



Building a green future

This month we hear from some of the people involved in implementing key areas of the green economy across the UAE as part of the Sustainable Solutions series hosted by *BGreen* and Emirates Green Building Council

The UAE has been at the forefront of sustainability drive in the Middle East region during the past 10 years thanks to a leadership that is committed to building and nurturing a green economy.

In fact, the country boasts of highest share of green buildings in the Middle East and North Africa (MENA) region as well as the largest solar thermal power project operating in the world. *BGreen* and Emirates Green Building Council (EGBC)

chaired a round table discussion, the seventh in our collaborative series Sustainable Solutions, to understand the sustainability trends in different sectors of the economy.

Round table participants were Ibrahim Al Zubi, head of CSR, Majid Al Futtaim (MAF) Group; Sarfraz Dairkee, general manager of corporate development & engineering, MAHY Khoory; P R Jagannathan, sustainability manager, EHS-Trakhees; and Ajita Nayar, education manager, Emirates

Wildlife Society-WWF. Discussion moderated by Anoop K Menon, contributing editor, *BGreen*.

BGREEN: GIVEN THE DIVERSITY OF MAJID AL FUTTAIM PROPERTIES' BUSINESS FOOTPRINT, HOW HAS SUSTAINABILITY EVOLVED WITHIN THE GROUP?

Ibrahim Al Zubi: As an entrepreneur and mall developer, Majid Al Futtaim Properties has come a long way to become one of



Ibrahim Al Zubi
Head of CSR, Majid Al Futtaim (MAF) Group

corporate citizenship. Given the buy-in and added value for the business, we engaged stake holders internally, came up with a policy and created a full time, dedicated post of head of sustainability – which I currently helm - reporting to the CEO.

We have put in measurable Key Performance Indicators (KPI) and tangible annual and long term targets that get audited every quarter by a third party auditor. To increase awareness, we also decided to become transparent and share these findings with our staff, the board and external stakeholders.

BGREEN: ARE THE CUSTOMER'S CUSTOMER (I.E. THE END CONSUMER) ENTHUSED ABOUT THE FACT THAT THEY ARE SHOPPING IN A SUSTAINABLE MALL, FOR EXAMPLE?

Al Zubi: Part of the marketing department's KPI as sustainability targets is to do customer surveys. Our end-customers find shopping at Mirdiff City Centre mall, which is the first shopping mall in the region to have been awarded a LEED Gold rating, a positive experience in terms of its physical structure and fit outs compared to other malls. We also have government departments like Dubai Electricity & Water Authority (DEWA) and Dubai Municipality (DM) using the mall to educate consumers about sustainable living. We are

now targeting the first LEED EBOM (The LEED for Existing Buildings: Operations and Maintenance) certified shopping mall in the Middle East. We want to document the engagement of our tenants and customers, see if they are aware. Interestingly, during a customer survey in Lebanon, buying a green building asset emerged as one of the top five most important deciding factors.

A few days ago, I was part of a panel at the ethical branding conference in Dubai, and what came out is that customer awareness is definitely on the rise.

BGREEN: WHAT HAS BEEN EMIRATES WILDLIFE SOCIETY-WWF'S EXPERIENCE IN TRYING TO PROMOTE SUSTAINABILITY AMONG THE SCHOOLS IN THE UAE?

Ajita Nayar: Nine years ago, EWS-WWF started environmental education programmes among students to raise awareness on environmental issues. We thought we will take it in a progressive manner, starting with environmental literacy... first using small booklets, and then progressing to an online education programme. While the programme had a good impact on students we were also keen to see whether the knowledge gained translated into any meaningful action. That's when we decided to introduce the Eco-Schools programme. The Eco-Schools programme deviates from a formal education strategy where typically teachers tell students what to do. In Eco-Schools, students are encouraged to be the core strategising group in the school. They try to identify what are the key environmental issues in the school and come up with solutions that are simple, practical and gives immediate results. For example, if they have observed that windows are open when the air-conditioning (AC) is running in a classroom, a very simple behavioural change they need to bring about is to ensure windows are closed when the AC is on. The keywords are simple and practical because many schools are not very comfortable in terms of doing retrofits or technological upgrades to conserve energy and water. Thus the core focus of the Eco-Schools programme is on behavioural changes that can help reduce consumption of resource. Over the

the biggest names in the region's retail sector. When we decided to make sustainability an integral part of the company's outlook, one of the first steps we took was to find out whether we had management buy-in. We engaged the different internal stakeholders and asked them why they wanted sustainability. The key value drivers of sustainability identified were brand reputation, moral obligation, long term profitability, license to operate and



three years of the programme, Eco-Schools have collectively reduced their water consumption by 12%. Figuratively, this may not be a huge number but for students to take the lead and come up with simple mechanisms means they are learning to think critically and come up with simple yet profitable solutions.

