From Rio to Reality: Who is Taking the Lead?
Exploring Water Leadership

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ABSTRACT: In the slipstream of the Rio+20 Earth Summit in 2012 that articulated *The Future We Want*, UNESCO-IHE has convened development practitioners, researchers, sector specialists, policy makers, and capacity development specialists to the 5th Delft Symposium on Water Sector Capacity Development on 29-31 May 2013 to examine who is taking the lead in developing capacity 'from Rio to Reality.' This paper maps some of the major challenges and choices to increase water security in the 21st century; outlines trends and relevant models in leadership development; and explores how leadership can be nurtured and catalyzed through capacity development for individuals, organizations, and networked communities to deliver on our shared visions, especially in developing countries. The author argues to adopt modern approaches that will expand individual and collective leadership at all levels and combine cognitive competencies, including deep knowledge of integrated water resources management, with transformational individual development.[2]

Note: This draft paper aims to frame and stimulate discussions at the Symposium, and will be finalized afterwards with the benefit of insights from the participants.

A Call for 1,000 Water Leaders

In June 2007, a rallying cry was heard in Delft for 1,000 water leaders in Africa and Asia. It came at the end of three days of discussions at the 4th Deflt Symposium on Water Sector Capacity Development which focused on developing local capacity and knowledge in a changing world.

Six years later in 2013, development practitioners, researchers, sector specialists, policy makers, and capacity development specialists are returning to UNESCO-IHE in Delft to take stock of progress made around the world, and to review challenges, experience, and innovation. With a theme of 'who's taking the lead in developing capacity from Rio to reality,' the focus of the 2013 symposium is on leadership and making a difference.

Water Security from Rio to Reality

The Rio+20 Earth Summit in 2012 produced *The Future We Want* (United Nations, 2012). The document itself, and the process of its preparation, demonstrate a shift in the international community towards developing countries in "the South" contributing more leadership in charting the world's path to sustainable development and green growth.

The summit also heralded a variety of new processes to create a post-2015 framework for sustainable development, supported by a new generation of indicators and targets to measure progress and achievement. Developing countries have taken on leading

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roles in these initiatives, thereby claiming more ownership in the decision-making processes that affect their development paths in an ever more connected world.

Meanwhile, the World Economic Forum has alerted leaders for several years in a row to the increasingly connected global risks of water, food, energy and climate security. This has prompted high-level attention in governments, board rooms, and civil society forums to explore how to lower these risks through collaborative partnerships and breaking the silo mindsets of business-as-usual improvements within sectors (World Economic Forum, 2013). The 2nd Asia-Pacific Water Summit on 19-20 May 2013 in Chiang Mai brought together heads of state and government, as well as leaders from government, international organizations, the private sector, and civil society, to commit to an agenda for national and regional actions to increase water security and reduce risks from water-related disasters.

Water security is a complex challenge, and is increasingly seen as an outcome of the process of integrated water resources management (Ait-Kadi and Lincklaen Arriëns, 2012). Measuring performance, convening the players, and growing our knowledge, with new skills, tools, and capacities, are keys for success.

Figure 1. Five key dimensions of water security.

Source: *Asian Water Development Outlook 2013*.

A landmark study published by the Asian Development Bank and the Asia-Pacific Water Forum, *Asian Water Development Outlook 2013*, sets out that increasing national water security requires simultaneous investments and good governance for five key dimensions: household water security, economic water security, urban water security, environmental water security (healthy rivers), and resilience to water-related disasters. This is shown in Figure 1.

More than 75% of the countries and more than 90% of the people in the region were found to lack water security, with many countries at risk of an imminent water crisis. (ADB and APWF, 2013)

To support investments in water security, capacity development in individuals, organizations, and sector institutions is key. This has been ably demonstrated by the previous four Delft symposia (Luijendijk and Lincklaen Arriëns, 2007). The development of

capacity also needs to be measured and monitored, distinct from the outcomes of the IWRM process. This is a major undertaking, and also an evolving challenge.

