

Incineration versus the Alternatives

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OUTLINE

- 1. Waste and the Big Picture
- 2. The arguments against incineration
- 3. The Zero Waste 2020 strategy
- 4. The Key Step Forward
- 5. Zero Waste Initiatives Around the World
- 6. Back to the Big Picture

1. Waste & the Big Picture

DIFFERENT TIMES DEMAND DIFFERENT QUESTIONS

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20th CENTURY

WASTE MANAGEMENT

*“ How do we get rid
of our waste
efficiently with
minimum damage to
our health and the
environment ?”*

DIFFERENT TIMES DEMAND DIFFERENT QUESTIONS

20th CENTURY

WASTE MANAGEMENT

*“ How do we get rid
of our waste
efficiently with
minimum damage to
our health and the
environment ?”*

21st CENTURY

RESOURCE MANAGEMENT

*“ How do we handle our
discarded resources in
ways which do not
deprive future
generations of some, if
not all, of their value ?”*

DIFFERENT TIMES DEMAND DIFFERENT QUESTIONS

20th CENTURY

**WASTE
MANAGEMENT**

The key issue
was **SAFETY**

DIFFERENT TIMES DEMAND DIFFERENT QUESTIONS

20th CENTURY

**WASTE
MANAGEMENT**

The key issue
was **SAFETY**

21st CENTURY

**RESOURCE
MANAGEMENT**

The key issue is
SUSTAINABILITY

Sustainability

Sustainability

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Sustainability

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- Meanwhile, **India, China etc.** are copying our consumption patterns

Sustainability

- We would need **FOUR planets** if every one consumed as much as the average **American**
- We would need **TWO planets** if every one consumed as much as the average **European**
- Meanwhile, **India, China etc.** are copying our consumption patterns
- Something has got to change and the best place to start is with waste

**We are living on this
planet as if we had
another one to go to**

**We cannot run a throwaway
society on a finite planet**

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**Waste is the evidence that we
are doing something wrong**

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Landfills BURY the evidence

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Incinerators BURN the evidence

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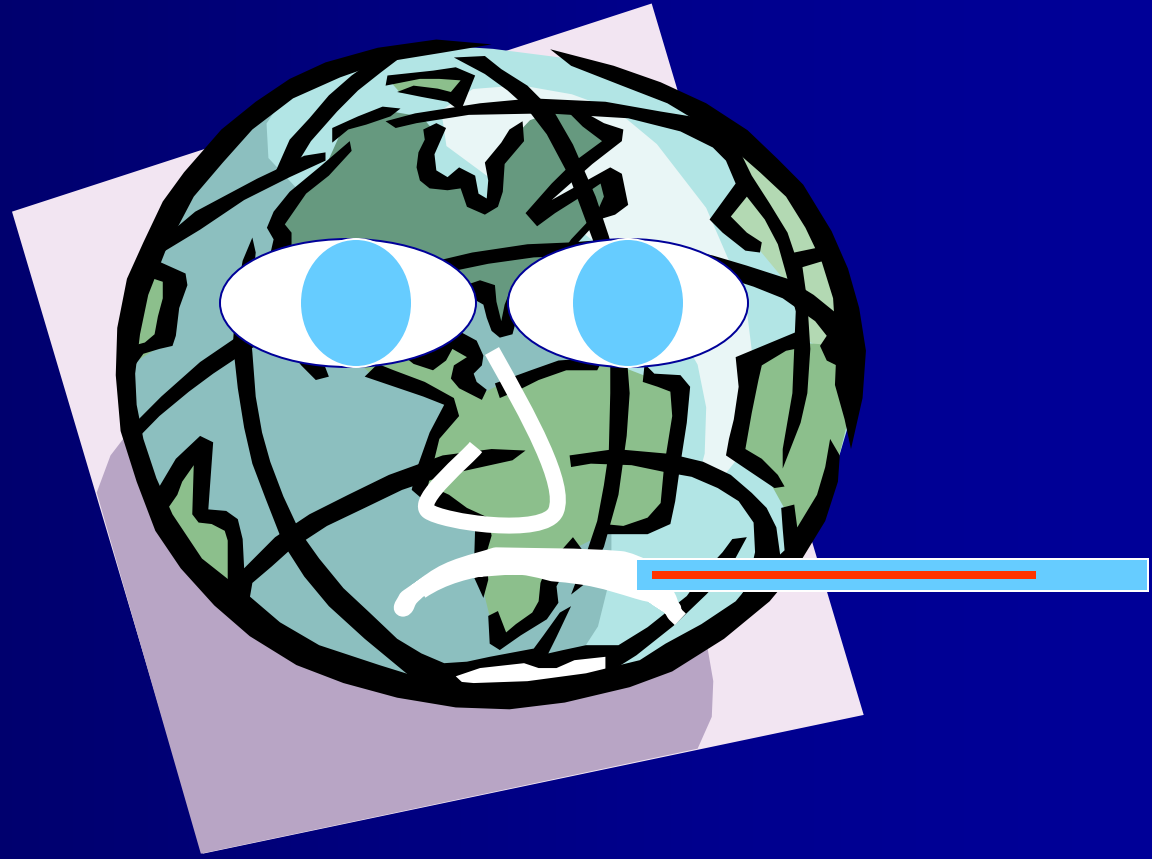
Incinerators BURN the evidence

