

LIFE CYCLE ASSESSMENT

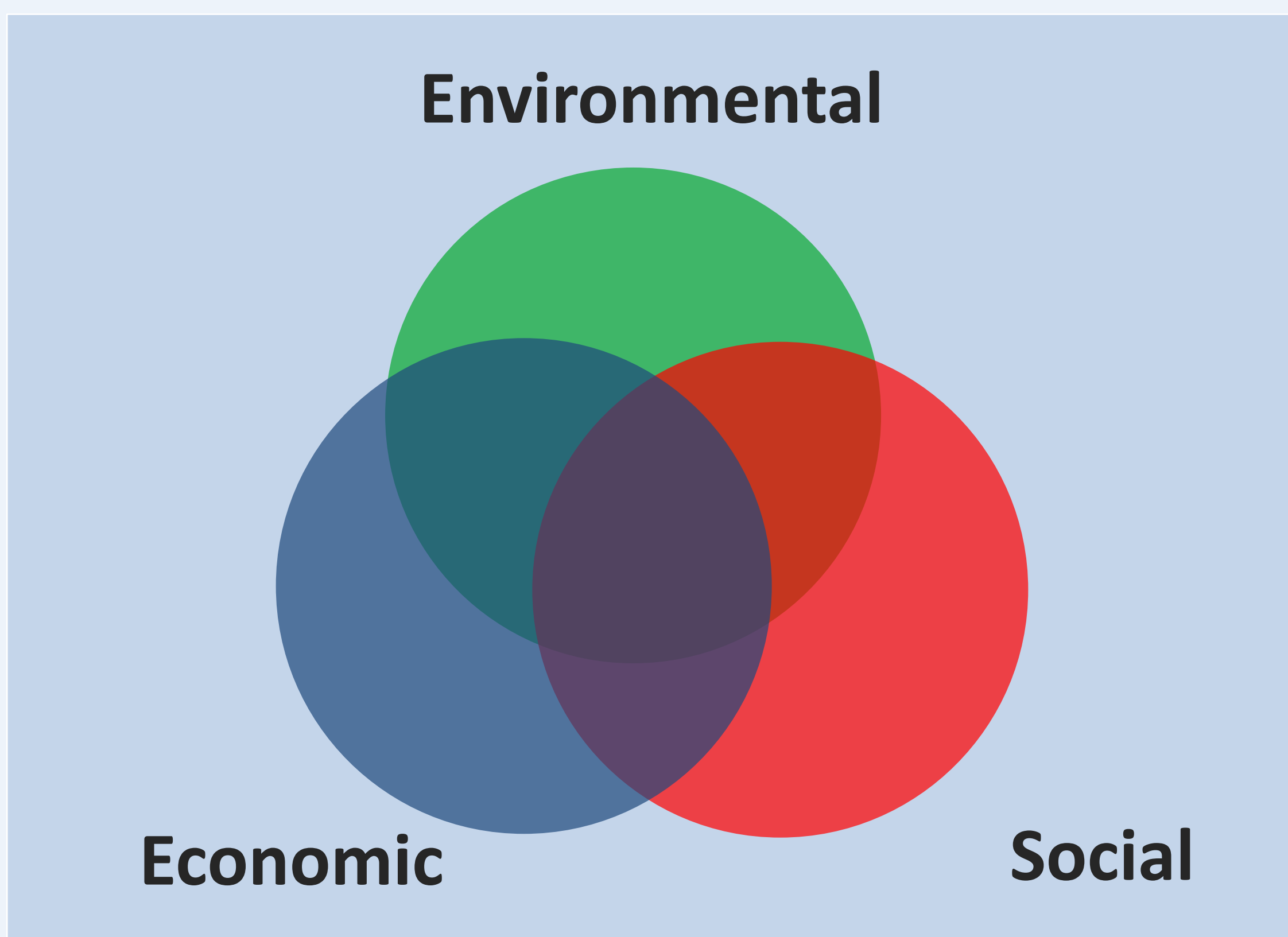
A TOOL FOR EVALUATING SUSTAINABILITY

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Introduction

Life Cycle Assessment (LCA) is a tool for evaluating the sustainability of products and services. Two types of LCA are Environmental LCA and Social LCA. Life Cycle Costing (LCC) is closely related.



Social LCA

An emerging method for consistently measuring the social responsibility of products or services.

