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Meet The 'Waste Warrior' Of India!

By SHOBHA WARRIER

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Her mission: Making Mother Earth cleaner and greener!

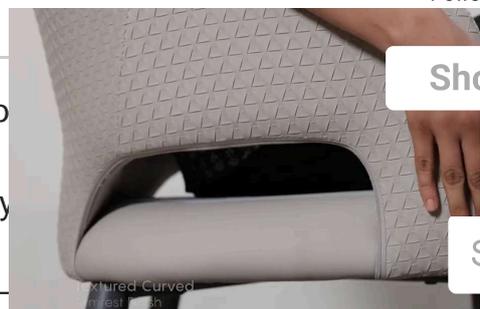


IMAGE: Dr Vanita Prasad with CFO Bhavik Kathrani and CEO Rajneesh Prasad. Photographs: Kind courtesy REVV Environmental Solutions

Key Points

- 'There is nothing called waste as our technology can reco
- 'My main competitor was cow dung!'
- 'We need a system that can convert our waste into energy water.'

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She is a scientist. She is also an entrepreneur. She believes it is the duty of scientists and entrepreneurs to identify the problems in society and then look for solutions.

That's what Dr **Vanita Prasad**, an environmental biotechnologist, does.

As a scientist, she saw waste management as one of the biggest problems the country faces and then tried to find solutions in her lab.

As an entrepreneur, she founded REYV Environmental Solutions so that she could take her award-winning unique solutions to manage waste into society.

Her mission: Making Mother Earth cleaner and greener!

So far, the Gujarat-based REYV has treated around 100,000 litres of waste water and 500,000 tonnes of organic waste.

No wonder she is called the 'waste warrior' of India!

"Every individual has a responsibility to Mother Earth to keep it clean and green. Each and every person should start by segregating waste so that our solutions work. I will be happy if this article can inspire at least one person to segregate waste," Dr Vanita tells **Rediff's Shobha Warriar**.

While studying, did you have the dream of becoming a scientist or an entrepreneur?

No. When I was young, my dream was to understand the human body. In 1977, I had to go for a CT scan, and it created a curiosity in my mind on how a machine could tell about my body to the doctor. From then on, I wanted to understand the scientific concepts behind the human body.

That was why I pursued science. But I had no idea of becoming a scientist.

Fortunately or unfortunately, I could not get into medical school. So, I studied biochemistry first, and then did my post graduation and PhD in biotechnology.

While doing my PhD, I realised that most of the health problems people had arose out of living in unhygienic conditions. This realisation made me change my PhD from medical biotechnology to environmental biotechnology.

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So, it was not to become somebody that I specialised in this field, but to understand certain issues.

So, you became an entrepreneur because you saw a problem that existed in society, and decided to find a solution?

As a scientist, it was a natural progression for me to move from environmental biotechnology to waste management.

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After my PhD, I was working in a lab for a company.

The reason I became an entrepreneur was because I felt everything was happening in the lab and not going to the real ground. A lot of things are happening in academia, but nothing is reaching where it should to solve the problems.

You have to find solutions that are economically viable too.

What is important is, when a scientist becomes an entrepreneur, you have to understand the market too.

So, in 2017, I decided to start my own company so that I could solve the issues that were there on the ground.

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IMAGE: Vanita Prasad with her team at a garbage site.

Was it a tough decision to take?

The decision was not taken in a haste.

After having identified the problem that existed in waste management, I knew what I had to do.

I had this idea and I started working on the idea.

When I finished working on the idea, and when I came up with a workable solution, I started the company, very thoughtfully.

As an entrepreneur, did you face problems in the beginning? To get funding, etc...

Everything was a problem; from taking the decision to resign from my job and starting my own company.

In fact, my husband (*Rajneesh Prasad*) also resigned his job, and both of us together started REVV Environmental Solutions Pvt Ltd.

I am of the opinion that you have only one life, and if you feel you have to do something, you should do it.

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When we came to know that the Government of India was offering funds to companies working in waste management, we applied.

In fact, I was working on the same idea while I was working for a private company.

You must understand that I was not sure whether the idea would work on the ground.

I took the decision to start my own company to try whether my idea was workable or not. It might have failed also. But I was ready for failure. Indian society cannot accept failures. I am of the opinion that you will succeed only if you fail first.

It is necessary to take risks to experiment your ideas. I was ready to take that calculated risk. I needed a company to try out the idea on the ground, and if it didn't succeed, the company would close down. It was as simple as that.

In A nutshell, here was a woman scientist who was working on an idea for 30 years, and wanted to try whether it would work on the ground or not. When her idea was supported by both the state and central governments, she took the plunge as an entrepreneur.