**We need to face the real
problem...**

**Our real task is to fight
over-consumption**

Not only is
over-consumption
giving us a local waste crisis
but also...

... a Global crisis



The Global Crisis:

Since the Industrial Revolution we have imposed a **linear society on a planet that functions in circles**

A LINEAR SOCIETY

A LINEAR SOCIETY

Extraction

A LINEAR SOCIETY

Extraction

Production

A LINEAR SOCIETY

Extraction

Production

Consumption

A LINEAR SOCIETY

Extraction

Production

Consumption

Waste

Advertising/TV



Extraction

Production

Consumption

Waste

Over-advertising

Over-advertising
produces
Over-consumption



By the time a high school student leaves school, he or she will have watched over 350,000 TV commercials.

*Paul Hawken
The Ecology of Commerce.*

Myth versus Reality

Myth versus Reality

- THE MYTH:

Myth versus Reality

- THE MYTH:
- The more you consume the happier you become

Myth versus Reality

- THE MYTH:
- The more you consume the happier you become
- THE REALITY:

Myth versus Reality

- **THE MYTH:**

- The more you consume the happier you become

- **THE REALITY:**

- The more you consume the fatter you become!

Myth versus Reality

- **THE MYTH:**

- The more you consume the happier you become

- **THE REALITY:**

- The more you consume the fatter you become!
- And the more waste you produce

**“The world has enough
for everyone’s **need**
but not for everyone’s
greed”**

Mahatma Gandhi

A LINEAR SOCIETY

**Extraction of
Virgin
Materials**

**Production of
Manufactured
items**

Consumption

Waste

A LINEAR SOCIETY

ENERGY



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Consumption

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A LINEAR SOCIETY

ENERGY



**Extraction of
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**Production of
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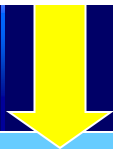
Consumption

