

Editors Column

We are pleased to bring you the latest edition of our company newsletter containing a new feature. We have collaborated with a young talented designer, Isheanesu Dondo, who will create a unique image with an environmental message for each subsequent edition. We do hope that you enjoy his work.

In this edition we present interesting articles on global world environment days being commemorated in May and June, coverage of the Chisipite School Science Fair, and a look at saving wetlands for the people and the environment.

We welcome your comments and environmental contributions which you may kindly send to The Editor on: infor@blackcrystal.co.zw
Thank you and happy reading!
Clara Chikohomero

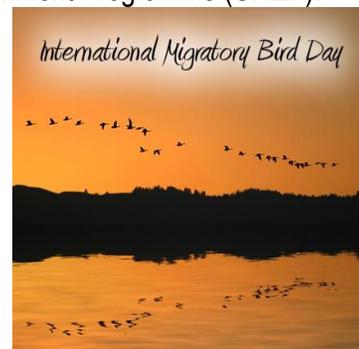


Black Crystal Consulting is one of Zimbabwe's leading reputable companies offering a quality service in environmental and socioeconomic consultancy services. Black Crystal Consulting believes in ***caring for the environment beyond today*** to ensure that biodiversity is maintained and that natural resources are not depleted for the next generation.

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World Migratory Bird Day: 12 and 13 May

World Migratory Bird Day is a global, annual awareness campaign to promote the conservation of migratory birds and their habitats worldwide. It was initiated in 2006. The day is organized by the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the African-Eurasian Migratory Water bird Agreement (AEWA) – two international wildlife treaties administered by the United Nations Environment Programme (UNEP).



This year's theme for the World migratory Bird Day is "Migratory birds and people - together through time". World Migratory Bird Day strives towards preserving the cultural ties humans have with migratory birds and the vital economic and environmental benefits they sustain. Considering the cultural, social, historic, economic and spiritual connections humans have with birds, it becomes clear that migratory birds and people are inseparably connected in many different ways and on many different levels.

However, many human activities including excessive land use and unsustainable hunting, as well as the impacts of climate change and pollution now gravely threaten migratory bird populations around the world.

See: <http://www.worldmigratorybirdday.org/> for more details.

Did you know?

Every acre of rainforest absorbs about one and a half tons of carbon dioxide each year, allowing each of us to breathe clean air.

International Day of Bio-diversity

The United Nations set May 22 of each year as the International Day for Biological Diversity and this year's theme is Marine Biodiversity.

Biodiversity is the variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems. Biodiversity usually refers to the three forms of diversity that is ecosystem, species and genetic diversity.

Since 1994, Biodiversity Day has been observed on December 29th. But, in December 2000 it was agreed that, from the year 2001, the Day would be observed on 22nd May, the date of the adoption of the Convention on Biological Diversity.

Zimbabwe ratified the Convention on Biological Diversity in 1994.

Saving the Wetlands for People and the Environment

Almost all open green spaces in Greater Harare are vlei's or wetlands. Many form the fragile headwaters of the Manyame/Marimba/Gwebi catchment basin, upon which the city is built. This basin is the only water source for many people in Zimbabwe so it is important to keep the wetlands intact.

Monavale Vlei is a very important wetland of outstanding natural beauty and enormous biodiversity. In order to protect and prevent environmental degradation of the vlei the Monavale Residents' Environmental Action Group (EAG) was formed in 2001.

The EAG soon grew and in 2005 they constituted the Conservation Society of Monavale (COSMOS).



Monavale Vlei

In 2006 Sharon Waterworth, one of Black Crystal's senior consultants, provided technical input to an integrated Environmental Management Plan forming part of a report compiled on the protection of Monavale Vlei entitled: 'Saving the Wetlands for People and the Environment: A Case Study from Monavale Vlei, Zimbabwe': A study into the potential for local residents to protect and manage their local wetland area, an important habitat for birdlife. The report was commissioned by Birdlife Zimbabwe and COSMOS.

Sharon is very pleased to report that today COSMOS has achieved some remarkable results and continues to manage and protect the vlei. In addition to building relationships with its stakeholders COSMOS has encouraged stewardship with the local community who assist in management activities which include: fire control, dumping prevention, monitoring, tourism, restoration and increasing biodiversity. In addition COSMOS has established an indigenous tree nursery with knowledgeable staff on hand to give advice on each species.

COSMOS also runs a community project helping to raise awareness about wetlands and biodiversity called COSMOS Kids. Every Saturday approximately 30 children

between the ages of 5 and 18, meet on Fenella Drive for a couple of hours. Each week a different habitant of Monavale is studied. Every child has their own Kids Club book which he or she brings to class.



