

# MULTAQANA

A FORUM FOR EDUCATORS  
OF SUSTAINABILITY



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Editor's note

Welcome to the latest issue of Multaqana! January 2017

As we wave goodbye to a year gone-by and welcome a New Year to come, we do so with the hope that continuous efforts will be made towards a sustainable world.

In 2016, The Environment Agency – Abu Dhabi has achieved successful milestones in the field of sustainable education. We kicked off the first quarter of this year by organizing an interactive training workshop that focuses on the Predict, Observe and Explain (POE) strategy. The POE is the process of acquiring information, to assist teachers in engaging students where their learning process is concerned and improving its quality. Students will be able to overcome any initial misconceptions and thus improve their performance.

During the second half of the first quarter, we organised a clean-up campaign around Al Wathba Wetland Reserve for the clean-up initiative's participating students. The two hour clean-up campaign resulted in removing 1,676 kg of waste, mostly plastic, wood waste, metal, glass and paper. In addition, the 3rd summit was organized with an overwhelming attendance of 240 students, 140 teachers from 120 schools around the Emirate. Through Eco Clubs in schools, students learned together and shared from the different projects and activities.

In the third quarter of the year we facilitated the green schools audit where 230 teachers participated. This workshop guided the teachers to assess their school's footprint and its increasing handprint. We have also organized two workshops that comply with the objectives of the Global Action Programme (GAP). 162 teachers were trained on new teaching and learning techniques that would help develop essential competencies in environment and sustainability education and how teachers can empower youths in taking action towards a more sustainable future for themselves. In the fourth quarter of the year, due to the success of the SSI project in the Emirate of Abu Dhabi, the Ministry of Climate Change and the Environment (MOCCA) decided to adapt the project and sign an agreement with EAD. The scope of this agreement focused mainly on the integration of Sustainable Schools and the Sustainable Campus Initiatives into UAE schools and colleges.

This is thanks to all the government and private institutions (sponsors, strategic and collaborators of the initiative) and schools that adopted the creative ideas, despite the difficulties and challenges faced to help us on the path towards a sustainable future.

We hope you will enjoy this issue, and we invite you to share it with the largest number of your acquaintances, for all to acknowledge our initiative and realize the importance of environmental education in the field of sustainable development.

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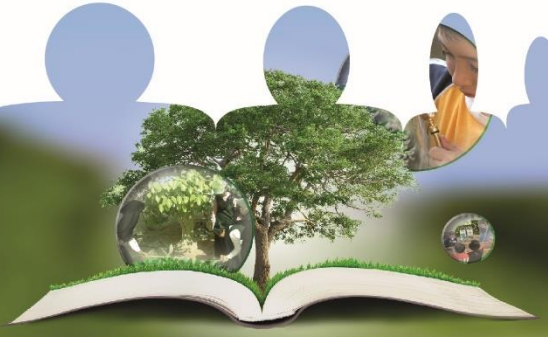
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### GREEN SCHOOLS AUDIT: SETTING UP & RUNNING AN ECO CLUB IN SCHOOLS WORKSHOPS

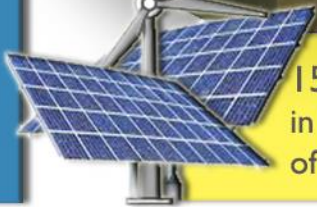
The Environment Agency – Abu Dhabi recognizes the issues that are harming the wellbeing of our environment and takes responsibility to make a major change to resolve the challenges faced by organizing knowledgeable and fulfilling workshops. These workshops are provided in order for schools to take action by measuring the environmental impacts inside the school buildings, take the necessary steps to handle them, and manage the environmental resources properly. Around 230 teachers participated in the workshop. The Sustainable Audit Framework provides a structure to enable participants to look at sustainability in the context of their school base and urge them to lead by example by making drastic changes within their schools and hopefully beyond the confines of their schools.



### Facts



**65%** of registered schools in SSI reuse or recycle their white and grey waste



**15%** of registered schools in SSI have initiated the use of renewable energy

On average, carbon emission from SSI schools decreased from an average of 87.5 tonnes to 81.2 tonnes.