Waste



**Solid waste
Air pollution
Water pollution
Carbon dioxide**

ENERGY



**Extraction of
Virgin
Materials**



ENERGY



**Production of
Manufactured
items**



Consumption

**Discarded
Materials**



**Solid waste
Air pollution
Water pollution
Carbon dioxide**



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ENERGY

ENERGY

**Extraction of
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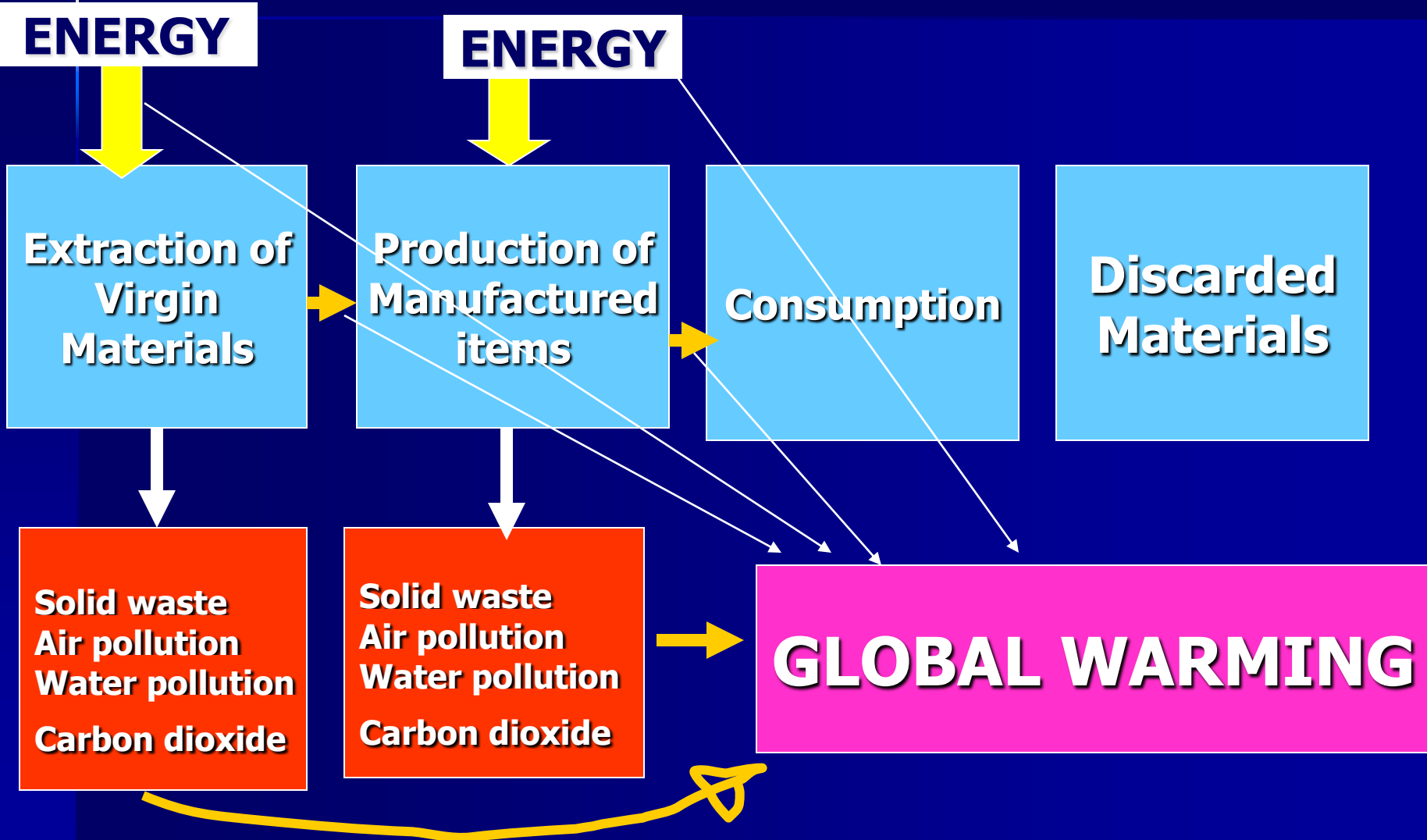
Consumption

