

## People living under High Tension Lines risk cancer

By Perwez Abdulla

Karachi : Thousands of people in Karachi live under High Tension Lines (HTL's) unmindful of the danger this poses to their health, a senior researcher at the University of Karachi has said. In Defence Housing Authority, one of the city's most upmarket localities, not only are houses constructed under HTLs but there is an entire row of marriage halls as well as a recreational club, The News has learnt.

The HTL crosses various areas of the city and in many places people have built their homes, a city survey has revealed. A 66,000 volts HTL is passing through the University of Karachi while a 132,000 volt line crosses the National Highway. Similarly, a 220,000 volt lines passes over Defence and a 500,000 volt line criss-crosses the city and originates from the HUBCO power plant in Balochistan.

Dr Surayya Khatoon, Pr and Chairman of Karachi University's

Department of Botany has conducted research on plants that grow under the HTL to ascertain whether they are affected in any way. **"The research is in the final stages. It is a much debated topic related to the health of plants and humans and we are pioneers of this research in Pakistan,"** the researcher told The News.

She says that the bulk of literature on the effects of high tension lines on humans and plants are based on laboratory experiments. **"We select the plants and expose them to electromagnetic fields for some time and study the adverse effects on them,"** says Dr Khatoon, adding **"This research is quite different as it has a narrow, confined and unnatural environment when compared to those plants that are beneath the HTL."**

Dr Khatoon said that these plants are constantly exposed and her team has collected samples of such plants from their natural ecology system and studied them for the effects. **"The genetic materials of the plants that grow directly beneath these lines are affected by the Electromagnetic Fields (EMF). The difference cannot be observed externally but can be studied under the microscope."**

Dr Khatoon told The News that it is evident that the cell-division process is disturbed in the reproductive cells. **As a result entire the Reproductive system is affected and this passes on to the next generation of plants. "This is called Geno Toxicity. We measure the intensity of the genetic change by the EMF through Gaussmetre that clearly indicates the genetic changes",** Dr Khatoon said.

This senior academic has discovered that plants can better survive under EMF than the animals and humans. A random survey of children exposed to EMF in Sweden had shown that many of such children had developed blood cancer. The residents of such areas protested against the presence of HTL in their localities and the government there acceded to their demand and rerouted the HTL through the unpopulated areas. This was about thirty years ago and the research had proved that the apprehensions of people about HTLs was right.

**"Our study is focused on the plants and we have examined more than 100 species under HTL conditions. It has been proved, beyond doubt, that EMF from HTL is harmful to the plants as well as animals. The studies tell us that Geno-Toxicity of plants and hence we can know and manage the healthy environment in the light of such studies,"** she informs.

According to the study, a 500,000 volt line affects the health of plants within a 100 metre area. The effect of EMF right beneath the HTL is 58 milli gauss and it continues to decrease until at 100 metre it come to more than one milli gauss on the ground level.

Dr Khatoon informed that the research will also focus on what protective measures should be taken to prevent the adverse effects of EMF from HTL but pointed out that the details could not be made public because the research was yet to be published. **"I am afraid that some plagiarist might be lurking and devour our work",** she said with a smile.



Karachi : The Sunset Club (to the right) and marriage gardens in Defence built right under the high tension cables.