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We have also organized two workshops on establishing and managing environmental clubs and to reach out to society to make a change. 100 participating teachers attended the training. 80% of total SSI schools submitted Eco club reports and over 300 creative projects were undertaken by schools' Eco Clubs at last year's green audit. This exceeded our expectations that a vast number of schools were so determined to make a difference and had exceptional results. That is why we believe that this year more schools will integrate sustainability into their school campuses and astonish everyone with their brilliant ideas. We can't wait to see what these talented schools will do next!



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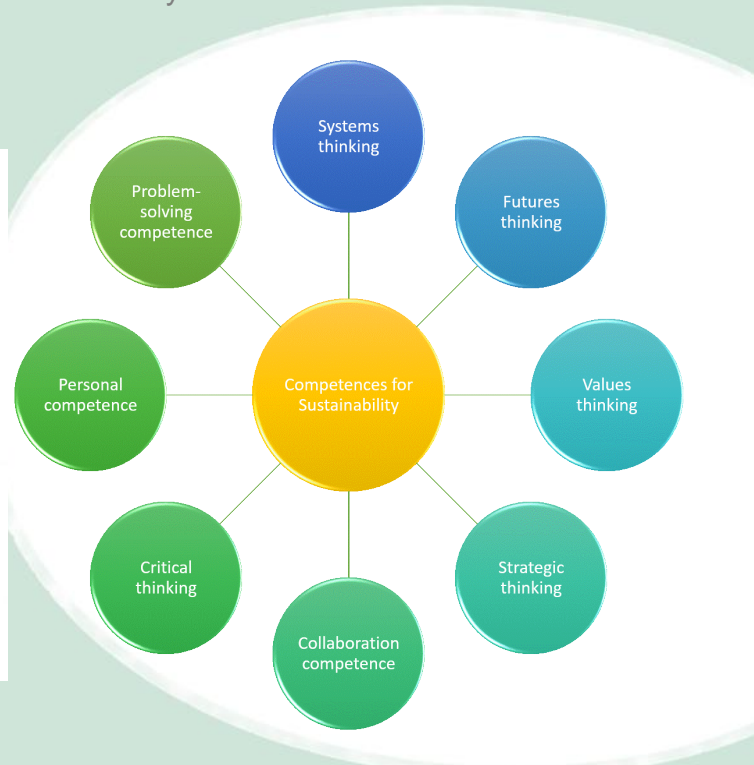
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### TEACHING AND LEARNING FOR THE 21st CENTURY: KNOWLEDGE AND SKILLS FOR A CHANGING WORLD TRAINING

Environmental and Sustainability Education has the potential to set into motion the power of creative and critical thinking in our learners which is essential to support and cultivate relevant learning skills that will empower learners to take action, innovate, cope and live sustainably in an ever-changing world. 162 participants took part in the workshop to empower youths in taking action of sustainability for their future. With hope of developing their knowledge and skills, they seek to change their values and attitude in order to make a difference as we want the participants to reorient education within their schools. This workshop reawakens the participants' mentality to initiate actions for the good of the environment and our people. They focused on strategy thinking, systems thinking, Integrated problem-solving and many more in order for the participants to learn for the benefit of themselves, their community and essentially the environment.



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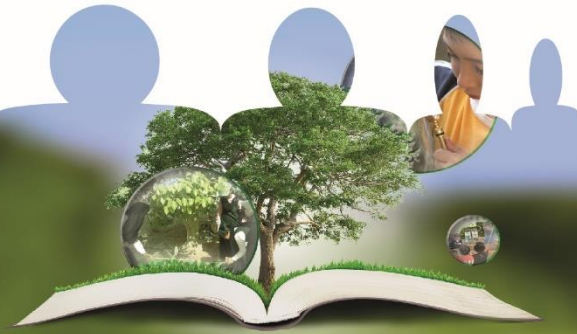
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## Sustainable Schools Initiative at the federal level

Sustainable schools Initiative (SSI) embarked on a new journey in the Northern Emirates after the success of SSI project in Abu Dhabi Emirate. The Ministry of Climate Change and Environment decided to adapt the project & sign an agreement with EAD. The purpose and scope of this agreement is for both parties to support the National environment education strategy of 2015-2021 as developed by the Ministry of climate change and environment to reach out to youth from all educational sectors, communities and businesses through joint and collaborative education and awareness initiatives. This further builds an ever evolving sustainable society in the UAE and leads a great example of sustainable growth not just in the UAE, but also globally.

