the choice of this topic for the HDR 2006 also contributes to discussions on poverty and more broadly, human development.

An effective and peaceful solution to the water problem constitutes one of the most important challenges for our planet at this time. The tensions and geopolitical conflicts around this resource are threatening the peace and stability of our world.

The proposed concept note and the priority areas that have been identified are a good starting point for a collective reflection, which is already shown by the richness of contributions received by UNDP country offices from the Slovak Republic, Vietnam, Nigeria and of CBS/BP, which all raise important and relevant questions.

Reading the contributions received so far, we have particularly appreciated the thoughts about the **grave consequences** that are caused by water scarcity, which include aggravation of poverty, emergence and aggravation of conflict and insecurity in the world, corruption, etc. At this point, an important question should be asked: given the fact that water can be considered a **human right** and that its scarcity especially affects the poor segments of a population (and contributes to maintain these conditions and to reinforce them), what can and should be done by national justice systems to protect the most vulnerable groups? A good starting point to answer this question would be for the HDR 2006 to show incontestably that water scarcity is especially affecting the poorest and that the consequences of this injustice are unsupportable.

This analysis should be:

- Supported by methods to estimate access to water, which are simple, significant and uniform, and
- Gender-sensitive, in order to show that among poor populations, especially women are experiencing unequal access to water.

This would be even more valuable if the Report touched upon the question of access to sanitation.

In view of the consequences of water scarcity, it is necessary to detect its **real causes**. Is there a

problem of absolute disposability of the physical resource? A problem of unrestrained consumption, respectively of waste? A problem of access due to inadequacies of infrastructure for collection, conditioning, supply and connection? A problem of funding and/or of making the necessary installation? A problem of technology, of competencies? A problem of governance? A combination of all these issues?

Regarding access to sanitation, the concept note states that progress in this area is slower than in those linked to access to water. Consequently, while the poor can obtain water for their vital needs, they might not be able to have access to acceptable sanitation equipment, due to the milieu and environment which lack elementary hygiene.

2. Contribution by UNDP Algeria

UNDP Algeria's contribution stresses three issues that should be addressed by the HDR with maximum clearness, arguments and precision:

- *Demystifying the notion of "water crisis"*. Can water be in crisis? No, it is condensed language. However, which realities are hiding behind these words?
- *Linking water to the MDGs*. If the objective of the MDGs is to reduce poverty in its most extreme forms, access to water is one of the essential factors to advance the MDGs. How to ensure that the poorest are included?
- *Enlarging access to sanitation services*, where the poor have already access to water. This is the case in precarious livelihoods/habitats (slums in/outside cities, barracks in the countryside). Do we have to equip these precarious habitats with sanitation networks and treat them on a case-by-case basis or should we find more global solutions?

- **Demystifying the notion of "water crisis"**

This reflection should be guided by the following central question: is the "*water crisis*" a **crisis of supply** or a **crisis of demand**?

While it is true that demand pressure increases with a growing population and its needs, it is important that the HDR 2006 distances itself from the *Malthusian vision* and shows that the constraint that needs to be loosened is on the supply side. In this vision (where the primacy is put on the supply), water can be envisioned as an "invisible" resource, which needs to be exhaustively exploited. However, it is important to have the right priority. In Algeria, it is estimated that leakages in urban distribution networks amount to 30% and every effort to reduce such waste helps to make precious additional resources available.

The constraint in supply is an expression that actually comprises various difficulties that involve the **supply chain** (access/mobilization of conventional water, water conditioning, distribution, maintenance) and which are especially relevant in terms of investment, funding, use of infrastructure and management of activities. All this is based of course on human resources and above all on the competencies represented in the hydraulic sector, administering an arsenal of professions linked to water, including civil and rural occupations, sanitation, etc. The Algerian experience shows that when the sector is undergoing

multiple restructuring, there is a destabilization of activities, a de-capitalization of knowledge and of know-how, and a loss of competencies.

Faced with its structural deficit, Algeria has opted for a desalination of its sea water as a complementary water source in addition to conventional water (dams and groundwater). The additional costs per cubic meter of this non-conventional water is prohibitive (around 10 times higher than for a cubic meter of conventional water), but its contribution to the reduction of the water deficit reveals its highly strategic character. The tariff policy is based on a system of burden sharing, ensuring that water bills are affordable by the households and that water consumption is maintained at the minimum level (principle of progressive tariffs in relation to levels of consumption).

In total, supply adjustment and rationalization of demand constitute two sides of the same challenge, which is ensuring **good governance of water**. Even if it is not the State that should directly be responsible for supply, it has the duty of organizing, guaranteeing and regulating it. In this sense, Algeria has reached a major turning point in its water management policy, putting the private sector in charge of the distribution network based on the principle of delineation.

- **Linking water resources to the achievement of the MDGs**

Water affects all human activities. The HDR 2006 should focus on showing why and above all how: (i) the development of water resources is possible in order to ease the constraints in supply; and (ii) water should be prioritized, which directly affects the course of the MDGs.

The first step in this direction is to integrate the MDGs related to water and sanitation into the PRSP (Poverty Reduction Strategy Papers), and also into the National Human Development Reports. This would be an indication of political willingness and greater public awareness. The following step would be to construct and incorporate **water-specific indicators** in these documents. Countries should have incentives to disaggregate these indicators (gender-related, spatial) in order to be able to easily measure inequalities in access to water and sanitation, as well as the progress already achieved in these areas.

