**DRI’s Global Water Knowledge Campaign**

DRI envisions a campaign to enhance awareness of DRI’s global reach through the engagement of current academic professionals in the preservation and sustainability of water resources on a global scale. Of particular interest are DRI’s work in Africa and China and specifically, our establishment of the Center for International Water and Sustainability (CIWAS) and our recently signed MOU with Hohai University to establish a “Joint International Research Laboratory of Global Change and Water Cycle”. DRI’s scientific and collaborative endeavors in Africa and China serve as examples of our institution’s global research and impact on advancing our knowledge of water resources and its use to sustain and improve humanity’s needs.

The vision: *Profoundly expand the global reach and impact of DRI mission through the establishment of the Global Water Knowledge Campaign in support of research, education, training, and collaboration on water related issues by DRI faculty and graduate assistants, with the goal of applying our knowledge to improve people’s lives worldwide.*

Our efforts in both of these countries also serve as a solid foundation from which to leverage our knowledge to serve and influence on a broader global scale. To achieve this vision, DRI is requesting:

*The immediate establishment of a DRI Foundation fund ($500,000 per year over 5 years) in support of the GWKI to provide critical direct and indirect research, education, training, and collaboration on water related issues in Africa and China by DRI faculty and graduate assistants, to potentially include commensurate and/or reciprocal research by African and Chinese scientists, with the goal of increasing awareness and private sector funding of DRI’s expertise in work focused on water.*

**Africa: “Water, Women & Wellness”**

Scope of the Problem: Access to Water & Sanitation

783 million people or 11% of the world’s population do not have access to improved sources of water. Sub-Saharan Africa has the greatest percentage of people in need of improved drinking water sources or 334 million people (39% of this region’s population). In addition more than 37% of the world’s population exist without basic sanitation and in Sub-Saharan Africa 599 million people (70% of this region’s population) have no basic sanitation. Consequently, more than 5,000 children die a day from poor hygiene practices, contaminated drinking water and poor sanitation. Over 5.5 billion productive days per year are lost to diarrhea alone as well as fetching water for daily use. Women and young girls bear the brunt of fetching this water and benefit the most when distances are reduced. Improving WASH (Water, Sanitation and Hygiene) has a direct impact on education and enrollment levels, particularly for girls.

Leveraging GWKC Funds:

- Building upon funds provided by the Conrad N. Hilton Foundation to initiate DRI’s CIWAS and build it as a critical international component of DRI’s science serving humanity.
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- Funding from private sector individuals / sources with a previously expressed direct interest in DRI/Africa/China initiatives.
- Establishment of a DRI-led WASH High Impact Fund Campaign with Global Impact (GI) in two phases:
  - The first phase is a $250,000 Fund to support initial CIWAS needs:
    - Hiring of program associate and a consultant to help with the CIWAS’ program development
    - maintain a CIWAS website
    - disseminate information to the wider WASH community
    - DRI’s partner, Global Impact (GI), will use up to $45,000 to establish a **Signature Fund**. Deliverables from this first phase will include:
      - Outline and criteria for the Fund;
      - A case of support for the Fund
      - Website and test results of the Fund from different platforms
      - Meetings to get other NGO’s and donors on board.
  - GI and DRI will design the second phase (beyond the $250,000 Fund) based on the outcomes from the first phase.
    - Activities for the second phase will include benchmarking of donors and partners for DRI, drafting of letters to invite other organizations to join the Fund and setting up all elements of the Fund – goals, objectives, governance, etc.

**China: Collaboration, Global Change, Environmental & Economic Sustainability**

Scope of the Problem: Environmental and Economic Degradation

The intensity of both global and local anthropogenically-induced environmental changes on hydrologic resources is a concern worldwide. The increasing disturbance of regional ecosystems, continual degradation of arable land, alteration of climatic conditions resulting in the depletion of water resources of crisis proportions, and increase in the intensity and frequency of extreme meteorological events (i.e., desertification, urban hydrology) together pose profound challenges to our planet’s long-term sustainability as well as the economic stability of nations worldwide. For example, with the rapid development of its economy in recent years, the eastern region of China is also suffering from urban floods and the degradation of its natural environment (water, land and air) at an unprecedented scale. Flooding and degradation has been recorded and reported, and shown to span a wide spectrum of environmental media.
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In response to these global water crises, Hohai University and Desert Research Institute decided to enter this Agreement to establish the Joint International Research Laboratory of Global Change and Water Cycle (hereinafter referred to as Lab) to organize a world class research team and address the various research needs in the areas of global change and water cycle, to develop a program for training excellent young scientists as well as students at all levels, and to establish an efficient research management system. The purpose of the Lab includes:

- To serve as a platform for collaboration by using the lab facilities on both sides.
- To develop disciplines in the global change and water cycles at both HHU and DRI into world class disciplines highly acknowledged by the related international academic community.
- To produce world class research findings and outcome that have profound scientific impact over regional and global development in the sector of hydrology and water resources.
- To nurture and produce a group of world class scientists and researchers with the qualities of innovation, global vision, and leadership.
- To encourage student exchange between HHU and DRI by using the Lab as an educational platform to bring up future talents in the area of hydrology and water resources.

The Lab will operate under the following conditions:

- A Joint International Advisory Council (hereinafter referred to as the Council) will be established to advise (under the appropriate governance documents as mutually agreed upon by both parties) the academic performance of the Lab.
- Director(s) of the Lab will be selected with the agreement by both parties who will oversee the overall operation of the Lab, including planning, identification, organization, and allocation of human resource, financial resources, physical, and material resources, and development of relevant management regulations, working standards, and specific programs and projects to streamline the operation of the Lab. The Lab will run by using internationally acknowledged code of conduct.
- Specific research teams will be set up to conduct research studies on different topics. The performance of these teams will be evaluated by internationally accepted criteria, for instance, the quality and significance of their research findings, publication, and academic influence.
- Both parties agree to seek and allocate a startup funding of USD 250,000 from each party to support the research projects and programs within a year of the execution of this Agreement.
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- Specific funding schemes will be developed based on collaborative discussion and mutual agreement to support other collaboration activities on a case-by-case basis.

It is anticipated that the Lab will be developed in the following manner:

**Phase I**
1. Seek in good faith to one-to-one matching gift opportunities for funds raised by both parties of this Agreement
2. Establish a program for visiting scholars/professorships on DRI and Hohai campuses for research, teaching and new course developments
3. Graduate Assistantships (GA) for Hohai and DRI/NSHE students to visit each other’s institutes from periods ranging from six months to two years

**Phase II**
1. Seek support from Ministry of Water Resources, China for additional funds
2. Seek funding from key public/private entities and stakeholders for supporting U.S./China initiatives
3. Develop joint capabilities of DRI and Hohai researchers to apply technologies developed in China to solve water problems there to other parts of the developing world, i.e., South Asia, Africa, Latin America

**Phase III**
1. In accordance with appropriate and relevant governing agencies, seek innovative entrepreneurial partnership between DRI and HHU scientists that could lead to new intellectual property development.
2. The Lab will seek collaboration through the Nevada Center of Excellence (NvCOE) to utilize this entrepreneurial partnership for the mutual economic benefits of the Lab and the NvCOE.