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Deep Words, Shallow Words:

An Initial Analysis of Water Discourse in Four Decades of UN Declarations

A UNU-INWEH contribution to Rio+20
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SUMMARY FOR DECISION MAKERS

DEEP WORDS, SHALLOW WORDS: LESSONS FROM A SYNTHESIS OF WATER DISCOURSE IN FOUR DECADES OF UN DECLARATIONS

A quintessential component for life, water permeates the daily vernacular of society and discussions of the status and health of the global environment. Words matter, particularly as used by experts or when they come with the imprimatur of highly-regarded bodies like the United Nations.

An examination of the changing discourse of water and key related issues in high-level declarations from eleven UN conferences on water and the environment over the course of forty years allowed us to trace both the deepening and shallowing of certain keywords. Although some of these shifts will have been deliberate, based on global developments and emerging priorities, some instances of shallowing may have occurred by default, with resolution drafters not taking into account what went before.

Ultimately, the upcoming Rio+20 UN Conference on Sustainable Development must look to the future by drawing on the lessons of the past, including those drawn from the wording of historic declarations. In order for Rio+20 to be an effective, robust document, the language used in the declaration should reflect mindful and cumulative deepening that builds on work done at previous high-level meetings.

What follows is an **overview** and **analysis** of the historic treatment of key, water-related themes. The summary concludes by outlining **effective strategies** for **highlighting** and **strengthening key concepts**.

“The aim is to analyze the discourse of water...”

WATER SCARCITY, WATER SECURITY & DESERTIFICATION

There is a science-policy disconnect *vis-à-vis* water scarcity. Within most of the declarations, water scarcity is framed as a crisis of safe drinking water. Despite being a key concern of the scientific community, the topic of water scarcity has not appeared consistently in the declarations. This deficit highlights the need for better science-policy interface mechanisms and institutionalized approaches such as knowledge translation and brokering to ensure that information produced by the scientific community is actually useful to, and used by, the policy community (e.g. resolution drafters). Of note, “scarcity” has all but disappeared from the declarations in the last decade.

The language of water-security is less institutionalized than that of food-security, although the term has recently begun to appear with some frequency in the language of water professionals. The term ‘water security’ appears only twice as an issue in the declarations, and once only peripherally. Looking towards the future, it would seem that if water is represented as a security issue, it follows that its urgency becomes more difficult to ignore.

The increased global focus on desertification, although sparsely mentioned among the declarations, can be read as an extension of previous concerns over water scarcity. The strongest language found highlights the growing problem of desertification in areas where there is a sustained degradation of land productivity, thus relating the issue to agriculture, food and health directly.

WATER QUALITY

Although the concept of water quality appears in almost every declaration, the thrust and depth of language surrounding the issue of water quality is inconsistent. Initially perceived as an environmental threat, the focus slowly shifts to global inequality with a progression towards the language of safety, followed by a gradual deepening via increased focus on threats to clean water (e.g. pollution). This deepening is, however, temporarily lost, only to return in more recent declarations through the vigorous reemergence of the language of safety.

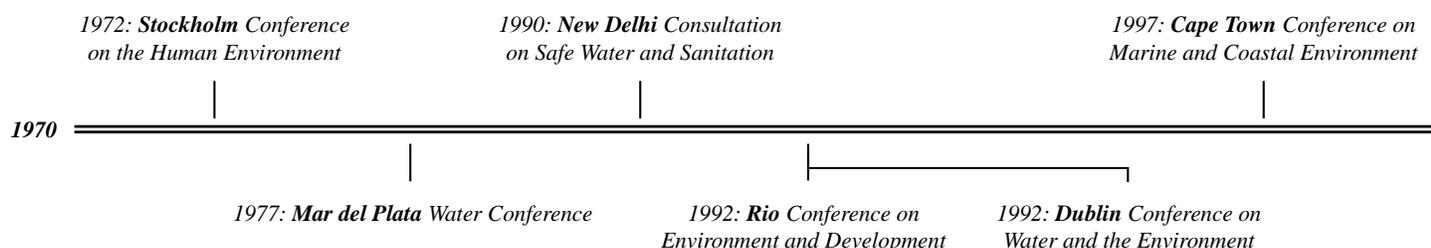
SANITATION

The relationship between water and sanitation is complex; in some cases, the mode of sanitation can have an impact on local water quality whereas in other cases the issues might be quite separate. Across the declarations, we see an uneven representation of this problem across time ending with what may prove to be a renewed commitment to this keystone issue. A major hurdle to dealing with the subject is that the euphemistic word “sanitation” itself constructs an enormous distance between the clean-sounding word and the messy facts of urination and defecation.

SCIENCE AND TECHNOLOGY (S&T)

Science and technology maintain a fairly consistent presence in the declarations, however, this should not indicate stasis. The word “technology” appears far more frequently than does the word “science”, a fact which suggests that, for their part, the declarations are more concerned about the application of existing science (i.e. technology) than they are about research. This focus highlights the need to implement and activate existing research by providing capacity-building, knowledge and/or technology-transfer tools, and links between the science and the policy in order to make the best use of this research base.

EVENT



POVERTY

Across time the declarations shows a growing acknowledgment of the links between the lack of available clean and safe water, unsafe sanitation practices, and poverty. Although poverty does not always garner many specific mentions in the declarations, it remains a consistent underlying concept, especially through the use of related terms such as “developing” nations. Although it may seem as if poverty is a separate issue, discussions of poverty are essential to putting water into a socio-economic perspective. Ultimately, poverty must be personified, making people primary, rather than allowing their poverty to define them.

GENDER

Despite instances of sexist language, the declarations overall make several attempts to address gender issues. Across the majority of declarations, there is growing recognition that women are already fulfilling influential roles as members of water management and hygiene sectors and that this work needs to be supported. Later declarations offer some of the strongest, most robust language on gender-related water issues by acknowledging the specific hardships faced by women and children.

FOOD

The language of security is used to describe both water and food sources, an overlap which may provide opportunity for forging stronger links between the goals of providing food and water as well as water for food. Within the declarations, a focus on the issue of food begins in earnest in the nineties, after which it becomes a frequent and growing theme. In later declarations, the language switches to the term “food security” to describe the goal of securing access to food for those in need.

CLIMATE CHANGE

Within the declarations, the language surrounding climate change has morphed from a vague future-worry to one of the most significant concerns of our day. The topic of climate change functions as a sign of the times, its presence ebbing and flowing. In the latest declaration we get a sense of the gravity of this issue when its societal impact is compared to that of the recent global economic crisis.

HEALTH

Health forms a number of interdependences to food and nutrition throughout the declarations because of its close links to the concept of water quality; however, when it comes to using the word “health”, the declarations reveal some unevenness. In some cases, the word “health” is underused to the point where it barely makes an impact on the overall document and, when it does, it is often buried in a list alongside other issues. This highlights the need for strengthening and prioritizing health as an integral component of declarations and linking it to all aspects of water discourse.

1998: *Paris Conference on Water and Sustainable Development*

2002: *Johannesburg World Summit on Sustainable Development*

2010: *Dushanbe Conference on the Implemenation of the International Decade for Action “Water for Life”*

2001: *Bonn International Conference on Freshwater*

2009: *Muscat First Ministerial Forum on Water*

2012: *Rio+20*

2014

EFFECTIVE STRATEGIES TO HIGHLIGHT AND STRENGTHEN KEY CONCEPTS

Aim for a varied vocabulary. Tracing the key terms across the documents, terms appeared fresh when the vocabulary is varied. Even the simple change between “water”, “water supply”, “clean water”, “safe water”, and “drinking water” suggested a different emphasis each time and helped to round-out an often-used word. The risk with such an over-used term is that its repetition renders it dull, and there is a tendency to skip over such words when reading.

Choose active language that engages the reader. One of the best examples of active language is found in the Bonn Keys, which employs short, declarative sentences and the present tense to describe the water crisis and its solutions. An example of more passive language can be found in *Rio*, in which future-oriented statements are prefixed by the word “shall” instead, as in “Nations shall agree to...” with the difference between the two being that *Bonn* reads as an imperative and *Rio* reads as a suggestion.

Stay focused by resisting the ease of lists. Burying a key term in a long list of other important issues proved to weaken it by distracting attention from the term itself. Lists were most effective when the listed terms were directly connected, with one item building on the next in a meaningful way.

Be clear and specific by avoiding vague or ambiguous language. One of the drawbacks of the shorter formats of the declarations and statements is that there is not enough space to offer extensive and comprehensive definitions of all the key terms. In some instances, however, vague language weakened the writing. Short definitions could help give the useful meaning to the terms and thus add strength to the documents themselves.