The correlation between access to water and sanitation on the one hand and human development on the other is empirically evident. It is, however, important to develop means and mechanisms to measure this correlation, even if only approximately. The strategic information to be examined is **the resilience with which the MDGs react to improvements in access to water and sanitation**. The type of calculation would show for example that in order to double the school enrolment of children in the poorest rural areas, it would be enough, all other things being equal, to increase the access of the affected populations to water by x liters of drinkable water per day and per person, which consequently would disburden children (especially girls) from water related work and would decrease absenteeism from school. The same principle should be employed for mortality related to infectious diseases (cholera, diphtheria) and their links with access to sanitation equipment.

When the development of water resources through the building of dams and wells is approaching its limits, as it is the case in Algeria, it is necessary to turn towards **alternative solutions, that are more bearing**, be it because they are based on non-conventional modern technologies (desalinization of sea water) or on the contrary, on traditional decentralized technologies (for example the recuperation of rain water in individual households).

The experience with the “foggaras” (traditional irrigation systems) in the south of Algeria shows how in communities where water is both rare and vital, this resource is enjoying status as a common good and as part of an ancestral maintenance system, which precisely determines its allocation and utilization.

- **Enlarging access to sanitation services**

The concept note suggests something very instructive: progress made in access to sanitation equipment is inferior to that linked to access to water. This would mean that if the water crisis is basically a supply crisis especially affecting poor populations, these poor are also living in hygienic conditions that imperil their health.

Hypothetically, one could explain this situation by the fact that **water access is a strictly vital need**, whereas a functioning **sanitation network is only a secondary need**, or at least it could be perceived as such. Poor populations that live in such a situation are those who live in a scattered rural environment or in slums around or even in the middle of large urban agglomerations. These populations are condemned to find the means to provide themselves with water, but they do not have the means to access a sanitation networks, even if they wanted to. One should not forget that slums are illicit habitats.

In some cases, community development projects, initiated and supported from the outside, can be at the origin of water-related initiatives, both upstream (access to water through a public spring) and downstream (collection of used water).

In conclusion, the water/human development relationship is based on three factors: **governance, competencies, and funding**. These three factors need to be simultaneously addressed in order to address the water crisis:

- Good governance should especially cover sectorial activities in a strict sense, as well as the promotion of competencies in the water sector, which are indispensable, and funding of the cycles of investment and exploitation of water resources.
- This promotion of competencies requires basic institutional capacities in the field of public policy and its funding.
- Funding, the core element, depends on good governance and experts who can master techniques of economic calculus and financing.

ORIGINAL MESSAGE:

Bonjour,

Veillez trouver ci-joint la contribution du bureau du PNUD à Alger, relative au thème de l'eau dans le RDH 2006.

Meilleures salutations

1. Remarques préliminaires

Le prochain Rapport mondial sur le développement humain (RDH 2006) sera consacré au thème « l'Eau ». C'est un excellent choix. Ce thème comporte une dimension intimement liée à celui de la pauvreté humaine et ce lien confère à l'eau le statut d'un droit humain au sens le plus élevé du terme. L'eau reste un input majeur, certes renouvelable, mais non substituable. Il détermine de manière toujours très forte les OMD, que ce soit directement ou indirectement. A ce titre, le choix de ce thème pour le RDH 2006 ne manquera pas de faire avancer et approfondir la réflexion sur la pauvreté et plus largement sur le développement humain.

La solution effective et pacifique des enjeux liés à l'eau constitue un des principaux défis planétaires de notre siècle. Les tensions et conflits géopolitiques autour de cette ressource continueront de faire planer des menaces sur la paix et la stabilité dans le monde.

La note de concept proposée et les domaines de priorités identifiés constituent un bon point de départ pour la réflexion collective. En témoigne la richesse des contributions reçues des bureaux du PNUD de la SLOVAQUIE, du VIETNAM, du NIGERIA, et du CBS/BP et qui toutes soulèvent des questions de fond aussi sensibles les unes que les autres.

A la lecture de ces contributions, nous avons particulièrement apprécié les idées sur les conséquences très graves que peut avoir la rareté de l'eau et qui se résument à l'aggravation de la pauvreté, l'émergence et l'aggravation des conflits et de l'insécurité dans le monde, la corruption, etc... A ce niveau de l'analyse, une question essentielle mérite d'être posée : dans la mesure où l'eau est un droit humain et que sa rareté frappe plus facilement et plus amplement les populations pauvres (et contribue à les maintenir, voire les enfoncer, dans des seuils de précarité plus graves), que peuvent et doivent faire les systèmes nationaux de justice pour protéger les groupes les plus vulnérables ? Un bon point de départ pour un plaidoyer en ce sens serait que le RDH 2006 mette en relief de manière incontestable que la rareté de l'eau est supportée par les plus pauvres et que les conséquences de cette injustice sont insoutenables. Cette analyse gagnerait à :

- être adossée à des méthodes d'estimation de l'accès à l'eau qui soient simples, significatives et uniformes,
- et à être « gendériée », de manière à bien montrer qu'au sein des populations pauvres, c'est la composante féminine qui pâtit le plus des inégalités de l'accès à l'eau.

Ceci est tout aussi valable lorsqu'on aborde la question de l'accès aux équipements d'assainissement.

Face aux conséquences de la rareté de l'eau, il est nécessaire aussi et surtout d'en cerner les causes

réelles. Y a-t-il un problème de disponibilité absolue de la ressource physique ? Un de consommation débridée, voire de gaspillage ? Un problème d'accès dû à l'insuffisance des équipements de collecte, de traitement, d'alimentation et de raccordement ? Un problème de financement et/ou de réalisation de ces installations ? Un problème de technologie, de compétences ? Un problème de gouvernance ? Une combinaison de tout cela ?