The scope of this agreement focuses especially on the adaptation of the Sustainable Schools and Sustainable Initiatives being implemented successfully by the Environment Agency in schools and colleges in the Emirate of Abu Dhabi. It will be implemented by the Government and Non – Governmental entities that both parties would agree to.

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Youths are the greatest asset to our nation. Their innovative ideas and commitment towards promoting green growth and sustainable development is what we gain from entrusting our environment's wellbeing to the remarkable young persons of our time. EAD will continue to support and encourage a Sustainable environmental movement.

With open arms we welcome schools that are seeking to make a significant change in the environment and guiding youth to become the leaders of tomorrow in terms of sustainable growth in the UAE. We want to prove to the world what a great environment we can sustain for the wellbeing of our people and encourage them to do the same in their communities. If a school would like to become a part of our sustainable success story, kindly reach out to us in order to attend our upcoming events and workshops and learn further more. We always look forward for new & motivating schools to join us.

To get more details on the initiative, you are welcome to visit our website:

[www.sustainableschools.ead.ae](http://www.sustainableschools.ead.ae)

Or send an email to

[sustainableschools@ead.ae](mailto:sustainableschools@ead.ae)

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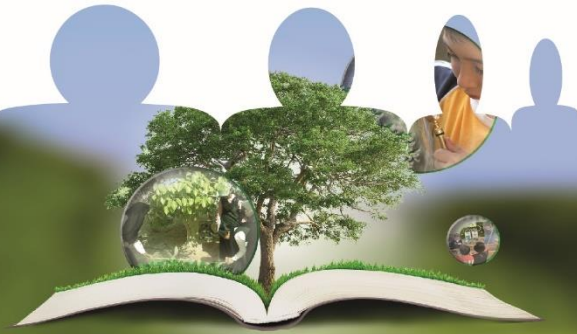


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### THE TALE OF THE SUSTAINABLE SCHOOLS INITIATIVE

The schools of our initiative have managed to balance between their educational priorities and their hope to have a sustainable environment. How did they manage to achieve this harmony and what were their projects that helped them be more sustainable? What have they learnt and gained from their experiences?

The following pages include 2 Schools success stories in setting up and establishing their Eco Clubs.



#### Abu Dhabi School

Abu Dhabi School Eco Club team was especially noteworthy as it sparked the students in to spontaneous, direct action. The team in this school made a point of visiting the homes of their fellow students, politely explaining the importance of curbing pollution to the parents and asking them to consider sharing their car trips to and from school. In addition, Abu Dhabi School Eco club members staged a targeted awareness campaign inside the school, asking drivers of both buses & private cars to switch off their engines while they're waiting.

As a result for the Eco Club member's effort, out of 40 families 32 accepted the students request and now use just one car to carry several students instead of taking them all individually. If all schools work towards the same goal, it all adds up to a really significant contribution to protecting the environment.



**80%** increase in shared transportation between students families

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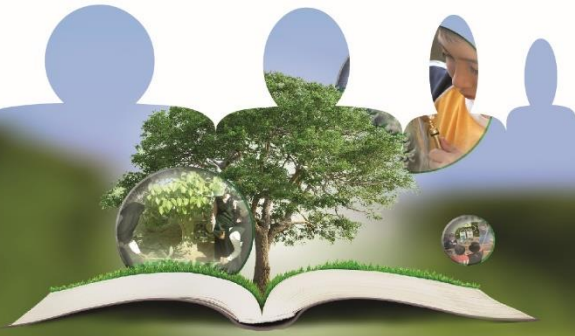
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### International Community School

The Eco club at the International Community school devised a project based on the high consumption rates households and bring about awareness into improving the wellbeing of the environment. First, they built their ideas after investigating 8 villas as they were the only ones willing for the students to visit due to privacy reasons. The team of Eco club members joined up with one another and conducted a survey on these villas using google survey created by one our talented students, and focused on the electricity usage and the types of plants in their surroundings. Second, they analyzed the data and discussed alongside the eco club members the results. Based on these results the households were not sustainable enough. Therefore, the students brainstormed and proposed effective ideas that will help turn their environment sustainably.



