Al-Ramad Hospital Green Transformation

Al-Ramad Hospital, one of the Egypt Healthcare Authority (EHA) affiliated hospitals.

Demographic information

- Region: Port-Said Governorate
- Country: Egypt
- Type of institution: Public
- Number of staff: +320
- Number of beds: 24

GGHH agenda goals

- Leadership
- Energy
- Water
- Waste
- Chemicals
- Pharmaceuticals
- Transportation
- Food
- Purchasing

Case study summary

Al-Ramad Hospital is an ophthalmology hospital, located in Port Said Governorate. It comprises 24 beds, 3 buildings, 3 operating theatres, 3 pharmacies and has a total area of 7,000 square metres. It serves more than 100,000 patients and performs 6,000 surgeries annually. It is Quality Accredited by the General Authority for Healthcare Accreditation and Regulation (GAHAR), the National Healthcare Quality Accreditation.

The case study is about Green Transforming Al-Ramad Hospital through implementing sustainability and green practices that target, mainly, energy and water efficiency.

The issue

Green Transforming the Al-Ramad Hospital is part of an EHA initiative to spread green transformation throughout the Hospital's facilities. An initial assessment revealed that the Hospital is well placed to achieve energy and water savings. The utility bills were high compared with the scope of work and the Sustainability Committee demonstrated willingness to achieve energy and water savings and created, initiated and maintained a strict system that manages to achieve a significant reduction in energy usage. The Committee also created a waste water recycling system for irrigation purposes, using simple and efficient measures. These efforts improved the green infrastructure and managed to spread awareness of these issues among patients, visitors and staff, by means of training, posters and advertisements.

1. **Environmental Context**:

Al-Ramad Hospital faces high energy demands for lighting, heating, ventilation, air conditioning (HVAC), medical equipment, and other operational needs. In addition, the generation of medical waste, including single-use plastics and hazardous materials, contributes to environmental pollution.

Further, the use of mercury blood pressure devices and mercury thermometers, adds to the environmental impact of its operations and emphasises the importance of adopting sustainable practices.

2. **Operating Costs**:

The Hospital's high energy consumption contributes significantly to its operating costs. The financial burden associated with energy bills not only affects the Hospital's budget but also diverts resources that could be allocated to patient care, staff development, and facility improvements.

The Hospital's average energy consumption was 87,000 kw per month, and the energy utility bills costed average 100,000 Egyptian pounds per month ($3,125). Water consumption amounted to 4,832 m^3 over a 6 month period, which cost 32,574.17 Egyptian pounds ($1,017) for the same period.

3. **Impact on Well-being**:

- *Patients*:

High energy consumption may contribute to increased operating room temperatures, which affects patient comfort and recovery.

Improper waste management can lead to concerns about infection control and overall cleanliness, which can negatively impact patient experience.

- *Staff*:

Excessive energy use may result in uncomfortable working conditions for staff, which affects their productivity and well-being.

Inadequate waste management practices may pose occupational health risks for staff who are responsible for waste disposal.

- *Hospital Workers*:

Increased operating costs may impact the Hospital's ability to provide competitive compensation and benefits to its workforce.

Poor waste management practices can lead to increased workloads and potential health risks for the employees who handle waste.

- *Community Health*:

Al-Ramad Hospital is located within a residential area and is also crowded with tourists. The environmental impact, including waste generation and energy consumption, may contribute to pollution and affect the overall health of the surrounding community, and the image of the Hospital.

Moreover, air and water pollution from energy consumption and improper waste disposal can have adverse effects on the health of community members, and will negatively affect tourism in the city.

The Hospital's goals

The Hospital aimed to achieve:

- Energy savings of at least 10% in the first year (compared with the previous year);
- Continuous water consumption savings of at least 10% in the first year;
- Total digital transformation into a total paperless system;
- Utilisation of energy-efficient technologies for mass transportation;
- Application of safe practices for efficient waste separation and waste management, generally;
- Participation in the WHO/Health Care Without Harm initiative for mercury-free health care;
- Provision of healthy natural and sustainable food that is preservative free;
- Development of an internal green pharmaceutical programme; and
- Application of Green Purchasing principles to ensure the purchase of environmentally friendly and sustainable products.