Avoid euphemisms, discuss issues frankly. In the case of sanitation, for instance, the sterility of the term itself does the concept a disservice by insufficiently describing the gravity of the need to contain human waste. The term “human waste disposal” is perhaps crude, but it is clear that it offers a more accurate description of the problem that may serve to better motivate action. Likewise, a more descriptive term may help us confront the taboos and stigmas that surround discussions of defecation.

Don’t homogenize, personalize. The use of person-first language should be encouraged in future statements and declarations as it acknowledges that people are the priority and that poverty is a material and economic state rather than a category of people. Further, effort should be devoted to recognize the diversity within the situation of poverty rather than paving over differences with homogenizing language.

Give each word its due by refusing tag-alongs. In many of the documents, for instance, the word “sanitation” mostly appeared following the word “water” in a repetitive manner. These types of tokenism made the word “sanitation” appear as if it were an afterthought rather than a genuine focus in and of itself. The tag-along does, however, successfully link two interdependent terms, like water and sanitation, and it can work if separate attention is given to the term at some point in the document.



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FOREWORD

There is little doubt in my mind that water will be universally acknowledged as of paramount importance globally within the next decade. The ongoing global crisis in drinking water and sanitation, and in water supply and quality, will only be exacerbated by climate change and the pressures of increasing population. The work of the UN in bringing attention to, and addressing, these issues will continue to be critical.

Two UN bodies in particular are well-positioned to undertake this critical work: UN-Water, which I have the honour of currently chairing, and the United Nations University's Institute for Water, Environment and Health (UNU-INWEH) that I also have the privilege of leading. These organizations provide guidance and support as we confront the challenges of water and its myriad interactions with human and environmental health, gender, poverty, food, energy...The list goes on.

With the landmark United Nations Conference on Sustainable Development (Rio+20) taking place in Rio de Janeiro in June 2012 it behooves us to look at the outcomes of conferences-past to examine how water has fared in various statements and declarations. The lessons learned can help us look ahead to Rio+20 and direct us in shaping future resolutions and actions.

I believe the analysis, undertaken by Dana Mount and Alex Bielak, of the changing discourse of water over the course of forty years, constitutes an important and insightful contribution by UNU-INWEH to the Rio+20 process, including input that should be considered at important Rio+20 waypoint meetings such as the Bonn+10 conference, UN-Water's semi-annual meeting, the 6th World Water Forum, and the upcoming Rio+20 Prepcom.

Ultimately, instead of sporadically referring to major water-related problems, Rio+20 and future declarations could more deliberately focus on what progress has (or has not) been made on water-related issues vis a vis previous declarations.

Dr. Zafar Adeel
Director UNU-INWEH and Chair UN-Water

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INTRODUCTION

Not only is water essential to life, it also arises in daily vocabulary and permeates discussions of the status and health of the global environment. In the lead-up to the Rio+20 United Nations Conference on Sustainable Development (CSD) to be held in June 2012, this paper presents a comparative analysis of how issues related to water have been represented in significant U.N. Declarations related to water and environment over the past forty years. The aim is to analyze the discourse of water by assessing instances in which certain key words attain more or less depth of meaning and to examine how this is achieved. To make this comparison, the paper undertakes both a quantitative and qualitative analysis of the discourse of water and water-related issues across four decades of Declarations.

Our study provides a coherent exploration of four decades of significant Declarations on freshwater, particularly as they relate to major issues and challenges in the water sphere. These issues are represented by the key terms we examined (see below) and fully aligned with UNU-INWEH's interests as the U.N.'s "Think Tank on Water."

Taking a broad approach³ to contextualizing water into social, political, economic and ecological realms, we provide a perspective on the history of the treatment of water that can be a resource for the development of future Declarations. It is our hope that this study facilitates the efforts of Ministers and policy makers to both build on and avoid unnecessary overlap with work done at previous high-level meetings. This paper marks the initial steps in the analysis of water-related discourse in a number of other globally significant documents, which could include UN General Assembly Resolutions, reports from the CSD, World Water Development Reports, World Water Forum declarations, World Water Week Annual Statements, and the World Commission for Dams.

³By contrast Porter (2007) undertook a narrower and more focused comparison carrying out critical discourse analysis of just two Health Charters. She noted that her paper took "only the small step of beginning to analyze the Charters themselves" and should "provide a window – however small and positioned – onto how the language use in these Charters constructs relationships among individuals, environments and institutions in health promotion practice so that, as practitioners, we can best use or resist these positions".



METHODOLOGY

The scope of this paper is restricted to UN Declarations and Statements resulting from high-level meetings on water and the environment. Since the 1972 landmark “Stockholm Declaration of the United Nations Conference on the Human Environment” such documents have outlined goals and directions for member states on important issues. Typically brief (2-6 pages), and similar in style and purpose, these documents provide a good basis for our comparison; they act as small windows into the conferences themselves, showcasing elements considered essential by the drafters. . . The only exception to the rule of Declarations and Statements is “The Bonn Keys”, a fundamental document derived from the Bonn Declaration that resembles in style, size, and purpose the other documents in that it is a synopsis of the conference. A brief overview of the Declarations is provided in Appendix 1.

Clearly these Declarations and Statements do not represent the entire output of any of the high-level meetings mentioned. Even though accompanying documents might include broader considerations they were considered beyond the scope of the current study and were not included in the analyses⁴.

“these documents... act as small windows into the conferences...”

⁴ For example, for the purposes of this study, the 5-page “Rio Declaration on Environment and Development” (hereafter Rio) is evaluated whereas the Conference on Environment and Development held in Rio de Janeiro in 1992 also produced the well-known “Agenda 21, Chapter 18” document, which is a much longer, full length programmatic text about progressing towards a sustainable future that covers all of our key terms in some depth and addresses water specifically. When this paper comments on “Rio”, however, the comments are limited to the text of the Declaration itself. Similarly Dublin and Johannesburg have sixty page documents attached to them, while the Mar del Plata Resolutions are accompanied by a longer Plan of Action.

When it came to deciding on the categories of comparison and analysis, the terms chosen were those that represented key issues related to the water crisis and particularly those related to water, environment and health. The key terms we ultimately chose to examine are:

- Water scarcity
- Water Security
- Desertification
- Water quality
- Sanitation
- Science & Technology (S&T)
- Poverty
- Gender
- Food
- Climate change
- Health

In searching for the key terms, we counted both the terms themselves and words related to them. For instance, in searching for the key term 'water scarcity', we counted the word/concept scarce, and scarcity along with water quantity, water supply, and water

shortage. Words to do with drought in particular were ignored, these belonging better to a category of water hazards. That is to say, in the documents, where drought was mentioned, it was treated as an acute water hazard rather than as a problem of scarcity.

Five other keywords or terms that we had initially considered (over-population, agriculture, environment, IWRM and rights) proved to be the least well represented in the Declarations, and for space and time reasons were not examined further during the current analysis. There are doubtless many other words that could have been examined (e.g. flood, disaster, famine, adaptation etc.) and they are left for future study.

Qualitative descriptions were applied to the use of the key words. Necessarily these are subjective to a certain extent; however they are internally consistent to the analysis. Table 1 (below) traces the appearance of the keywords across the various documents, and indicates where the language was stronger or more cursory.

Table 1: Tracing Significant Themes Across Declarations and Documents

	Stockholm 1972	Mar del Plata 1977	New Delhi 1990	Dublin 1992	Rio 1992	Cape Town 1997	Paris 1998	Bonn 2001	Johannesburg 2002	Muscat 2009	Dushanbe 2010
Water Scarcity		✓	✓	☑		✓	✓	✓			
Water Security				✓				☑			
Desertification							✓		☑	✓	
Water Quality	✓	✓	✓	☑		✓	✓	☑	✓	✓	✓
Sanitation	✓	☑	☑	✓		✓	✓	✓	✓	✓	✓
Science & Technology (S&T)	✓	✓	✓	✓	✓	✓	✓	✓	✓	☑	✓
Poverty	✓	✓	✓	☑	✓	✓	☑	✓	✓	✓	✓
Gender			☑	✓	✓	✓	✓	✓	✓	✓	☑
Food	✓			✓			✓	☑	✓	✓	✓
Climate Change				☑			✓		✓	✓	☑
Health	✓		✓	✓	✓	✓	✓	✓	☑	✓	✓

✓ - signifies appearance of given term in a specific declaration or document. ☑ indicates a stronger reference.

