Niko Dowling

GhostPrint.bio

Thiel Foundation

October 31, 16

The Sustainable Circle of Survival

GhostPrint.bio is a non-profit that is currently in the idea stage. It is focused on providing a sustainable way of life, one could even say that it would be the most sustainable way of life to be developed. There are three main components that go into play, clean water, clean food and clean energy. The point should be infazized that this sustaibnable way of life is a framework that can be implemented in something as small as a tiny home all the way up to skyscrapers, and beond. There is no limit to the scale or implimentation of this framework but all around it will change the world for the better.

Clean water is crutial for survival yet almost a billion people do not have acces to it. Luckly that can be solved with an amazing organism called algae. Algae actually comes into play in providing all three of these recourse humans need to live an enlightened life. By providing clean water, clean food, and clean energy, there is no wast products of the algae left behind. “Researchers at Rochester Institute of Technology are using algae grown in wastewater to produce biodiesel. Algae—as a renewable feedstock” (Wired). Amazingly if all the elements of the algae are harnessed properly there is no waste. The waste water as well as the CO2 and CO created from burning the biofuel, both feed the algae. This creates, clean water, biofuel, and feedstock. Now that leaves one question because we already know what clean water and biofuel can be used for but what is the feedstock going to be used for in this closed loop system? Do we want to rase cattle? No indeed it is much more efficient to feed fish this feedstocks which intern in a Aquponics setup can feed plants. Bamb two different food souces symbiotically living together ready for human consumption. Now putting this all together would be a million dollar idea itself but this sustainable way of life needs a few more key components.

If properly created and used this design should be completely self sustainable. There are a few other things that need to be implemented into this design before self sufficiency can be attcheved. One of which is a compost bin with three functions. All three have been tested and used but have yet to all be implemented into the same design. One aspect would be the ability to harness methane which would be best served cooking food. “Just about any organic waste can be decomposed as a methane generator” (Fantasticfarms). The next aspect would be extracting the heat created from breaking down compost. “As the Pain Mound decomposes, heat is produced and harnessed using a hydronic loop” (Instructables). This would be done threw a rotating tube with water running threw it, creating the last effect of breaking down the organic material highly efficiently. “So we simply left the compost unturned. This results in less aeration so it takes longer for the compost to process” (Eartheasy). The hot water created could be used for heating the house or just for hot showers or sinks. This design alone is a million dollare idea of putting the puzzle pieces together but it is needed inorder for this sustainable way of life to work properly.

The last consecpt is currently being developed all over the world and in many different forms. This is the actual stuckture of the living invironment. Sufficency is key so going with a net zero building would be crutial. Incase one does not know what net zeor means, it is producing just as much energy as the building consumes threw varia tecnics . I am not going to go into to much dept with this consept because there is just to much to say but I will say that this is about the only part of this idea that is remotely normal.

I want to state that all of these ideas have already been sepretly tested by others much more ingenious than myself, the only idea that is orginal to me is putting all the puzzle pieces together.

https://www.wired.com/2011/02/using-algae-to-clean-wastewater-make-fuel/

<http://www.small-farm-permaculture-and-sustainable-living.com/methane_generator.html>

http://www.instructables.com/id/Compost-Heating-System/

http://learn.eartheasy.com/2012/08/compost-tumblers-vs-compost-bins-pros-cons/