

## Packaging for a More Sustainable Future

From the time we wake up to the time we go to sleep, our everyday lives are permeated by unsustainable materials. We might pour milk on our breakfast cereal from a plastic carton and brush our teeth with a disposable plastic toothbrush, using toothpaste from a low-density polyethylene tube. Sometime throughout the day, it is likely that we will drink water from a plastic bottle we do not end up recycling, eat a snack from a plastic re-sealable bag, or use a household cleaning product encased in packaging that will later be thrown away. All of these products have in common the potential to be great burdens on Hawaii's environment, and could be replaced with new packaging designs that are greener and more efficient.

The problem of unsustainable packaging material is one that affects every resident of Hawaii. Everyone is familiar with the product plastics that soon become needless waste in the islands' landfills. Hawaii has already faced waste disposal issues in the past and, if the current trend in discarding continues, will likely face further problems in the future. For instance, landfills in Hilo are quickly approaching capacity, and it is likely that waste will have to be moved to a West Hawaii landfill, a waste-incinerator will have to be built, or the landfill will have to be expanded. Similar problems with waste disposal space have also arisen concerning the Waimanalo Gulch Landfill, and the landfill in Nanakuli on Oahu. There seems to be no space to expand the existing landfills to keep up with our consistent torrent of refuse, and no one wants a new landfill in his or her community. Excessive waste leads to a greater chance of debris landing in the ocean, placing stress on marine habitats and ecosystems. Fifty years from now, it is very possible that Hawaii's landfills will be filled, with the state left with no other place to dispose of waste.

There are many possible solutions to the disposal problem in Hawaii, including recycling and limiting the amount of household garbage allowed. Both of these solutions, however, address waste after it has been produced. A more efficient and long-term remedy would tackle the source of the problem: the prevalence of disposable plastic materials. Adopting a system of green packaging would greatly reduce the amount of permanent waste produced. Both biodegradable packaging and reducing the package-to-product ratio are desirable. Although Hawaii has already begun to reduce plastic bag usage, the detrimental effects of plastic waste can also be alleviated by switching to biodegradable plastics made from materials like cornstarch or sugarcane. These plastic items would still need temporary storage in landfills, but would eventually disintegrate, freeing up much-needed space.

Aside from replacing traditional plastics with more environmentally friendly materials, an effort could also be made to reduce the amount of packaging needed for products. Many companies have already found innovative ways to make packing less cumbersome. Extraneous outer boxes, such as those around medicine bottles, can be eliminated. Plastic bottles and containers can be made thinner, and detergents and solutions can be made more concentrated to reduce bottle sizes. Although these changes may not seem revolutionary, their collective effect could substantially reduce the amount of waste going into Hawaii's landfills.

Another option could be to focus on replacing current packaging material altogether with materials that have a less negative impact on the environment. Plastic beverage containers, such as jugs of milk and juice, could be replaced with cartons, which, once disposed of, disintegrate faster than biodegradable plastics. Water bottles, which have traditionally always been made of plastic, can be converted to cartons as well. While it is true that water bottles can be recycled, people oftentimes forget to recycle them and the process of recycling itself has its own carbon

footprint. Plastic food bags, such as Ziploc pouches, can be replaced with reusable food-grade fabric bags. Recent technology has allowed molded pulp to retain liquid, making it available to replace plastic in items like soap bottles and household solution containers. Plastic packaging in everyday products from office supplies to beauty products can be replaced with cardboard, cardstock, and paper. If implemented with creative design, this packaging switch can be made while maintaining the attractive aesthetics of products. Making this switch to more environmentally friendly materials can reduce the lifespan of product waste, giving landfills levels the opportunity to decrease.

In order for the implementation of these ideas to be successful, community awareness is essential. Consumer participation is needed to promote buying products with sustainable packaging. To encourage this, advertisements can be placed in the local news and encouraged through the social media outlets of news stations. Local businesses can also be encouraged to adopt the use of sustainable packaging. These local companies would receive more business from consumers who are working to reduce waste as an incentive.

Throughout his life, Clarence T.C. Ching displayed great foresight and a passion for working toward the betterment of Hawaii as a whole. In his development of Kukui Gardens, Mr. Ching sought to create a housing complex that would suit and sustain Hawaii's population in the future. Now, Hawaii faces struggles with waste disposal, which, if not addressed, could be detrimental to the state's residents. It is important to take steps now to protect future island communities, in the same way that Clarence T.C. Ching so deeply cared. Implementing sustainable materials in product packaging could save Hawaii from facing overwhelming waste in the future and could allow for a sustainable balance between consumption and the environment.