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ANALYSIS

“Discourse about the provisioning of safe water for healthy communities has been replaced by the question of our own role in the misuse of water.”



WATER SCARCITY

Focusing on the Here and Now: A Portrait of Acute Thirst

Within most of the declarations, water scarcity appears as a crisis of safe drinking water. The concept of scarcity relates to the relationship between water demand and water availability, thus the Declarations focus on the needs of local communities, namely drinking water, and the water available to meet those needs. Agricultural water needs appear secondary to drinking water in the documents under study. In many cases, such as The “1977 Resolutions of the Report of the United Nations Water Conference”, Mar del Plata (hereafter *Mar del Plata*), the concept of water availability is twinned to the concept of quality. In the “1990 General Assembly Resolution, International Drinking Water and Sanitation Decade” (hereafter *New Delhi*), as well, there is a call to provide “adequate and safe drinking water and sanitation”. In terms of delivering what water there is to those who need it, *New Delhi* also introduces the idea of “suitable and sustainable services”. The concept of “suitability and sustainability” combines the idea of water scarcity (whether there is enough water to meet needs) with the idea of appropriate technologies.

Going Global: The Use and Misuse of a Finite Resource

Two declarations in particular take a broader view of the problem of scarcity. Concerned over the possible “exhaustion” of finite resources, the “1972 Stockholm Declaration on the Human Environment” (hereafter *Stockholm*) lays out a number of principles with a view to safeguarding our ability to draw on the earth’s renewable and non-renewable resources today and with a view to the future. It is in the “1992 Dublin Statement on Water and Sustainable Development” (hereafter *Dublin*), however, that the issue of global water scarcity is most fully and forcefully taken up. In fact, the Statement opens with the following declarative line: “Scarcity and misuse of freshwater pose a serious and growing threat to sustainable development and protection of the environment”. Such a pronouncement marks a turn from the conservative language of ensuring safety that we saw in *New Delhi* (where the emphasis was on our ability to secure water for the use of humankind) to the more urgent language of blame and risk. Discourse about the provisioning of safe water for healthy communities has been replaced by the question of our own role in the misuse of water. The reappearance of a biocentric (as opposed to anthropocentric) approach harkens back to *Stockholm*, which (as we will see) frames the problem of water quality in terms of human interference in nature (i.e. “man-made” pollution). *Dublin* makes it clear that we need to be concerned not only with our ability to access water, but to the “finite” nature of such a “vulnerable resource [which is] essential to sustain life, development and the environment”.

Cape Town and Bonn entrench the idea of scarcity by locating it in reality. The “Cape Town Declaration” (hereafter *Cape Town*) includes the special recognition of the challenges faced by “water-scarce countries” in Africa. Here scarcity is not defined solely as a question of water available in the local environment, but also linked to the demands on available water (if any), including high density, “[i]ncreasing population and rapid urbanization” (Cape Town 1998). The combination of “fragile environment” and desperate human need reflect both sides of the concept of scarcity: both supply and demand. The 2001 document “Water – Key to Sustainable Development” (commonly known as the “Bonn Keys”, and herein as *Bonn*), joins *Cape Town* in acknowledging the fact that “the reality of floods and droughts touches increasing numbers and many live with water scarcity” (Bonn 2001).

Whither Scarcity?

After the strong pronouncements in Bonn, the issue of water scarcity is absent in the three most recent documents (*Johannesburg, Muscat and Dushanbe*). Although the “Muscat Declaration on Water” (hereafter *Muscat*) makes one reference to the word “drought”, it is not in a context that

suggests permanence the way “scarcity” does. Likewise, the “Dushanbe Declaration on Water” (hereafter *Dushanbe*) does include a mention of the word “supply”, but it is only used to describe a water source, rather than in the sense of a limited supply. Interestingly, however, *Johannesburg* and *Muscat* provide some (in the former case) strong language about desertification (see below). It could be concluded, then, that the increased global focus on desertification is an extension of previous concerns over water scarcity.

There appears to have been somewhat of a science-policy disconnect *vis a vis* water scarcity. While this is a topic that has been covered extensively by the scientific community (e.g. in the Comprehensive Assessment of Water Management in Agriculture by the International Water Management Institute, and in various UN World Water Development reports etc.), it has not appeared consistently in the Declarations. This highlights the need for better science-policy interface mechanisms and institutionalized approaches such as knowledge translation and brokering to ensure that information produced by the science community is actually useful to, and used by, the policy community (and resolution drafters).







WATER SECURITY

Securing Water

Although the language of food security seems to be well-entrenched at the UN, the language of water-security is less institutionalized even though that term has begun to appear with some frequency in the water vernacular in the past few years, including most recently in Stockholm in 2011 (see Postscript). Only two of the documents under study make direct use of the term “water security”, and these are *Dublin* and *Bonn*. *Dublin* pronounces that the “apparent security of existing water resources” is being threatened by climate change. This statement appears under a discussion of water related disasters, a fact which suggests the concept of “security” is linked more to acute water shortages rather than a trend towards increased drought or growing drylands (i.e. water scarcity). *Bonn* takes a broader view of the concept of water security, stating that “The first key is to meet the water security needs of the poor.” The term “security” here is being used to emphasize and underscore the base-level needs that water represents. If water is represented as a security issue, it follows that its primacy becomes more difficult to ignore. For a discussion of the risks of the language of security, however, see below (“Food”).

Dry Lands

At the far end of the spectrum, the growing problem of desertification signifies areas where there is a sustained degradation of land productivity, and often where water is scarce. Desertification is not mentioned in the documents until *Paris*, and then only appears in two more, *Johannesburg* and *Muscat*. The *Paris* mention is not even a full treatment of the subject, but is rather a passing reference to the “Convention to Combat Desertification”. *Johannesburg* warns that “desertification claims more and more fertile land”, and in *Muscat* desertification appears only in a list of “water related disasters”. *Johannesburg* certainly offers the strongest language on desertification through this simple Statement about the loss of fertile lands, thus relating the issue to agriculture and food—and thus health—directly.



WATER QUALITY

But Can You Drink the Water?

The poor quality of much of the world's water supply is widely considered an impediment to health and development. The Joint Monitoring Program 2010 Update on Progress on Sanitation and Drinking Water recently released by the World Health Organization and UNICEF notes that close to a billion people still get their water from unimproved sources. Because of the chronic illnesses associated with poor water quality (and sanitation, which we will turn to soon), that have led to high infant and child mortality as well as low or uneven productivity among affected adults, the issue of water quality is imperative.

Polluting the Waters

In keeping with its ecological focus, Stockholm treats the issue of water quality as more of an environmental threat than as a social issue. Any concerns over water quality are directed at the goal of reducing the human impact on the environment. The pollution of water is therefore framed as “evidence of man-made [sic] harm” to the earth, and a call is made to “take all steps to prevent possible pollution of the seas” (Stockholm 1972). *Stockholm*, in this regard as in many, takes a different position on the issues than we see in subsequent documents.

Water Quality as Social Inequality

Beginning with *Mar del Plata*, water quality is treated not primarily as evidence of our disregard for environmental integrity, but rather as evidence of global social inequality and as a hurdle to achieving rightful quality of life for all humanity. *Mar del Plata* begins with some of the strongest language of all the Declarations in fact, by stating that “All peoples, whatever their stage of development and their social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs”. *Mar del Plata* also leads the way by prioritizing the establishment of high-quality water provisioning at the national level and by reallocating funds to make this happen. Interestingly, *Mar del Plata* underscores its commitment to the total provisioning of “safe” drinking water for all by stepping outside the bounds of the framework of the nation-state as sole and primary actor. It achieves this by stating that where such needs are not being met, governments should “actively involve, encourage and support efforts being undertaken by local voluntary organizations” (*Mar del Plata* 1977).

The Power of Pollution

Dublin and New Delhi achieve depth in their representation of the issue of water quality by focusing on the threats to clean water, rather than simply restating the importance of clean or safe water. *New Delhi* uses the language of safety to describe desired water quality, whereas *Dublin* employs both “clean” and two other instances of the word “quality” (as part of the duo “water quantity and quality”); both, however, offer more substantive discussions about pollution. *New Delhi* explains that “[u]ncontrolled pollution is putting greater stress on the living environment” and further warns that “[w]ithout fundamentally new approaches, the broad-scale deprivation will turn into an unmanageable crisis”.

