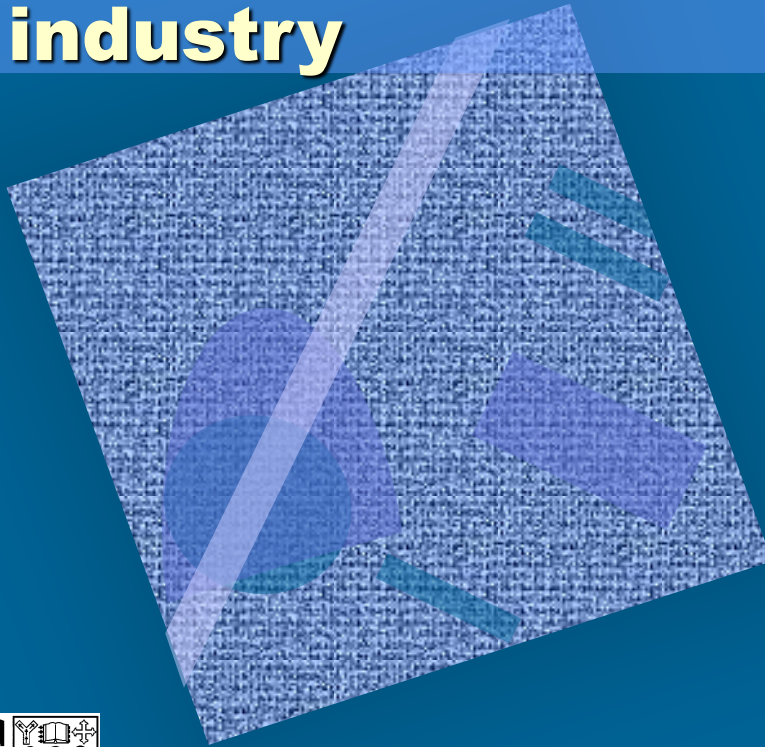


# Overview of a model to estimate the GHG balance of the New Zealand forest industry



Isabel Loza-Balbuena  
PhD candidate  
School of Forestry

# Funding

- University of Canterbury Doctoral Scholarship
- T.W Adams scholarship
- IEA Bioenergy study award

# Outline

- Goal
- Objectives
- Overview of the project
- Outputs expected
- Approach

# Goal

*To analyse the impact of climate change and renewable energy policies and economic instruments on the GHG balance of the forest sector .*

# Objective 1

To identify the level of incentive to have an impact on the GHG balance

# Objective 2

To estimate the NZ carbon balance of forest plantations the processing industry and HWP as an integrated system

# Objective 3

To identify a combination of mitigation options through land use management, forest industry and bioenergy aiming at reducing GHG emissions for the short and long term.

# Objective 4

To investigate the use of discount rate on the economic analysis of carbon benefits as an environmental and market value of forest.



