

NAQQAS FFRANKA



Promotion of Sustainable Energy, Water
and Waste Management Practices
in Gozitan Households



**Message by the Hon. Giovanna Debono
Minister for Gozo**

Through the 'Save and Reduce' project, the Ministry for Gozo is once again extending its invitation to all those residing in Gozo in order that all may be directly involved in the implementation of the eco-Gozo action plan - an ambitious vision which aims to attain a better future for our island of Gozo.

This invitation is being brought to your homes by our representatives, who have been specifically trained so that they may share with you valid information on environmental-friendly practices that benefit society as well as your family. This thanks to the collaboration received from the University of Malta, who are our partners in this project.

Following the commitment of about 50 Gozitan entities that have by now implemented or are in the process of implementing various eco-Gozo related projects, that ensued the encouraging interest shown throughout the public consultation process, we are confident that you will join and support us once again in our endeavours connected with this project.

Whilst thanking you for welcoming our representatives, we augur that their advice will prove to be a valuable service to you as well as the entire Gozitan community.

The objectives that inspire our joint commitment seek to achieve a better future for the island of Gozo that also signifies a better future for all families residing in Gozo.

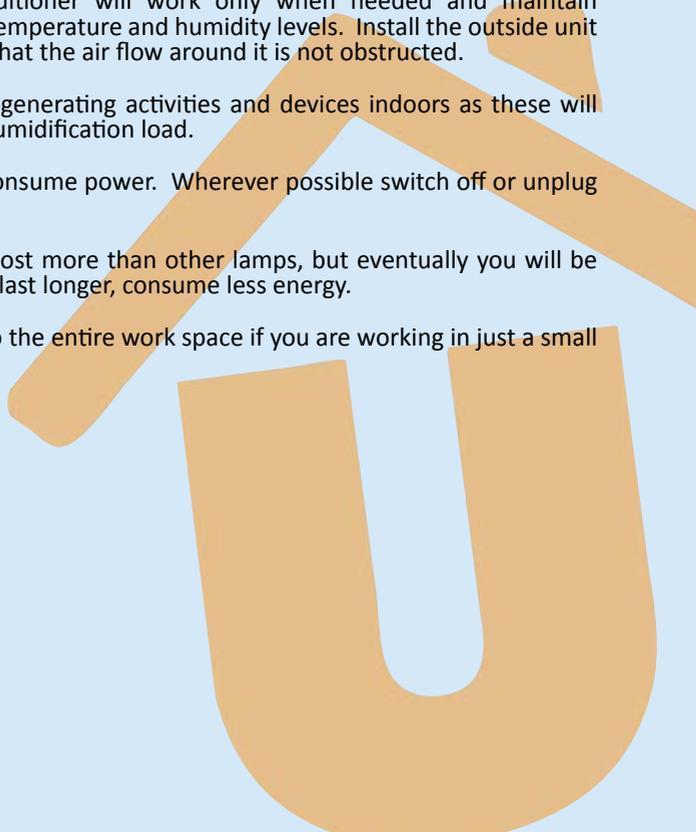
Yours sincerely,

A handwritten signature in dark ink, appearing to read 'Giovanna Debono'. The signature is fluid and cursive, written in a professional style.

Energy conservation tips



- In order of priority, the following are the best measures you can take to conserve energy in your home: insulation of roof; insulation of external single walls around shafts and internal yards; shading in summer; and night-time ventilation in summer. Double-glazing makes a marked effect only for homes that have several large windows/glass doors.
- When opting to change windows or doors, avoid using aluminum frames as they conduct heat fast. Opt for wooden or plastic-based products that have thermal breaks, to avoid heat losses.
- When buying new electrical appliances or lighting, look out for an energy label and understand its content.
- Choose a refrigerator that suits your needs and locate it away from heat sources. Defrost regularly excessive frost and check door seals periodically.
- For dishwashers and washing machines use washing programmes having the lowest temperature setting. Avoid using too much detergent to avoid the need to re-rinse clothes or dishes.
- Use the right-sized cooking utensil (pot, pan, etc.) for the burner in use. Cover pots and pans when cooking. Lower the heat once liquids start boiling.
- A correctly-sized air conditioner will work only when needed and maintain conditions at the desired temperature and humidity levels. Install the outside unit in the shade making sure that the air flow around it is not obstructed.
- Avoid heat- and humidity-generating activities and devices indoors as these will increase the cooling / dehumidification load.
- Appliances on 'Standby' consume power. Wherever possible switch off or unplug such devices.
- Energy saving lights may cost more than other lamps, but eventually you will be saving more because they last longer, consume less energy.
- You do not have to light up the entire work space if you are working in just a small area.



Renewable energy sources: solar water heater



- By replacing an electrical water boiler (geyser) with a Solar Water Heater (SWH) you will be reducing your household's dependency on fossil-fuel and Greenhouse Gas (GHG) emissions.
- Heat pump water heaters are air-conditioning units that heat water instead of air and can save up to 70% of the electricity consumed in a geyser. This is an ideal solution for residences that have no roof access.
- When calculating the capacity of SWHs remember that:
 - the typical hot water needs for showers are approximately 30 litres per shower. However, you need to cater for extra hot water for cloudy days.
 - for a Flat-plate Collector, each square metre of collector area should be matched by circa 50 to 60 litres of hot water storage tank capacity.
 - for an evacuated tube collector, each square metre of collector area should be matched by a 100 litre storage tank capacity.
- Ideally, a SWH collector should be installed in a location that is always exposed to the sun ... not shaded by higher structures (e.g. washrooms, parapet walls, lift rooms, water tanks, etc.).
- The SWH should face South as much as possible and installed at an angle between 40° and 50° to the horizontal to ensure that it is exposed to the sun even during winter when the sun is lower in the sky.
- The structure supporting the collectors and hot water store should be corrosion resistant and fixed to the rooftop to withstand strong wind.
- All pipes connecting the SWH to the point-of-use should be insulated to cut down on heat losses.
- Your SWH should be checked out periodically by a certified installer.
- The Solar Water heater Grant Scheme issued by the Malta Resources Authority in 2011 is open to the general public with 40% of eligible costs up to a maximum of €400. Applicants meeting social assistance criteria specified in the guidelines for eligibility and Gozo residents (under the Eco-Gozo initiative) are eligible to 40% of eligible costs up to a maximum of €560.