Sustainability strategy implemented

At the EHA level the implementation strategy for green transformation is intentional. Egypt has a long-term vision for sustainable development and EHA is keen that its health policies align with Egypt's environmental sustainability goals, outlined in the Sustainable Development Strategy: Egypt Vision 2030.

Accordingly, EHA has commited to spread the Green Hospital experience to the rest of the facilities that it manages. This process started in 2022 at Sharm El-Sheikh International Hospital in South Sinai Governorate, and continued in 2023 at the Al-Ramad Hospital in the Port-Said Governorate.

The Hospital's strategy

➢ The decision to install solar panels for energy generation was found to be inefficient due to:

- Low solar irradiance;
- Geographical location;
- Shade and obstruction – nearby tall buildings and trees; and
- Unfavourable weather conditions – frequent cloud cover and heavy rainfall.

Accordingly, the implementation of energy efficient programmes was considered a more effective goal.

- The decision to purchase an autoclave with a shredder was deemed unnecessary for the small amount of waste produced, given that the Hospital is a one-day, specialised opthalmology hospital.
The Hospital agreed that a more efficient goal would be to implement waste reduction and waste separation measures, and to prepare an agreement with the nearest EHA hospital that owned an autoclave with a shredder, to ensure access to this (external) autoclave.
- Sustainable water management, including improving water efficiency in agriculture and a reduction in water wastage.
- Sustainable local transportation initiatives.
- Further integration of digital technologies and Digital Transformation.
- The Hospital had no cafeteria or kitchen, and depended, mainly, on the nearest EHA hospital for its food supplies. It had drafted a proposal to rent an internal space as a cafeteria and has added to this proposal a condition that stipulates the prohibition of preservatives and canned and packaged food inside the Hospital, and limits all food supplies to healthy natural food from nearby farms.
- Staff Training and Engagement.
- Partnerships with national authorities.
- Implementation of the Healing Gardens concept.
- Financial Efficiency Measures and Cost Analyses.

Implementation process

Who was involved at each stage of implementation?	Implementation phases: **First Phase**: The Sustainability and Green Transformation Department (**SGT Dep**.) within EHA developed the strategic plan for green transformation in selected facilities, and secured the approval of top management. **Second Phase**: The Sustainability and Green Transformation Department (**SGT Dep**.) within EHA communicated with top management of the Hospital about forming a Sustainability and Green Transformation Committee drawn from the Hospital's task force, consisting of representatives of various departments and professions. A capacity building programme for the Committee was put in place and included the development of plans, goals, objectives, timelines and an evaluation process. **Third Phase:** Implementation of the GGHH Agenda Items by the Sustainability and Green Transformation (SGT) Committee. Continuous monitoring, training and support, overcoming challenges, and evaluation by the Sustainability and Green Transformation Department in EHA.
What factors resulted in success?	- Gaining support from EHA top management. - Developing team work on the part of the Committee, plus training and capacity building.