As a result, they revisited the villas and found that 7 villas committed into significantly reducing the electricity usage in their household due to the previous high concentration by changing to LED lights system. Also, 4 villas increased the greenery area by planting the suited plants the students proposed for a more sustainable environment.

These plants ranged from orchids, Caladium, Dieffenbachia, Alyssum, Coleus are some of the best suited to grow in UAE conditions.

The bright Eco club members did not just limit themselves by sustainably improving the environment within the households but within the school grounds as well. The Students were motivated to make a difference, they did so by reducing the water consumption of water bottles from an amount of 144 to 98 per day.

It's safe to say that these active students contributed greatly to a more sustainable environment with a great deal of effort into their school grounds and other external communities. Hopefully, they have triggered our readers to make a difference in their surrounding environment as well.

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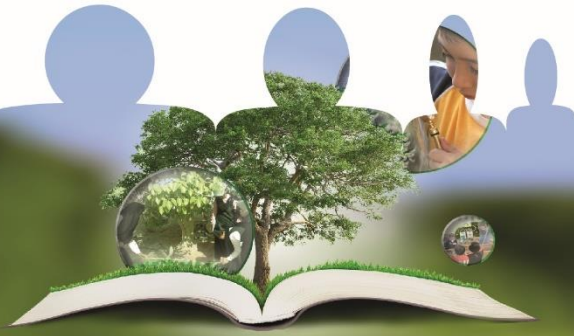


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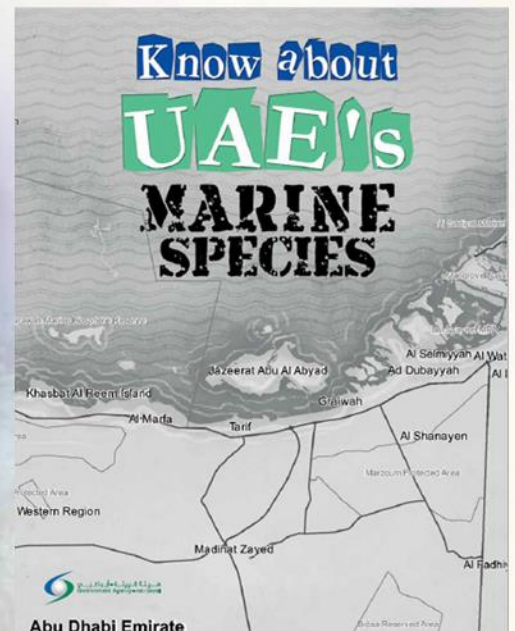


### SHARING AND LEARNING

#### UAE'S Marine Species & Habitat

Offshore the United Arab Emirates waters are homes to an enormity of wildlife species which dwarfs that of the hostile mainland environment. For instance, deep within the sea lies sea reptiles such as the solitary turtles and venomous snakes; mammals like sea cows or dugongs, giant whales, and friendly dolphins; and many more. UAE has an abundant maritime heritage. The rich history of maritime culture and heritage consisted of tales that are passed on from elders in the country about pearling and darling adventures at sea. The elders truly believed that it was their responsibility to take what they need from the sea without harming the ecosystem due to the fact that they want the sea creatures to have a long lasting life span. The sea was also the main process for transportation, associating and trading with the neighboring countries.

The safety of UAEs environment is intrinsically connected to the conservation of these species and its marine habitat. Sadly, a few of our marine habitats are at a critical state due to coastal development, dredging, climate change, and so on which is jeopardizing our species. Not to mention there is a lack of information is provided about the marine species and it's habitats that exist in the deep sea.



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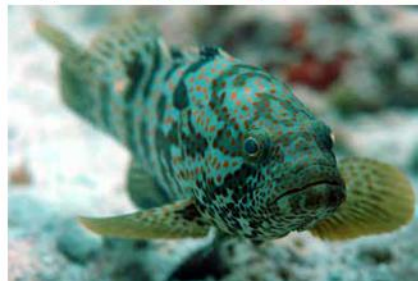
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The agency is proud to share a two part edition of UAE's Marine Species & UAE's Marine Habitat. The book is directed towards students of ages 8-12 years, to help infuse the importance of protecting these beautiful sea creatures, a satisfying and enjoyable reading for students of higher ages as well.