BGREEN: DOES THIS LEAD TO SCHOOLS THEMSELVES ADOPTING GREEN PRACTICES LIKE ENERGY EFFICIENT LIGHTING, WATER RECYCLING AND THE LIKE?

Nayar: One of our key messages to schools is that while they may find it useful to do retrofits or install energy saving LED lamps, they don't have to rush into that. We advocate a more practical approach wherein if at any point of time, for example, they have to replace a damaged light bulb, they could do that with an energy-efficient lights like LED, should they have the finances. If not they could opt for the CFLs. We have also had a very interesting case in a government primary school where they don't waste even a single drop of grey water from their wash basins. Instead of installing additional plumbing, they trained their janitors to collect the grey water in huge buckets and channel the same into their gardens. In schools, change is certainly taking place but in a gradual way.

BGREEN: EHS-TRAKHEES HAS PLAYED A PIONEERING ROLE, FROM A REGULATORY STANDPOINT, IN SPREADING SUSTAINABILITY MESSAGE IN THE UAE. WHAT WERE SOME OF THE CHALLENGES ENCOUNTERED IN THAT JOURNEY?

P R Jagannathan: In October 2007, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai issued a resolution late 2007 that effective from 2008, all constructions in Dubai would be aligned to green principles. At that time, Trakhees-EHS was in the final stages of creating its own green building regulations. These regulations came into force effective January 2008 for all new constructions within the Ports, Customers and Free Zone Corporation/Dubai World jurisdiction. Compliance with these green



P R Jagannathan,
Sustainability Manager,
EHS-Trakhees

building regulations was mandatory to obtain a NOC for building permit. This mandatory framework continued through the global economic slump and recovery. As of this day, there are nearly 70 LEED certified new constructions in Dubai of which nearly 70% are from our jurisdiction. The challenges were several and multifold – the property developers and clients were generally clueless about green buildings per se and the role of such buildings on the environment. But they knew that under the mandatory framework, they couldn't get the building permit without complying with the green building regulations and obtaining the clearance from Trakhees-EHS. The challenges with the consultants were several. They used to visit our office with a letter of undertaking to comply with all the regulations and were expecting the NOC and the building permit based on that document. This essentially meant

that they undertake to comply with the requirement after obtaining the building permit whereas the very purpose of a regulatory review process is to ascertain and make sure that the proposed project fully complies with the green building regulations in terms of robust designs.

We were of the strong opinion that sustainability should commence right at the design stage for maximised returns and cannot be left behind to be compensated at later stages. Once the building is issued with a building permit, the entire focus would be on hitting the ground and proceeding with the construction works rather than looking into incorporating green designs. Hence, such letter of undertakings, notwithstanding the genuine intentions would not help green buildings.

We discouraged it right from the beginning and set on the most challenging task of incorporating robust procedures, strong guidelines and other mechanisms to facilitate and encourage the adoption of green buildings and meaningful design submissions; they sharply focussed on matters that are of key importance to the region such as energy and water. Accordingly, important design elements such as energy modelling reports, heat load calculations, water efficiency design predictions, envelope features and overall design consistency were insisted (made a must) and meticulously checked by the review team. These parameters were required to be locked and sealed from a design point of view so that if the contractor follows the designs, the building can expected

END OF THE DAY, WITHOUT THE FULL INVOLVEMENT AND COMMITMENT OF THE MANAGEMENT, SUSTAINABILITY CANNOT BECOME EMBEDDED INTO THE CORPORATE DNA. MOREOVER SUSTAINABILITY HAS TO BE ECONOMICALLY FEASIBLE"

to be reasonably compliant in the construction phase as well. On the same yardstick with operational measures and awareness, it can expect to perform to the extent of what was committed.

What worked for us, in my view point, was making green buildings mandatory. Through strong reviews, we have managed to substantially reduce the gaps on the design compliance front. The stakeholders are aware of what exactly has to be done to achieve green design. The challenge has now shifted to construction and operation/post-occupancy phases.

BGREEN: WHAT WOULD BE THE CHALLENGES IN THE CONSTRUCTION AND OPERATION/POST-OCCUPANCY PHASES?

