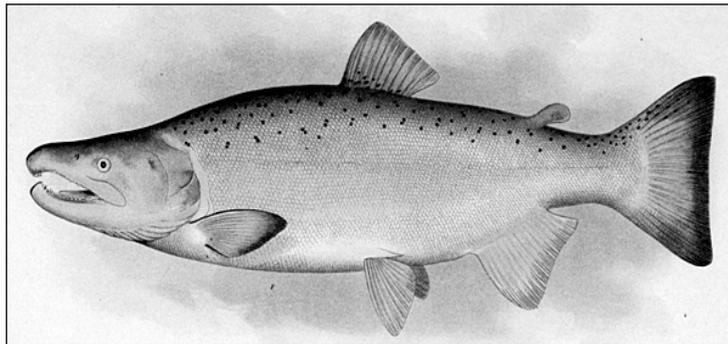




Braj Kishor Gupta

Get Your Dream Job

Getting a Dream Job is your birth right! It is of vital importance for you to know that "Dream jobs do not exist, we create them, first in mind and then in reality". To move closer to your dream job, you must believe that you are the microcosm of the universe and the world begins with you. It is the power of this belief that would motivate the entire universe to collaborate with you in getting you your dream job. But it is imperative to have the clarity about your goal. The goal you choose must be based on your aptitude and natural drive. It is important not to subscribe to the common belief that there is a crisis of suitable employment. On the contrary, you must be of the view that



there are opportunities and possibilities galore. It is only the question of time when fortune smiles on you.

Let there be no doubt that you need to have a Big Dream. Besides having the dream, you must be fired by an urge to survive and succeed in life in spite of nature's hostilities and

inhospitable surroundings. In this context, we can all get inspired by the fiery zeal and passion as embodied by the Coho Salmon – A rare breed of fish found in the North Pacific Ocean. It is strange but true that out of 2500 eggs which are laid, 2125 die instantly, and the remaining

375 eggs are hatched, out of which, only 30 see the light of the day. You would be perturbed to know that out of 30, 25 of them again either die or get eaten up by the predators. Ultimately, there are only 2 brave Coho Salmon fish that survive the buffets of life and live to carry forward their progeny. This amazing tale of grit and courage to survive and thrive ought to be the guiding principle of our life.

As you embark on your journey to get a dream job, you must grow creative in your search by looking beyond what is obvious. Creativity implies making invisible visible and adding value. You must bear in mind that no organization ever looks for a perfect candidate. You need to be just a potential candidate having desire

and determination to prove to be an asset to the organization. You should however remain open to learning and acquiring new skill sets all the time.

It is possible for you to fail a couple of times before you could have the last laugh. That is the time to hold on to your faith and live by the indomitable will like Ernest Hemingway's old man named Santiago in the famous novel 'The Old Man and the Sea', who refuses to accept defeat, despite not getting a single fish during his first eighty four days in the treacherous sea. He gets disappointed but does not give up. He persists and succeeds in creating history with his catch, the biggest ever in his life time. Such indomitable will and the killer instinct for survival can truly pave the way for 'Getting Your Dream Job'.

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Swachh Bharat Abhiyan: Role of Indigenous technologies developed by BARC

*Courtesy Department of Atomic Energy

Swachh Bharat Abhiyaan was launched by Hon'ble Prime Minister of India on 2nd October, 2015, which caught attention of everybody not only in India, but also in the world. The Government has taken various steps to create awareness among the masses for keeping the area surrounding them neat and clean. Government is also paying special attention for cleaning of rivers, railway stations, tourist destinations and other public places.

To achieve the target of cleanliness, the technologies to treat the waste material should also be developed along with creating awareness. There are many technologies that are used to treat waste material. They are usually very costly, very complex to be understood and viable only for large size units. At the same time, indigenous technologies are low cost capital and easy to use and they can also be used by different size units. In India, they are particularly suitable for the small and medium units. In this regard, a National workshop on Indigenous water, Wastewater and Solid Waste Treatment Technologies was organised by the Department of Atomic Energy (DAE) in January, 2015 at Gujarat Technological University (GTU) in Ahmadabad. The objective of the workshop was to disseminate indigenous technologies of water, wastewater and solid waste treatment developed by the **Bhabha Atomic Research Centre (BARC) under "Swachh Bharat Abhiyan"** and to bridge gap between the research at the research centres and the practical application of the technologies.