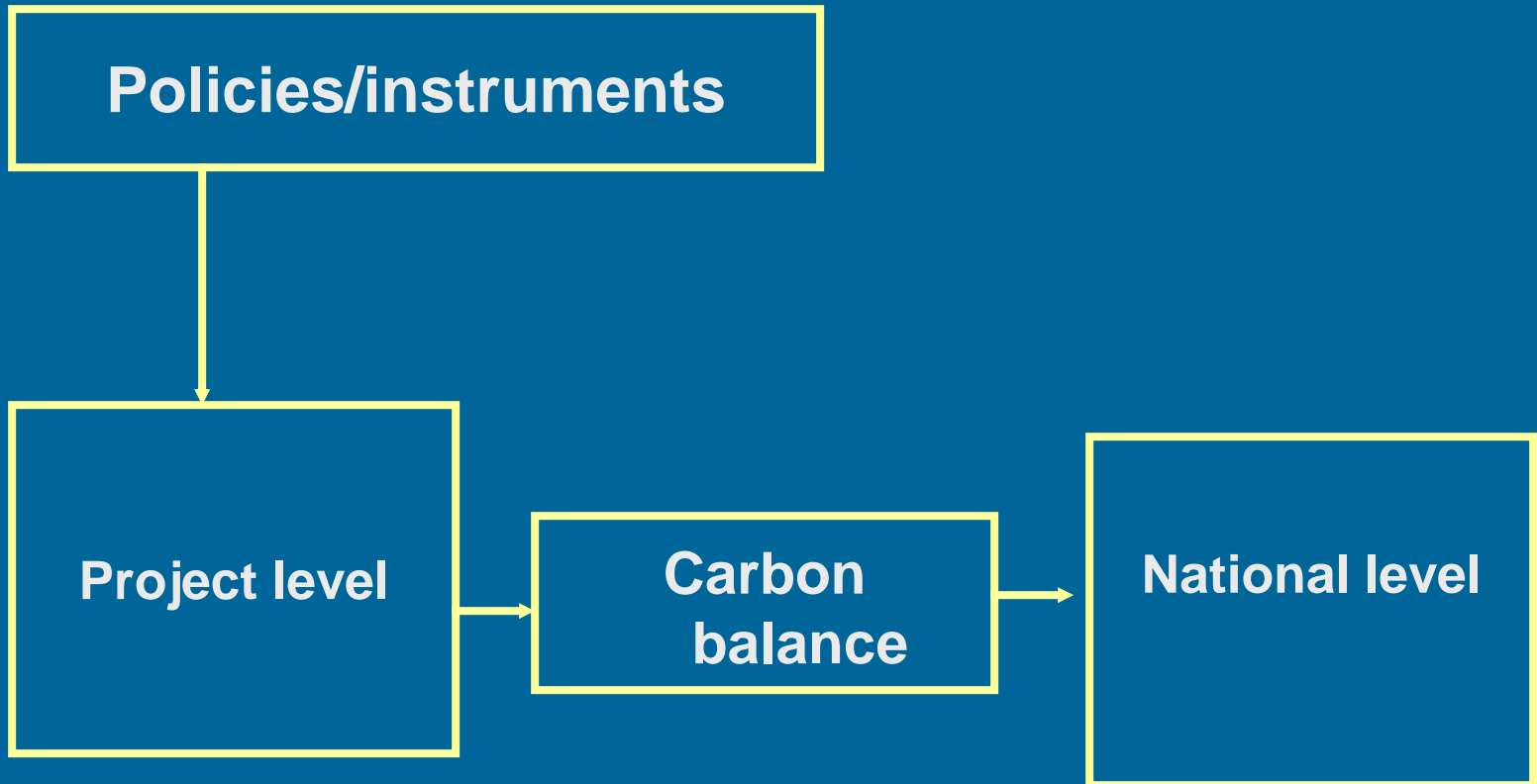
# Objective 5

To analyse the potential of the forestry sector to help meet renewable energy targets through an increase in the use of woody biomass (forest and processing residues).

# Objective 6

To analyse and eventually identify the main barriers for the use of bioenergy in the forest industry and assess whether certain incentives would help to overcome them.