We hope students will inspire us and others by taking action and help protect these marine species and it's ecosystem as a whole.



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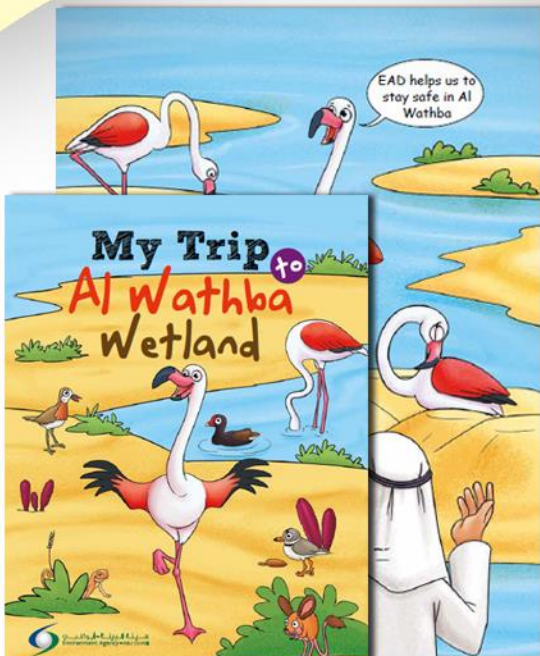
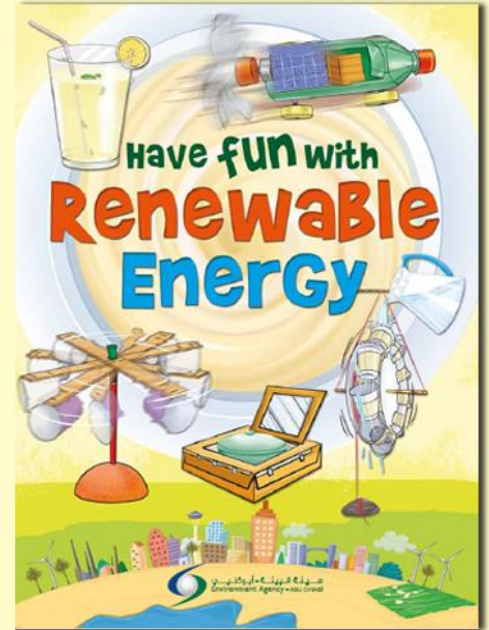
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### SHARING AND LEARNING

#### Have Fun with Renewable Energy – booklet

“Have Fun with Renewable Energy” introduces the concept of energy and how it can neither be created nor destroyed, but it can be converted from one to another. This book explores the fascinating world of renewable energy, how children can use the shining sun, open windy spaces and flowing water to create fun activities such as cooking without fuel, handmade solar powered car and lots of interesting games. It’s also covers the latest gadgets and apps available in the market.



#### My Trip to Al Wathba Wetland – booklet

“My Trip to Al Wathba Wetland” is a special gift to the children which takes them on an informative tour into the fascinating world of Flamingoes, who now live in the amazing diversity of AL Wathbah. This Book presents exciting visuals, coloring activities, and interesting paper craft that will keep a child’s creative imagination flowing. The child not only engages in fun learning but also learns about the exciting world of AL Wathbah which is home to the spectacular Flamingoes

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### SHARING AND LEARNING

#### Gaming and Simulation for Sustainability

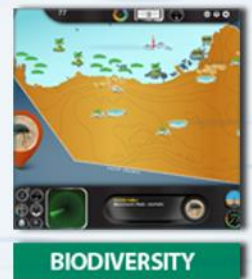
Sustainability is a complex issue and needs a good comprehension of a mosaic of interconnected linkages and dimensions. Weaving sustainability into our classroom situation is not easy. As educators involved in teaching a specific subject, they are often required to juggle between laying down the conceptual basis or foundational principles of their respective disciplines and infusing the complexity of sustainability issues into the classrooms, all within a limited time.