Consider the following passage in *Dublin* that offers a fairly detailed description of the effects of pollution: “Various kinds of pollution, including transboundary pollution, exacerbate these problems, degrade water supplies, require more expensive water treatment, destroy aquatic fauna, and deny recreation opportunities”. In total there are six mentions of the word “pollution” in *Dublin*, and one of “polluter”. Nearly each mention is used in a different context, and as part of a detailed paragraph, as in the previous example. By focusing on what makes the waters unsafe for drinking, *Dublin* brings the question of water quality strongly into focus.

By contrast, there is only one mention of “pollution” in *Rio* and not a single mention of “water”. Obviously, then, *Rio* cannot be seen to advance a discussion about water quality. Nevertheless, *Rio* does promote the polluter-pays principle and although it is not clear whether this is directed at victims of water pollution specifically, it could be one possible application.

For the People

The language about “safe” drinking water that we saw in *Mar del Plata*, but which was replaced by “clean” and “quality” in *Dublin*, is restored in *Cape Town*. In addition we see the adjective “drinking” being placed before the word “water” as a modifier in several instances, again as in *Mar del Plata*. Both of these additions serve to remind the reader about the gravity of the water quality situation: the water under discussion will be drunk by real people with the expectation, or hope, that the water will not make them sick. The “Paris Declaration” (hereafter *Paris*) follows with similar language, employing “safe drinking water” twice. In addition, *Paris* raises the issue of the “inadequate treatment of waste water” as an important issue, thus bridging the links between water quality, pollution, and sanitation.

Although the specific words “safe” and “clean” are not used in *Bonn*, several other clues are given that suggest that the Declaration is taking a strong position on water quality. The first is that *Bonn* calls on a “national and international commitment on drinking water” (2001). The second and equally important Statement is the simple phrase: “everywhere water quality is declining” (Bonn 2001). Lastly, *Bonn* announces the intention to dialogue with those living in poor communities about their own water needs. Taken together, these three pieces of *Bonn* form a strong pronouncement about the dire situation faced by those without reliable drinking water supplies. In the case of *Bonn*, then, it is not the specific language surrounding the word “water” itself that strengthens its position on the issue of water quality, but rather the interconnecting positions advanced by the Keys more generally.

Basic Life

After all the work done in *Mar del Plata*, *New Delhi*, *Dublin* and *Bonn*, it is a surprise to see that in *Johannesburg* the depth is lost once again. Although “The Johannesburg Declaration on Sustainable Development” (hereafter *Johannesburg*) does list “clean water” as one of the “basic requirements” for “human dignity”, there is little else in the Declaration itself that helps complicate or enrich our understanding of the issue of water quality. A possible exception is the statement that “air, water and marine pollution continue to rob millions of a decent life” (*Johannesburg*, 2002). Of course, we need to bear in mind once again that in cases where the declarations themselves may have little to say on an issue, the named conferences also produced documents of much greater length which cover many of these key topics in depth⁵. What can be taken from these two claims is the idea that it is not just life itself, but a dignified and decent life which ought to be the goal of global social, economic, and environmental work.

Return to Safety

In the final two Declarations under study, *Muscat* and *Dushanbe*, we see a return to the language of safety. The word “safe” appears six times in *Muscat*, and four times in *Dushanbe*—both significantly more than in any of the previous Declarations. In addition, the words “quality” appears four times in *Dushanbe*, and “drinking” acts as a qualifier twice in *Muscat*. The high number of references to safe, good quality drinking water suggests a commitment to improving the health of those currently drinking from compromised water sources. Through the language of safety, a concern for improved health is projected.

⁵For Johannesburg the associated key document was the ~ 200 page “Plan of Implementation” www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm (Accessed 15-09-11)



SANITATION

Dirty Words

The relationship between water and sanitation is complex; in some cases, the mode of sanitation can have an impact on local water quality whereas in other cases the issues might be quite separate. Across the documents, we see an uneven representation of this problem across time ending with what – when seen in the light of other recent UN initiatives, including the 2011 Five-Year-Drive to Sustainable Sanitation – ought to prove to be a renewed commitment to this keystone issue. A major hurdle dealing with the issue is the taboo and discomfort around talking about the production and disposal of human waste. Even the euphemistic word “sanitation” itself constructs an enormous distance between the clean-sounding word and the messy facts of urination and defecation. The sterility of the word sanitation, however, speaks to the concept itself: to protect humans from contact with excreta.

Sanitation in the Spotlight

Predictably, *New Delhi*, which was written on the heels of the Drinking Water Supply and Sanitation Decade, contains frequent, rich references to sanitation. *New Delhi* elaborates on the meaning of the word “sanitation” by occasionally putting aside that term in favour of phrases such as the “proper means of waste disposal” as well as “proper drainage and disposal of solid waste” which offer clearer descriptions of the process. In addition, *New Delhi* also targets “hygiene”. Although this term refers to a range of practices, not all of which have to do with responding safely to contact with human waste, the concept of hygiene can turn our attention away from the technology of sanitation towards the user of the technology. Despite the fact that *New Delhi* uses the “water and sanitation” phrasing that is too often a substitute for real attention on sanitation (as is the case in *Stockholm*), *New Delhi* offers enough insight into the processes behind the term to provide real depth.

The earlier *Mar del Plata* may have set some precedent when it declared that “the disposal of waste water, including sewage” was comparable to the need for safe drinking water. In this Declaration, a first statement is made about the right of all humans to safe drinking water, then another linking this right to development, and a final one describing the treatment of all kinds of waste, including human, as nearly equally important. Rather than simply tacking sanitation on as an afterthought, then, *Mar del Plata* succeeded in illuminating its similarities to the issue of water quality while also providing sanitation its own category—a key distinction.

Dublin also adds some depth to the issue by carrying through the term “hygiene”. By specifying “hygienic means of sanitation” instead of simply “sanitation”, *Dublin* adds a bare minimum of information that helps to identify why sanitation is of concern. The word “hygienic” is similar to the word “sanitation” in that they are both fairly safe, comfortable words, but “hygienic” connotes risks to health in a stronger way, making it a fairly effective add-on.

Slippage

After *Rio* fails to mention sanitation at all, *Cape Town* reverts back to pinning it to the words “water” or “water supply” as if it were an afterthought. In one instance sanitation stands alone as the term “environmental sanitation”. This term moves the already euphemistic word “sanitation” even farther from its intended meaning. Attaching the word “environment” obfuscates the messy and dangerous problems of the unplanned disposal of human waste by twinning it with an overly broad and vague term (i.e. “environment”). *Cape Town* is not the only instance of the term “environmental sanitation” in the documents under study, however it demonstrates the trend of adding sanitation on to water continues. In *Paris*, the word “sanitation” appears twice tied to “water” and once in a fairly autonomous statement: “more than half of mankind [sic] lacks adequate sanitation”.

Bonn and Johannesburg are not much better, with sanitation mentioned only once in each document.

In *Bonn* it is at least given some prominence through an independent mention. In *Johannesburg*, though, the only time the word “sanitation” appears is within a long laundry list of “basic requirements such as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity”. The length of the list and the inclusion of too many important issues have the effect of reducing the impact of each word and therefore each issue listed.

Recovery

Although at first *Muscat* appears to repeat the less effective list mode, a few key differences can be noted that recover sanitation from obscurity. The main difference is that *Muscat* resists the simple repetition of the refrain “water and sanitation” by adding descriptive words that help specify the meaning. By writing out what is meant specifically, for example: “Water resources, irrigation, and sanitation” or “clean water and improved sanitation”, the monotony of the repetition is broken and the new words bring focus and depth to sanitation issues (Muscat 2009).

The increased focus on the problems posed by poor sanitation conditions to water quality and health continues to be central to Dushanbe. Here we find many mentions of sanitation, often as part of longer lists, but with enough semantic independence to make an impact.





SCIENCE & TECHNOLOGY

Reliable Technology

Given that the Declarations and Statements are designed to address some of the most persistent problems facing humanity, it is no surprise that science and technology maintain a fairly consistent presence in the documents under study. After all, science and technology continue to be important sources for innovation and the development of new approaches to problems such as contaminated drinking water. The consistency of science and technology does not mean that their representation is static with time, however. It is also notable that although we have grouped them together to reflect the commonly used concept of “S&T”, in the documents under study the word “technology” appears far more frequently than does science. This emphasis suggests that for their part the documents are more concerned about the application of science (i.e. technology) than the research end. This focus of the declarations highlights the need to implement and activate existing research in ways that would improve the quality of life and community health. The science may be there, but there exists a need for capacity-building, knowledge and/or technology-transfer, and links between the science and the policy in order to make the best use of this research base.