	- Communication, engagement, and obtaining support from related National Authorities and internal departments at EHA. - Establishing a good plan and caring for details, given that sustainability practices are recent to healthcare systems in Egypt. - Working to improve principles and loyalty to the project by team members, whenever they encounter challenges and milestones. - Improving problem solving skills and encouraging innovative ideas within the Committee. - Leading by example, and building on successes.
Describe the decision-making process. Share any insights obtained.	- The decision making process combines strategic and collaborative approaches, at the EHA level, starting from establishing plans, long and detailed discussions with top management, defining goals and objectives, developing the road map and a detailed set of steps, defining expected challenges and risks, developing solutions and alternatives, evaluation systems, ensuring the implementation of plans, and ongoing monitoring. - Multidisciplinary Collaboration: Engagement with representatives from various departments, including operations, facilities management, finance, and healthcare services, was crucial. - Stakeholder Engagement: Involving key stakeholders, such as Hospital leadership, staff, patients, and the local community, was essential. Their input fostered a sense of ownership and commitment to sustainability goals. - Data-Driven Decision Making: Conducting thorough energy audits, waste assessments, and financial analyses provided the necessary data to inform decision-making. This helped identify priority areas for improvement, set realistic targets, and measure the effectiveness of sustainability initiatives. - Strategic Planning and Goal Setting: Establishing clear sustainability goals that aligned with the EHA mission and values was vital. This provided a roadmap for implementation, helped track progress, and provided a commitment to continuous improvement. - Cost-Benefit Analysis: Conducting a cost-benefit analysis was crucial for demonstrating the financial viability of sustainability initiatives. - Regulatory Compliance: Compliance with regulation ensured that the Hospital met its legal obligations while contributing to broader environmental goals. - Employee Empowerment: Involving and empowering employees in the decision-making process fostered a culture of sustainability, and widespread support enhanced the likelihood of successful implementation. - Education and Training: Prioritising education and training programmes for staff was crucial. Enhancing awareness and understanding of sustainability goals ensures that

	employees are equipped to contribute actively, fostering a sense of collective responsibility with related national and international bodies.
Describe what staff training was required.	EHA held an intensive training programme for the Al-Ramad Sustainability and Green Transformation Committee, to explore and understand sustainability practices and develop a plan for implementing the GGHH Agenda items. In turn, the Committee created a training programme that addresses all staff, medical professionals and administrative and non–medical staff, regarding health impacts and climate change matters such as: 1. The healthcare sector in relation to climate change, particularly the means to achieve adaptation and mitigation; 2. Sustainability of environmental management systems in health facilities; 3. Positive impact of green transforming hospitals; 4. GGHH Agenda items concerning: Energy efficiency, Reduced water consumption, the Safe management of chemicals, Healthcare waste management, Food safety sustainability and health, Promoting green and ethical purchasing options, Efficient eco-friendly transportation alternatives; and 5. Financial analysis of the energy and water reduction measures. This training helped to enforce social responsibility by all participants, and educated staff members about the measures taken to reduce the carbon footprint for the facility, and to transform the Hospital into an eco-friendly healthcare facility. The Sustainability and Green Transformation Committee also initiated ongoing discussion forums for patients and visitors, using videos concerning the impact of climate change on health and what it means to be a green, eco-friendly, resilient and sustainable facility.
Describe any changes made to the equipment.	**Energy measures:** - Devices are used to measure humidity and temperature and to monitor all electrical tasks, with documentation of the results; - 100% of fluorescent lamps are replaced with LED lamps for the purpose of energy reduction; - Lighting fixtures are repositioned according to the need of each site for efficient electric systems and operations; - Energy conservation measures were implemented, including adjusting the temperature of air conditioners to 24 °C , ensuring that doors and windows are kept closed, and installing air curtains; - Working conditions of the chillers are improved; - Power factor correction is installed;

	- Kettles and all kinds of water heaters were banned in all administrative offices, limiting their use inside the coffee corner; - Lighting of the entrance and corridors was reduced to 50%, with more reliance on natural daytime lighting; and - The use of unsafe electrical connections and cables was prohibited and monitored by means of a routine, daily round. **Water measures:** - Replacing traditional water faucets with Smart efficient faucets in some outpatient clinics, emergency clinics, receptions, and major operating theatres; - A Smart water saving gadget was installed on all faucets in the three buildings, to decrease water pressure and quantity; - A complete irrigation system was installed to collect and store rain water and waste water from AC units; - Drain pipes and water basins were installed to collect and store and re-use wasted water for cleaning work, and irrigation purposes; - Green infrastructure was improved through using modern irrigation systems planting and afforestation projects via irrigation with sprinklers; - Green spaces with plants were increased, using drought-resistant plants such as palm trees; - Port-Said Governorate started a complete Planting and Afforestation plan in Al-Ramad Hospital free spaces, using drought-resistant plants; - Posters were produced to educate workers and visitors about the importance of water; and - An education and awareness programme was held to educate patients and visitors about the importance of water, and ways to rationalise its consumption, thus enhancing the Hospital's social responsibility contribution to society. **Transportation measures and projects** - EHA adopted total digital transformation in Al-Ramad Hospital to transform into a total paperless system; - Al-Ramad Hospital established a policy to re-use paper through reprinting, or rewriting, to decrease overall paper consumption; - Al-Ramad Hospital managed to install parking arrangements for bicycles on the pavements outside outpatient clinics, to encourage staff and visitors to use bicycles and reduce their carbon footprint. An awareness plan has been developed to encourage patients and staff to use bicycles instead of vehicles that rely on fossil fuels for power;