A Wider Landscape of Capacity

As engagement for water security grows with more players being convened, more local knowledge included, and more silos torn down to make way for synergy among water-related sectors (commonly referred to as a nexus), the landscape of capacity development is becoming significantly wider. This should lead to a review of the earlier frameworks for measuring capacity development in the water "sector," which were also predominantly focused on public sector organizations. How, for example, to account for growing water management capacity in the private sector, in hydropower companies, and in civil society, including practitioner networks? And how to strengthen capacity through partnerships?

Furthermore, as more boundaries are spanned, the notion of a water "sector" and "water sector capacity development" will need to make way for an updated and more inclusive framework, with strong ownership in the developing countries.
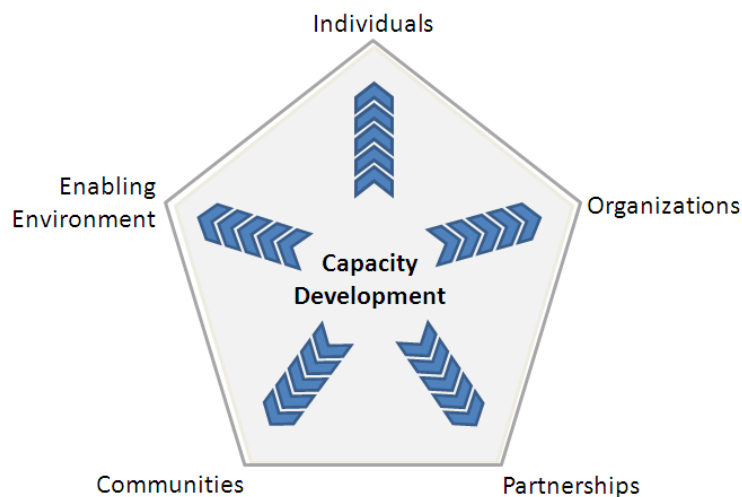

Figure 2. Five key dimensions of capacity development.

Figure 2 offers a framework for capacity development that transcends and includes the earlier three dimensions recognized during the earlier Delft symposia: individuals, organizations (including teams), and the enabling environment (policies, legislation, information, culture). Drawing on the work of the Center for Creative Leadership (Petrie, 2011) and the Leadership Learning Community (Meehan and Reinelt, 2012a), two key dimensions were added: (i) for partnerships between two organizations, between public and private entities (PPP), or broader government-corporate-society (GCS) partnerships); and (ii) for communities (for example, communities of practice, networks, associations, and also local communities and larger segments of society working together as communities, both in person and online). Instruments are needed to measure increases in capacity in these five dimensions of capacity and, from their interplay, to assess how the whole is more than an addition of the parts.

What are the implications of this wider capacity landscape for the development of water leaders and leadership? Who takes the lead? When, where, how, and how to catalyze and measure the outcomes? The traditional ways of leadership development focused on individuals only (mostly senior leaders), and while effective, they were slow. There is an urgent need to explore how leadership development can be catalyzed through new approaches.

Making Smart Choices

Several scales (or arenas) are recognized for increasing water security: countries (also the enabling environment for national water reforms), river basins, cities and towns, local communities, as well as supra-national arenas such as subregions and regions of the world, and the global community.

The range of challenges and choices to increase water security are reflected in some of the results of the 1st Asia-Netherlands Water Learning Week in Delft in 2012, where more than 30 water leaders from Asia explored with their counterparts in the Netherlands how to make smart choices to increase water security and green growth.

Topics attracting wide interest were how to leverage green infrastructure for water security; how to build and finance public-private partnerships for water infrastructure and services; how to adapt delta cities to climate change and sea-level rise; and how to modernize water legislation. Such choices affect the organizations concerned (with change led by individuals and teams), their partnerships, as well as institutions in the enabling environment (such as policies and legislation, and reforms, for example the choice to combine the ministries of infrastructure and environment in the Netherlands into one).

The leaders also explored smart choices that will generate momentum across sectors, with new partnerships for change and policy-making, for example to harmonize spatial planning and integrated water resources management. Pursuing public-private partnerships (PPP) would allow governments to move faster in project execution, with a transfer of some risks from the public to the corporate or private service provider, and often with a beneficial transfer of innovative knowledge and smart technology to the public sector. And by engaging a wider government-corporate-society (GCS) partnership model, the involvement of the community and sustainability of the project could be supported.