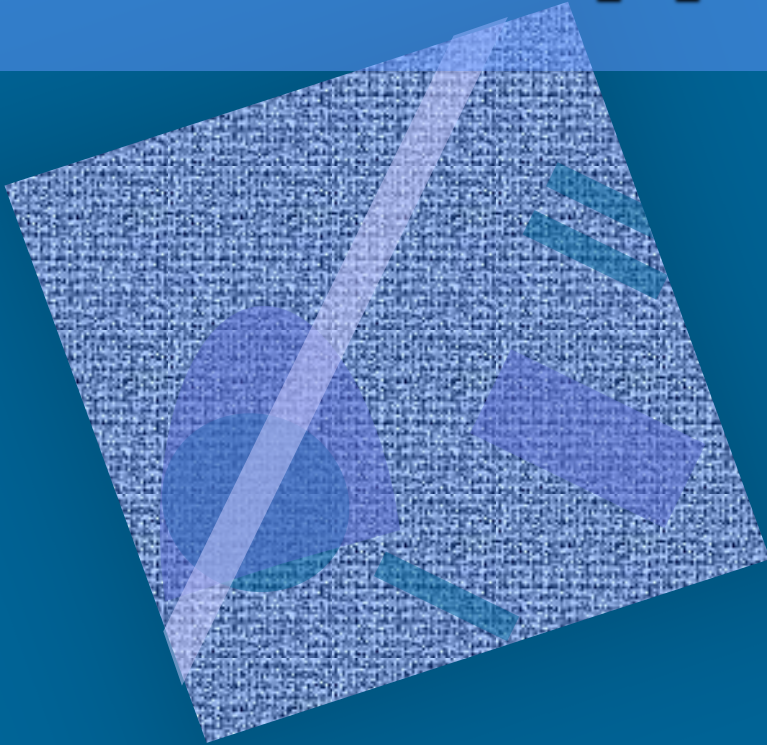
# Impact of policies on GHG balance



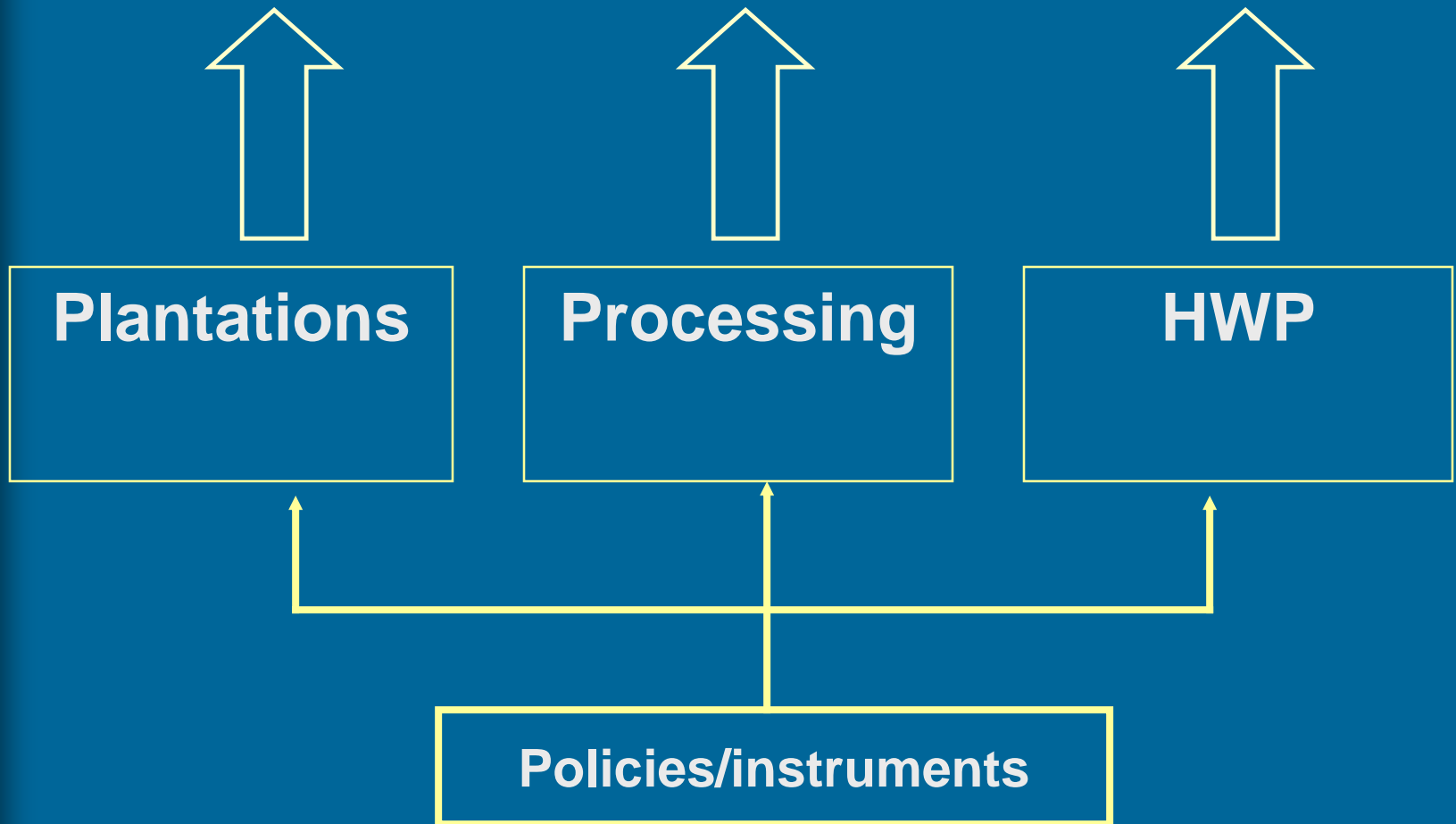
# Outputs expected

- Land that would need incentives to change LU
- Level of incentive necessary to achieve more planting
- Sensitivity analysis for different species, rotation age, management, log allocation, energy use, decay rates
- Impact of these scenarios on carbon balance