	- A plan has been developed to utilise energy-efficient technologies for mass transportation; and
	- Al-Ramad Hospital is negotiating with the Port-Said Governorate to install a public transportation bus station within a 100 metre square near the Al-Ramad Hospital Campus (in progress).
	
	Waste measures:.
	- Al-Ramad Hospital has adopted a policy and a programme and applies safe practices for efficient waste management and waste separation, according to laws and regulations. These include the following five categories:
	  - Pharmaceutical waste
	  - Plastic infectious waste
	  - Sharp infectious waste
	  - Chemical waste
	  - Ordinary non-hazardous or general waste: the Hospital established a programme to separate ordinary non-hazardous waste into three categories:
	  Glass
	  Cans
	  Plastics
	- Al-Ramad Hospital does not have a shredding and autoclave unit; it will transfer the Hospital's waste to a nearby EHA hospital that has an autoclave device with shredder, thus avoiding incineration as a method of disposal of hospital waste.
	- Ordinary waste separation containers are being provided to the Hospital, and contracts with existing service providers will be amended to guarantee continuous financial support to the Hospital.
	- All workers in waste management and handling are well trained and vaccinated against hepatitis B virus; and
	- Personal protection equipment is used during all stages of waste handling.
	
	Chemicals measures:
	- The Hospital has a good record for managing hazardous materials and waste according to laws and regulations. It also investigates replacing highly hazardous materials with safer alternatives; and
	- Al-Ramad Hospital has participated in the WHO/Health Care Without Harm initiative for mercury-free health care. It has replaced all mercury thermometers with digital scales, and substituted all mercury blood pressure devices with digital devices.
	The Egypt Healthcare Authority proudly announces that Al-Ramad Hospital has become a mercury free hospital.

	Purchasing measures
	EHA also addressed the Unified Purchasing Authority (UPA), the national Authority specialising in all governmental purchasing for all public organisations, demanding disclosure of the chemical components of traded products and materials, and documentation of these results, before contracting or ordering from any supplier. This will ensure that all components have been tested for primary toxicity, at the least.
	
	Food measures
	- The Hospital does not have its own kitchen and its dietary needs are supplied by a nearby hospital that has contracted with certified, local food suppliers to provide healthy and sustainable food;
	- The hospital holds awareness programmes to educate patients and staff about eating habits and to promote balanced healthy diets; and
	- Currently the Hospital does not own its own cafeteria. It has developed a proposal to let a free space to a tenant, as a cafeteria, on condition that the tenant commits to provide healthy, natural and sustainable food that is preservative free, and does not offer any fast and canned food. This cafeteria will be the first of its kind in healthcare facilities in Egypt.
	
	Pharmaceuticals:
	- EHA has adopted a centralised procurement plan through the Supply Chain Division at EHA's headquarters, which brings together the needs and requirements of all healthcare facilities and establishes a unified purchasing body for all provisions;
	- EHA adopted centralised contracts that ensure the return of excess pharmaceuticals to the manufacturer;
	- Al-Ramad Hospital developed an internal pharmaceutical programme in the context of green pharmacies initiative developed to:
	  ▪ Improve medication prescribing practices;
	  ▪ Adopt small initial quantities for new patient prescriptions;
	  ▪ Prevent providing samples of medicines to patients, to reduce the waste of free samples.
	- Ongoing training programmes for health care providers are held to optimise their prescribing practices and control the distribution of medications in terms of the quantities that patients receive, and which limits waste;
	- The pharmacy has an internal process to safely manage hazardous chemicals; and
	- Finally, the Hospital participated in the Egyptian Green Award in Pharmacy Practices (EGAPP), a national initiative by the Arab Association for Pharmacy Progress, and reached the first rank on the national level (for both private and public hospitals).