Innovation 'outside the water box' involved engaging the water-food-energy nexus and the links with land management and climate change. Smart choices were also discussed in managing the expansion of cities, in the financing and contracting of strategic infrastructure projects for water security, and in combining climate proofing with the improvement of livable cities.

Leaders agreed that improving water governance lies at the heart of water security. In governing for results, the quality of processes and partnerships were found to be increasingly inseparable from the desired outcomes. The challenge is to make integrated solutions work together. This resonates with the experience of the International WaterCentre in Brisbane, which stressed that the quality of the process for developing a shared vision is more important than the vision itself, and that this process needs to be revitalized repeatedly to maintain momentum for results (Chandler, 2013).

Who is taking the lead in these choices and changes? The number of players has increased. How can leadership by countries, communities, partnerships, organizations, and individuals be stimulated, enabled, and supported? What are the trends, and the implications for the capacities needed, and how to development these? And what are the consequences for improving education and awareness?

Three Shifts in Leadership

In examining opportunities to develop leadership capacity for increasing water security, we can draw on rapidly evolving research into leadership and its development around the world. Three shifts in leadership thinking and practice are noted in particular for their significance in catalyzing shared visions, effective projects, and sustained outcomes.

First, there is a trend to expand leadership capacity away from vertical hierarchies to reach horizontally *across* boundaries of organizations, functions, disciplines, expertise, stakeholders, cultures, and geographical areas.

Second, leadership is no longer seen as limited to the domain of executives (who hold positions with formal authority). The focus of leadership development is rapidly expanding to non-executive younger leaders, and even further to youth leaders. And it is increasingly recognized that younger leaders are more adept to exercise influence collectively through groups.

Third, there is a growing recognition that leadership development needs to go much deeper than training courses and workshops that offer additional skills. Modern leadership development engages experiential learning (personal mastery) that expands self-awareness and nurtures transformation through challenges 'on the job,' with personal development plans and continuous feedback through coaching and mentoring to manifest behavior change and deliver results.

Leadership Shifts

1. Leaders reach across boundaries.
2. Non-executive younger leaders will influence collectively.
3. Personal mastery empowers every leader's transformation and results.

Petrie (2011) compares skills training for leaders to 'filling the glass,' whereas modern programs will allow leaders to 'expand their glass' as well as fill it. Incorporating these shifts into the design of leadership development programs will allow water leaders at all levels to engage and influence more effectively in today's environment, which is characterized by being more volatile, uncertain, complex and ambiguous (VUCA) than the past.

For leaders to operate effectively in these changing conditions, research by the Center for Creative Leadership has pointed out that the most-needed leadership competencies ten years from now are adaptability, effective communication, learning agility, multicultural awareness, self-motivation, and collaboration (Van Velsor and Wright, 2012).

Water leaders, in particular, need to be systems thinkers who are comfortable with ambiguity and able to recognize and cut through complexity with effective solution strategies. Boelee and Reiziger (2013) explain that water leaders also need to cultivate in-depth knowledge of the process of integrated water resources management (IWRM) to increase water security. They will also need to be familiar with, and competent to apply multi- and transdisciplinary approaches.

Leadership Trends and Insights

The concept of leadership is nowadays increasingly understood as having to do with getting an organization or group of people "from A to B(etter)," in other words, what it takes to make a change or a journey to a desired outcome. Earlier definitions tended to focus on the capacity of a person as leader. Bennis (1994) defined leadership as "a function of knowing yourself, having a vision that is well communicated, building trust among colleagues, and taking effective action to realize your own leadership potential." To achieve this, one needs influence, and Maxwell (1998) said that "the true measure of leadership is influence, nothing more, nothing less."

For this paper, we follow Horth and Vehar (2012) and Taylor and McIntosh (2012) in combining these notions, and we define leadership as a process of influence by which an individual or group creates direction, alignment and commitment for their shared work. This typically involves creating a shared vision, mobilizing resources, and generating momentum towards results. Drawing on Kotter (2001), McIntosh explains that leadership behaviors involve establishing direction, aligning resources, generating motivation and providing inspiration. In contrast, key management behaviours involve planning, budgeting, organising, staffing, controlling and problem solving.