Pour ce qui concerne l'accès à l'assainissement, la note de concept constate que les progrès dans ce domaine sont plus lents que ceux liés à l'accès à l'eau, et que donc lorsque les populations pauvres ont pu se procurer de l'eau pour leurs besoins vitaux, elles n'ont pas pour autant accédé à des conditions d'existence acceptables, en raison d'un milieu de vie et d'un environnement où l'hygiène la plus élémentaire fait défaut.

2. Contribution du Bureau du PNUD à Alger

La contribution du Bureau du PNUD à Alger met l'accent sur trois questions que le RDH devra aborder avec un maximum de clarté, d'arguments et de précision :

- Démystifier la notion de « crise de l'eau ». L'eau peut-elle être en crise ? Non, c'est un raccourci de langage. Mais quelles réalités peuvent se cacher derrière ?
 - Mettre la mise en valeur des ressources en eau au service des OMD. Si les OMD sont un moyen pour faire reculer la pauvreté dans ses formes les plus sévères, l'accès à l'eau est un des facteurs essentiels pour faire progresser les OMD. Comment l'assurer pour les plus pauvres ?
 - Elargir l'accès aux équipements d'assainissement là où les pauvres ont pu se procurer de l'eau. C'est le cas dans l'habitat précaire (bidonvilles dans les cités, gourbis dans les campagnes). Faut-il doter l'habitat précaire de réseaux d'assainissement et le consacrer comme mode d'habitat à viabiliser, ou lui trouver des solutions plus globales?
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- **Démystifier la notion de « crise de l'eau »**

Le questionnement qui doit alimenter et fédérer toute la réflexion doit tourner autour d'une interrogation centrale : la « crise de l'eau » réside-t-elle fondamentalement dans une crise de l'offre ou une crise de la demande ?

S'il est vrai que la pression de la demande est très forte sous l'effet de la croissance démographique et de la dynamique des besoins, il est important que le RDH 2006 se démarque franchement des visions malthusiennes et démontre que la contrainte qu'il faut s'efforcer de desserrer est celle de l'offre. Dans cette optique (où le primat revient à la crise de l'offre), les économies et la rationalisation des usages de l'eau peuvent être envisagées comme des ressources « invisibles » qu'il faut exploiter à fond. Mais il ne faut pas se tromper de priorité. En Algérie, on estime que les fuites sur les réseaux de distribution urbains sont de l'ordre de 30% et tout effort visant à réduire un tel gâchis équivaldrait à rendre disponibles de précieuses ressources supplémentaires.

La contrainte de l'offre est une expression qui en fait agglomère toute un ensemble de difficultés. Celles-ci jalonnent la chaîne de l'offre (accès/mobilisation de l'eau conventionnelle, traitement, distribution, maintenance) et se posent principalement en termes d'investissements, de financement de ces investissements, d'exploitation des équipements et de gestion des activités. Tout ceci repose bien

évidemment sur les ressources humaines et surtout les compétences du secteur de l'hydraulique qui abrite une panoplie de métiers liés à l'eau : le génie civil, le génie rural, le génie sanitaire, etc. L'expérience algérienne montre que lorsque le secteur subit de multiples restructurations/ réorganisations, il s'en suit une déstabilisation des activités, une décapitalisation du savoir et du savoir faire, et donc une grave déperdition des compétences.

Devant le creusement de son déficit structurel, l'Algérie a finit par opter pour le dessalement d'eau de mer comme source complémentaire à l'eau conventionnel (barrages et nappes). Le surcoût au mètre cube de cette eau non conventionnel est prohibitif (environ dix fois supérieur à celui du mètre cube d'eau conventionnelle), mais sa contribution à la réduction du déficit hydrique revêt un caractère hautement stratégique. La politique tarifaire repose sur un système de péréquation qui rend la facture d'eau des ménages encore très supportable, dès lors que leur consommation se maintient dans la tranche inférieure (principe de la progressivité des tarifs par rapport aux tranches de consommation).

Au total, l'ajustement par l'offre et la rationalisation de la demande constituent les deux facettes d'un même défi qui s'impose aux pouvoirs publics en termes de bonne gouvernance de l'eau. Ce n'est pas l'Etat qui doit forcément et directement se charger du volet de l'offre, mais il a le devoir de l'organiser, de le garantir et de le réguler. A ce titre, l'Algérie vient d'opérer un tournant majeur dans sa politique publique de l'eau en faisant appel à la formule de la concession au secteur privé pour gérer le réseau de distribution sur la base d'un cahier des charges.

- **Mettre la mise en valeur des ressources en eau au service des OMD**

L'eau est un input qui se positionne en amont de toutes les activités humaines. Le RDH 2006 devrait se focaliser à montrer pourquoi et surtout comment (i) la mise en valeur des ressources en eau est possible pour desserrer la contrainte de l'offre, (ii) les efforts dans ce sens doivent prioriser les usages qui déterminent directement les OMD.

Le premier pas dans cette direction consiste à intégrer les OMD relatifs à l'eau et aux équipements d'assainissement dans les DRSP (Documents de Stratégie pour la Réduction de la Pauvreté), mais aussi dans les Rapports nationaux sur le Développement Humain. Ce serait là, un indice de prise de conscience et de volonté politique. Le stade suivant serait celui de la construction et de l'incorporation d'indicateurs fins, spécifiques à l'eau. Les pays doivent être incités à désagréger ces indicateurs (critère genre, critère spatial) de manière à pouvoir facilement mesurer les inégalités d'accès à l'eau et aux équipements, ainsi que les progrès réalisés dans ces domaines.