# Approach



# Balance



# GHG balance

Plantations

Processing

HWP



Net atmospheric  
exchange

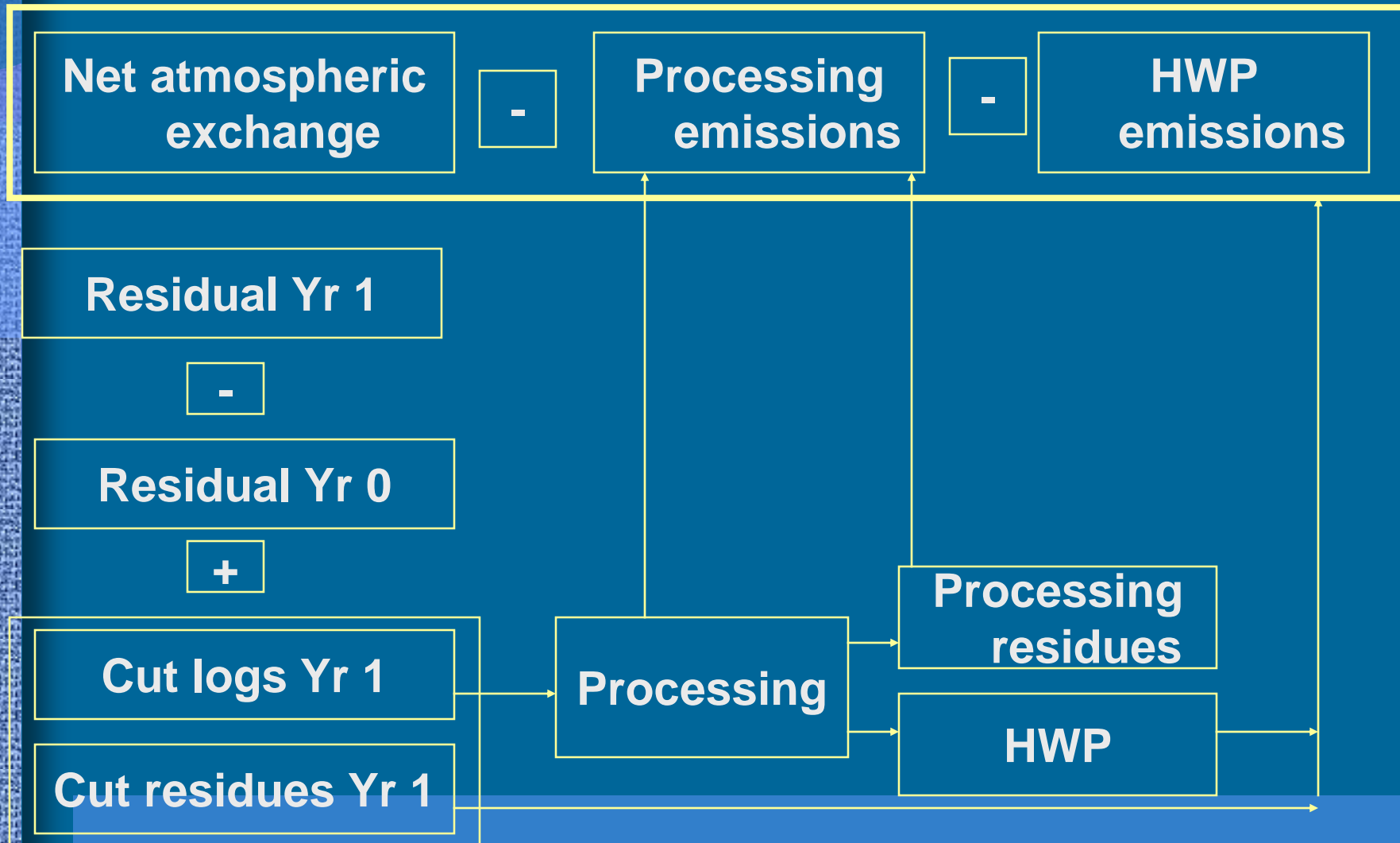
-

Processing  
emissions

-

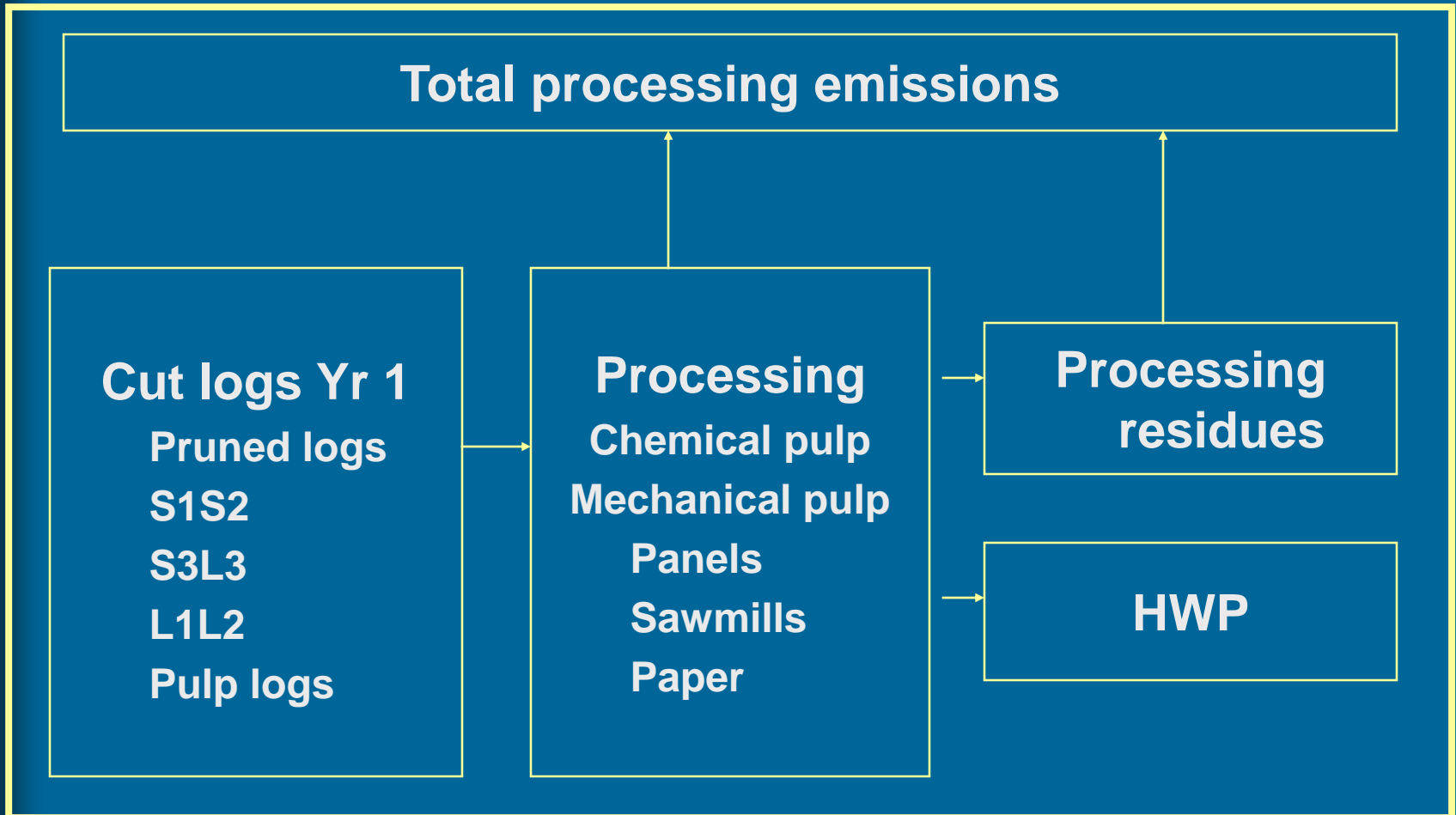
HWP  
emissions