**Discarded
Materials**

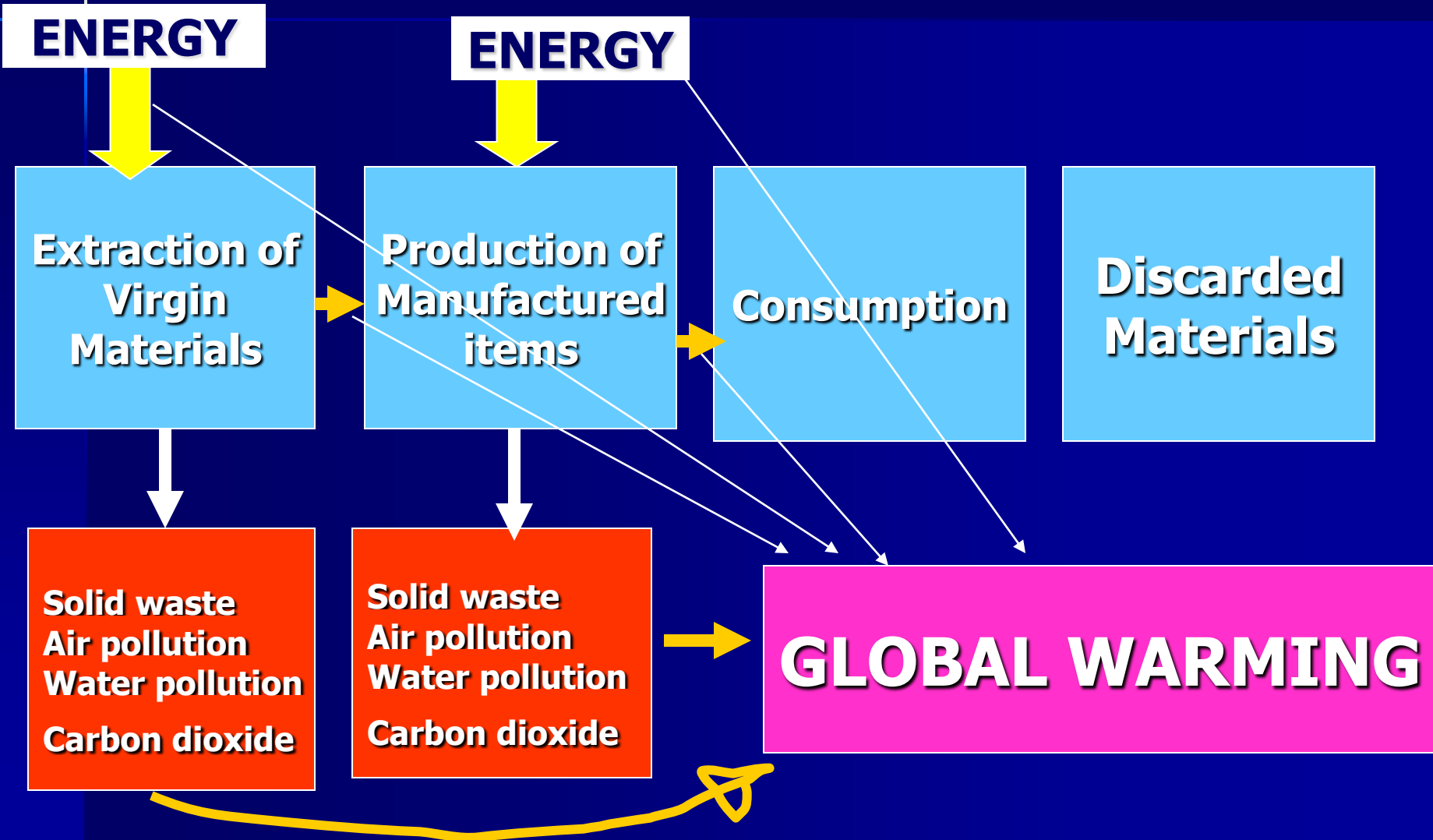
**Solid waste
Air pollution
Water pollution
Carbon dioxide**

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GLOBAL WARMING



How do waste management practices affect this picture?



