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**IF I COULD INVENT SOMETHING NEW, ………**

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It will be a packaging material which can be used in place of synthetic plastics. My invention will make use of fish scales to produce biodegradable plastics. Fish scales are known to have high toughness and high tensile strength and they also contain a combination of organic and inorganic materials. Fish scales contain protein, fats, protein chitosan and gelatin. With some engineering processes, I believe my innovation can be brought to life.

Plastic has over the years been a daily part of our lives. Since the introduction of the first synthetic plastic, Bakelite in 1907, it has found extensive use both domestically and industrially. Industrial use of plastic cuts across all sectors, particularly the packaging sector. This is due to its versatility, light-weightedness, flexibility, moisture resistance, durability and affordability. Of all the plastics produced globally, only a few are properly disposed. A good number of these plastics often end up on the coastal lines causing what is known as plastic pollution.

Plastics are synthetic non-biodegradable materials that do not break down completely. Instead, they typically break down into microplastics which often persist in the environment for a long period. The resulting microplastics have been found in the gut of marine creatures, drinking water, beers and food products. Some microplastics have been shown to contain additives that are known reproductive toxins, carcinogens and mutagens. Moreover, due to poor disposal, plastic products block water channels leading to flooding, erosion, and mosquito breeding. The ripple effects of plastic pollution have overreaching consequences on agriculture, wildlife and human existence.

Plastic pollution is a contemporary social problem that the world currently grapples with. According to the United Nations Environment Programme, humans produce over 430 million metric tonnes of plastics annually. Researchers have predicted that the amount of plastic waste in the environment will reach 12000 million metric tonnes by 2050. As part of effort to reduce plastic pollution, taxes and fines were levied on countries and companies generating plastic waste while tax incentives such as tax holidays were given to companies that cut down on waste generation. Despite various efforts to address plastic pollution at the international, national, and subnational levels, the menace persists, most especially in developing countries.

In Nigeria, an average of 2.5million tonnes of plastic waste is generated annually. plastic waste generation is still very high and requires urgent immediate and lasting solutions. There is an increasing need to tackle plastic pollution due to its significant risks to biodiversity and public health.

My invention will help to reduce and/or eradicate the use of non-biodegradable plastics that pollute our environment resulting in a safer environment and healthier human and animal population.