La corrélation entre d'une part l'accès à l'eau et aux équipements d'assainissement et d'autre part le développement humain est empiriquement évidente. Il importe toutefois de se donner les moyens et les outils pour pouvoir la mesurer, même approximativement. L'information stratégique à rechercher est celle des élasticités avec lesquelles les OMD réagissent à des améliorations dans l'accès à l'eau et à ces équipements. Ce type de calcul aurait la vertu de démontrer par exemple que pour doubler la scolarisation des enfants dans les milieux ruraux les plus pauvres, il suffirait, toutes choses étant égales par ailleurs, d'augmenter l'accès des populations concernées à l'eau dans une proportion de x litres d'eau potable/jour et par personne ; ce qui dispenserait les enfants (dont les fillettes) de la corvée de l'eau et diminuerait l'absentéisme scolaire. Le même principe d'élasticité doit être approché pour la mortalité par maladies infectieuses (choléra, diphtérie), et ses liens avec l'accès aux équipements d'assainissement.

Lorsque la mise en valeur des ressources en eau par la réalisation de barrages et de forages tend vers la saturation, comme c'est le cas en Algérie, il y a lieu de se tourner vers des solutions alternatives, plus porteuses, qu'elles soient axées sur des technologies non conventionnelles modernes (dessalement d'eau de mer) ou au contraire sur des technologies traditionnelles de type décentralisé (par exemple la récupération des eaux de pluie dans les maisons individuelles).

L'expérience des foggaras dans le grand sud algérien montre comment dans les communautés où l'eau est à la fois rare et vitale, cette ressource jouit d'un statut de bien collectif et fait l'objet d'une gestion ancestrale très précise au niveau de son partage et de son utilisation.

- **Elargir l'accès aux équipements d'assainissement**

La note de concept évoque un constat très instructif : les progrès en matière d'accès aux équipements d'assainissement sont inférieurs à ceux liés à l'accès à l'eau. Ceci signifierait que si la crise de l'eau est une crise de l'offre supportée surtout par les populations pauvres, celles-ci pâtissent en aval d'une hygiène du milieu qui met en péril leur santé.

A titre d'hypothèses, on peut expliquer cette situation par le fait que accéder à l'eau répond à un besoin strictement vital et que celui de se connecter à un réseau d'assainissement répond à un besoin relativement secondaire, ou en tous cas qui perçu comme tel. Les populations pauvres qui vivent une telle situation sont celles qui résident dans un habitat épars en milieu rural ou qui sont installées dans des bidonvilles autour ou même au cœur des grandes agglomérations urbaines. Ces mêmes populations sont condamnées à trouver les moyens de s'approvisionner en eau, mais la connexion à un des réseaux d'assainissement reste toujours au dessus de leurs moyens, quand bien même ils en auraient le désir. Ne pas oublier par ailleurs que le bidonville est un habitat illicite.

Dans quelques cas, des projets de développement communautaire impulsés et soutenus de l'extérieur, peuvent être à l'origine d'initiatives liées à l'eau en amont (accès à travers une fontaine publique) et en aval (collecte des eaux usées).

En conclusion, l'articulation eau/développement humain repose sur le triptyque : gouvernance, compétences, finances. Loin d'être juxtaposées, ces trois facteurs de sortie de crise doivent être ingénieusement imbriqués :

- La bonne gouvernance doit couvrir notamment les activités sectorielles au sens strict, mais aussi la promotion des compétences qui leur sont indispensables et la gestion financière des cycles d'investissement et d'exploitation.
 - La promotion des compétences conditionne les capacités institutionnelles indispensables à une gouvernance de qualité dans le domaine de la politique publique et de son financement.
 - Le financement, élément névralgique, doit lui-même obéir à la logique d'une gouvernance de qualité et, pour cela, être préconisé par des organes experts, maîtrisant les techniques du calcul économique et les montages financiers.
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[Sara de Pablos](#), UNDP Mauritania, wrote:

Dear colleagues,

I would like to share my view on the ***necessity of strengthening the partnership in the water sector development*** to be able to attain the MDG targets and thus increase human development.

The development of the water sector in developing countries needs normally a high investment at the beginning for the setting up or renovation of the water distribution and/or sanitation systems. Different financing institutions such as the World Bank, Development Banks, bilateral institutions etc. can and do provide large amounts for these basic infrastructures. The amounts to be financed are normally very high and thus these financing institutions concentrate normally on the construction and the setting up of an institution (or private company) to run it. Most of the time, they do not consider the setting up and development of the local systems of distribution.

Nevertheless, these local distribution systems are key. In developing countries, water is still distributed by the means of stand pipes for large areas, and the water for the population is sold at the stand pipe level or even at a door to door level. The local distribution systems that are set differently consider the conditions in each particular area, especially social cohesion, the stage of the decentralization process, the regulations... It can take the form of community participation, public- private partnerships, private companies..., and can have an important gender component. An adequate management/distribution system at local level will determine the price of water, the equal access, the quality of the water and therefore the impact on the development of the area.

To have an impact on human development, both infrastructure and setting up of local distribution systems are necessary. This has an extra cost, and it is then important to be able to create partnerships with these financing institutions to ensure that the local distribution system will be taken into account. This is why the partnership in this sector is crucial: if an infrastructure project is financed, it needs to be complemented by a social and development project, to identify the better way to assure and maintain an effective and adequate water distribution system at local level.