Jagannathan: There is an enormous awareness gap. Notwithstanding the green design and construction, we cannot say with assurance that all the certified buildings are performing as per the original predictions. This is not only a regional issue but a global one as well. It is important that post-handover from the contractor and the consultant, the building must behave 'green'. First and foremost, the client or the investor and his Facility Management (FM) team needs to understand that the facility that they have inherited is a sustainable building (green building) and accordingly, requires a different set of approach, both technical and behavioural. Likewise they need to be aware that they deserve to derive the benefits of such a building in return for their investments. With this philosophy, they should start demanding the performance. However, in its absence, it would continue to be a property of neglect just like any other building. Very often, they come to know that measurement and verification is mandatory only after they come to us for an official fitness renewal. There are so many parameters in the operational phase that may

completely shift the engineering design estimate so those things have to be factored and calculated again. On the other hand, if the client is aware of the facility, he does not need to wait for regulatory intervention. Rather, he would lead the sustainability efforts in order to get the benefits and return on the investment. At the end of the day, without the full involvement and commitment of management, sustainability cannot become embedded into the corporate DNA. Moreover, sustainability should be incorporated to the extent that it makes a good economic proposition. Sustainability without direct / indirect profitability may lead to green washing.

Nayar: Are LEED certifications permanent?



Ajita Nayar
Education Manager,
Emirates Wildlife Society-
WWF

Jagannathan: Initially, LEED gave certificates that didn't have a validity period. But here, I would like to make a point that we shouldn't have an obsession towards an international rating system. Whether it is New York or Dubai, all we are talking about is energy, water, waste, operations and behavioural change.

Al Zubi: While this is a good point, what is the solution? Even within the region, we have multiple green building standards, locally developed as well as international.

Jagannathan: Within Trakhees-EHS jurisdiction, you will find mostly commercial and office buildings, residential and warehouse developments. From our discussions with stakeholders, business units and clients, we realised that it is harsh to impose LEED regulations on a warehouse development which has a different nature of usage such as a large storage area with a very small conditioned space (say 100 m² of air conditioning). So we started developing EHS In-House green building regulations for warehouses, targeting envelope, energy, lighting, controls and water. Instead of leaving it to consultants to mix and match and do the modelling, we prescribed in detail what needs to be done from basic engineering to design to operation. The same approach was adopted for villas as well.

Al Zubi: We have considered coming up with our own green building standards. The issue is when you are trying to build a business case. We have a standalone energy policy supporting the green building policy because energy consumption is a key issue.

Sarfraz Dairkee: In EGBC, when we started in 2004-05, we realised that there were multiple green building rating systems. But there is a difference between imitation and adaptation; what we wanted to do was adapt because only that enables you to get to the root of the matter. For example, then and now, LEED has two credit points for water efficiency. But in the case of the UAE, we found that energy and water have a strong nexus - every m³ of water is equal to 5-5.5 kWh of energy. At that time, we realised that one of the key issues to look at, from a sustainability standpoint,



is water. Probably, we were ahead of time when we proposed three-line plumbing system to collect and re-use the grey water.

Again, in this region, cooling accounts for majority of the energy consumption. So we tried to look into various aspects of air conditioning – for example, in those days, the emphasis was on air-conditioning the building. But it is not the building which needs air-conditioning; rather, it is human beings who need air-conditioning. The moment you adopt this approach, your entire design philosophy changes.

Even today, a very large percentage of green building compliance remains a ritual. As long as it remains a ritual, you will never solve the problem. If you try to apply the same solution, you will get the same results. You cannot expect different results with the same solution. It only adds to the costs with very little value addition. To have the value addition, you have to ask what sustainability means to you.

BGREEN: WITH THE ECO-SCHOOL PROGRAMME, DID YOU HAVE TO FACE DIFFICULTIES IN ADAPTING A CONCEPT DEVELOPED ELSEWHERE TO LOCAL CONDITIONS?

Nayar: The good thing about Eco-schools framework is that it is completely malleable. The framework can be tailored to local requirements.

Dairkee: With schools, you don't have to deal with 'unlearning' either.

BGREEN: HOW DID MAJID AL FUTTAIM PROPERTIES NAVIGATE THROUGH THE WEB OF MULTIPLE GREEN BUILDING RATING SYSTEMS?

Al Zubi: Across our portfolio, we have hotels, big malls, community malls and community developments. We have mall assets in different countries with different climatic conditions. The fact we have sustainability policy, that sustainability is part of our organisation's DNA is 50% of the job done. From experience, we found that it is easier to achieve LEED for malls and new-build hotels and EarthCheck for existing hotels. For multi-storied, in this



Building standards was a key part of the seventh Sustainable Solutions round table

case the Waterfront City project in Lebanon, we did gap analysis between LEED, BREEAM and Lebanon Green Building Council's ARZ Rating System. Unfortunately, ARZ is for existing buildings but we are supporting them to develop standards for new-builds.