Defining the Role of S&T

What makes *Stockholm* unique is that science and technology is cited both as the cause of environmental destruction, as well as an important means of improving environmental health and quality. In fact, *Stockholm* is one of the strongest documents in terms of its treatment of science and technology, in both quantity and quality. This is one of the cases, too, however, where the relative length of *Stockholm* appears to play a part in providing the space necessary to go into detail about the key concepts. Consider this excerpt and how it carefully delineates the aspirational role of science and technology in the field of water and the environment: “Science and technology, as part of their contribution to economic and social development, must be applied to the identification, avoidance and control of environmental risks and the solution of environmental problems and for the common good of mankind [sic]” (*Stockholm* 1972).

Getting More Appropriate

By the time of *Mar del Plata*, we begin to see the appearance of the idea of “appropriate technology”. In *Mar del Plata* there are only two mentions of technology and both make reference to the need for “appropriate” and “cost-effective” technologies. Further, there is a call for the strengthening of “national scientific infrastructure” to support water management practices (Mar del Plata 1977). *New Delhi* sees an interesting expansion on *Mar del Plata*. It moves ahead both the ideas of appropriate and cost-effective technologies, and frames these within the context of delivering more socially-responsible and appropriate water and sanitation services. This is evidenced in two ways: the first is that appropriate technologies are touted as a way of making services “sustainable and socially acceptable”; the second is that the concept of choice is foregrounded. *New Delhi* suggests that it is most cost-effective to “[i]nvolve consumers in choice of technology and service level”. By concentrating on the level of the user of the technology (in terms of affordability and appropriateness), rather than simply the technology itself, *New Delhi* goes a long way towards placing technology in a social context.

The Social Sciences

Although the word “science” is conspicuously absent from *Dublin*, the word “technology” makes several notable appearances. As in *Stockholm*, the development of new technologies is seen as crucial to meeting the water needs of developing countries and it is requested that “substantial and immediate” commitments be made to this area. Twice in *Dublin* the word “technology” is linked to the idea of capacity-building (i.e. technology transfer). Following on *New Delhi*, then, we can see an effort to make technology a large part of supporting development as an ongoing, self-sustained project. The same commitment is renewed in *Rio*, which devotes an entire principle, Principle 9, to capacity-building with a strong focus on science and technology. For the first time there is an emphasis on “sharing” scientific and technological knowledge, a change which arises from an increased awareness of and sensitivity to the idea of local and indigenous knowledge, the latter of which is addressed in *Rio*’s Principle 22, which acknowledges that indigenous peoples hold unique and valuable contributions to environmental knowledge.

Likewise, the concept of appropriate technology and technology transfer—which again gestures to the sharing of knowledge—is echoed in *Cape Town*. *Paris* only offers one mention of technology, and none of science, but it does manage to do so extensively. Again, we see technology as part of a broader discussion about capacity-building, knowledge transfer and training. In addition, *Paris* gets slightly more technical by expanding on the simple term “technology”. *Paris* advocates “increased transfer of technology and expertise, the development of monitoring and information systems related to water resources and their different uses”.

These trends towards the socialization of technology continue in *Bonn*, *Johannesburg*, *Muscat* and *Dushanbe*. Through a single simple sentence, *Bonn* sums up the current position on the role of technology in the area of international water and sanitation provisioning: “New technologies can help; so can traditional techniques and indigenous knowledge”. The use of the semi-colon helps to balance out the focus among new and traditional technologies, while acknowledging that the primary, or common, focus, continues to be on new technologies. *Bonn*’s position is not upheld in *Johannesburg*, which names “modern technology” as key to addressing problems of uneven access to clean and safe water.

Coming Together

Of all the documents under study, *Muscat* devotes the most attention to science and technology. Technology appears both as “new” and “traditional”, acknowledging both sides of *Bonn*. *Muscat* offers specifics about technological interventions, such as artificially recharging groundwater sources. It continues to emphasize the potential for science and technology to be a basis for information sharing, for example through the following initiative: “Providing a searchable interactive database of scientists, centres and services to facilitate and encourage information sharing and cooperation among partners” (Muscat 2009). The detailed, repetitive engagement with both science and technology makes *Muscat* the strongest document in this category.

“Stockholm is one of the strongest documents in terms of its treatment of science and technology, in both quantity and quality... New Delhi goes a long way towards placing technology in a social context.”



POVERTY

An Undercurrent of Poverty

A survey of all of the documents under study shows a growing acknowledgment of the links between the lack of available clean and safe water, unsafe sanitation practices, and poverty. Although poverty does not always garner many specific mentions in the documents, it remains a consistent underlying concept, especially through the use of related terms such as “developing” nations. Although it may seem as if poverty is a separate issue, discussions of poverty are key to putting water into socio-economic perspective. In *Stockholm*, the term “the underprivileged” arises in a discussion about the need to educate the public, namely young people and “the underprivileged” about environmental issues. Here, the “underprivileged” are thus seen as potential causes of environmental harm or at the very least environmental ignorance. This is not the paradigm of poverty that is being discussed in the rest of the documents.

Two decades later, *Dublin* describes people living in poverty as the “unserved millions” and declares the “Alleviation of Poverty and Disease” a key priority. Although the issue of poverty is only directly mentioned once in *Dublin*, by providing the subject its own paragraph, poverty stands out as an important focus of the Declaration. In certain cases such as these, it is not the number of instances in which the word appears that indicates its strength, but rather the space and substance devoted to it. On the other hand, *Mar del Plata’s* single mention of the “poor and less privileged” as a top priority is less effective because the language is buried farther in a cumbersome paragraph.

The Eradication of Poverty

In the same year, Rio declared not that poverty be “alleviated” as in *Dublin*, but that it be “eradicated”. The word “eradicate” gains in popularity across time, namely in *Johannesburg*, *Dushanbe*, and in *Muscat*, where it is mentioned five times. The phrase “eradication of poverty” carries significant strength due to the firmness of the goal, that is, the total elimination of poverty. One thing that makes this statement weak, however, is the tension between the concept of poverty itself, being an economic state in which people suffer many material needs unmet, and the reality of people living in poverty. The phrase “eradicating poverty” talks about the state in which people live without talking about the people themselves. Therefore, although it makes a strong statement about poverty itself, it does not assist in developing ways of thinking about the people who live in poverty. *Rio* largely manages to circumvent this trap by emphasizing the human: “All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the

disparities in standards of living and better meet the needs of the majority of the people in the world". The acknowledgment that the economically impoverished are also the majority of the world's people reminds the reader that poverty is more often the rule, rather than the exception.

In another example, *New Delhi* demonstrates a simple way of adding substance to a term by diversifying it. *New Delhi* employs "poverty", "the poor" and "low-income" but often pairs these with the terms "urban" and "rural". These modifiers suggest that there are different experiences of poverty in different locations and according to different living patterns. *Cape Town* echoes this by commenting specifically on the "urban poor" and the emphatically termed "poorest of the poor". *New Delhi's* emphasis on "rural and low-income urban areas" seems to be an effort to describe what are colloquially known as "slums". Since the high-concentration of these types of urban settlements do pose different problems than the rural areas (which may face their own obstacles, such as remoteness and poor road access), it is extremely useful to bear these differences in mind when planning for water programs.

More than Eradication: Inclusion

If the term eradication risked overlooking the human side of poverty, then we need only look to *Paris* for examples of language that focuses on the people living in poverty. *Paris* calls for the inclusion of "people living in poverty and the disadvantaged groups" including indigenous peoples and youths, to be consulted and involved in decision-making.

The semantic insistence on the human in the term "people living in poverty" does the important work of making people primary, rather than allowing their poverty to define them (and if poverty defines them and poverty is eradicated, what of the people?). The insistence on placing the person before their socially-defined role (i.e. "people of colour" instead of "coloured people"; and "people living with a disability" instead of "disabled people") has been an important development in feminist, anti-racist and disability studies.

Although *Bonn* continues to use the term "the poor" to (inadequately) describe a very large and incredibly diverse number of people, it makes one interesting development, and that is the concept of "pro poor". According to *Bonn*, "Pro poor water policies focus on listening to the poor about their priority water security needs". Thus, although people living in poverty are greatly homogenized by this term, there is some attempt to recover the language of "the poor" through the adoption of a "pro poor" stance that is achieved through dialogue and consultation.

The most recent Declaration, *Dushanbe*, makes a more nuanced return to the language of eradication. *Dushanbe* combines the goal of poverty eradication with language of poverty reduction and "lifting people out of poverty". The Declaration also adds the term "vulnerable" alongside the word "poor" which, although it does little to personify poverty, at least draws attention to the level of risk faced by people living in poverty. Further, the word "vulnerable" has an affective quality that may resonate stronger with readers than the more banal "poor".