Communicating sustainability using simulation and gaming offers educators a good option, it allows us to communicate with students the complex issues of sustainability. Digital games present a high potential to facilitate learning on sustainability.

EAD now offers games to learn and teach about the environmental issues through the sustainable schools initiative website.

#### Biodiversity Game

In this game the player is supposed to link the organism in the most suitable habitat. The organisms are all local species; players may recognize some of them easily and will get to know the others more. This game is very informative and introduces students to the UAEs biodiversity and habitat.



#### Air Quality Game

This game familiarizes players with the PM concept, it provides an idea of where they are coming from and the impacts they have on humans and the environment. The game helps in showing students the importance of air quality and that there are pollutants everywhere even if we can't see them.

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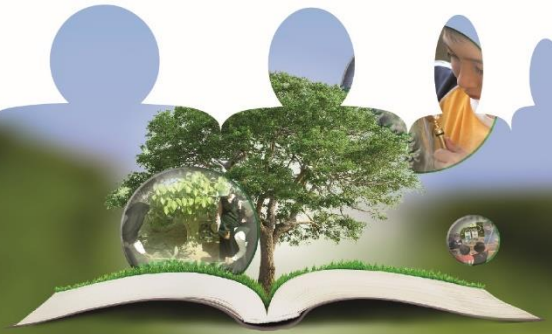


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### SHARING AND LEARNING

#### Gaming and Simulation for Sustainability

##### Water Resources

Another great game is the Water Resources game. It is known that the UAE is facing water issues because of many human activities. In this game water related issues will rise on the screen and players should identify the best solution for these issues. This game will give players an idea of what should be done in each situation and will make them more responsible towards water consumption.



WATER RESOURCES



CLIMATE CHANGE

##### Climate Change

Sustainable schools website also provide two interactive animation flash videos. The first one is about climate change and how it is caused by human activities such as burning fossil fuels in order to use it for energy. The animation provides valuable information about Climate change. It also allows students to monitor CO2 emissions level and sea level through the indicators as the temperature increases.

##### Al Wathba Wetland Reserve

The second animation is the Al Wathba animation, it is very interactive for students. It contains five different scenarios for Al Wathba Wetland Reserve. It allows students to see what could happen in different situations. For example, first scenario is about the microorganisms that are found in the lake and are considered a food source for Artemia a type of shrimp. The great flamingos feeds on artemia and their chicks feed on the artemia larvae. The animations have a bar that shows the information and the graphs also acts as the information displayed.



ALWATHBA

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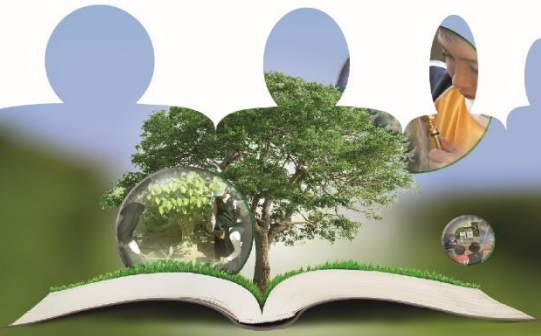
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## UP COMING RESOURCES

### Outdoor Education Guide “Promoting experiential learning”

It is indeed true that nature inspires creativity. However, with the advancement of technology and increased urbanization there has come a gross dissociation between human beings and their environment. Most children today lead a nature deficit lifestyle. They prefer to live, learn and play indoors. It is thus a sad reality that a generation of children today have been raised completely indoors within restricted and confined spaces. It is unfortunate that although they may be well aware of global environmental threats they lack any kind of tangible contact with it. The only experiential learning they have had is through the television and computer consoles.

Field Trips bridge this gap and become the missing link between children and the environment. In field trips children are exposed to powerful learning opportunities as they get to directly interact with the environment and thus understand why they need to care for nature. For Field trips Environment Agency – Abu Dhabi will publish soon a Field Trips guide for registered schools under sustainable schools initiative. The guide provides specific instructions of required preparation for outdoor education field trip, coverage on different environmental categories such as water, climate change, renewable energy and waste. In addition the guide provide special highlight on varied natural habitats in the UAE, list of different educative places with descriptions, their location.



