

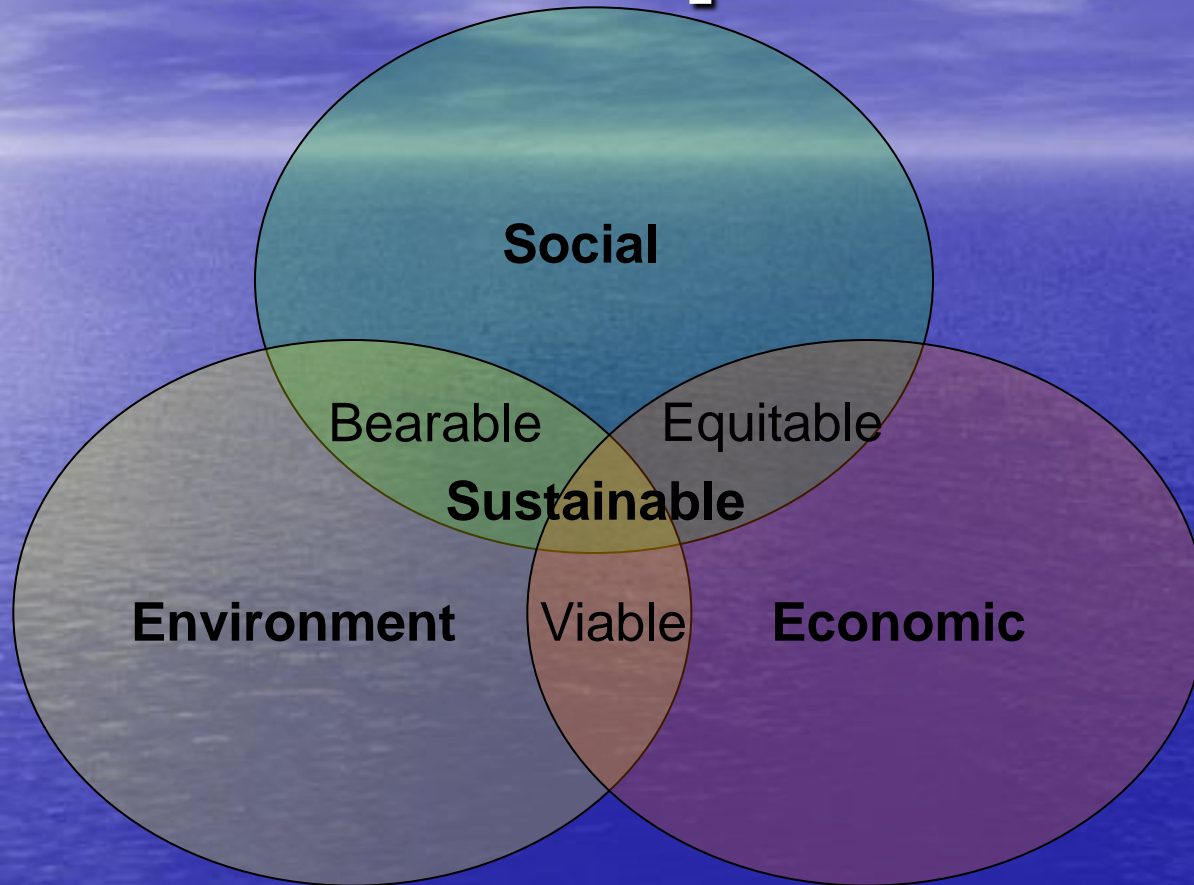
Biogas:

Surprising New Opportunities and Approaches

***Technology
Meets
Permaculture***

***Biorefineries for Advanced
Integrated Resource Recovery in
Agriculture***

What's the problem?



**Our supreme challenge:
sustainable human existence**

Why Biorefineries?

- Energy
- Food
- Water

According to many sources, we are facing a “Triple threat”.

$$W = P \times T^n$$

Wealth = Physical Resources, multiplied by Technology, and T (Technology) has an exponential multiplier effect on itself.

Unlimited Wealth – The Theory and Practice of Economic Alchemy by Paul Zane Pilzer (Crown Publishers, 1990).

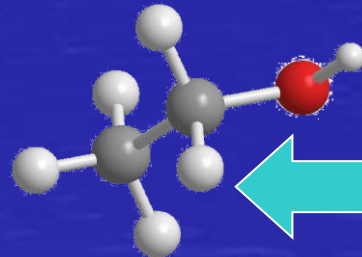
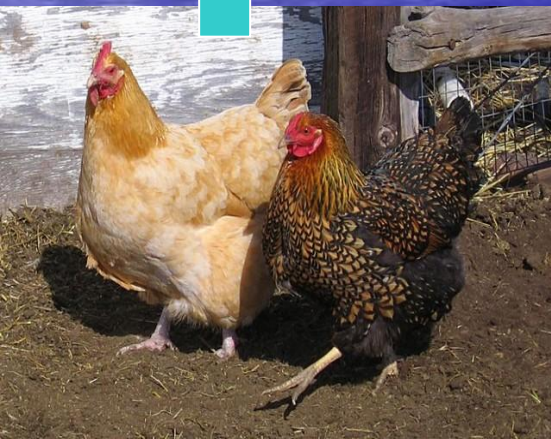
The current BC Situation

More than 92.5 million chickens at any given time, producing up to 1.2 BILLION kg of manure/yr

An average of 58000 active milking cows, plus replacements on the farms, producing more than 1.5 billion kg of manure per year

Seeping, leaching and runoff are huge issues, as are odour and pathogens

We have manure nutrients, we need feed and water!



"A single solution in isolation is linear; we cannot respond to dynamic challenges with linear solutions."

Christopher Bush

Catalyst Agri-Innovation Society



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