Renewable energy sources: photovoltaic & wind systems



- Although photovoltaics (PV) are becoming more popular, solar heating is at least 3 times more efficient and up to 4 times cheaper per kWh than PV systems. Solar heating should be given priority in your renewable energy options.
- According to MEPA guidelines, solar PV modules should not be higher than 1.5 metres above roof level.
- If installed properly, a typical PV system of 1 kilo-Watt peak capacity should produce at least 1,500 units of electricity per year. This output is expected to degrade by 1% every year.
- Partial shading reduces the efficiency of your PV system. Ideally a PV panel should be 2.4 metres away from every 1 metre of obstacle height.
- PV systems on roofs must not be accessible to children.
- If you switch off a PV system, the PV panels would still be producing power during the day and hence one should not tamper with the system at all.
- Modern Wind Energy Conversion Systems (WECS) harness the wind to generate electricity and are called wind turbines, wind generators and aero-generators.
- Smaller WECS may be used in stand-alone arrangements i.e. in battery-charging mode with the batteries supplying electricity when the wind does not blow. Such systems do not need to be connected to the electrical distribution grid network.
- Larger wind turbines may be installed alone or in arrays (called wind farms). The electrical energy that they generate is fed into the national electrical grid network.
- Wind farms may be installed onshore or at sea (offshore).
- Other countries have used wind energy extensively because it is free, abundant and an inexhaustible natural resource with no GHG emissions.



Water saving tips



- Never put water down the drain when there may be another use for it such as watering a plant or garden.
- Verify that your home is leak-free. Read your water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, there is a leak.
- Reduce your flow. If you have a pump-delivery water system, install plastic restrictors (like buttons) in your water taps to reduce water flow by 20%.
- Use your well ... for toilet flushing, for the washing machine and for washing the car and floors. Do not drink or use well water for showers, baths, and wash-hand basins unless it is appropriately treated.

In the bathroom:



- If your toilet is a standard 9-litre toilet, place a bottle filled with water / specialised bags in your toilet tank to cut down on the amount of water used for each flush: 3.5 litres can be saved with each flush.
- Put food colouring in your toilet tank. If you see the colour into the toilet bowl, you have a leak. It's easy to fix, and you can save more than 2200 litres a month.
- If your shower can fill a 10-litre bucket in less than 1 minute, then replace it with a water-efficient showerhead. It can save you more than 1500 litres a week. Keep your shower to under 5 minutes. You will save up to 4000 litres a month.
- Keep a bucket in the shower to catch water as it warms up or runs. Use this water to flush toilets or water plants.
- Turn the water off while you shampoo, brush your teeth, shave, etc.

In the kitchen:



- Collect the water you use for rinsing vegetables and fruit and reuse it to water houseplants.
- Do not use running water to thaw food.
- Consider installing an instant water heater on your kitchen sink so you don't have to let the water run while it heats up. If you have a domestic reverse osmosis unit for drinking water, make sure the reject pipe is run into a cistern or the roof tank. A standard domestic RO unit wastes 85% of the water.

In the laundry:



- Use your washing machine only when fully loaded or properly set the water level for the size of load you are using. You could save 2000 litres a month.
- Choose new water-saving appliances, like washing machines that save up to 70 litres per load.

Reduce at work:



- Examine your production and procedures to see where waste can be reduced. Significant savings in supplies and disposal costs can result.
- Establish and support a collection program for recyclables.
- Encourage employees to bring their own washable mugs to work or consider providing mugs as a gift.
- Next time your company buys a photocopier, get one that makes two-sided copies.
- Use electronic mail to send memos, or route memos to staff members rather than making a paper copy for each person. You can even add a message to your emails asking your contacts to consider the environmental responsibility before printing an email.
- Use re-used envelopes for internal mail.
- Use direct deposit for your paycheck.
- Ask suppliers to deliver materials in returnable/reusable containers.
- Use a thermos flask for beverages, reusable containers for snacks, a washable bag or plastic container for sandwiches and a cloth napkin.
- Pack it all in a reusable cloth bag or lunchbox.

Reduce at home:



- Use washable utensils and dishes for picnics, outdoor parties and barbecues.
- Use cloth napkins. Reach for a sponge or dishcloth instead of a paper towel to clean up.
- Use internet banking for paying bills.
- Encourage companies that bill monthly to use two-way mailing envelopes.
- Use up existing home chemicals, like paint, paint stripper, paint thinner and other chemicals, before buying more. You'll save money by not having to buy new products.



5km of
restored
rubble
walls



90%
of Gozo
schools
participating
in eko skola



€2,000,000
for 51
eco-Gozo
projects
by Local
Councils and
NGOs



€1,200,000
for a Centre
of Research,
Development
and
Innovation in
Agriculture
and the
Environment



3000
new
trees
in Gozo



43
million litres
of increased
rainwater
harvesting
capacity in
Gozo



10,000
home visits
in Gozo
promoting
sustainable
energy, water
and waste
management
practices



€120,000
to promote
Gozo as
a diving
destination



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