In addition the Agency personnel would also be conducting a field trips to locations not easily accessible to schools such as AL Wathbah Wetland Reserve “please take a look to the following page”.

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## AI Wathba Wetland Reserve

### What is it?

AI Wathba Wetland Reserve is a complex of surface water bodies, both natural and man-made, around 40km southeast of central Abu Dhabi, just past Mussfah.

AI Wathba Wetland Reserve was established in 1988, by the late Sheikh Zayed bin Sultan Al Nahyan. It was the first place in the Emirate to be designated for protection by law and was declared a Ramsar site in 2013. This means that the site has been recognized by the Convention on Wetlands of International Importance and joins a list of over 2,000 other internationally recognized wetlands around the world. AI Wathba Wetland Reserve covers a total area of five square kilometers, comprising wetlands, sabkhas (salt flats) fossilized sands and dunes.

Despite its relatively small size, it simply teems with life. Students will discover an amazing diversity at the reserve, including several endangered species who have made this their home and found shelter, protection and nourishment. The presence of so many different habitats and types of vegetation within one compact area has attracted many different forms of life. More than 250 species of birds have been spotted, along with an abundance of aquatic life, as well as 37 plant species. AI Wathba also features a rich variety of dragon flies and damsel flies.

But its greatest and most spectacular attraction is, of course, the flamingo population. When these migratory birds fly in to spend autumn until spring here, as many as 4,000 can be counted. Even when the majority return to Central Asia for the summer months, they still leave behind a resident population which can be seen all year round. In July 2013, the Greater flamingo colony successfully hatched 231 chicks at AI Wathba.

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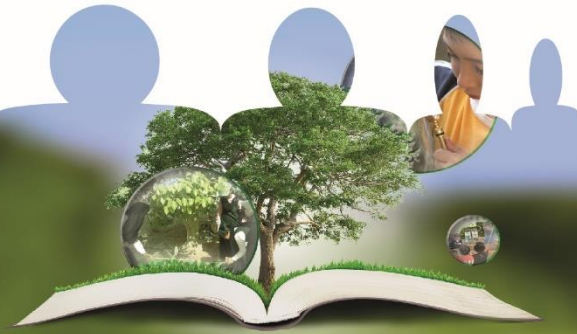
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## AI Wathba Wetland Reserve

Since AI Wathba Wetland is an ecologically sensitive area, our visiting hours and days must be limited. The reserve is open for the public on Thursdays and Saturdays from 8.00am to 2.00pm.

### How Schools can visit the AI Wathba Wetland Reserve

Schools can organise group field trips to the reserves on Tuesdays by contacting us at [sustainableschools@ead.ae](mailto:sustainableschools@ead.ae).

### Necessary Tools and requirements to be brought by the students

A bottle of water – notebook and pens – wear comfortable clothes and shoes – a hat, suntan – sunglasses – first aid box – a camera



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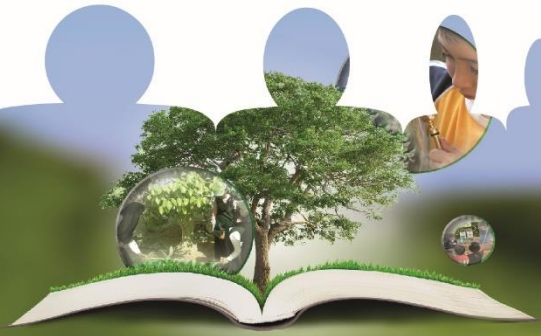


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## UP COMING RESOURCES

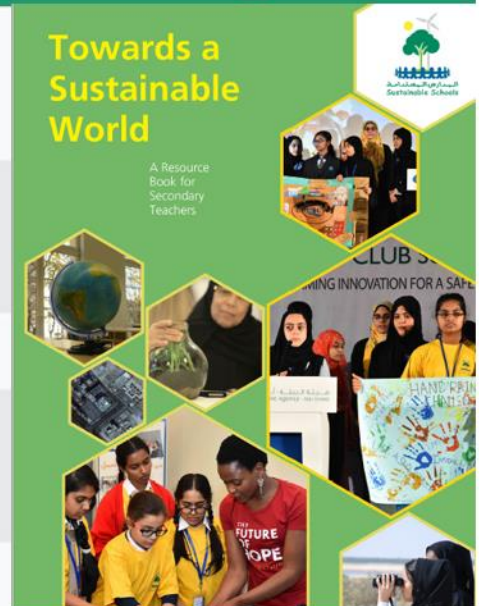
### Towards A Sustainable World – A Resource Book For Secondary Teachers