The field of leadership studies is wide and evolving rapidly, with many styles, methods and models being researched and advocated. Reams (2005) describes how it evolved from trait theory (related to "great man" or heroic theory) in the early part of the 20th century, associating "innate qualities or characteristics" possessed by leaders, to style

theory, which formalized leadership "as a form of activity" and focusing on the elements of "tasks and relationships."

In the 1930s, leadership's relational aspect was linked with group dynamics theory, with a definition of leadership as a social process, stating it as "personality in action under group conditions" Rost (1991). In the late 1960s, situational leadership theory emerged, recognizing that different situations call for different kinds of leadership, and introducing the importance of the context in which leadership is exercised (Northouse, 2001).

Transformational leadership (Burns, 1978) focused on the process of inspiring and motivating followers to take action. More recently, competency theory applies modern psychological frameworks and suggests that effective leaders "must possess a specific set of abilities or competencies" (Thomas, 2013). Other leadership theories that have evolved over the years explore charismatic, visionary, transactional, strategic, emergent, servant, resonant, primal, centered, contingent, strengths-based, and boundary spanning dimensions or styles of leadership.

The introduction of integral theory since the 1970s by philosopher and theorist Ken Wilber has given rise to the exploration of integral leadership theory, which seeks to recognize and accommodate all the other leadership theories and styles into a comprehensive integral framework (Thomas and Volckmann, 2011). Integral theory seeks to apply an approach that is "comprehensive, inclusive, non-marginalizing, and embracing." This is highly relevant to IWRM and water security.

It is important to recognize that the development of leadership theory is correlated with the evolution of predominant worldviews over the same period, and that the effectiveness of leadership styles will be correlated to the relevance of those worldviews for people at any particular time and situation (Thomas, 2013). Integral leadership theory recognizes the evolution of worldviews (from imperial to traditional, modern, postmodern, and integral), and correlates these with relevant leadership styles (from autocratic to authoritarian, strategic, collaborative, and integral), and action logics (from opportunist to diplomat/expert, achiever, individualist, and strategist). An action logic expresses how a leader "interprets his own or other behavior and how they maintain power or protect against threats" (Rooke and Torbert, 2011, and Torbert, 2004).

What this means for water leaders is that making recommendations for change as part of the IWRM process should take into account the prevailing worldviews of the stakeholders involved in the project or basin, who may respond to different messages in a different way.

How to Develop Leadership

In the 20th century, leadership development was associated with people in formal and senior leadership positions, like executives and politicians (Taylor and McIntosh, 2012). Today, it is recognized that leadership can be exercised by individual people at all levels, as well as by groups of people (such as teams, organizations, and networks).

The Center for Creative Leadership (CCL), an educational nonprofit organization, has tracked and analyzed the evolution of leadership practice since 1970. Its mission is to "advance the understanding, practice and development of leadership for the benefit of society worldwide." (CCL Website, 2013) CCL's experience has led it to group its core programs into leading self, leading others, leading managers, leading the function, and leading the organization. These are intersected by specialized skill development programs and a leader development roadmap.

From its research, CCL has developed a time-tested guideline to work with the 70-20-10 Rule for Leadership Development, advising that (only) 10% of success in leadership development can be attributed to coursework and training, 20% to developmental relationships (such as with mentors and coaches), and the remaining 70% to challenging assignments, which can take the form of bosses and superiors, turnarounds, increases in

scope, horizontal moves, and new initiatives (Wilson et al, 2011, and Lombardo and Eichinger, 2000). CCL also researched innovation leadership and found that effective innovative thinking requires a combination of three building blocks: mindset, skill set and tool set (Horth and Vehar 2012).

CCL's research by Van Velsor and Wright (2012) into the development of next-generation leaders expands the leadership equation significantly compared with earlier approaches. They recommended that leadership development start as early as in primary school. This is an interesting finding when we consider that many people (and water professionals) today have not received an opportunity to participate in formal leadership development until their promotion into management positions later in their career.

