

CONTAMINATION CRISIS

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From massive industrial corporation pollution in China, to colossal rubbish-filled plastic patches of the North Pacific Gyre, our planet is under attack; not in the way one might consider a world to be attacked, though. This particular variety of destruction is currently being inflicted by the very individuals who require the Earth's protective bounty, and it needs to stop. Within only the past 50 years, humans have consumed more resources than in all previous history. We have been burying, dumping, and expelling innumerable quantities of non-compostable materials with toxic properties directly into the sensitive ecosystems of the planet. Should our society continue in this fashion, the air we breathe, water we drink, and soil we plant in will eventually result in record illness rates, tremendously magnified solar rays that scorch and in the end, an extensive relapse of ice age. Going "green" is most assuredly not a fad, it is an essential and fatally serious call for help from those who grasp our conduit to failure; we see the Earth suffering, why aren't we acting? This is more than a world issue, it's a Contamination Crisis.

Beginning at the production source, we find ourselves staring into the eyes of thousands of factory giants. These veritable pollution and waste machines are the backbone of our problem. Take China for example, a motherland of people who only produce to order and the rest of the world just won't stop demanding more. Whether it's a higher production rate or lower cost margins, this hard working society never ceases to meet the world's needs. Doesn't anyone ever wonder how they do it? As with all extremes, that power to surplus comes with unlimited responsibility that we keep telling the Chinese to disregard. In September of 2011, more than 500 people from the small village of Haining City aggregated in a riot just outside of the Zhejiang Jinko Solar Co.

Ltd. Factory to protest the deadly pollutants seeping from the manufacturer's looming razor wire fences and smoke stacks. Several of the villagers had complained of toxic chemical waste being released, claiming that "not only does the factory discharge waste water into a river, it also spews dense smoke out of a dozen chimneys" and "an elementary school and a kindergarten are located less than a kilometer from the plant. Many fish died after the factory discharged waste into a small river" ("Over 500 villagers," 2011). Concerning pollution such as the aforementioned smoke, atmospheric vapors known as anthropogenic air pollution (meaning caused by humans) is among our worst causes of global climate change. According to Johannes Quaas of The Center for Marine and Atmospheric Sciences in Hamburg Germany, "Anthropogenic pollution forms small liquid or solid particles in the atmosphere. These aerosols—emitted directly, for example, as soot particles from smoke, or formed from pollution gases, such as sulfate particles...absorb sunlight, contributing to climate warming; others reflect sunlight, leading to a relative cooling" (Quaas, 2009). Together, these aerosol particles will form an average cooling result, effectively launching the Earth back into a chilling and life-shattering ice age. Aside from this overwhelmingly out of control aspect of our waste problem, yet another dangerous practice holds true despite the push to recycle. Plastic is the one of the world's most durable, lightweight and multi-purpose materials, making it the perfect choice for packaging and storing products. Knowing this, it only makes sense that factories around the globe are required by business owners to excessively package their products as a protective measure. However, such a substance is seriously poisonous, generates waste, and will certainly not biodegrade for an extremely long expanse of time. Over decades of research, scientists have

associated health issues such as asthma, cancer, birth-defects, endocrine disruption, and even diabetes to the elements which of plastic is comprised (like BHP and BPA phthalates). As the Director of the University of Rochester's Center for Reproductive Epidemiology, Shanna Swan discovered in her studies that pregnant women exposed to phthalates during pregnancy have a much higher risk of developing a baby boy with genital mutations. These ubiquitous plastics that we quickly use and dispose of will never wane, ensuring that all of this debris ends up somewhere on Earth after the population has expended it. In 2010 alone, more than 300 tons of plastic were produced worldwide; bearing in mind only the first 10 years of this century, we produced more of this invincible petroleum product than the previous century in its entirety (Knoblauch, 2009). Perhaps one of the most completely scandalous destinations for this plastic remains to be the massive oceanic vortices we call "garbage patches". Over 18 billion pounds of the plastic our industry produces enters the sea, only to be sucked into these torrential maelstroms where mounds the size of Texas become either mistaken food or torturous trapping devices for many a marine animal, resulting in bellies full of the nutrition-less masses and ensnared appendages of helpless creatures (Roberts, 2012). Over time, this waste's concentrated chemical base seeps into the bodily fluids of over 180 species of wildlife (Knoblauch, 2009), traveling down the food chain and disrupting the entire ecosystem until our very own fishermen end up catching and feeding the malnourished, poisoned animals back to us (Ahmed, 2012).