GENDER

A Late Start but a (Mostly) Clear Message

When it comes to discussing gender issues, the documents under study make something of a late start. Neither *Stockholm* nor *Mar del Plata* make any reference to the words “women” or “gender”. *Stockholm* makes a handful of references to “man” as a stand-in for humankind, but these are not counted in this analysis because it is not an attempt to dialogue with gendered issues surrounding politics and development in the way that we understand the word gender today. *Stockholm*’s sexist use of the masculine in place of the neutral should not, however, be justified as a mere anachronism since we see the appearance of the word “mankind” in the *Paris Declaration* at the close of the twentieth century; a fact which stands in stark contrast to otherwise prominent pronouncements about the need to be attuned to gender issues.

Despite these instances of sexist language, the Declarations overall make several attempts to address gender issues. Growing recognition of the burden (and associated negative effects) of finding, collecting, transporting, and treating water, falling disproportionately on the shoulders of women (and children) may have been a driver in this respect: *New Delhi* is the first to mention women, and twice it calls for women to not only participate, but to “lead” and have “influential roles”. These roles are envisioned at all levels of the water management and hygiene education sectors and, importantly, *New Delhi* attempts to strengthen this call for capacity-building by employing the language of “equal employment opportunities”. By using the language of labour, *New Delhi* offers substance to the vague call for women’s “participation”—here their participation is rightly called labour and an attempt is made to put in place fair compensation for this labour. Although this language is about empowerment, *New Delhi* is also quick to note that women are more often disempowered when it comes to water issues, stating that poor women, along with their children, are “the main victims” of “disease, drudgery and millions of deaths” due to a lack of essential services that include safe water and “environmental sanitation”.

***Dublin* adds to *New Delhi* by not only calling for the future participation of women, but acknowledging that women already “play a central part in the provision, management and safeguarding of water”.** By outlining women’s diverse roles related to water, *Dublin* helps delineate why gender is an important factor in discussing water. *Rio* follows in *Dublin*’s footsteps by issuing a Principle devoted to the recognition of women’s “full participation” as crucial to achieving sustainable development. This lingering concept of “full participation”, however, acknowledges the need to have women participate but

it does not help outline any potential barriers to participation, nor does it touch on issues of inequality at all. In terms of participation, *Cape Town*, which contains some fairly solid language about women, calls not only for the participation of women, but also for support to allow and encourage women's groups to take part in decision-making.

Towards Equality

***Paris* carries forward the language of *New Delhi* by focusing on women as both resource for water management, and a group most disadvantaged by poor water management.** Here women are talked about alongside the categories of “people living in poverty” and “disadvantaged groups”. *Paris* mentions women three times, and in some detail, in their capacity as users and managers of water. Interestingly, *Paris* employs the term “men and women” in one instance when calling for “the involvement of both men and women”. This distinction seems to add depth by identifying both groups of people in an inclusive way while maintaining the reality of difference that best reflects water use in the global South.

One instance where this technique fails to add depth is in *Bonn*, where too many categories of people are listed. *Bonn's* oddly-phrased list includes “women and men, farmer and fisher, young and old, town and country dweller”. The use of the colloquial “dweller” may seem jarring against the language of the other Declarations, but it does fit in somewhat with the more relaxed tone of *Bonn* itself. As the only mention of women or gender, however, this list offers a very superficial treatment of the issue.

***Johannesburg* underscores its commitment to the needs and capacities of women by invoking the language of “empowerment and emancipation”.** Moreover, *Johannesburg* is only the second Declaration in which the word “gender” appears in a call for equality (the first was *New Delhi*). *Johannesburg's* approach is to state in one paragraph that the principles of gender equality and the participation of women will be “integrated in all activities encompassed within Agenda 21, the Millennium Development Goals and the Johannesburg Plan of Implementation”. Such a statement is at once strikingly strong, and at the same time lacking in any tangible specifics. In either case, it offers far more substance than does *Muscat*, in which there is only one very minor reference at all to gender issues.

Women and Children First

Where *Cape Town* only alluded to barriers that might be in place against women's participation in water issues, *Dushanbe* reaffirms the fact that women face specific barriers in even accessing and obtaining safe drinking water. *Dushanbe* acknowledges that women and children are the hardest hit by issues of insufficient or unsafe water and inappropriate or unsafe sanitation facilities. The ongoing need to include women in making the decisions that could improve their access to safer drinking water is also a key concern in *Dushanbe*. By stating both the hardships of women and children, as well as the need for their ongoing involvement, *Dushanbe* offers some of the strongest, most robust language on gender issues of all the Declarations under study.





FOOD

Eating without Drinking

There seems to be some uncertainty about the role of food in the Declarations. Of all 11 documents under study, four do not mention food at all (these are: *Mar del Plata*, *New Delhi*, *Rio*, and *Cape Town*). Focus on food began in earnest following *Paris*, after which it became a frequent and growing theme. *Dublin* stands as an anomaly in this chronology and there we find a significant focus on food, and even with the use of the term “food security” which becomes a common term in the later documents. In addition to the term “food security” and the link to the word “agriculture”, *Dublin* uses the verb “eat”, as in “At the start of the 1990s, more than a quarter of the world’s population still lack the basic human needs of enough food to eat, a clean water supply and hygienic means of sanitation”. The addition of this verb draws attention to the active need for food, and rhetorically links the abstract word “food” to the concept of eating, which may have the effect of more of a personal impact on the reader. *Stockholm* comes near this type of affective response when it lists both “adequate food and clothing” as unmet needs of the impoverished majority. Like the process of eating, the idea of clothing is also personal and thus adds depth to the word “food”.

(In)Security

In later Declarations, as we mentioned, the language switches to the term “food security”, with security being an important and perhaps dominant concept in the 21st century. *Bonn*, *Johannesburg*, *Muscat* and *Dushanbe* (and *Dublin*, as mentioned above) all employ the term “food security” to describe the goal of making food available to those (often chronically) in need. *Paris* and *Bonn* both make explicit the fact that water is key to food production and food security. In fact, the first *Bonn* Key states that water is key to the “security needs of the poor”, which include “food production and security”. This is probably the most prominent position that food receives in any of the Declarations.

Because the language of security is being used to describe both water and food sources, this overlap may provide space for forging stronger links between the goals of providing food and water and water for food. On the other hand, because the language of security is more often invoked in terms of prohibition than in the sense of securing needs for people, it is possible, too, that this term will create more barriers than it will bridges. If *Dushanbe* is any indication, security speak will continue to dominate discussions of global issues in the coming years. *Dushanbe* not only employs security to discuss food, but it also speaks to physical (i.e. personal) security as well as energy security.



CLIMATE CHANGE

The issue of climate change, or global warming, does not appear in the documents under study until *Dublin*, after which it disappears, returns briefly in *Paris*, is absent in *Bonn*, and makes a steady reappearance from *Johannesburg* onwards. In this way the topic of climate change functions as a sort of sign of the times, garnering attention in the early 1990s, and becoming entrenched in global discourse by the 2000s. *Dublin* calls for global monitoring of the climate change situation and warns that “global warming” is a real threat. Both terms are used interchangeably in *Dublin* as well as in *Muscat*, whereas in *Dushanbe* only the term “climate change” appears—and it does so seven times. *Paris* is only counted as a brief, or very shallow mention, because the term “climate change” only occurs in reference to a past convention, rather than in a discussion of the issue directly.

Dushanbe represents the concept of climate change in a deeper manner through complex and repeated mentions, in which the relationship between water, climate change, and people’s well-being is thoroughly discussed. Especially interesting is the way in which climate change is compared with the economic crisis as two significant global obstacles to the implementation of water programs. This pairing lends the issue a gravity which stands in contrast to the way in which climate change was treated as an impending future threat in *Dublin*. Climate change has gone from something to worry about in future years to one of the most significant concerns of our day.

“The issue of climate change... does not appear... until Dublin, after which it disappears, returns briefly in Paris, is absent in Bonn, and makes a steady reappearance from Johannesburg onwards.”



HEALTH

Tracking Health

Health is a difficult term to track in the documents because of its close links to the concept of water quality. When describing water quality, the documents often invoke words like “safe” and “clean” to denote the relationship between water and health—a relationship which largely is determined by water quality (as well as quantity, of course). Good quality water, it follows, is water that does not have negative impacts on health, such as the spread of common diseases like diarrhea. Water is also key to another crucial element of health: food and nutrition. Water, quite obviously, is required in the production of food, which is required for life itself. Despite these important interdependencies, when it comes to using the word “health” specifically, the documents reveal some unevenness.

