

YVID Assignment 3: Choose two or three of the Sustainable Development Goals and discuss, based on observations you've made during your internship and other experience/knowledge, how they interconnect with one another, and how this impacts how the goals should be addressed

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I will be discussing how SDG 7 “Ensure access to affordable, reliable, sustainable and modern energy for all” interconnects with SDG 12 “Ensure sustainable consumption and production patterns” in Zambia based on my experience so far, and how I believe they could be addressed in a Zambian context. Where these two goals intersect could present innovative and progressive solutions to challenges Zambia is facing regarding energy and sustainable consumption patterns.

Currently in Zambia, load-shedding is a common occurrence – where power disappears from 3-8 hours per day, as Zambia is not producing enough energy through the state monopoly ZESCO. It is my understanding from locals that most of the energy generated is hydroelectricity, and as the rainy seasons become shorter due to climate change, what was once an adequate power supply is no longer. I had the opportunity to sit in on a regional development meeting for Kitwe where the energy shortage was brought up; the effect on businesses is huge. Businesses have to supply their own backup generators to ensure no disruption of power, an expense that eats into their bottom line. As well, aside from major corporations (ie in the mining sector), average Zambians are bound to ZESCO and have no alternative. That means economic production on a micro level is halted throughout the day due to load-shedding. At this regional meeting, the idea of building coal powered plants was mused, as Zambia has coal as a natural resource, as a way to supplement power loss. As the developed world (slowly) moves away from coal, it was shocking to hear this suggested so casually and the idea accepted without discussing the environmental impacts. Zambia has opportunities to utilize other energy sources at its disposal.

Solar energy for starters is one solution that jumps out automatically. With the rainy season being 4-5 months of the year, the other 7 or 8 months are almost cloud free – and hot. Wind energy is another logical option. Diversification from hydro is essential if Zambia is to adapt its power needs in relation to the climate challenges it is facing. Incentives from foreign bodies to increase awareness about the importance and benefits of different renewable energy resources as well as access to funds to implement such infrastructure changes is one way this goal could be addressed.

I would also like to hypothesize and propose another alternative to solar and wind – and this is where Zambians consumption patterns come into play, and SDG 12. Garbage, recycling and composting in Zambia is virtually non-existent. Roadsides have all sorts of trash along the side, and upon arrival I instantly wondered where it all went or how it eventually got disposed of. As it turns out, from the city to the country side, piles of garbage are raked or swept together and burned in a ditch. Consumption patterns have the possibility of changing for the better in two ways for Zambia. Firstly, everything is burned, including compost. Yet most lower to middle class households have their own small garden and it is common to have some chickens. The agricultural trend, and not just because of garbage disposal, is to burn the area intended for crop use. While there is some benefit to the soil from the ash, the environmental impact from a low burn and the smoke emitted is harmful. Utilizing composting as a method to fertilize soil would be a great way to shift towards sustainable consumption patterns and lessen the environmental impact of small scale farming.

Additionally, the infrastructure needed to create garbage and recycling programs that would reach most Zambians seems daunting and not high on the priority list. I would address this issue by suggesting investing in the creation of waste-to-energy plants – as has been heavily successful in Sweden. These plants burn waste at such a high heat that steam is created, which then powers a steam turbine to create electricity.

The other by-product, ash, is sorted and recycled for metals or various construction purposes. By making formal waste-to-energy plants, burning garbage would have less environmental impact than how it is currently disposed of, while contributing to a modern and sustainable source of power (steam turbines to electricity and heating). This would also help to diminish the reliance of hydroelectricity and diversify sources of power.

In conclusion, the connection between sustainable and renewable energy (SDG 7) and sustainable consumption patterns (SDG 12) in Zambia creates innovative areas of opportunity. Increased composting for personal/small scale agriculture would diminish smoke pollution that is a common occurrence here. Waste-to-energy power plants would burn the rest of the garbage with decreased environmental impact – as well as diversifying Zambia's energy with resources already being used, but not utilized (garbage).