Emphasis of course is on wetlands and the environment with regular quizzes and crosswords on these topics. Each lesson is concluded with biscuits and juice followed by activities such as team building exercises and obstacle courses. The club tries to take the children on a field trip each term, dependant on transport availability.

The COSMOS project is certainly living up to its goal: For Monavale wetland to be an outstanding model of community driven conservation of international standing, creating awareness on conservation of wetlands biodiversity and promote conservation of biodiversity within the vlei.

You are invited to join COSMOS on a natural history walk on the Vlei every third Sunday of the month at 7am. Meet on Fenella Drive.

Everyone is welcome!

For further information please contact:
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Or visit: www.monavalevlei.com

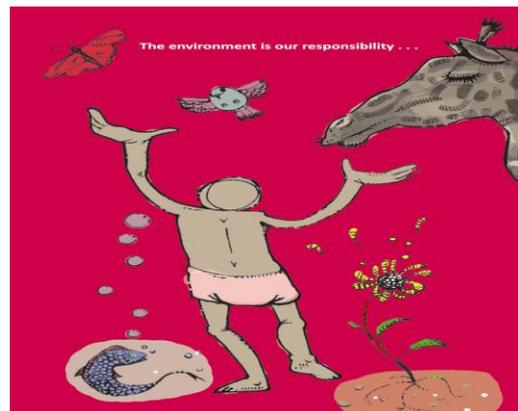
World Environment Day 5 June

World Environment Day is commemorated on the 5th of June each year. The United Nations General Assembly established the day in 1972 to mark the opening of the Stockholm Conference on the Human Environment.

World Environment Day is one of the principal vehicles through which the United Nations stimulates worldwide awareness of the environment and enhances political attention and action.

The theme of this year's celebrations is 'Green Economy' aimed at raising awareness of the serious environmental impacts of carrying on with 'business as usual'. Through engaging governments in action and spreading the word on the importance of a Green Economy, this collective effort will hopefully assist in preserving nature, while achieving growth, and encourage sustainable development.

In Zimbabwe the Ministry of Environment will be launching a key document entitled 'State of the Environment' on World Environment Day.



Let's all be in harmony with nature this world environment day and participate in conserving it.

Image: copywrite Isheanesu Dondo

Rethink Your Business Model Around Green

Shifting market dynamics, such as rising oil prices, new energy and environmental technologies, greening consumer attitudes, legislation and even the likely capping of greenhouse gases, provide the opportunity for companies to rethink their existing business models. Today, companies are emerging that directly challenge current ways of doing business. In doing so, they are not only redefining the consumer value proposition, but are unlocking new sources of value for the companies pursuing them.

Right now, green businesses are challenging the conventional wisdom that centralised production delivers a sustainable advantage through economies of scale. In fact, in the emerging green economy, many businesses are shifting to distributed models where production is done locally. Not only can this approach reduce costs, lower environmental impact, and produce a better product, but it can also realize value by using our existing assets in new ways.

Today, all companies should evaluate the impact that shifting market dynamics in energy and the environment have on their competitive position. To do so, companies should ask themselves the following questions:

- How do changing green market dynamics affect the players in my industry?
- Are there ways to evolve my business model in order to turn threats into opportunities?
- Are their new innovative ways to unlock value from my existing assets?

Where does your company stand?

Courtesy of **David Wigder**

World Day to Combat Desertification and Drought 17 June

In December 1994, the United Nations General Assembly declared June 17 the World Day to Combat Desertification and Drought. The assembly acknowledged that desertification and drought are global problems because they affect all regions of the world. The assembly realized that joint action by the international community is needed to combat desertification and drought, particularly in Africa.



World Day to Combat Desertification and Drought highlights the need to reduce desertification and combat drought.

On the same day, the United Nations negotiated and adopted a Convention (international legal instrument) to combat land degradation in world's dry lands. The Convention provides strategies to deal with the global problem by adopting multi-sectoral participatory approach based on cooperation among Governments, Inter-governmental organizations and NGOs.

This year's World Day to Combat Desertification will be celebrated under the theme "Healthy soil sustains your life: LET'S GO LAND-DEGRADATION NEUTRAL."

Zimbabwe ratified the United Nations Convention to Combat Desertification in 1994.

Legislation Corner: Wetlands

Section 113 of the Environmental Management Act (chapter 20:27) protect wetlands and it states that;

- The Minister may declare any wetland to be an ecologically sensitive area and may impose limitations on development in such area.
- No person shall, except in accordance with express written authorization of the Agency, given in consultation with the board and the Minister responsible for water resources-
 - a) Reclaim or drain any wetland;
 - b) Disturb any wetland by drilling or tunneling in a manner that has or is likely to have an adverse impact on any wetland or adversely affect any animal or plant life therein;
 - c) Introduce any exotic animal or plant species into the wetland.