The research found that the five most important competencies for leaders of 20 years ago (technical mastery, self-motivation/discipline, confidence, effective communication, and resourcefulness) had changed with today's needs (self-motivation/discipline, effective communication, learning agility, self-awareness, and adaptability/versatility). And the change continued when asked what would be most important competencies 10 years from now (adaptability/versatility, effective communication, learning agility, multi-cultural awareness, self-motivation/discipline, and collaboration). Note that self-motivation/discipline and effective communication remained throughout as essential competencies for leaders. Furthermore, among the top concerns of current leaders about the next generation were an unrealistic sense of entitlement and a perceived lack of ability in effective face-to-face communication skills, understanding complexity, and self-awareness, and work ethic.
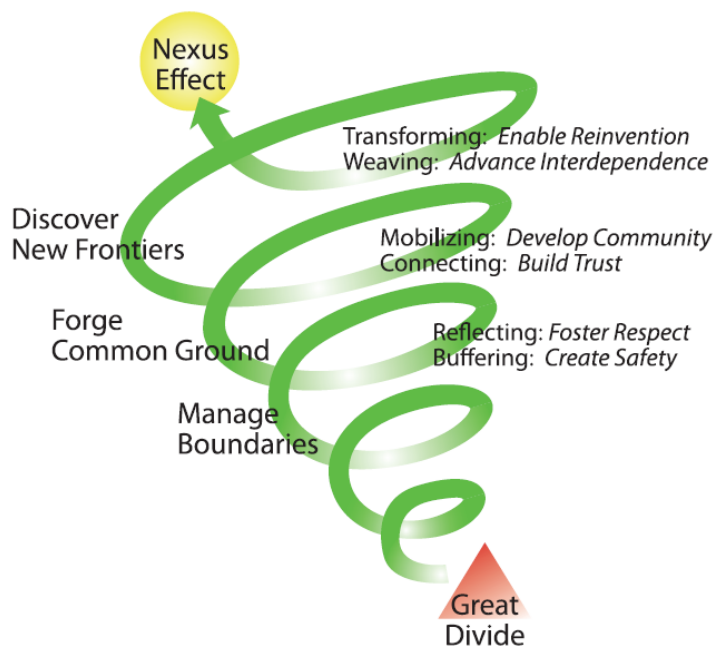

Figure 3. Boundary-spanning leadership steps and practices.

Source: Yip et al, 2009.

CCL offers three principles for leadership in what they see as an increasingly interdependent world: (i) evolution in leadership thought, away from individual leaders; (ii) advance in leadership cultures from dependent through independent to interdependent, able to deal with complexity, ambiguity, and chance; and (iii) interdependent leadership within and across four levels: society, organization, group, and individual (Lee et al, 2012).

The introduction by CCL of boundary-spanning leadership methodology (Yip et al, 2009) marked a significant further shift from the traditional vertical focus in leadership

development to a new focus on spanning horizontal boundaries (across functions and expertise, with partners outside the organization, across diverse groups, and across regions and localities). Their research established a large gap of almost 80% between a growing importance given by leaders to spanning horizontal boundaries (99%) and their low effectiveness in boundary spanning (7%).

CCL developed a six-step methodology for leaders to fill this gap in three phases (managing boundaries, forging common ground, and discovering new frontiers) starting at the "great divide" and ending with a "nexus effect". This is presented in Figure 3. Their methodology (Lee et al, 2012) shows how leaders can be trained to develop effective collaboration between organizations through six successive practices (buffering to create safety, reflecting to foster respect, connecting to build trust, mobilizing to develop community, weaving to advance interdependence, and transforming to enable reinvention).

Leadership from the Core

Leadership involves increased consciousness. Einstein famously remarked that no problem can be solved from the same level of consciousness that created it. Chatterjee (1998) said that "leadership is not a science or art, it is a state of consciousness." As the world's development challenges have grown more complex and interdependent, schools of leadership have emerged that pay more attention to the inner dimensions of self-awareness and development, and less to acquired knowledge and skills that universities, MBAs and training can provide. And as the focus on self-awareness deepened, it also expanded to 360 degree orientation to leadership all around oneself, supported by 360 degree assessments.