Towards A Sustainable World contains 7 chapters, including: Thinking in System, Smart Learning, Water, Biodiversity, Energy, Waste and Climate Change.

The book starts off by giving an introduction about the history of Earth and the impacts of human on it, definition of sustainability & Environmental Report card for Abu Dhabi, this report showed “clearly that we are crossing the biophysical limits of this very fragile desert environment”. The book suggests one major solution for this, which is “Education for Sustainability”

Thinking in system chapter focuses on how to help young people understand the complexity of the environment surrounding them and motivates them to think in terms of relationships. “Smart Learning” chapter is about Active and effectual interaction of education, technology and their merging towards the improvement of learning processes. The rest of the chapters discuss

the issues of each aspect of the environment & how educators can embed across secondary schools curriculum. With its real – life and local – specific focus it’s hoped that this book will serve as a valuable resource for all educators striving to educate for sustainability. It also highlighted Geographical Information Systems (GIS) is open for Citizen Science, students who were hesitant to go outdoors and favored learning using digital technologies and the internet are now enthusiastic to get out into the field and combine their desire for using smart technologies with Outdoor Learning.



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## UP COMING Events

Environment Agency – Abu Dhabi (EAD ) cordially invites you to the  
3rd Sustainable Schools Initiative's Campaign

**Theme: Reclaiming Our Climate.**  
**Join us to plant a Ghaf tree and reduce carbon dioxide**

**Venue:** Abu Dhabi Forest – Al Khazna

**Date:** Monday, January 23rd , 2017

**Time:** 8:45 - 12:00 pm



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## UP COMING OCCASSIONS



يوم البيئة الوطني  
NATIONAL ENVIRONMENT DAY  
4 فبراير الانتاج والاستهلاك المستدامان  
Sustainable Production & Consumption 4<sup>th</sup> February  
2019-2017

### UAE National Environment Day

This Day signifies UAE's commitment to protect and manage the environment of the Emirates. On this Day in the year 1993 the Federal Environment Agency—the first government institution in the UAE was constituted with an authority to manage and initiate laws and policies to protect and manage the Emirate's Environment. Since then each year on this Day all residents of UAE renew their pledge to take care of UAE's environment and do their bit to protect Mother Earth. Theme for upcoming 3 years is Sustainable Production & Consumption.

The Day provides the right opportunity to take a close look at various environmental issues of UAE. The Eco Club could plan activities related to the declared theme. It can hold various events for students and parents to raise awareness and take appropriate action.

Quizzes, debates, essay writing, poster making, painting, exhibitions, model making, campaigns related to the theme can be planned and conducted in the school.

We hope you would observe above mentioned day as a part of the Eco Club Activities, If yes you could share with us your school activities and pictures to be published in our next issue of SSI newsletter.

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### UP COMING OCCASIONS

#### World Wetlands Day

**Themes:** Wetlands connect us all, Healthy Wetlands, Healthy People.



#### Afforestation Week

**Themes:** Plantation for Various Areas: schools, offices, public spaces, roads and streets, utilities like airports.

#### World Consumer Rights Day

**Themes:** Junk Food Generation - Stop the Marketing of Unhealthy Food to Children. Genetically Modified Organisms (GMOs) in Crops



#### World Forestry Day

**Themes:** Wildlife Supported by the Forested Areas.

#### World Water Day

**Themes:** Coping with Water Scarcity, Water and Sanitation Water Wastage Conserving Water, Wise Use of Water.



#### Earth Hour

We hope you would observe above mentioned days as a part of the Eco Club Activities, If yes you could share with us your school activities and pictures to be published in our next issue of SSI newsletter.

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We look forward for your comments and feedback about  
our newsletter

To contact us

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