Moving down the line, the world's businesses are not exempt from this ignorant mischief. One of the worst offenders among many is the medical industry. In their attempts to provide a clean and safe environment for the hordes of humans who pass

through for various surgeries, procedures and check-ups, health professionals utilize hefty quantities of protective resources which cannot be recycled due to the biohazards they harbor. Instead, these wastes culminate in landfills where they are buried underground in clay, lead and plastic lined beds, or worse, wind up incinerated to the point of releasing poisonous dioxin gas and carcinogenic chemicals into the air (Shapley, 2007). Beyond just plastic usage and disposal, several stores and companies frequently co-mingle their garbage, compost, and recycling castoffs as a method of banking on labor and removal handling fees. Ultimately, these dealings are saving money while simultaneously sullyng our world's resources when we toss away those plastic bottles, bags, lids and reams worth of once-used photocopies or cardboard boxes. It doesn't matter if one is an educator making 175 reproductions for their students, a screen writer with 5,000 prints of their latest movie, or a financial advisor who just dumped three years' worth of customer information shreds into the dumpster; everyone is a part of this issue, making the reality of it all just that much more impending. Despite the fact that emerging nation paper industries are capitalizing on recycling plants for old newspaper and cardboard packaging, virtually zero of the new paper mills are actually using these recycled substances in production. It is for this reason that a total of half this ecosphere's forests have already been emptied or burn-harvested, while leaving 80% of the remains despoiled (Foulkes et. al., 2005). Currently, taking into account the extent of faithfully recycled goods, countries like the United Kingdom have only been recycling up to 17.7% of the substantial 60% that is actually recyclable or compostable (Roberts, 2012). The truths lay within the very trucks and processing plants that mulch, clean, and re-sell our waste. These management firms

will admit that not all waste products *possible* to recycle will be accepted for the reason that they only want to devote the energy for what their buyers will purchase at the end of the day.

At the source roots, one might think that the worst has already passed; nevertheless, it has only just reached the worst of the iceberg concerning the paramount wasters of all classifications. "Who are they?" One might ask, but the answer need not be questioned, for a simple glance toward one's own home surroundings will do; yes, we the consumers are the greatest burdens upon this planet. Forget factories, forget the McDonald's down the street that never recycles a single bottle or box, it's us that need to make adjustments most. Companies only produce what the patrons will buy, and that means we are the ones who must change to break this progression. As of 2010, "carbon footprint" had become a part of household vocabulary, sending us all into a tizzy of uncertainty regarding each of our imaginary impacts on the speed of our planet's decline. The "carbon footprint" can be described as the influence one has on the environment based upon the amount that he or she consumes in their daily life, creating waste and removing trees (which increase CO₂ levels) so as to live a comfortable and satisfying life. Although the phrase itself is directly specified toward carbon emissions, this phrase has also recently been used to reference any variety of environmental impact or discharge of effluence that an individual might introduce into the ecosystem during their lifetime. With this in mind, we can break down each portion of the conglomerated metaphorical "pie" of personal consumption and waste. Among the greatest negative symptomatic vices that humans have is their need to travel quickly and securely in automobiles. These widespread mechanisms still operate on limited,

polluting, and highly dangerous fossil fuels for internal combustion, making for an unquestionably disturbing universal dependency that inevitably raises each and every person's carbon footprint exponentially by simply driving to work each day. As our cars run us to and from our bustling metropolitan destinations, those tailpipes consistently dispense large quantities of greenhouse gases like smog (a mixture of particulates like sulfur dioxide or methane) and carbon dioxide, both resultantly termed "greenhouse gases" for the glasshouse-like magnifying effect that they produce above us in the atmosphere after being released. Such gases may seem most ordinarily linked to automobiles but the planes, trains, power, and other essential undertakings we take part in every day contribute by the same token, if not more so. As stated by National Geographic, "In the past 150 years, such activities have pumped enough carbon dioxide into the atmosphere to raise its levels higher than they have been for hundreds of thousands of years." Upon understanding this concept, someone might wonder why we don't merely begin to pursue methods of eradicating vapors like sulfur dioxide from our skies overhead. The honest answer to this question was recently apprehended by many industrialized countries after working tirelessly to extract and eliminate these vapors with the goal of improving their civilians' health; in reality these lower particulate levels can essentially make the situation shoddier since removing the material stops obstruction of sunlight photons, causing more light to shine through and scorch the Earth. Furthermore, the remaining types of greenhouse gases finish off our sticky situation by trapping the consequential heat ("Air Pollution").

Back on the ground, there are yet more wasteful issues to be dealt with. Of these, electronic waste ("e-waste" for short) is an active and regularly overlooked