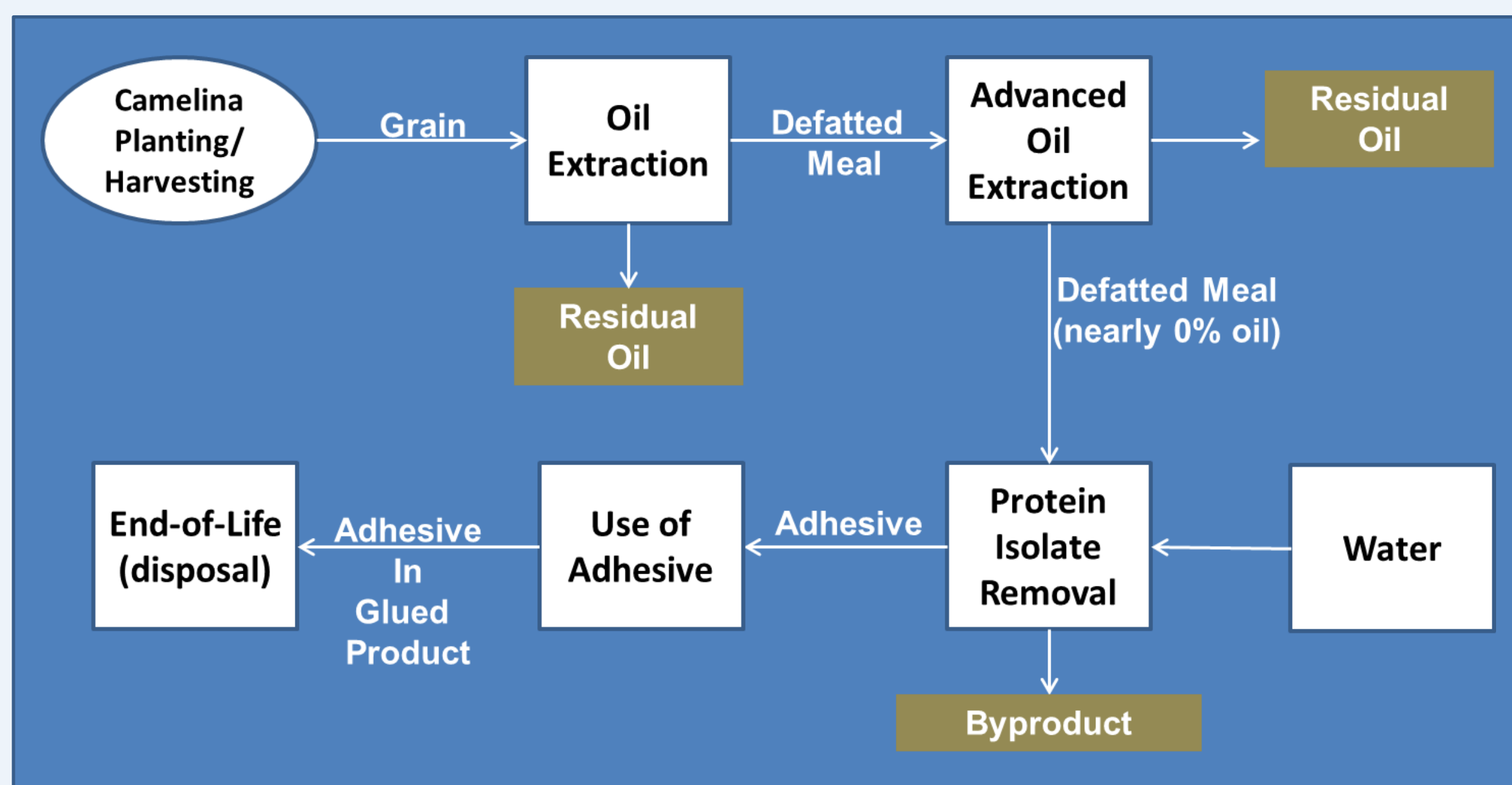
1. Fair wages / Fair trade
2. Worker health and safety
3. Worker freedom of organization and collective bargaining
4. Child labor
5. Land use / land ownership
6. Community health and safety
7. Effects on Biodiversity

Life Cycle Costing

LCC is another life cycle approach (i.e., cradle to grave). It looks at the direct monetary costs involved with a product or service and not environmental impact.

Environmental LCA

A method for evaluating the environmental impacts of products or services for its entire life cycle.



LCA methods can be used to evaluate sustainability of emerging products from field to shelf

Impact category	Unit	Total
Ozone depletion	kg CFC-11 eq	3.5E-08
Global warming	kg CO2 eq	0.29511
Smog	kg O3 eq	0.009389
Acidification	kg SO2 eq	0.001212
Eutrophication	kg N eq	0.000516
Carcinogenics	CTUh	7.71E-09
Non carcinogenics	CTUh	7.42E-09
Respiratory effects	kg PM2.5 eq	9.04E-05
Ecotoxicity	CTUe	0.17116
Fossil fuel depletion	MJ surplus	0.001738

Summary

We control what we measure. Choosing to produce and use sustainable products and services requires tools to evaluate their sustainability. LCA methods allow us to evaluate the many facets of a product or service throughout its life cycle, enabling us to make more informed decisions about how we produce and provide goods and services.