LANDFILLS

ENERGY

ENERGY

**Extraction of
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Materials**

**Production of
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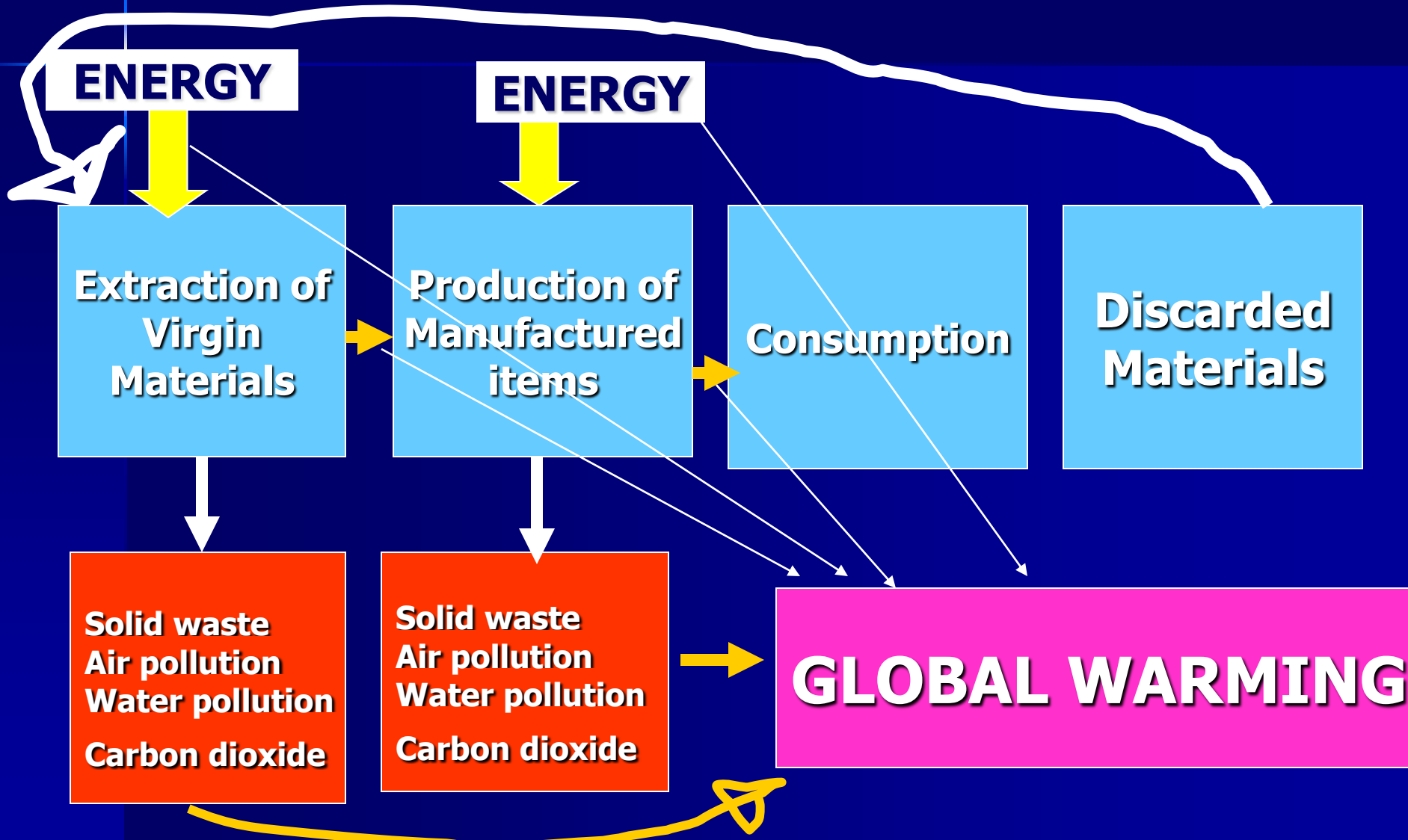
Consumption