Which departments were involved in the implementation.	At the EHA level: Sustainability and Green Transformation Department, Pharmacy, Engineering, Supply chain, Financial, Quality, Infection Control, and Marketing. At the hospital level: The Hospital manager, Pharmacy, Engineering, Supply Chain, Financial, Quality, Infection Control, Marketing and Training.
Did you employ pilots or tests before full deployment?	A pilot test was employed inside the Hospital by applying pharmaceutical agenda items, and participating in the Egyptian Green Award in Pharmacy Practices (EGAPP), initiated by the Arab Association for Pharmacy Progress. The Hospital reached the first rank on the national level (in both private and public hospitals).
What behavior/cultural changes were necessary?	- The Sustainability and Green Transformation (SGT) Committee took charge of changing the culture of workers, staff and patients, as most of the energy reduction goals were not electric and depended on staff collaboration and devotion to the goal of achieving energy savings. - Many behavioral changes among patients, visitors and staff were achieved and the motivation to adopt and maintain sustainability and eco-friendly changes was agreed. - A training programme that addresses all staff, medical professionals and administrative and non –medical staff on health impacts and climate change was adopted. This training helped to enforce social responsibility for all, and educate the staff about the measures taken to reduce the carbon footprint for the facility. - The Sustainability and Green Transformation Committee within the Hospital also performed ongoing discussion forums for patients and visitors, using videos concerning the impacts of climate change health and what it means to be a green, eco-friendly, resilient and sustainable facility. - The policy of giving every surgical patient a mercury thermomoter upon discharge was changed, together with the culture behind the policy, through awareness programmes. - The Hospital initiated a bicycle park, and adopted an awareness programme for staff and visitors, to encourage them to use bicycles instead of public transportation.
Also, detail when the strategy was implemented, the frequency of its review and modification. Are there ongoing staff training needs?	The frequency of strategy review and modification was on a weekly basis, depending on decisions taken in daily meetings. Training needs for the staff were evaluated according to the extent of compliance with implementation, and to ensure that new practices became deeply rooted within the new system.
From start to finish, how long did implementation take?	From beginning to end, the implementation process took 10 months to achieve.