An important advocate of inner leadership development work has been Goleman who introduced emotional intelligence (1998). He defined five key components of emotional intelligence: self-awareness, self-regulation, motivation, empathy, and social skill, and later remarked that "the most effective leaders are alike in one crucial way: they all have a high degree of what has come to be known as emotional intelligence" (Goleman, 2011).

In 2009, McKinsey & Company (Barsh and De Smet, 2009) started publishing results of a global leadership survey, from which they distilled a map of five dimensions of what they called centered leadership. This model focuses on leaders who "master the art of leading from their core."

McKinsey's five dimensions are: "(i) meaning: finding your strengths and putting them to work in the service of a purpose that inspires you; (ii) positive framing: adopting a more constructive way to view your world and convert even difficult situations into opportunities; (iii) connecting: building a stronger sense of community and belonging; (iv) engaging: pursuing opportunities disguised by risk; and (v) energizing: practicing ways to sustain your energy on a long leadership journey." The research, applied to both women and men, showed that practicing the five dimensions together resulted in very high scores in each of the outcomes of passion for work, leadership effectiveness, and life satisfaction, (Barsh et al, 2010).

Positive outcomes from aligning work with individual strengths were also found by Buckingham and Clifton of the Gallup Organization in their research, using the online Strengthfinder assessment (2001).

Today's focus on the importance of transformational leadership suggests that leadership programs following the 70-20-10 Rule of Leadership Development require enough time to produce what is referred to by Taylor and McIntosh (2012) as new leadership behaviors, which in turn result from self-awareness and inner transformation along the lines suggested by the research of Goleman, McKinsey and others, supported by newly acquired skills and tools.

In cultivating self-awareness and multi-stakeholder awareness for leadership, managing individual and collective energy is key. One perspective on leadership is that attracting desired goals into our lives and work depends on the quality of our energy, focus,

and whether we have cleared up internal blockages caused by self-limiting beliefs (Schneider, 2007). To create better outcomes, we may need to transform our vision (and worldview), first. That lies at the core of leadership development, and it is complemented by adding skills, such as for communication, negotiation, etc.

Leadership is also seen as a life-long journey, during which intense, transformative events can take the form of defining moments (crucibles), as a severe test or trial. Bennis and Thomas (2011) hold that crucibles happen unplanned. However, their occurrence could well take place during the challenging assignments that constitute 70% of the leadership development process.

Taking an Integral Approach

When promoting changes through IWRM, water professionals normally resort to problem analysis and development of strategies to reach new goals. This may, however not be enough to produce change. In their study on change in 130 companies on 4 continents, Kotter and Cohen found that the successful method almost always is "see, feel, change" rather than the process we are familiar with: "analyze, think, change." A similar approach was discovered by Heath and Heath (2010) when they explored how to lead change "when change is hard." Comparing change to making an elephant switch course, their strategy was to "direct the rider, motivate the elephant, and shape the path."

Leading change requires an integral approach that looks for functional fit (IWRM) as well as cultural fit with the individuals and groups involved with and affected by the change (the stakeholders). The integral approach to leadership, drawing on integral theory, accommodates both functional and cultural fit by developing understanding and moving forward with solutions that take into account both the objective (exterior) and subjective (interior) perspectives, represented by the right and left-side quadrants. These four *quadrants* are shown in Figure 4. Esbjörn-Hargens (2009) explains that "integral theory weaves together the significant insights from all the major human disciplines of knowledge, including the natural and social sciences as well as the arts and humanities."

Thomas (2011) explains that from a leadership perspective, the upper (individual) level contributes perspectives regarding "individual mindset, motivation, experience, and individual actions and behavior." On the other hand, the lower (collective) level considers perspectives of "teams, groups, relationships, culture, behavioral patterns, processes and procedures, organizational structure, systems." These upper and lower levels are further divided into left and right quadrants by distinguishing subjective perspectives, such as "motivation, worldview, beliefs, interpretations, capabilities, feelings and perceptions" and objective perspectives, including "behavior, action, economics, processes, infrastructure, metrics, and the physical environment."