Best regards,

Sara

Sara de Pablos
Associate expert
Environment Unit
UNDP Mauritania

[Leila Tadj](#), UNDP Algeria, wrote:

TRANSLATED MESSAGE

Dear colleagues,

It is my pleasure to contribute to this discussion on the water crisis. Yes, the water sector is in crisis because the action framework of its organization is weak. Existing responses are not adequate to resolve the problem of growth that threatens the sector as institutional system. Yet, every crisis brings with it opportunity for development and learning for the sector.

The [attached note](#) ("[La crise de l'eau: l'eau en Afrique coincée entre mythes et réalités](#)") looks at the challenges of water issues by examining the principal links between water, environment, sustainable development, risks, territories, and governance. The proposed approach addresses the issues at stake by examining the relations/interaction and contradictions between environment and development. This approach tries to introduce a debate on the Social Responsibility of Actors of Territories in an environment of risks and crisis through the Social Responsibility of Political Actors and through an approach of environmental vulnerabilities carried, caused or supported by water.

Warm regards

Mme Leila Tadj
UNDP Algeria

ORIGINAL MESSAGE:

Cher Collègues,

J'ai le plaisir d'apporter ma contribution personnelle au débat sur la crise de l'eau. Oui le secteur de l'eau est en crise puisque le cadre d'action de son organisation est inadéquat et son répertoire de réponses n'est pas adéquat pour résoudre le problème de croissance qui menace le secteur en tant que système institutionnel. Cependant, toute crise est porteuse d'opportunités de développement et d'apprentissage inédites pour le secteur.

Aussi, [la note ci-jointe](#) ("[La crise de l'eau: l'eau en Afrique coincée entre mythes et réalités](#)") se propose-t-elle de mettre en perspective les principaux liens entre eau, environnement, développement durable, risques, territoires, gouvernance pour introduire la problématique de l'eau. L'approche proposée s'intéresse aux spécificités des enjeux à travers les modes de relations/interactions et les contradictions entre environnement et développement. Cette approche cherche à introduire le débat sur la Responsabilité Sociale des Acteurs des Territoires dans un espace de risques et de crises à travers la Responsabilité Sociale de la Politique et à travers une approche des vulnérabilités environnementales portées, induites ou supportées par l'eau.

Cordiales salutations

Mme Leila Tadj

[Aeneas Chapinga Chuma](#), UNDP Zambia, wrote:

Dear Colleagues,

Please find my comments on the concept note below.

I have reviewed the outline and it covers most of the issues. However I would like to pick up a few points that may strengthen and provide most insights in some of the issues to be covered in the chapters:

(i) Chapter 1: water and human development - the acknowledgement of the consequences of water crisis should embrace the comprehensive approach of “water is life” it should not only be limited to failure in meeting the MDGs and development prospects. Thus the chapter title may be revisited to capture this broader perspective, which should be modeled on the ecology premise covering governance issues and natural resource aspects.

Further section 4 covering water production and environment should include issues pertaining to water runoffs

(ii) Chapter 2: water for human consumption - section 9 reaching university: integrating water and sanitation into poverty reduction strategies may be broadened to cover the development process that would include poverty reduction elements. Although limited access to water is a poverty issue, water being a source of life should be at the centre stage of development and go beyond the poverty reduction strategies.

(iii) Chapter 3: Sanitation – section 1 human development costs of lack of sanitation should also include the loss of biodiversity, which is usually not costed, but it is critical to maintenance of the ecosystem. Further section 6: what needs to be done should cover also the school curriculum, as children are agents of change.

(iv) Chapter 4: water, production and human development – under subsection 1.3 Industry and energy there is need to include issues related to transportation, recreation and tourism. Further under subsection 4.3 institutional management and development should include aspects for reducing water runoffs

(v) Chapter 5: Transboundary waters and human development – under section 4 benefits of cooperative water management should include tourism which has potential for job creation and contribute to poverty reduction.

Aeneas C. Chuma
Resident Representative
UNDP Zambia

[Ngila Mwase](#), UNDP Mozambique, wrote:

Dear colleagues,

I would like to share with you some comments on the Global Human Development Report (HDR) 2006 on water, focusing on **Africa**.

1. *The Poverty Reduction Strategy (PRS)/ Millennium Development Goals (MDGs) Dimension:*

The overall theme is quite opportune given the importance given to water and sanitation in the MDGs and indeed in PRS/PRSPs (Poverty Reduction Strategy Papers). There is an increasing trend for assessment of water both in (PRS)Ps and in MDGs reviews.

The other component of MDG 7 – *environmental sustainability* - is subjected to comprehensive appraisal wherever environmental impact assessment (EIA) is a pre-condition- as is usually the case- in large infrastructural investments especially through loans and grants. Given the importance of water to life and its increasing scarcity, the water target in the MDGs is often viewed by the population (as evidenced through Participatory Poverty Assessments (PPAs), e.g. the 1998 and the 2003 Uganda PPAs) as too conservative. In the domestication of the MDGs one might have to be a bit more ambitious.

2. *Access to water can be a cause of conflict between nations and peoples in the future.* A number of treaties governing the utilization of river, lake and sea/oceanic water need to be reviewed so that they also address contentious issues. One such treaty, for instance, governs the utilization of the waters of the Nile River. The establishment of the UNDP/World Bank-supported, [Entebbe-based Nile Basin Initiative \(NBI\)](#) is assisting to smooth matters – and may succeed in addressing the challenges of maximizing benefits for all and minimizing disadvantages for some countries/zones. Tanzania has already succeeded in tapping water from Lake Victoria for irrigation in the Shinyanga region. The NBI is an innovative regional experiment that might help to defuse conflict, and whose experience may eventually offer good lessons of experience.