nuance of the spendthrift realm we live in. Many an individual are unaware of the fact that these high-tech products are even more noxious and polluting than any other type of detritus. Among this trash, various spent batteries full of alkaline and other corrosive metals, computer monitors with intermittent displays, cell phones that were no longer attached to a carrier's service plan, televisions dumped after an upgrade, and heaps of random electronic parts such as hard drives and microprocessors. Each of these items ends up in the trash from the consumers of the world because they are just too difficult to recycle. The average person is not willing to sacrifice convenience of routine to go out of their way and either pay for recycling removal, or take the e-waste to a special treatment center miles away from home base. Instead, said rejected goods are tossed away to the dumpster where trucks unknowingly take them to landfills in foreign countries. Once there, deadly substances leak out, heavy metals leach into the water supply, and perfectly usable merchandise goes undesirable. While on an exploratory investigation of Guiyu China, journalist Katia Moskvitch for BBC News reported that even when such materials are recycled they often are not done so properly outside of the country. She says that "...the toxic fumes they [e-waste recyclers] produce have dangerous effects on the land, and most of all, on people...The soil in Guiyu has been found to be so saturated with heavy metals such as lead, chromium and tin that groundwater has become undrinkable." As stated by China's Shantou University, the area of Guiyu has the most astronomical levels of carcinogenic dioxins in the world, instigating an exceedingly excessive rate of lead poisoning in the resident children (Moskvitch, 2012). As well as China's abandoned dregs, the e-waste doesn't stop there; this variety of garbage comes from all over the world to accumulate in the emerging

desert lands of Ghana and Nigeria. There, orphaned and suffering children struggle to endure the atrocities of life through foraging for the scarce precious metals and valuable resources contained within the masses of discarded tech artifacts. Gold bits from microchips and semiconductors can be scraped off, and copper wire can be smelted into a purer form for up to one pound (£) a day in sales. Despite the fact that these kids have discovered a means to survive, it is treacherous and injury-prone work that often doesn't even profit adequately enough to recompense for the agony these children feel when they become wounded "on the job" (Rowe, 2011).

Fresh water supply has also come up to surface in our daily life crises, bringing to attention the powerful force it has on us as its presence or lack thereof, brings and takes away life. The availability of actual usable H₂O has become a frighteningly impending issue within the past few lifetimes, while each and every person notwithstanding their nationality is the largest part of the problem. Each day that we take water for granted and leave that faucet dripping, keep flushing our inefficient toilets, clean our dishes with gallons upon gallons of the substance, etc. we are forgetting that the water we use for these tasks is quite limited and the exact same water we must drink or water plants with just a few hours after it has been cleaned. In fact, all of the water upon our planet is exactly the same as the dinosaurs and our ancestors used long ago. Should the current inhabitants of Earth continue to waste water, the calculated purify-able fresh water index of 76% will surely and radically drop into nonexistence (Shiklomanov & Gleic, 1993). Just this number alone is what is possible if necessary, the real percentage that we actually utilize on a daily basis is only 1% of the biosphere's fresh and pure water. Conceivably, one of the world's most concerning locations

regarding water requirement is the Asian country of India. Currently, municipal water provisions only extend to 69% of homes in large metropolises, 45% in small towns and villages, and a meek 9% of country households. Past this, manual pumps remain to be the chief source of clean and practical water in the abovementioned rural zones (McKenzie & Ray). In April 2012 at the Indian Water Week forum of New Delhi, Prime Minister Manmohan Singh spoke on the topic of his country's deep need for a change in the management of their water supply. With the way things have been in years past, Singh implored that the resource must be controlled "in a rational and sustainable manner" within the next five years of India's conservational plan for water due to the "rapid economic growth and urbanization...widening the demand supply gap."

Projecting the decline of the nation's water reserves, deputy chairman of India's Planning Commission, Montek Singh Ahluwalia suggested that without express action India's use of water will reach a rate "100% higher" than now by the year 2030 (Stancati, 2012). Of the main reasons for this shortage remains to be a duo of perpetrators: India's burgeoning industry polluting the last of their feasible resources, and their very own people. Since there is still no code of practice for ground water extraction, over 80% of the country's water is agriculturally consumed for irrigation annually (Sampath et. al.). The problem with water truly has no connection to how much water we have on the planet, because those very same molecules are still here, just somewhere else mixed in with what we don't want. Planet Earth is abounding with immense bodies of water from icecaps and tundra permafrost, to swamps and salinated oceans full of plant and animal matter. Herein lies our issue, we need a method of removing the "waste" from the "waste water" we have so much of. Whether it came from

the toilet or our dishwashers, it must somehow be recycled. It is for this reason that humanity must cease to pollute what little we have available to us.

Irrespective of the sudden onset awareness surrounding “eco-friendliness” or the “green” movement, we as the inhabitants of this planet must to become more aware of the sheer damage we are inflicting on our home. From the household wastes of consumers, to businesses and factories spewing paper, polluting water and excessively using valuable resources, conservation is crucial to our survival as a species. What mass is here cannot be created nor destroyed; therefore, sully and squandering the little quantities we have is most certainly not an acceptable exploitation. Should our civilization linger on this trajectory, the air we inhale, water we drink, and soil we plant in will ultimately consequence in record illness rates, massively concentrated and trapped solar rays that scorch and in the end, an extensive relapse of ice age. Going “green” is most assuredly not a fad; it is an essential and fatally serious call for help from those who can visualize our bleak forthcoming on this path. Pay attention, listen to what is being said within the next few years and attempt to accept it for the better. If we begin to take small steps toward the end goal now, a future of clean and abundant resources on a one-of-a-kind, beautiful floating pebble we call Earth will still be available for our children to live and prosper from.

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