By adopting an integral approach, a leader has access to all these perspectives in any situation, thereby gaining an opportunity to choose what is the most important and not leaving out important aspects. In comparison, the scope of IWRM and water security is usually treated as limited to the two right-side quadrants (reflecting a systems approach). Other significant elements of integral theory include understanding people's abilities by (i) developmental *lines* and *levels* (recognizing that intelligences, capacity, competency, and skills are unevenly developed, for example between IQ and EQ); as well as (ii) states (e.g. emotions, energy levels, health, performance, morale); and (iii) types (e.g. male/female, introvert/extrovert and other personality types, as well as any typology used to describe organizations, infrastructure, economies, etc.). Recognition and interpretation of these elements are essential to developing leadership ability and applying it in any situation (Thomas, 2011).
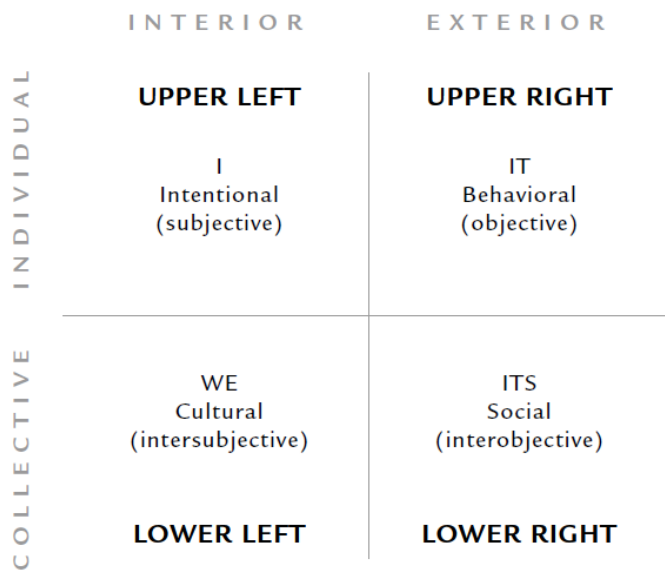
Figure 4. The four quadrants of the integral approach.

Source: Esbjörn-Hargens (2009)

Of particular importance to effective communication in any situation where IWRM is advocated and used, is the leader's awareness of different *levels* of consciousness (worldviews) among stakeholders. Communication (the message) has to make sense and appeal to the stakeholders at the level "where they are at." To make progress in IWRM, and in the improvements in water governance that are an essential part of it, leaders need to be conversant with the worldviews and (collective) value systems of the stakeholders they are working with, as well as with their own.

Beck and Cowan (1996) refer to such conceptual models of stakeholders (individual and groups) as *memes,* explaining that such core values and collective intelligences can evolve (just like in the IWRM process with its spiral of continuous step-by-step improvements) and transcend and include all previous models. This goes back to the fundamental aspect of leadership manifestation as an expression of consciousness. People, including the (aspiring) leader, don't see the world as it is, *but as they are,* or as they are conditioned to see it (Covey, 1989). Stakeholders in the IWRM process in a river basin or city will communicate according to their different memes, and the water leader will have to be able to make recommendations in different "languages" to arrive at win-win solutions. And in doing so, the leader has to cultivate a self-awareness of his/her own meme and how it is evolving as part of leadership development.

In Senge's words (2010), only by "seeing systems, collaborating across boundaries, and creating desired futures" will water leaders be effective in promoting systemic change to increase water security for all stakeholders.

Developing Water Leaders

Leadership development is woven as a red thread through the presentations and discussions of the 5th Delft Symposium. It is a common and cross-cutting theme. Discussions will draw on examples of leadership development, and how these can be expanded and catalyzed.

Foremost among the examples to date is the Water Leadership Program – Developing Emerging Leaders for Tomorrow's Challenges created by the International

WaterCentre (IWC) at Brisbane, Australia, after the 4th Delft Symposium. IWC offers a modern long-term program for emerging leaders based on many of the principles articulated in this paper, including the 70-20-10 approach, and it serves as an example for further programs to be developed elsewhere in the world, including for developing countries. The program's development, implementation, and evaluation, is itself subject of research in peer-reviewed journals, which ensures that the knowledge of how to conduct water leadership development is growing systematically (Taylor and McIntosh, 2012).