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GLOBAL WARMING



INCINERATION

ENERGY

ENERGY

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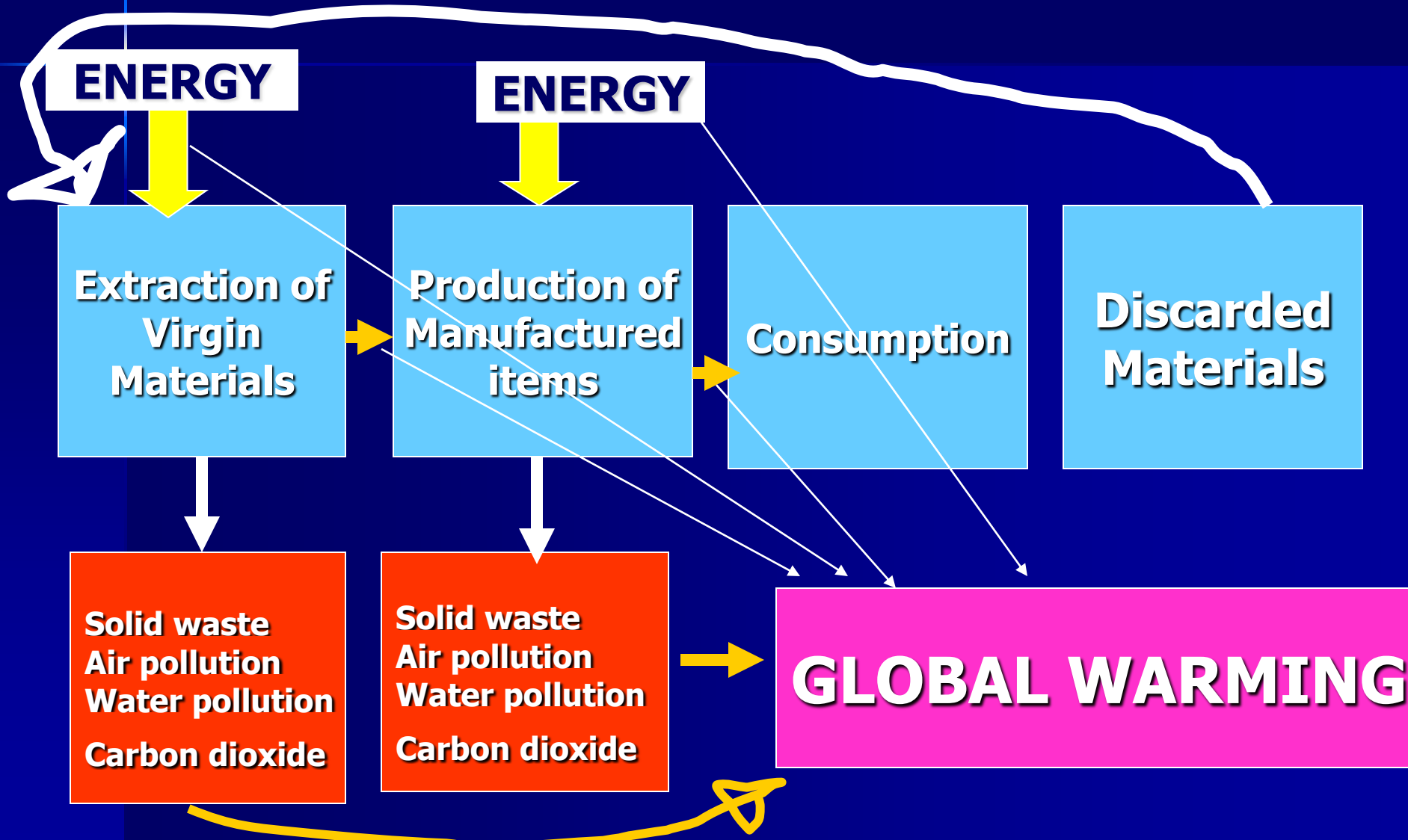
Consumption

