



BELLA GAIA

Hotspots to Hopespots

Watch the video at www.bellagaia.com



The United Nations Environment Programme and BELLA GAIA collaborated in the creation of the film *Hotspots to Hopespots* intended to raise awareness of the importance of using global data to weave together a compelling story that illustrates anthropogenic change on planet Earth. Director Kenji Williams selected stories that show hopeful signs of positive change that can be done when people work together. BELLA GAIA's method of artistically translating data is designed to inspire action and to find solutions that will make our future more sustainable. **Read the Press Release at <http://www.bellagaia.com/press.html>**

Water – Africa

Innovations Helping to Maximize Available Water

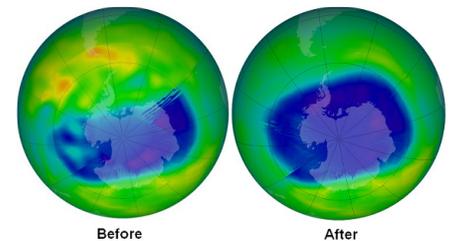
Africa faces growing challenges to its water resources. Many of these challenges and threats to Africa's water supplies—such as the drying of Lake Chad in the Sahel and the erosion of the Nile Delta in Egypt—as well as increasing water scarcity as a result of climate change impact the amount of available water per person. Africa is well below the global average and declining. A majority of Africans are dependent on rain fed agriculture, and scientists are predicting that by 2020 between 75 and 250 million people in Africa will live in conditions of increased water stress from climate change. The dramatic changes sweeping Africa linked with both positive and negative management of the continent's vital water resources is graphically brought home through images from space of the region. New solutions and water management success stories from across the continent in what UNEP calls "hopespots", is coming from promising innovations that are helping farmers get 'more crop per drop'. Low-cost foot-powered treadle pumps, drip irrigation, reduced tilling practices, mulching, and small earthen dams are helping farmers maximize available water by channeling moisture directly to the roots of crops.



Ozone Depletion

Decrease in Global Consumption of Ozone Depleting Substances

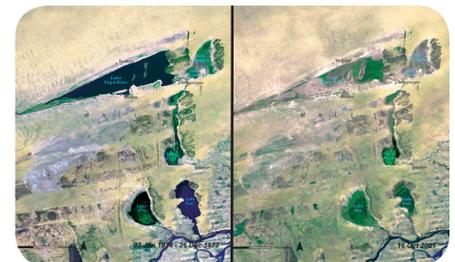
The world has nearly eliminated the production and use of substances that deplete the protective ozone layer in the upper atmosphere. Further expansion of the Antarctic 'ozone hole' has been halted, but full recovery of the ozone layer is not expected until mid-century or later. Prompted by scientific observations from the laboratory, ground, aircraft, and satellites, the Montreal Protocol first reduced and then banned the chlorine- and bromine-based chemicals (particularly chlorofluorocarbons, or CFCs) that destroy atmospheric ozone. The destruction of the ozone layer allows more of the Sun's ultraviolet radiation to reach the surface of the planet, increasing the risk of sunburns, skin cancer, and eye damage. According to NASA scientist Pawan Bhartia, "The Antarctic hole is stabilizing and may be slowly recovering. Our focus now is to make sure that it is healing as expected." The amount of ozone-depleting substances (ODS) in the atmosphere has stopped rising in recent years, and may actually be decreasing. The yearly ozone hole should continue for a while, though, as CFCs and other ODSs can last for decades in the air. Scientists found in a 2009 study that without the Montreal Protocol global ozone depletion (not just Antarctic) would be at least 10 times worse than current levels by 2050.



Lake Faguibine – Sahelian Sub Desert, Mali

Clearing Channels after Prolonged Drought

Lake Faguibine is located in the Sahelian sub-desert zone to the west of Timbuktu in northern Mali. Annual precipitation in the Faguibine area is in the range of 250 mm/yr. When Lake Faguibine is full, as it was in the 1970s satellite image (right), it is among the largest lakes in West Africa, covering approximately 590 km². During the great droughts of the 1970s and 1980s, Faguibine began declining and in the 1990s it dried up completely. With the lake all but gone, many local livelihoods also dried up including agriculture, fishing, and dry-season grazing. The sparse rainfall is not enough to fill the lake and it receives most of its water through two channels that carry water from the Niger River when its levels are high enough. Despite some better rainfall years since the great droughts, Lake Faguibine has not significantly refilled. During the extended droughts of the 1970s and 1980s, the channels that carry water between the Niger and Lake Faguibine had become clogged with sand and vegetation. The government of Mali has been working to clear the channels and recently received a commitment of US\$15 million from the United Nations Environment Programme to help support that work. A government official working with the project says that conditions are already improving with a dramatic increase in farming around the lake between 2006 and 2010.



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About *Hotspots to Hopespots*

The United Nations Environment Programme (UNEP) and BELLA GAIA worked closely to create the film *Hotspots to Hopespots* to showcase visualizations of data from the UNEP Live portal based on research led by UNEP's Division of Early Warning and Assessment (DEWA). The images presented in the film *Hotspots to Hopespots* show both the positive and negative impacts of human life on Earth to provide food for thought, as we seek ways to balance our use of the Earth's resources. Creative Director Kenji Williams was inspired to work on the film with UNEP DEWA to help put a spotlight on the issues. As the inhabitants of planet Earth begin to realize that the ecosystem we depend on for survival is not infinite, and that our actions affect other things on individual, cultural, and systems levels, we are learning how interconnected with the planet we are. We are increasingly aware of how dependent each part is with the whole and how complex the biosphere actually is.

BELLA GAIA's creation was inspired by a story from Mike Fincke, an American Space Shuttle astronaut, who spoke of the profound transformation of perspective he had when he first looked out the window of the Space Station and saw planet Earth. BELLA GAIA has managed to accurately simulate the space flight experience according to many astronauts who have been to space. We need advanced visualization, in concert with digital storytelling and scored music, to help us quickly understand and digest concepts regarding the threats to our environment, and how we may address them in ways that serve to renew ourselves, our cultures and the greater Earth community.



Kenji Williams Biography

Creative Director and Composer, Kenji Williams is an award-winning filmmaker, music producer, theatrical show director, and classically-trained violinist. A world-bridger of music, visual arts, science and unique storytelling, Williams has collaborated with international DJ John Digweed, evolutionary philosopher Ken Wilber, world famous painter Alex Grey, the Gates Planetarium (Denver Museum of Nature & Science), and is exposing his solo work from big music festivals around the world, to mainstream television, and film soundtracks. His current live multimedia show, "BELLA GAIA", involves collaborating with institutions such as NASA and The Smithsonian. In addition to public and critical acclaim, Pioneer, Panasonic, and Sony corporations have sponsored Williams with technology to support his artistic vision.



About United Nations Environment Programme (UNEP)

UNEP is the leading authority on the environment within the United Nations system. The mission of UNEP's Regional Office for North America (RONA) is to build support in the region for UNEP's work, promote effective responses to international environmental challenges and to foster cooperation on environmental issues between North America and the broader international community. The Division of Early Warning and Assessment (DEWA) provides timely, scientifically credible, policy-relevant environmental analyses, data and information for decision-making and action planning for sustainable development. It monitors, analyzes and reports on the state of the global environment, assesses global and regional environmental trends and provides early warning of emerging environmental threats. Working through five sections at headquarters in Nairobi and six regional offices, DEWA also maintains an office at the UNEP World Conservation Monitoring Centre in Cambridge, UK and administers the Secretariat for the United Nations Committee on the Effects of Atomic Radiation in Vienna, Austria.