3. There is a number of *regional cooperation schemes* anchored in river basins e.g. the Mano River Union. The 2006 HDR could tap into the Southern Africa experience where UNDP supported the Southern African Development Community (SADC) to set up a SADC Regional Water Master Plan in the late 1990s. There are other cooperative arrangements such as the Lesotho Highland Water Project (Lesotho/RSA) or the Mano River Union whose experience could enrich the HDR. In this regard a number of projects are in the drawing board under the [New Partnership for Africa's Development \(NEPAD\)](#) supported by regional banks especially the African Development Bank.

4. Although water establishments were *public utilities* for decades, they have now been subjected to various degrees of *privatization*. A study of the ensuing water corporations would be helpful. In most cases services are yet to be improved to appreciable levels. One of the reasons for this approach is to bring in private sector resources given the need to address availability of water in water-scarce areas

especially in urban areas; water treatment problems, etc. The challenge is to ensure that access by the poorer segments of the population is enhanced rather than diminished.

5. The discussion still needs to be put very much in the context of the *MDGs*. There is a need therefore to address issues of deforestation, and desertification and how these can be turned around through afforestation. Mozambique and a number of other African countries suffer under persistent droughts and floods. Related to the issue of water is sanitation. This is an area that does not need massive inflows of foreign exchange. It needs proper mobilization of local communities to foster what the UN Millennium Project Report (Jeffrey Sachs) called “quick wins”. The HDR 2006 could explore possible “quick wins”.

6. The Report could also put the discussion in the context of *NEPAD*. There are a number big NEPAD projects under consideration for funding by the African Development Bank and other banks.

I hope you will find the comments useful.

Ngila Mwase
UNDP Mozambique

[G. Uyanga](#), UNDP Mongolia, wrote:

Dear colleagues,

We would like to send the comments from UNDP Mongolia Programme team on the Global Human Development Report (GHDR) on water and sanitation.

Water is an extremely important and increasingly scarce resource for Mongolia. It is intricately linked to the lives of all Mongolians, but especially those who are living in rural areas. The response below is organized as follows:

a) Comments to the GHDR, based on Mongolia-specific facts and examples

b) Useful resources

A. Comments to the GHDR

Access to water:

Water collection is an important, time-consuming and hard part of domestic work, which usually can not be delayed. In Mongolia, as in many other countries, this job is often performed by women and children, and especially children when adult members of the family have to work. Due to the sprawling “ger” areas (“ger” is a traditional Mongolian dwelling, but nowadays “ger” areas in urban areas are synonymous with slums) and high rate of inward migration to Ulaanbaatar, the capital city, the provision of water

infrastructure by the municipality is increasingly less able to meet the needs of new arrivals. Moreover, greater investment is needed not only in physical maintenance and physical infrastructure; institutional and human factors are also at play. The water kiosks (to which water is supplied by trucks) work at specific schedule, which does not always suit the needs of families. As a result, there are often situations when poor households are not able to fetch any water, which, in addition to other issues, affects their nutrition.

There are large disparities in access to water. On average, apartment dwellers in Ulaanbaatar use 240-450 liters of water per person per day, indicating high level of water wastage. At the same time, water consumption in urban “ger” areas is 6-8 liters and in rural areas is 6-10 liters per person per day, which is significantly lower than the global standard of 20 liters. As a result, there is high risk of using water from unprotected sources.

Quality of water:

The above mentioned form of water distribution (by trucks) is not only expensive and limits access of the poor to water; it is also not hygienic due to lack of cleaning of water tanks in which water is distributed.

The quality of water (natural) is poor especially in Western and Gobi regions of Mongolia, containing high level of minerals. The water cleaning facilities function poorly, as a result of which the poor quality of drinking water results in wide spread diseases such as flourosis, iodine deficiency, kidney and cardiological diseases.

Water pricing:

Data from the Ministry of Nature and Environment shows the differentiated water pricing. (Quoted in a recent study commissioned by UNDP on Access to Water and Sanitation Services in Mongolia)

- Whereas worldwide, urban poor pay 4-10 times more, in Mongolia they pay 84 times more.
- Water vendors sell for 500 Tg/ 1000 liters
- Industry is charged with 6 Tg/ 1000 liters
- Mining is charge with 6 Tg/ 1000 liters
- Small business is charged with 480 Tg/ 1000 liters
- Apartment dwellers pay 1500 Tg/ 7500 liters

Another study on the Impact of Utility Prices on Poor Households gives the following data:

Type of service/ client	Tariff (Togrogs per 1000 liters)
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Water

Commercial users	200
Residential users (apartment dwellers)	181

Metered users	121
Ger area users	500

Sanitation

Commercial users	115
Residential users	105
Metered users	72

Miss-pricing, under-pricing and attitude to water as “valueless” resource are often quoted as the major reasons for widespread water wastage in the piped water system. There are efforts of the Ulaanbaatar city municipality to introduce water metering system to rationalize water usage, but these efforts have neither been effective, nor widespread.

In addition, high level of water wastage is dependent on miss-pricing. Due to relatively low charges on water for industrial users, the same drinking / cleaned water is used in industrial processes such as washing of wool.

Water and mining:

There is considerable mining activity taking place in Mongolia, mainly in gold mining. Due to weak enforcement of environmental regulations, mining activities have a devastating impact on the environment, with serious implications on rivers and lakes. Use of mercury, highly contaminating substance, in refining gold has profound implications on water and soil. In addition, extensive mining activities are being undertaken at the beginning of rivers that feed limited water resources in the Gobi desert and semi-desert region, as a result of which large lakes and habitat in the surrounding areas are dying. In response, several movements have arisen in rural areas, the Ongi River Movement, Khuvsgul Dalainkhan Citizens’ Movement, Sacred Subarga Movement in Tsenkher soum of Arkhangai aimag, to protect their rivers and pastures. The response of the government, however, has not been effective.