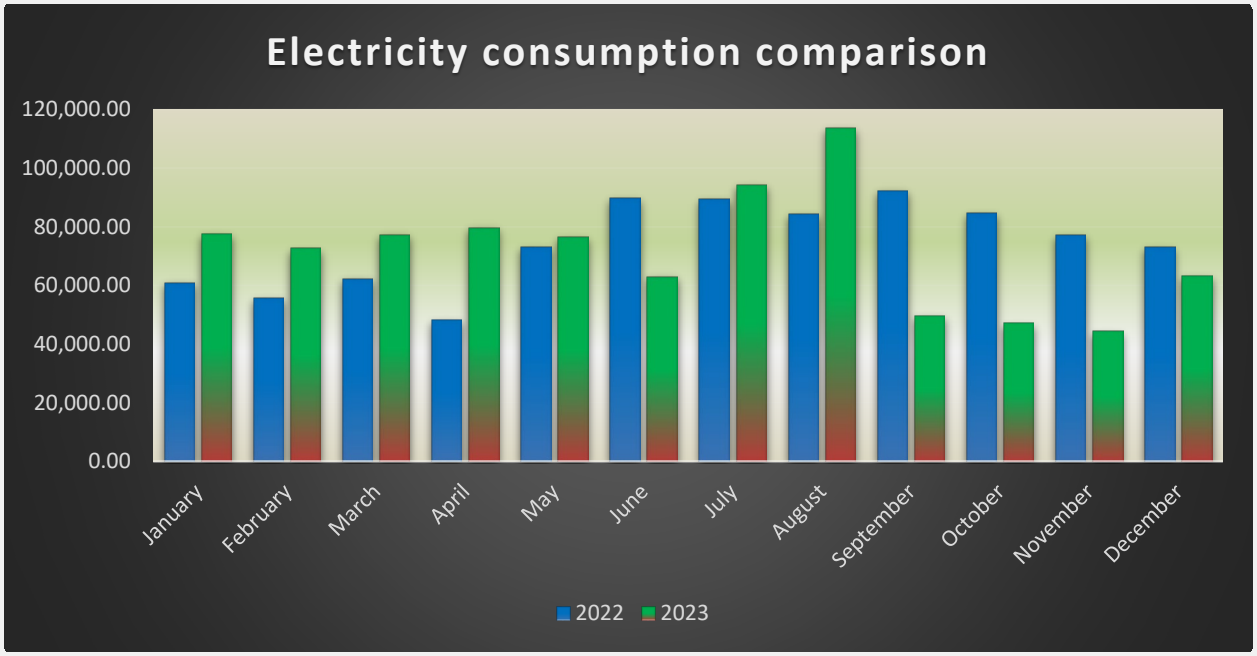
Tracking progress

Success measures	Targets	Results
Achieving energy savings, in utility bills	Achieving minimum 10 % reduction in energy consumption	The Hospital managed to achieve an average of 38 % in energy reduction, saving 86,671 Egyptian pounds in a two-month period.
Achieving water savings, in utility bills	Achieving minimum 10% reduction in water consumption	A 7% reduction in the water bill, compared with the second half of 2022, was achieved in the second half of 2023.
Ensuring that green practices are sustainable through walkarounds	Ensuring that: The temperature of all air conditioners is adjusted to 24°C; Operating instruction cards were produced for all medical and non-medical devices; Kettles and all other water heaters were banned in all administrative offices, including limiting their use inside the coffee corner; Banning the use of unsafe electrical connections and cables; Posters are produced and placed strategically, to educate workers and visitors about the importance of electricity savings; Monitoring the application of water recycling measures; Monitoring improvements to the green infrastructure;	Sustainability measures are maintained by daily walkarounds throughout the Hospital.

	Monitoring procedures to replace all mercury devices with safe digital alternatives.	
Ensuring that staff and patients have complete awareness through questioning and surveys	Random interviews with patients, visitors and staff during walkarounds, and retaining sample records of these conversations	Random interviews with patients and visitors revealed that 86% were highly aware of the sustainability measures that had been introduced in the Hospital.
Digital transformation and reducing paper consumption	Ensuring 100% digital transformation in all departments	100% digital transformation was achieved in all departments, with a 30% reduction in paper usage, so far.
Safe waste management	An agreement to transfer the Hospital's waste to a nearby EHA Hospital that has an autoclave with shredder device, instead of resorting to incineration	This is an ongoing procedure.
Chemicals	Changing the policy that necessitated giving every patient who had surgery a mercury thermometer upon discharge; 100% replacement of all mercury devices with safe alternatives.	The policy was modified and mercury thermometers are no longer given to patients upon discharge. 100% of mercury devices have been replaced with digital alternatives, supplied to the Hospital through the Unified Purchasing Authority.
Pharmaceuticals	Being selected among the top ten hospitals in the Green Pharmacies initiative	Al-Ramad Hospital was ranked among the first ten participating hospitals

Energy consumption analysis for 2023 versus 2022

Year	Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2022	Energy consumption in KW	60,813	55,732	62,248	48,198	73,231	89,776	89,512	84,327	92,309	84,939	77,195	73,250
	Monetary values	87,010	81,305	80,620	64,463	93,650	116,898	116,593	110,631	119,951	110,975	102,069	96,292
	No. of surgeries	468	470	516	303	456	424	381	512	455	491	429	444
2023	Energy consumption in KW	77,672	72,711	77,306	79,773	Start 76,647	63,070	94,348	113,756	49,720	47,096	44,393	63,259
	Monetary values	100,878	95,173	99,297	101,134	97,539	82,765	118,735	141,055	67,413	64,395	61,287	79,803
	No. of surgeries	388	471	518	355	633	574	503	567	545	580	628	632
Total reduction							30 %			46%	45%	43%	14%



Please note that the information in this case study was provided by the GGHH member named above. Health Care Without Harm (HCWH) is not responsible for the accuracy of the information/data provided.