Another program that was introduced after the 4th Delft Symposium is the [Temasek Water Leadership Programme](#) for water utility managers in Singapore, organized by the Lee Kuan Yew School of Public Policy with partners, at the National University of Singapore. This program focuses on short-term training involving project teams, thereby seeking a catalytic effect involving individual as well as collective results.

UNESCO-IHE has started a project to develop standards and initiatives for water leadership development programs. The results of this collaborative project with the Asian Development Bank will be presented at the Symposium (Boelee and Reiziger, 2013).

The expectation is that the adoption at the Symposium of (preliminary) global standards for water leadership development will help to create more programs in developing countries, including in Asia and Africa in response to the call to action of 2007. The adoption of standards for such programs will also help to mobilize the necessary funding for such programs to be developed and implemented, including from water development projects and the private sector, including private foundations.

Leadership and IWRM Proficiency

In Asia, the Network of Asian River Basin Organizations (NARBO) has already decided to start incorporating leadership development modules into its training programs for developing capacity in integrated water resources management (IWRM), at four levels (basic, middle, senior, and regional). UNESCO-IHE has started to work with NARBO and ADB to explore how proficiency in IWRM can be certified as a result of such programs, by accredited centers to be established in developing countries in Asia. The government of the state of Karnataka in India has expressed an interest to pilot such an initiative in cooperation with ADB and UNESCO-IHE.

In anticipation of such proficiency certification going ahead, ADB and UNESCO-IHE are also exploring how the number of professionals certified for IWRM proficiency can become a measurable indicator of IWRM progress in countries across Asia (and thereby serve as an indicator of a country's IWRM capacity towards increasing water security).

UNESCO-IHE and IWC are both exploring how leadership development modules can be integrated in their ongoing masters degree programs for integrated water management.

Several practitioner organizations, including the Mekong River Commission and Indonesia's Directorate General for Water Resources, are reviewing their competency frameworks and plans for human resources development, into which leadership development is expected to find a central place.

Supporting Water Leaders

A variety of other practices and examples are available "as puzzle pieces" to explore how water leadership development can be supported, individually and collectively. Symposium participants can consider these and compare with those offered by their own organizations. Among the puzzle pieces are:

- Training programs for water project managers and team leaders
- Coaching programs (such as the coaching program for integral water leaders piloted in ADB's Water Community of Practice)

- Mentoring and team building initiatives in many organizations
- Twinning arrangements (such as the Water Operator Partnerships, which will be highlighted at the Symposium, and for twinning among river basin organizations, such as through NARBO)
- Research into the role and experience of water "policy entrepreneurs" (Meijerink and Huitema, 2010) and other change agents
- The role of youth water leaders (such as Korea's initiative in support of an Asia-Pacific Youth Parliament for Water, and the youth leaders activities and declaration at the 2nd Asia-Pacific Water Summit in Chiang Mai in May 2013)
- Online social networking activities to promote collective water leadership through initiatives, now widespread around the world, especially among young leaders
- UNESCO-IHE's strategic direction towards creating a global campus offering education and capacity development programs in different regions of the world
- ADB's Sustainable Asia Leadership Program piloted in 2012 in Manila and in 2013 in India, in collaboration with The Energy and Resources Institute (TERI).

Recommendations

While leadership challenges have changed, including in the world of water and water security, many leadership development activities have yet to catch up and embrace change. This paper demonstrates that the field of leadership and leadership development is evolving as fast as the world around us, offering many exciting opportunities for better results.

Informed by the three shifts in leadership that are taking place around the world, and making use of the valuable research findings available and the innovative pilot programs started since 2007, the participants joining the 5th Delft Symposium can review progress, examine their own development as water leaders, and make recommendations how water leadership development can be further accelerated and catalyzed through a combination of activities to increase water security in their own country, river basin and city.

Such recommendations can focus on applying modern approaches targeted at enabling individual and collective leadership at all levels, and combining development of cognitive competencies together with transformational individual development as well as leadership through teams and networks.

Note: This draft paper aims to frame and stimulate discussions at the Symposium, and will be finalized afterwards with the benefit of insights from the participants.

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