# Net atmospheric exchange

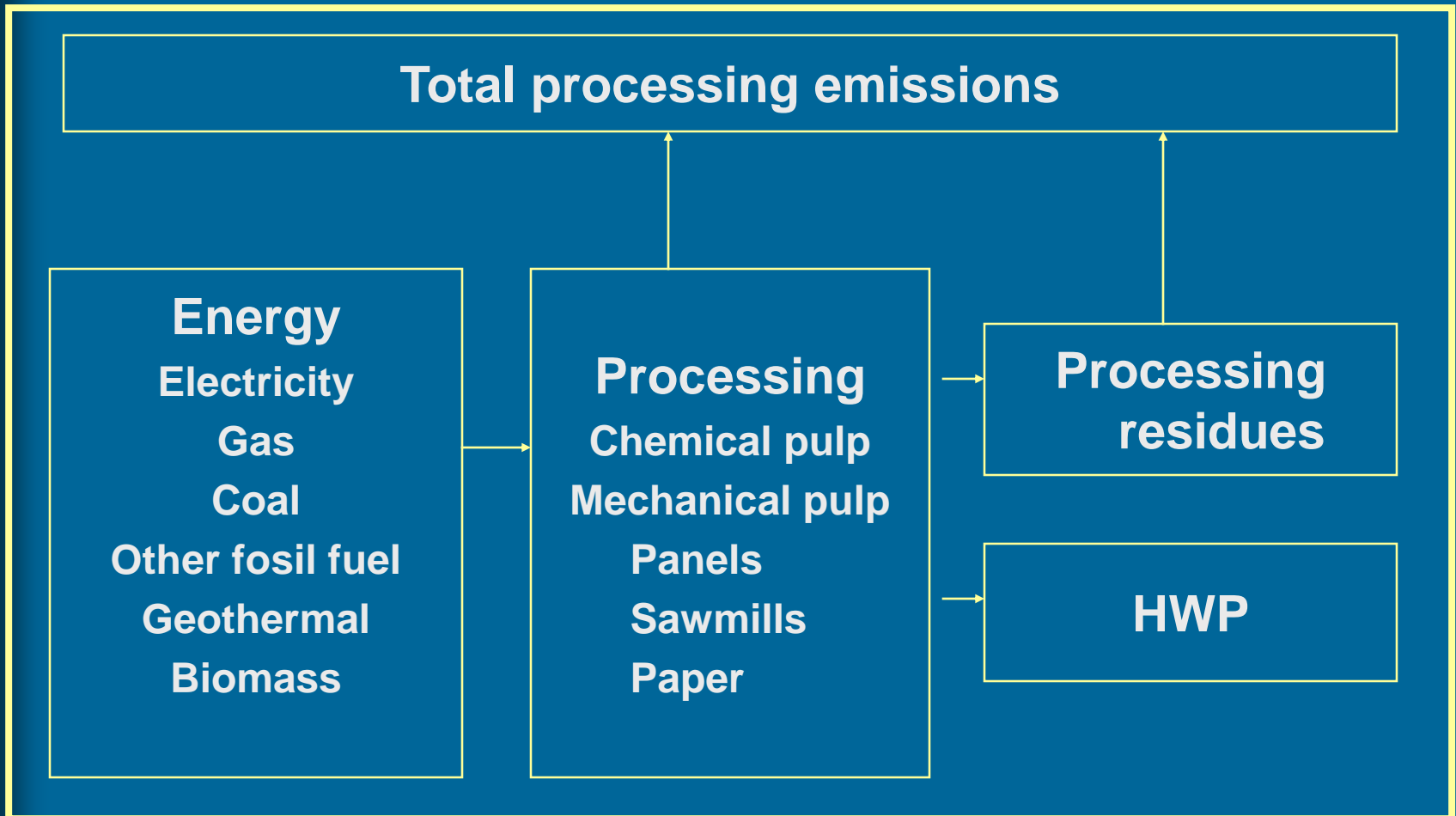




# Processing



# Energy use



# HWP