Progress achieved

Direct benefits:
Evaluation of the business case revealed that viable economic benefits were found in Al-Ramad Hospital, realising 38% in energy reduction, a saving of 86,671 Egyptian pounds, and a 7% reduction in water consumption in an eight-month period.

The Comprehensive Safe Waste Management system implemented minimised disposal costs and the Hospital is investigating ways to generate revenue from the sale of recyclable materials. This dual benefit supports both cost efficiency and environmental sustainability.

By eliminating mercury-containing devices in both hospitals, the risk of mercury exposure for patients, visitors, and the general public is significantly reduced, plus this promotes Safety and Health for all Hospital workers.

Indirect benefits:

The Sustainability and Green Transformation Department agreed to implement these sustainable initiatives, and included consistent green practices in the healthcare system, to realise the National Vision for Sustainability and help the country achieve its broader sustainability goals.

The Framework selected played a crucial role in reducing the carbon footprint in healthcare facilities by integrating sustainable practices into their design, operation and management, and offered a range of potential benefits that positively impacted patient care, environmental health, improved patient healing environments, and provided a healthy work environment.

The Green Hospitals approach demonstrated that responsible resource management and operational efficiency go hand in hand. Moreover, this had a positive impact on the mental health of patients. Exposure to nature has been shown to reduce stress, improve mood, and reduce the average length of a hospital stay. Overall, this has enhanced the public image of the Hospital and fostered a positive relationship with the community.

This goodwill has attracted patients, donors, and partnerships, all of which contribute to the Hospital's overall financial sustainability.

Challenges and lessons learned

The challenge	Overcoming the challenge
The Hospital was already built in a conventional (non-green) way. This means that the building lacks green specifications and the standards for resiliency, such as the material used in building, ventilation, the use of natural lighting and energy efficiency systems.	To accommodate this situation we opted for a flexible accreditation system and chose the GGHH option. GGHH emphasises operations and activities, as opposed to structural buildings, which worked well for our case.
The decision to install solar panels for energy generation was found to be inefficient, due to: - Low solar irradiance; - Geographical location; - Shading and obstructions – nearby tall buildings and trees; - Unfavourable weather conditions – frequent cloud cover and heavy rainfall.	Implementing energy efficient programmes was found to be a more effective goal in this case.
The Hospital is the only hospital in the governorate that has no autoclave device with a shredder for treating waste. The decision to purchase an autoclave with a shredder was found to be inefficient in relation to the small amount of waste produced, being a specialised, one-day, opthalmology hospital.	Implementing waste reduction, separation measures, and preparing an internal agreement with the nearest EHA hospital that owns an autoclave with shredder was considered a more efficient goal.
Installing one big water tank was an inefficient idea, given that collecting rain water from the ceiling would have to come from more than six collection points at each building, besides the multiple AC units. This would have meant installing a huge and complex water pipe system.	Drain pipes were installed separately to collect rain water and water from AC units. Based on this simple idea, multiple small water basins were installed to collect, store and re-use waste water, for cleaning work and irrigation purposes.
The Hospital has no current cafeteria or kitchen and depends mainly on the nearest EHA hospital for its food supplies. The Hospital developed a proposal to let an internal space to a tenant for the purpose of cafeteria services.	A condition was added to the lease agreement that prohibits the use of preservatives, canned and packaged food inside the Hospital, and limits food supplies to healthy, natural food from local farms.

