Application of Life cycle Assessment "LCA" approach for a sustainable building design under specific environmental conditions

Research Scope

Objectives

Methodology & Case study

Tools

Results and interpretations
DEFINITION AND PHASES OF « LCA »

1- Goal and scope definition
2- Inventory analysis
3- Impact assessment
4- Interpretation

Life Cycle Assessment

Impacts of BBC
- Energy consumed
- Used water
- Odor
- Production of photochimic ozone
- Human toxicity
- Aquatic ecotoxicity
- Eutrophisation
- GWP

Impacts of BET
- Submission of abiotic resources
- Inert wastes product
- Radioactiv wastes
- Aquatic ecotoxicity
- Eutrophisation
- Acidification
- GWP

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SYSTEM BOUNDARIES: USER-SCHOOL-ENVIRONMENT

Global
Intermediar
Intern

Materials of construction
Electricity
Gas
Water
Ventilation
Lighting
Heating
Time of life (80 years)
Lose of energy
Waste Emissions
Individual transport
Production of equipments
Common transport
Transport of materials and equipments

Eco-profil (en année/habitant)
Construction Utilisation Rénovation...

Odor
Effet de serre
Acidification
Eutrophisation
Production d'ozone
Photochimique
Ef f et
de
serre
Acidification
Eutrophisation
Production d'ozone
Photochimique
Acidification
Eutrophisation
Production d'ozone
Photochimique