Climate change, water and desertification:

There is a complex interplay between man-made and natural factors (climate change) that are affecting the growing desertification in Mongolia. Long-term permafrost melting phenomenon is also expected to further reduce the level of rivers and perpetuate the vicious circle of environmental degradation. Cutting of forests (in central and northern parts) and shrubs (in desert areas) for fuel consumption has severely impacted the level of water. According to a survey conducted by the Ministry of Nature and Environment in 2003, since the last 1995 survey, 683 rivers out of 5565, 1484 springs out of 9600 and 760 lakes and ponds out of 4196 disappeared. Water is likely to become a serious human security issue, especially in the arid regions of Mongolia.

Land degradation and desertification results from a reduction in water levels and the destruction of wells

constructed during the socialist period throughout the territory due to the collapse of institutional systems for well maintenance. It in turn leads to over-concentration of livestock in few areas with good water access and further perpetuates land degradation. Livestock herding provides livelihoods to about 40% of the Mongolian population.

More on that is in the study commissioned by UNDP on Ecological Vulnerabilities and Human Security in Mongolia (see below in the resource section).

Water, sanitation and sustainability:

80% of water consumption in Mongolia originates from groundwater sources. However, the two main problems associated with groundwater include: 1) in urban areas, high spread of simple pit latrines and high level of industrial/ poorly treated discharge that contaminates groundwater; 2) permafrost melting process which reduced the level of groundwater through much of the territory of Mongolia.

Water governance:

Finally, water governance is one of the most serious problems that prevents effective action to address water and sanitation issues. Previously, at least 6 separate authorities existed at various levels to address water issues, often with overlapping mandates. Attempts have been made to consolidate these fragmented institutions by establishing a new Water authority in 2005. However, the Water Authority lacks technical capacity and, most importantly, does not have a sufficiently high status to resolve the governance issues. UNDP is currently working jointly with WHO and UNICEF for Improved Water and Sanitation Services. One of the areas of the project will be enhancing the capacity of the Water Authority.

B. Useful resources:

- Access to Water and Sanitation Services in Mongolia - Study commissioned by UNDP, UNICEF, WHO in partnership with the Ministry of Nature and Environment, 2004 http://mirror.undp.org/mongolia/publications/ACCESS_TO_WATER_AND_SANITATION_SERVICES_IN_MONGOLIA_eng.pdf
- Economic and Ecological Vulnerabilities and Human Security in Mongolia - Study commissioned by UNDP in partnership with the Ministry of Foreign Affairs, 2005 <http://mirror.undp.org/mongolia/publications/Economic%20and%20Ecological%20Vulnerabilities%20and%20Human%20Security%20in%20Mongolia.pdf>
- Impact of Utility Charges on Poor Households, study commissioned by UNDP in partnership with the Ministry of Finance, Poverty Research Group, conducted by Centre for Social Development, NGO, 2005 http://mirror.undp.org/mongolia/publications/Impact_of_utility_Charges_on_poor_households_Eng_FactSheet.pdf
- Reserves, consumption and contamination of groundwater in Mongolia - Study by S. Zandarya, U. Borchuluun and Sh. Munkhtuya, Urban Geology Project team, Ministry of Nature and Environment http://hdr.undp.org/docs/network/hdr_net/Mongolia_HDR2006_Groundwater_Ulaanbaatar.pdf

Best regards,

G. Uyanga,
NHDR focal point
Poverty Reduction and Human Development Team
UNDP Mongolia

[Elena Malanova](#), UNDP Russia, wrote:

Dear colleagues,

Please find below a contribution from UNDP Russia regarding water governance. Upon review and discussion of many issues pertaining to water governance in our country, our team has agreed on the Lake Baikal which represents one of the world treasures and which is currently a subject of negotiations between state, business and the local community. The HDR2005 would be a very timely and appropriate contribution of UNDP into the on-going national debate on governance of natural resources in general and water in particular. The Water Code of Russia is being amended to include an aspect of privatization of water resources which raises polarized opinions of proponents and opponents of privatization of public goods.

Kind regards

Elena Malanova
UNDP Russia

The Lake Baikal: the World Heritage site vs. economic development

A unique lake at the centre of Siberia

Russia is a largest country of the Eastern hemisphere with abundant water resources. Therefore water shortages would not be an issue for at least several hundred years ahead. Quality of ground water is quite satisfactory whereas quality of superficial water is higher than in many European countries, particularly cities. The Baikal Lake is one of the geographical sites in Russia which is unique in its physical, geographical characteristics as well as purity of its waters.

Situated in the south-west of Siberia the lake is the biggest reservoir of fresh water (23, 000 cubic meters) going deep down for 1620 meters (according to some estimates - 1637 meters). The comparative tables 1 and 2 below demonstrate the volume and depth of the largest lakes on Earth.