There was a lot of struggle. Yes, you got the opportunity. You got a chance. But you had to see whether your idea would succeed or not.



IMAGE: Jugnoo.

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What was the idea?

The idea was creating granulated sludge, a microbial cocktail of 650 natural microbes that transforms wastewater into clean water, fertiliser, and biogas.

Not just wastewater but organic waste and also effluents from industries such as dairy, distilleries, pulp and paper, slaughterhouses, sugar, food processing etc..

We develop 'Designer Bio-culture' using IP protected combinations of bacteria and other micro organisms in the form of anaerobic granulated sludge, and biomass growth enhancement formulations that treats waste. The waste is then converted into energy source such as Bio-methane and Bio-Hydrogen.

You know my main competitor was cow dung! Whenever a biogas plant is commissioned, it uses cow dung. While cow dung may or may not have the right kind of micro organisms, the product that I have created has the right kind of microbial combination as a microbial cocktail.

This will work on any organic waste: Agricultural waste, industrial organic waste, food and beverage waste, and waste water.

For example, when we treat waste water, clean water comes out and biogas will be recovered.

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Likewise, biogas and organic fertiliser will come out from agricultural waste when it gets treated by our product.

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IMAGE: Waste treatment taking place.

You said this was the solution for global crisis of food, water and energy... This is significant as it is said that the next war will be over water..

The reason for a lot of the community problems is, poor waste management and contaminated water.

I will tell you how a circular economy works.

There is a water crisis in many cities in India including here in Gujarat.

We need a system that can convert our waste into energy, waste water into clean water. Indore is doing this successfully.

Indore is running the city from the energy they get from municipality organic waste.

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That is the model I want to work with.

This is what is called a circular economy.

Their own organic waste will give them energy and fertiliser.

And the fertiliser helps you have nutritious food.

This is applicable not just in India, but all over the world.

Reports say that as a country, Singapore doesn't waste a single drop of wastewater as the entire sewage water is treated to make clean water. Of course, Singapore is a small country...

In India also, we can do that. Right now, 70% of India's sewage is NOT treated.

But the Gujarat government has made it mandatory that all industries should make use of circular water hereafter, and they will not get any fresh water.

What is needed is, you will have to do it at a low cost. Only then, you can afford to do it.

That's why we are trying to create a low cost wastewater treatment solution.

Our technology can be used in any organic waste. It can be used to create biogas from any agricultural organic waste.

We treat not just kitchen wastes but also the most complex wastes from industries like paper mills, pharmaceutical, fertilizer, dye, distilleries, and petrochemicals industries.

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IMAGE: Anaerobic granulated Sludge.

Which is the major problem in India: Agricultural waste or industrial waste?

Both are problems for India.

Like I said earlier, 70% of India's sewage is NOT treated. And it is the municipalities that take care of sewage. But then you need infrastructure for that, and the government will have to spend a lot of money.

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In the case of industry, there is a pollution board to monitor industries. You will be surprised to know that 60% of industrial waste is treated now.

Then comes solid waste, and it needs to be segregated.

For the last 10 years, the government has been telling people to segregate waste, but how many do it properly?

So, if we have a problem in waste segregation, everybody is responsible.

Things will change only when every citizen realises their responsibility.

You spoke about Singapore. In Singapore, waste is everybody's responsibility. Even a small child there knows he shouldn't litter.

There the government could implement ideas and manage the waste because the citizens are responsible there, and they segregate their waste meticulously.



IMAGE: The Revy R7D facility at Alindra.

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The REVY web site says that your mission is to make Mother Earth cleaner and greener..

If all of us follow the right path in waste management, Mother Earth will automatically be cleaner and greener.

Why is it that Singapore and Europe are clean? Because people maintain their cities properly.

Even when they have concrete structures, they have greenery also, with lots of parks within the city.

They have managed industries and greenery in the right proportion. It means they are doing development responsibly.

What we need is sustainable development, not development at the cost of the environment.

We at REVY want to give solutions to the industry so that they follow sustainable development.

It is important to work with industry so that industrial waste is used in a sustainable way and their waste becomes a raw material for them.

That's why at REVY, our mission is to develop low-cost waste and wastewater treatment technologies.

We want our waste to become a resource.

In my opinion, there is nothing called waste as our technology can recover value from any waste.

As an entrepreneur, I have to take it to the market. We do not want to keep our solutions inside the lab. Unless the solutions reach society, there is no value to them.

As a scientist, I try to understand how Mother Earth processes waste, and then I apply those solutions on a scale that can be used by mankind in a sustainable way. After all, Mother Earth does everything in a sustainable way.

That's why our mission is to make Mother Earth cleaner and greener.

Feature Presentation: Aslam Hunani/Rediff

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