Listing Health

In some cases, the word “health” is underused to the point where it barely makes an impact on the overall document. *Stockholm* is the first example of this, where “health” only appears twice amongst long lists of pressing issues. In *Mar del Plata*, “health” only appears by default when the World Health Organization is mentioned. *Paris* presents “health” in list form only, however the list is shorter than it is in *Stockholm*, and presents a directness which lends the issue some prominence. For example, “water resources are essential for satisfying basic human needs, health, energy and food production, and the preservation of ecosystems, as well as for social and economic development” (Paris 1998). Although the list is long, there is an obvious relationship between the items listed

“when it comes to using the word “health” specifically, the documents reveal some unevenness.”

and the placement of health is near the top of the list, signaling its importance. By contrast, *Johannesburg* contains a list that is less effective at showcasing each of its items. *Johannesburg* reads: to “speedily increase access to basic requirements such as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity”. The addition of the phrase “such as” represents each item as an interchangeable example, rather than as independent yet interrelated issues.

***Dublin* also uses the list form to discuss health, but its prominent place within the Statement gives it more weight than the above documents.** The second sentence of *Dublin's* introduction announces that “[h]uman health and welfare, food security, industrial development and the ecosystems on which they depend are all at risk, unless water and land resources are managed more effectively in the present decade and beyond than they have been in the past”. Again we find that it is these simple expansions on the expected vocabulary, such as “human health and welfare” instead of merely “health”, that contribute to the relative depth of the key terms in certain documents over others.

Most recently, *Dushanbe* returns to the list form, striking a satisfactory balance between the different modes. Although the word “health” twice appears in fairly long lists, the terms listed are connected and equally weighted in a way that respects each one. *Dushanbe's* best contribution to the discourse is in adding the terms “public health” and “healthy society” because of the way they demand that we concentrate on the community as a connected body rather than on an autonomous individual.

In Other Words: Health

In some cases, the discourse around health follows less predictable courses. In *Muscat*, for example, the word “health” only appears once, and that is in a paragraph on the merits of biotechnology. In *Rio*, the discussion about health is almost entirely about ecological health, rather than human health, which is the primary focus of the other documents. The one mention of human health urges States to cease the transnational dumping of toxic substances which pose a threat to both environmental and human health. Even in this case, then, the larger focus is on environmental conditions and human health effects are secondary.





CONCLUSIONS

This study has approached these Declarations, Statements and Keys with a specific and narrow agenda: to analyze and evaluate the treatment and representation of a set of key words related to water. Following this, a number of conclusions can be made about the overall effectiveness of the documents with regard to these key words, and to water issues more generally. The conclusions reached do not necessarily speak to whether or not these documents have achieved the political or material goals they set out to achieve. That is to say, this study is not meant to assess the effectiveness of these documents on the ground per se. (See, for example, Biswas 2004, 2009, Panjabi 1993).

Rather, this study has drawn attention to the importance of language by reading significant UN documents as texts. This type of textual analysis reveals information about the representation of these key words that are not visible if we are focusing on the outcomes of these high-level meetings. Tracing the relative importance of, say, health versus science and technology in forty years of UN documents gives insight into the worldviews of the authors as well as the times in which they were writing. In this way, textual analysis allows us to see how texts both reflect the world as it is and take on their own meanings which will continue to shape the world they are a part of.

At the end of the day, Declarations are intentions or calls to action recorded for posterity. Words have meaning and power. Drafters of such documents can debate for hours about the simple placement of a punctuation mark or argue about *le mot juste*. The gravity of the wording of these documents is paramount to the writers, and we see our project aligning with theirs.

We have traced both deepening and shallowing of language pertaining to certain of our keywords. Some of these shifts will have been deliberate, based on global developments and emerging priorities. We consider, however, that some of the shallowing in particular may have occurred by default, with resolution drafters not taking into account what was said and recorded before.

There is clear potential for further study to broaden the initial analysis we have undertaken; for instance other terms and sectors and/or various longer documents associated with the statements could be examined, and a map of the geographic references in the various declarations might be instructive. We anticipate that

our examination of water discourse over four decades will prove useful to drafters of resolutions to come, prompting them to more deliberately focus on what progress has (or has not) been made on water-related issues *vis a vis* previous declarations and think about how best to advance the cause of water, the most important issue of the next forty years.

Ultimately, Rio+20 must look to the future by drawing on the lessons of the past including those drawn from the wording of declarations made over the last four decades. In contrast to the original Rio declaration, water should not only actually appear in any outcomes of Rio+20, but the language used should reflect mindful and cumulative deepening.





MOVING FORWARD

Right now ministers of the member-states of the United Nations are preparing for the upcoming “Rio+20, United Nations Conference on Sustainable Development,” in June 2012. Two themes for the conference have been decided on, including the green economy in the context of sustainable development and poverty eradication as well as the institutional framework for sustainable development. There is great anticipation surrounding these high-level conferences and the documents produced will no doubt be influential in shaping environmental and social initiatives in the years to come.

In anticipation of this conference, there are a number of things we can take from our review of the last four decades of UN Declarations and Statements. The following are a series of suggestions drawn from our analysis of some of the most effective strategies for highlighting and strengthening key concepts. These suggestions – relating both to our key words, and to the written language - could be useful in helping to delineate terms such as “the green economy” which have enormous potential but need definition and clarity.

Words Matter!

Aim for a varied vocabulary. When tracing the key terms across the documents, one thing which made the terms appear fresh was the employment of varied vocabulary. Even the simple change between “water”, “water supply”, “clean water”, “safe water”, and “drinking water” suggested a different emphasis each time and helped to round-out an often-used word. The risk with such an over-used term is that its repetition renders it dull, and there is a tendency to skip over such words when reading.

Choose active language that engages the reader. One of the best examples of active language is found in the Bonn Keys, which employs short, declarative sentences and the present tense to describe the water crisis and its solutions. An example of more passive language can be found in *Rio*, in which future-oriented Statements are prefixed by the word “shall” instead, as in “Nations shall agree to...” The difference between the two is that *Bonn* reads as an imperative and *Rio* reads as a suggestion.

Stay focused by resisting the ease of lists. Burying a key term in a long list of other important issues proved to weaken it by distracting attention from the term itself. Lists were most effective when the listed terms were directly connected, with one item building on the next in a meaningful way.

Be clear and specific by avoiding vague or ambiguous language. One of the drawbacks of the shorter formats of the Declarations and Statements is that there is not enough space to offer extensive and comprehensive definitions of all the key terms. (Just what does “clean” or “safe” water mean?) In some instances, however, vague language weakened the writing. Short definitions could help give the useful meaning to the terms and thus add strength to the documents themselves.

Avoid euphemisms, discuss issues frankly. In the case of sanitation, for instance, the sterility of the term itself does the concept a disservice by insufficiently describing the gravity of the need to contain human waste. The term “human waste disposal” is perhaps crude, but it is clear that it offers a more accurate description of the problem that may serve to better

motivate action. Likewise, a more descriptive term may help us confront the taboos and stigmas that surround discussions of defecation.

Don’t homogenize, personalize. The use of person-first language acknowledges that people are the priority and that poverty is a material and economic state rather than a category of people. Such language should be encouraged in future Statements and Declarations. Further, effort should be devoted to recognize the diversity within the situation of poverty rather than paving over differences with homogenizing language.

Give each word its due by refusing tag-alongs. In many of the documents, as we saw, the word “sanitation” mostly appeared following the word “water” in a repetitive manner. This type of tokenism made the word “sanitation” appear as if it were an afterthought rather than a genuine focus in and of itself. The tag-along does, however, successfully link two interdependent terms, like water and sanitation, and it can work if separate attention is given to the term at some point in the document.







POSTSCRIPT

The Road to Rio+20 - via Stockholm again

One of the premier water-related global gatherings, the World Water Week (WWW) is held annually in Stockholm. As we were finalizing this paper, the 2011 iteration off WWW concluded in August 2011 with the issuance of “*The Stockholm Statement to the 2012 United Nations Conference on Sustainable Development in Rio de Janeiro (Rio+20 Summit)*”⁶. Although it is not an official UN declaration or conference, the “*Stockholm Statement*” (hereafter *Stockholm 2011*) was endorsed by an assortment of parties, including UN-Water, the coordinating mechanism for the 28 UN agencies that deal with water issues.