Given that no funds were available, the (high) cost of the mitigation projects was earmarked specifically for green projects.	We focused on energy efficiency measures, rationing water consumption, and integrating medical waste management systems.
The Hospital policy was to give every patient who had undergone surgery a mercury thermometer, upon discharge.	The policy was modified and no further mercury thermometers have been given to patients.
One last challenge was changing the culture of service providers and workers alike, in light of the habits and protocols they had already developed, given their day-to-day work pressures.	Changing this culture was a real challenge. Special attention was paid to the training needs of Hospital staff at all levels, including a focus on developing team work and loyalty between Committee members.
The Hospital team managed to surpass expectations and made great progress towards the achievement of their goals. This is confirmed by the financial evidence: 86,671 Egyptian pounds in savings, and a 7% reduction in water consumption in an 8-month period. In addition, the Hospital participated in another initiative – the Egyptian Green Award in Pharmacy Practices (EGAPP), a national initiative by the Arab Association for Pharmacy Progress – and reached the first rank on the national level (which included both private and public hospitals).	

Next steps

- **Next steps for the Hospital level:**
- The next step will be completing all ongoing projects and measures:
- Applying the proposal to rent free space inside the Hospital on condition that no preservatives, canned and packaged food is used inside the Hospital, and that food supplies are limited to healthy, natural food from local farms.
- Reaching agreement with the Port-Said Governorate indicates approval of a dedicated public transportation bus station within the 100-metre square near the Al-Ramad Hospital, and the installation of parking arrangements on the pavements at all outpatient clinics.
- Maintaining energy and water savings, as planned.
- **Next steps for the EHA level:**
- Lead environmental sustainability within Egypt's healthcare sector through the Sustainability and Green Transformation Department. This programme is the first of its kind in Egypt's Healthcare systems.
- Develop funding sources for sustainable green hospitals within the EHA investment plan.

- Engage with a central, internal EHA programme that reinvests financial savings from energy and sustainability projects into future projects in Green Transformation hospitals. This approach serves to motivate hospitals to develop practices to achieve cost savings of utility bills, and guarantees financial sustainability of green projects.
- Embrace switching to alternative low carbon renewable energy sources through a strategic plan that will be implemented at selected hospitals in different governorates, through working with international organisations and stakeholders, to install solar panels for generating clean and renewable energy.
- Adopt advanced construction strategies that provide pioneering models of green architecture, based on LEED, and Edge Standards.
- Continue working towards the gradual green transformation of all the Authority's facilities, providing safe, sustainable and environmentally friendly health services, while ensuring increased health system flexibility, to enable healthcare facilities to respond to climate change.
- Establish sustainability and green transformation committees in health facilities.
- Analyse carbon footprint assessments, vulnerability and adaptation assessments, and develop appropriate corrective plans, and prepare a carbon footprint map for Healthcare Authority facilities.
- Prepare a climate change risk map for the Authority's facilities.
- Provide training on the development of disaster and crisis plans and follow up on simulation experiments regarding floods, fires and power outages.
- Pursue engagements with communities through educational initiatives and partnerships, to promote environmental awareness and sustainability.
- Prepare a widespread initiative at the national level, to retrieve expired medicines from patients and return these to appropriate outlets, to guarantee safe disposal of medications.
- Organise workshops and seminars for local communities on environmental sustainability, waste management, and healthy living.
- Implement green smart building technologies by pursuing Green Building certifications, e.g. Leadership in Energy and Environmental Design (LEED) for new built healthcare facilities, including environmental factors in facility design, such as maximising natural light and ventilation.
- Introduce telemedicine services to reduce the need for travel, minimising the environmental impact associated with patient transportation.
- Industry Recognition: Sought recognition from sustainability organisations and participated in industry benchmarking exercises, to showcase the Hospital's commitment to sustainability.
- Develop healing gardens and green spaces within EHA facilities, to positively impact patient well-being and recovery.

Links

https://drive.google.com/file/d/1kSuYgeH8aNyXnH_6V5vjJAxxUUU3CR36/view?usp=drive_link

https://drive.google.com/file/d/15fqy5XRoiYYtXJGBbVvt97ot_fg7X1ru/view?usp=drivesdk

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https://www.cabinet.gov.eg/News/Details/68815

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