Women and Science

Despite the tremendous gains that girls and women have made globally in education and the workforce during the past 50 years, progress has been uneven and certain scientific and engineering disciplines remain overwhelmingly male. In Africa the percentage of women in the field of science is less than 3%. In an effort to address this problem Chisipite Girls Senior School established an annual Chisipite Science Fair.

Last year the School collaborated with United Nations Educational, Scientific and Cultural Organisation (UNESCO) established in Harare in 1986 as a sub-regional office for education in Southern Africa, with special emphasis on higher education, following a recommendation of the 5th UNESCO Conference of Ministers of Education in Africa (1982). UNESCO undertakes

programs for the development and application of scientific and technological knowledge for social development in Africa.

In line with their Science Programme UNESCO seeks to develop the capacities of the cluster countries and the SADC region in promoting access and retention of Women in Science and Technology, they agreed to collaborate in this years Chisipite Science Fair organized by Mrs S Mahachi, Chemistry and Physics teacher. The Fair was open to the upper and lower 6 Form (practicals) and Forms 3 and 4 (posters).

Participating schools included: Chisipite, Mabel Reign, Oriel girls and boys, Hellenic International Academy, Prince Edward and Gateway. The theme was: Inventions Past and Present. The students were marked on their explanation and understanding of the science, relevance to mankind and on the presentation of their stand and equipment.

Mrs S Waterworth from Black Crystal was one of the panels of judges along with Mr G Broucke, Programme Specialist Natural Sciences, UNESCO, Ms Rachel Chiwara Man and Biosphere, UNESCO (Promotion of a sustainable relationship between humans and their environment through the Man and Biosphere Programme), Mr R Powles, Head of Chemistry at Hellenic International Academy and Mr Du Toit.

The judges were impressed by the variety and quality of the entrants and of their informative stands, many complete with computer graphics, video clips, text and images. Each group had to give a verbal presentation explaining their chosen topic and answer questions from the Judges.

In order to clearly demonstrate their topic most of the upper and lower 6 forms made their own working models and presented

them in the science laboratory. One group of students looked into the health aspects of Coca Cola. They had researched the ingredients of this highly popular drink and discovered that it is very acidic and showed this by connecting it to pH meter. They also demonstrated high much less sugar is in a light/diet coke by floating a can in water alongside a can of regular coke. The 'light/diet' coke floated whilst the other, containing a higher sugar content, sunk below it. They concluded that Coke is not the healthiest of drinks and its massive popularity is attributed not so much to eh actual product but to their very successful marketing programmes.

One group followed the theme of the fair and gave a presentation on women inventors and highlighted that they have made substantial contributions to Science but sadly many are unknown to most people. Another group studied sodium the sixth most abundant element in the Earth's crust. To show some of the properties of sodium they made their own version of the lava lamp for each visitor by using various sizes of salts of sodium that the placed into a tall, narrow vase of water along with food coloring. As each salt has a different density, some crystals floated whilst others sunk and others were suspended in-between the others.

Others presented inventions that make a huge impact on our daily lives such as the television, the light bulb, automobiles and antibiotics. Whilst the popular CSI (Crime Scene Investigation) series of TV programs inspired a group of students to research into the science of genetic finger printing.

Another group had investigated into liquid nitrogen: nitrogen in a liquid state at an extremely low temperature. They explained the Leidenfrost effect that applies to any liquid in contact with an object significantly hotter than its boiling point. Uses of liquid

nitrogen include: coolant for computers, vacuum pumps, cameras etc and the cryopreservation of blood, reproductive cells (sperm and egg), and other biological samples and materials. It is also used in food preparation, such as for making ultra-smooth ice cream. Due to the potential hazards of handling liquid nitrogen, laboratory safety rules prevented the students from making ice cream in front of the judges, although the judges were able to taste some made earlier by the students.

Other topics researched by the students included: fireworks, solar energy, bombs, hydro electricity, chromatography, robots, mirrors and light and rockets.

The winners of the Science Fair were as follows: upper and lower 6 Form, first place - Coca Cola: Chisipite Senior School, second place - Robot: Prince Edward and third place – Antibiotics: Chisipite Senior School.

Winners of the Form 3 and 4 Poster Category were: first place – Radioactivity: Chisipite Senior School, second place – Nature's Cough Syrup: Oriel Girls, third place – Tie: The Evolution of Virtual Reality: Chisipite Senior School and Hellenic International Academy and fourth place – Tie: Rubber Bands: Chisipite Senior School and the Invention of Fire Works: Chisipite Senior School.

Black Crystal would like to take this opportunity to heartily commend Chisipite School and UNESCO for organising the Fair and congratulate all the pupils that participated in this very important event: an important leap for women and science.

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