Two strong and distinct themes emerge from *Stockholm 2011*, and those are (green) economy and energy. The opening sentence of *Stockholm 2011* uses a strong metaphor, declaring water to be the “bloodstream” of the green economy. The rest of the document describes how water can both promote and threaten economic growth and stability within the context of a healthy society.

Although the theme of economy has made some appearances in past declarations, *Stockholm 2011* is unmatched in its determination to link water health with economic health. Another important link made in *Stockholm 2011* is between water, energy and food, principally in four references in a single page to the need to provide “water, energy and food security”. Not only does this resolve the ongoing failure to connect food and water, but it introduces a new and crucial element—energy, which as this document suggests, will play an important part in defining the concerns of Rio+20.

There are at least two areas where *Stockholm 2011* could have been improved in light of our findings. The first is in the area of sanitation, which suffers the same weak vocabulary problems as ever. The second has to do with the treatment of poverty. The term ‘bottom billion’ is evocative and effective in conveying the scale of the problem of global poverty, but it does little to humanize or diversify the picture of people living at-risk.

Finally, a note on the language: *Stockholm 2011* employs several catchy phrases such as “from field to fork” and “more nutrition and crop per drop” which, through alliteration and rhyme, offer memorable, digestible goals for readers to retain. Small changes, such as the wording we use, can help shape the impact and outcomes of these high-level meetings. The conversations we have and the language we use also reflect our thinking. There is much excitement over the power and potential of the upcoming Rio+20 Summit, and the conversations held there and the documents produced will say much about our environmental consciousness.

⁶http://www.worldwaterweek.org/documents/WWW_PDF/2011/2011-Stockholm-Statement.pdf (Accessed 08-09-2011)



APPENDIX 1

Notes on the Documents

STOCKHOLM (1972)

The “Stockholm Declaration of the United Nations Conference on the Human Environment” is probably the most environmentally-centered document of all those under study. Water plays a fairly prominent role. *Stockholm* has a strong focus on natural resources and ecological health, underlying which is an uncertainty about the human place in the environment: if humans are largely responsible for so much environmental destruction, it asks, how can we also take responsibility for its regeneration? As far as social issues go, *Stockholm* is the least developed, or perhaps more accurately, is the most out-of-date. Its focus on poverty, for instance, is largely couched in terms of the threat of underdevelopment to the health of the environment. Also out-of-date is the sometimes moralistic, always flowery, and often highly rhetorical language that stands in contrast to the often neutral tones of the later documents—that said, a little of the narrative voice could help bring life to some of the more descriptive documents. Where *Stockholm* shines, in terms of our key terms, is in its commitment to exploring science and technology as sources for environmental betterment.

MAR DEL PLATA (1977)

The “United Nations Water Conference – Resolutions” that resulted from the *Mar del Plata* conference can be seen as laying the groundwork for the documents that followed. The prescriptive language of the Resolutions is forward-looking and is therefore well-suited for use as a reference document when creating national or international policy. The “Stockholm Declaration” looked to the past as well as the future, something which has since been lost. Although *Stockholm* did this with a flourish that is perhaps excessive (e.g. “In the long and tortuous evolution of the human race on this planet”), it is worth considering whether breaking from history is a change in the best direction. The *Mar del Plata* resolutions are very much focused on water and have done a good job articulating the concepts of sanitation, water scarcity and especially water quality through the adoption of the term “safe water”. *Mar del Plata* lay some of the groundwork for the concept of equity, even if it failed to mention gender or pay directed attention to the issue of poverty.

NEW DELHI (1990)

The “New Delhi Statement” opens with the tagline “[s]ome for all rather than more for some” and an imperative that all nations should work towards fulfilling the two basic needs of healthy water and healthy sanitation. *New Delhi* covers these basics and goes beyond by offering a more holistic picture of water issues, addressing everything from employment equity and education to economics and geographical differences. The focus on poverty and gender mark a great difference from *Mar del Plata* and give an indication of the paradigm shift between the 1970s and the 1990s. Stylistically, *New Delhi* abandons the bullet-points model of *Mar del Plata* in favour of fuller paragraphs and a longer overall document, providing the space necessary to accommodate this more holistic view.

DUBLIN (1992)

In some ways, the “Dublin Statement” harkens back to *Stockholm*, with its strong environmental focus, the difference being that *Dublin* aligns this with an equal concern for and engagement with social welfare. *Dublin* is quite a comprehensive document in that it covers all of the key terms we used and in most cases added some depth to the concept. One theme that *Dublin* covers well but that we were unable to address here is that of over-consumption. *Dublin* has its eye focused on the so-called developed world as much as it does on the global South, and this is a refreshing change. In terms of formatting, *Dublin* used the bullet-style to announce its four principles in very readable fashion and accompanied those with shorter descriptive paragraphs.

RIO (1992)

The word “water” does not appear once in the “Rio Declaration on Environment and Development”. Granted, the focus of this Declaration is not specifically water, but the same is true of other documents as well, such as *Stockholm* and *Johannesburg*, which do also cover water. Likewise, few of our other key terms appear in *Rio*, the exceptions being “Science and Technology”, “Poverty”, Gender”, and “Health”. With the other documents proclaiming water key to environmental health and social welfare and development, it is certainly interesting that *Rio* manages to leave water out of the picture. This is likely because *Rio* is focused on the global mechanisms of how to achieve sustainable development and it does not break down the elements of this sustainable development. *Rio* speaks in broad and sometimes vague terms about “the environment” and yet offers specifics about how responsibility for the environmental crisis should be divided among nations. *Rio* also employs more formal language and can come across as a much dryer text. However, this occasionally results in Statements that have a strength of conviction that other, more descriptive documents lack, such as “[p]eace, development and environmental protection are interdependent and indivisible” (Rio 1992).

CAPE TOWN (1997)

The “Cape Town Declaration” is similar to *Rio* in that it is strongly focused on directing governments towards collaboration and cooperation regarding pressing environmental and social issues. That said, *Cape Town* is also issue-driven and engages directly in the issues of safe drinking water and improved sanitation. *Cape Town* does a good job at contextualizing the issues rather than treating them in the abstract. A good example of this is *Cape Town’s* discussions of urban water quality issues, and the problem of water scarcity in Africa in particular.

PARIS (1998)

The “Paris Declaration” strikes a very good balance between being issue-based and being prescriptive. Some of the longer documents, such as *Dublin*, do such a good job at providing background information about water issues that it is possible when reading to lose sight of the purpose of the document. Others, such as *Rio* and to a lesser degree *Cape Town*, provide perhaps too little description of the environmental and social crises that they are designed to address. *Paris* is organized in a manner that offers both sufficient background on the issues and strong directives for governments moving forward.



BONN (2001)

The “Bonn Keys” are succinct and compelling, relying on positive rhetoric to rally concern and action. There is a strong use of the active voice that helps *Bonn* address the present situation and the need for immediate action in a lively way.

JOHANNESBURG (2002)

The “Johannesburg Declaration on Sustainable Development” situates itself amongst the long history of UN conferences with a view of assessing the past and moving forward. In this way, it provides an excellent overview of the priorities across time. One way in which *Johannesburg* distinguishes itself is by identifying the barriers and challenges to building sustainable development in very specific language, for example the problem of xenophobia and the epidemic of HIV/AIDS.

MUSCAT (2009)

The “Muscat Declaration on Water” opens by announcing a focus on both the human and ecological environments, which is an important combination for addressing the water crisis in a holistic manner. Another important strength of *Muscat* is its emphasis on the South and on South-South cooperation. This is the type of collaboration that Rio+20 would do well to continue to support.

DUSHANBE (2010)

Although a handful of other documents also touch on armed conflict as an obstacle to providing water services, the “Dushanbe Declaration on Water” takes a different approach by framing water as a means for greater cooperation. *Dushanbe* argues that water more often brings people together than it does create conflict. This optimism could be borrowed to conceptualize water as a positive global tool, rather than as a perennial source of problems.

*“water resources are essential for satisfying basic human needs, health, energy and food production, and the preservation of ecosystems, as well as for social and economic development”
(Paris 1998)*

MAR DEL PLATA ACTION PLAN

The United Nations Water Conference,

Realizing that the accelerated development and orderly administration of water resources constitute a key factor in efforts to improve the economic and social conditions of mankind, especially in the developing countries, and that it will not be possible to ensure a better quality of life and promote human dignity and happiness unless specific and concerted action is taken to find solutions and to apply them at the national, regional and international levels,

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