The BARC is playing a pivotal role in the development of these technologies. Some of these technologies are as follows:

Indigenous water purification technologies:

These technologies can improve the drinking water quality of smaller villages as well as larger cities. It



uses the Pressure Driven Membrane Processes. These are suitable for all capacity units e.g. they are adaptable from household level unit or community level unit to large scale unit. Water purification technologies make use of the nuclear energy and solar energy also.

Environment friendly Plasma technologies:

Solid waste dumping sites or landfill sites need more amount of land which is not available in urban areas. Incineration of solid waste pollutes the environment if the incinerators are not designed or operated properly. Thermal Plasma Technology is ideally suited for waste treatment. By plasma technology Hazardous & toxic compounds are broken down to elemental constituents at high temperatures; Inorganic materials are converted to Vitrified Mass; and Organic materials are Pyrolysed or Gasified, Converted to flue gases (H₂ & CO

& Lower hydrocarbon gases when operated at low temperature (500 – 600°C). Disposal of carcass is also being thought of using plasma pyrolysis.

Unique Multi Stage Biological Treatment Solution:

Multi Stage Biological Treatment Solution (MSBT) can be implemented on existing STP which are not able to process Sewage to optimum efficiency. MSBT can be implemented as a modular or container on the banks of rivers on Drains/Nalas which discharge waste water to the river. It can also be implanted in small urban societies and housing complex for better water management. Benefits of MSBT are: No Surplus of Organic Sludge, No Odour problem, Drastic reduction of Electrical Power usage which minimizes operating costs, No need for return sludge pumping (minimizing electromechanical component which ultimately reduces operating

cost).

Role of environmental isotope techniques in the water resources development and management:

There are two type of isotopes, stable isotopes and radioactive isotopes. Isotope techniques are used to find out the type of contamination in surface water and ground water, the sources and origin of contamination, pollutant dispersion in surface water bodies, to assess the ground water salinity, to assess the changes due to long-term exploitation of groundwater, for hydro-chemical investigation and to carry out geochemical evolution of groundwater.

The BARC UF Membrane Technology for Domestic Water Purifiers:

Water filters manufactured by Sondhka based on membrane based water Purification Technology has been developed by BARC. Benefits of BARC Polysulfone Membrane are high tech 0.02micron or 20nm, simple form factor, rugged (life of more than 1 year) and low maintenance (about Rs. 500 per year). It is very easy to use and very low cost solution for the water contamination.

Deployment of BARC Domestic Water Purifier in Rural Area through AKRUTI Program:

Rural Human & Resource Development Facility is disseminating BARC technologies, namely Nisargruna Biogas, Soil Organic Carbon Testing Kit, Seed Bank, Domestic Water Purifier, Weather Forecasting, LLL, RIA, FSD, VTD; under the AKRUTI (Advance Knowledge of Rural Technology Implementation) Program. Activities carried out under the AKRUTI program are surveys for safe drinking water, Interaction with the villagers, Entrepreneurship development for domestic water purifier production and Awareness programs for benefits of use purified water. RHRDF has also launched a scheme for safe drinking water for

village under CSR.

Radiation Hygienization of Municipal Sewage Sludge:

The Sewage is the waste water generated from domestic premises and consists mainly of human waste. It typically contains 99.9% water and about 0.1% solid. The solid waste in sewage is typically organic in nature and is broken down in the sewage treatment plants resulting in sewage sludge as a by product. In Radiation Hygienization process dry sludge generated at STP's is hygienized using radiation technology using standard Gamma facility at a Dose of 10 kGs. Such radiation plants are operating in India for sterilizing medical products.

Refuse Derived Fuel: An Emerging Processing Technology in MSWM:

Refuse Derived Fuel (RDF) is a processed form of Municipal Solid Waste (MSW) and it can be a substitute to coal energy. The process of conversion of garbage into fuel pellets involves primarily Drying, Separation of incombustible, Sizereduction and Pelletisation.

Conclusion: The above mentioned technologies can be of great help in the treatment of water and solid waste management. This shows that solid waste which is normally treated as the cause of concern, if treated properly it can become a sustainable source of energy.

The aim should be to promote research work in these technologies. After the research is done, the gap between research and its implementation at ground level should be bridged. All stake holders such as various departments, urban local bodies, consultants and contractors should be involved so that these technologies can be utilised by small, medium and large units, so that they can contribute to the Swachh Bharat Abhiyaan by making India clean