Fig.1

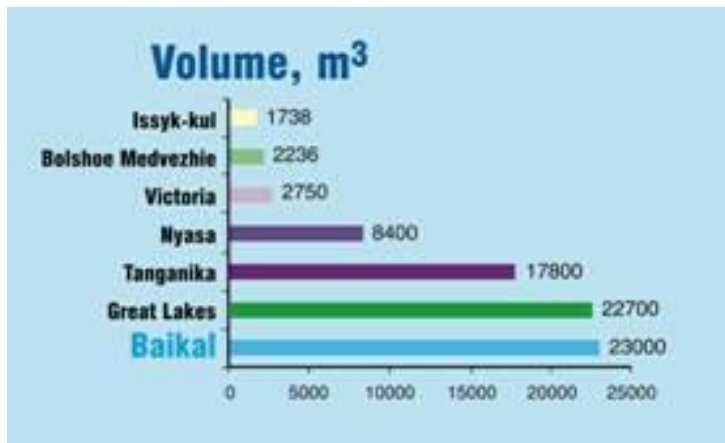
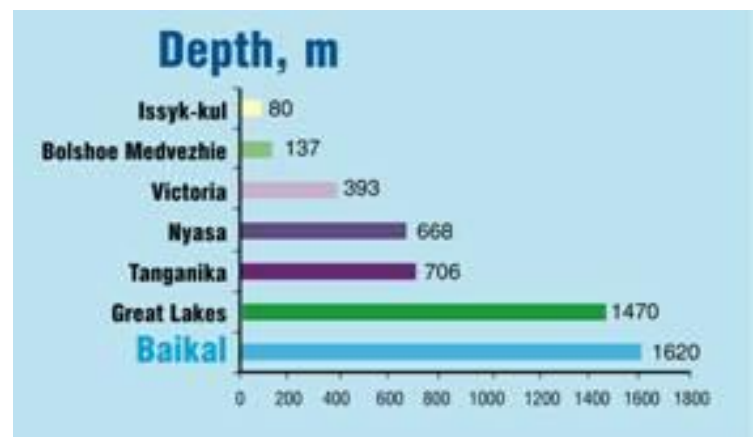


Fig. 2



The Baikal basin contains one fifth of all fresh water on the planet. Within a year all rivers of Russia together carry just 10% of waters in the Baikal which exceeds the territory of Belgium and is somewhat smaller than Switzerland. The Baikal shore line is 2000 kilometers long allowing about 300 rivers to flow in and only one - the Angara – to flow out. The lake was formed at the crack of the earth crust about 22-23 million years ago giving life to 2630 species of flora and fauna with 2000 of them endemic. The coastal area includes 12 natural protected areas with 3 state nature reserves where economic activities are strictly prohibited.

In 1996 UNESCO included the Baikal and an adjacent area of 90,000 square kilometers into the list of the World Heritage sites. Taking into consideration the uniqueness and importance of such a nature landmark, in 1999 the Russian Government adopted the federal law on protection of the Lake Baikal. The preparation period of the law was a subject of an unprecedented public debate when 1300 amendments were proposed by the non-governmental organizations only. So, it seemed that there would be no reasons for concern afterwards. Yet the local non-governmental organizations, particularly those involved in ecological issues regularly keep the public alert to multiple threats to the lake.

What are the reasons for alarm?

In the 1960's on the lake's shore there was a launch of the Baikal cellulose processing plant which has not yielded much profit yet contaminated the virgin waters. The Government has adopted dozens of directives to prohibit the discharge of sewage and redesign of the plant but none of them was put into force. In accordance with technical requirements the plant is working in a closed water cycle mode. In practical terms, the monitoring of waters near the plant indicates that contamination of water with phenol, sulphides and other chemical substances is growing, pH is rising while transparency indicator is decreasing having a detrimental effect on water organic balance. This information is included in the official annual reports on the Lake Baikal of the Government while unofficial facts are more alarming: illegal felling, human-caused forest fires, contamination by oil discharged from boats and ships, losses of the Baikal nerpa – the only seal living in fresh water. Perhaps, this is not a catastrophe but a mere threat. The lake could have rejuvenated itself as the Baikal is able to reproduce more than a quarter of its waters (about 60,000 cubic meters) per annum. It could have, if all the man made activities are ceased along the shore and across the Baikal basin which is 18 times more than the lake's surface. 40% of the basin inhabited by almost a million of people is in Mongolia. For the 140,000 residents living on the shore line

the lake is not only a sacred object, a unique protected area of global value but a source of living. The Republic of Buryatia, one of the regions where the lake is situated is ranked 71th on human development index (out of 87) so the prohibition of economic activities on the lake would exacerbate the poverty rates. Therefore alternative strategy is to be undertaken, the one combining the economic growth with maximum protection measures, in other words, a strategy of sustainable development of the Baikal area.

Saving the World Heritage site

A recent life story well demonstrates the benefits of sustainable development which can provide a balance between welfare of local residents and interests of corporations. The socio-economic development strategy of Siberia and Far East envisages large scale infrastructural projects and construction of transportation systems. One of the projects is implemented by the private-public company "Transneft" which was about to build an oil pipeline connecting the Eastern Siberia to the Pacific Ocean. It was initially planned to lay a pipe at 800 meters from the Baikal. The project developers guaranteed safe technologies and ensured all the ecological security norms which resulted in the approval by the state ecological expertise. But the local non-governmental ecological organizations supported by media and members of the Parliament raised an alarm which developed into a public protest movement across the country. Similar public actions were taking place before but they were mostly ignored and the state followed up as planned. In this case the intensity of the protest was as such that 3 days before the start the President Putin had to interfere with a proposal to move the pipe for 400 kilometers up to the north of the lake. This would require about 1 billion dollars of additional investments as well as a search for new technological solutions to pave the way in the permafrost highlands. The lesson learned is the following: when the issue is about World Heritage site, it is necessary to waive economical gains. The value of the Baikal is not measured monetarily or growth rates of economic indicators. The oil will flow away in 50 or 100 years whereas the Baikal is to live forever for future generations.