Recently, we carried out a gap analysis study for old standards and credits. Over the last two years, we have been training our project managers and development managers in all green building standards including LEED and BREEAM. I did this, not only to save money on green building consultants, but to help our team know which credits to choose and raise awareness internally.

All over the world, building standards are developed by industry associations, USGBC being a great example. If EGBC came up a national green building standard for the UAE, I would find it easier to follow; similarly, I would prefer to follow the Lebanese Green Building Council's standards in Lebanon.

Dairkee: Even with green building standards in place, a green outcome cannot be guaranteed. It is important

to internalise the truth and adapt it. The solution to our kind of challenge is understanding what the critical thing is. You cannot define it and the moment you do so, it becomes very static. It is a moving object in the sense that your truth will not be my truth.

I believe that every building has its distinct personality. Unless we address that, it won't respond to our likes and dislikes. To know that, we have to identify the owner's project requirements. The owner himself needs to be aware of the possibilities, dreams and aspirations and define them.

Al Zubi: For aspirations to be translated into action, you still need to give a design brief, look at the spreadsheets, put in the investment.

Jagannathan: The confusion about multiple green building standards and regulations is an issue for consultants. If it is EHS-Trakhees, it is mandatory regulation; if it is Sharjah, there is none; if it is Abu Dhabi, there is the mandatory One Pearl; if it is Dubai Municipality, there is none until next year. In fact, Dubai Municipality's Green Building regulations were initially applicable

TYPICALLY, WHEN A GOAL IS SET AND POLICY CREATED, THE POLICY SHOULD HAVE LEGAL BACKING AND ENFORCEMENT... IT REALLY DOESN'T MATTER WHETHER YOU HAVE GOVERNMENT REGULATION OR NOT: WHAT REALLY MATTERS IS THAT YOU ARE SAVING ENERGY AND WATER AND THAT SHOULD BE THE KEY FOCUS,"

to government buildings from 2011; from 2014, they will be extended to the private sector as well. The way I see it, at least in Dubai, we have multiple stakeholders like Dubai Electricity & Water Authority (DEWA), Dubai Municipality, Dubai Carbon Centre of Excellence and EGBC active in green building movement. There are lot of synergies to be gained by working together. Perhaps, the government can play an important role. Typically, when a goal is set and policy created, the policy should have legal backing and enforced through regulations. Policies help identify priority strategies, regulations and programmes. The programmes would have different time frames, resources, measurable metrics and reporting mechanisms.

However, if you have a good technical team who are convinced that a particular approach will get

them 18% in energy savings, then it doesn't really matter whether you have a government regulation or not; what matters is that you are saving energy and water, and that should be the key focus.

What the government school achieved by collecting grey water and re-using for landscaping is a much more effective than investing in sophisticated grey water systems. Sometimes, a low cost practical approach that delivers quantifiable savings is preferable over savings promised on paper.

Al Zubi: While a green building code or energy labelling may not be necessary to start saving on energy and water, the challenge is in communicating these savings with stakeholders. We invested in a third party auditor to ensure that

our data is proper and correct. We had to do our own benchmarking for the last three years, and it is a lot of hard work.

Everyone in the room will agree that you cannot manage something that you cannot measure. We need to benchmark, collect data; we need a platform and a framework. We are benchmarking our assets through GRESB (Global Real Estate Sustainability Benchmark). You need a benchmarking framework to see if you are doing well. This will also makes it easy to communicate the technical aspects to the top management. I feel that EGBC can play an important role here.

Jagannathan: While one should not be discouraged by the absence of a benchmarking framework in Dubai, its absence is indeed a barrier for those who would like to assess their performance vis-a-vis others. How will we know what is the energy intensity of a villa in Al Quoz compared to a similar one in Jumeirah or what is the energy intensity of a tower on Sheikh Zayed Road compared to a similar tower in TECOM?

Al Zubi: I believe that transparency is a big part of benchmarking and implementing green building standards. We have taken a big step towards that with our annual sustainability report.

Jagannathan: A great example of such transparency on a broad level is one set by the Energy performance of buildings directive in UK which calls the requirement of an Energy Performance Certificate (EPC) for properties when sold, built or rented and Display Energy Certificate (DEC). While the extent varies within the range of properties, it serves to significantly promote awareness and provide the existing owners as well as potential buyers a complete energy background of the property that they own or planning to own. It also assists in potential tenants in choosing the most energy efficient property.

Dairkee: Enforcement can work only so much. For sustainability to work, it has to come from within. If you are making regulations and you cannot implement them, it is better not to make them at all. **b**



Sarfraz Dairkee,
General Manager
Corporate Development &
Engineering MAHY Khoury