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Materials**

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GLOBAL WARMING



RECYCLING OF MATERIALS

ENERGY

ENERGY

**Extraction of
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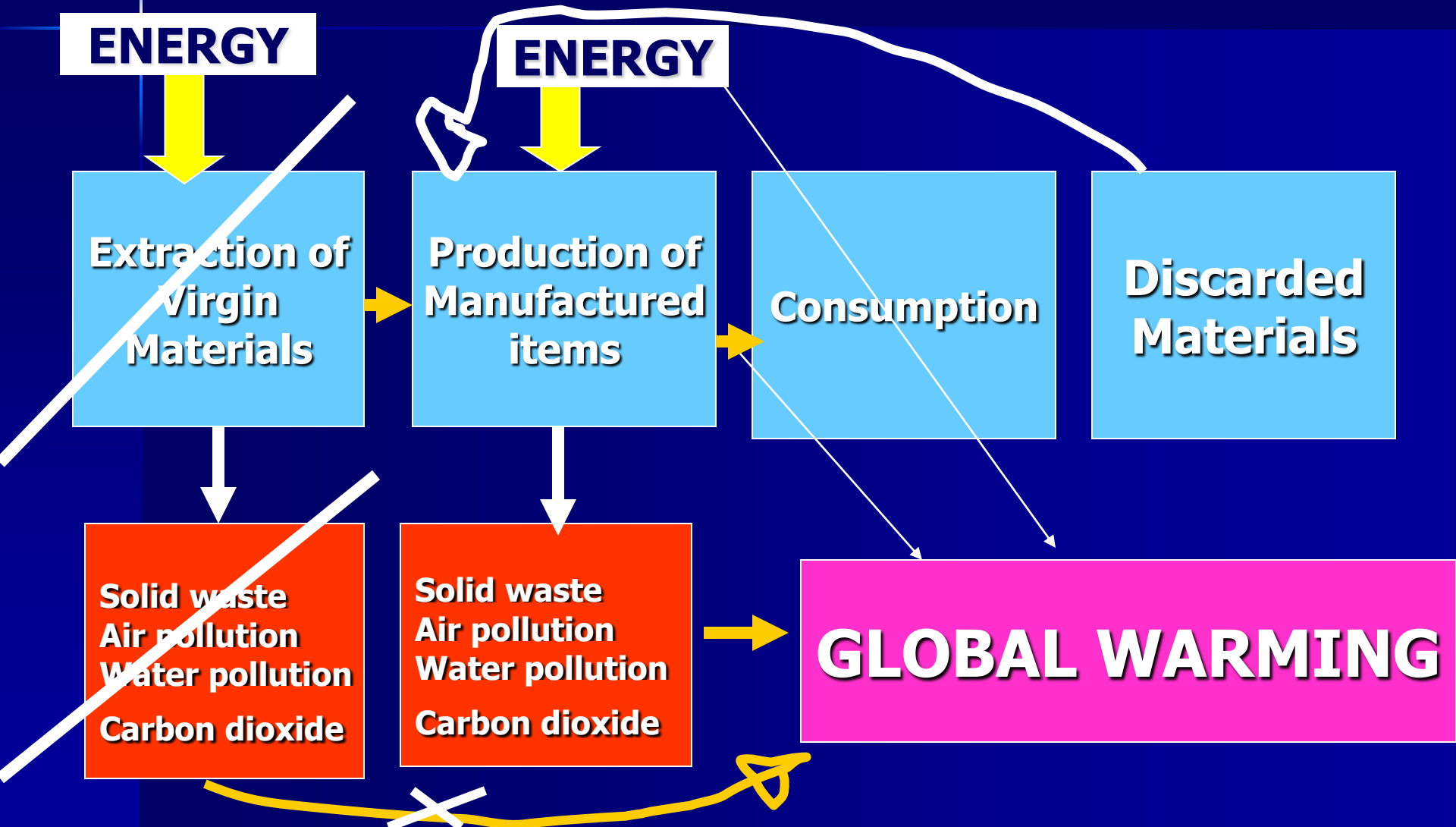
Consumption

**Discarded
Materials**

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GLOBAL WARMING



REUSE OF OBJECTS

ENERGY

ENERGY

**Extraction of
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Materials**

**Production of
Manufactured
Items**

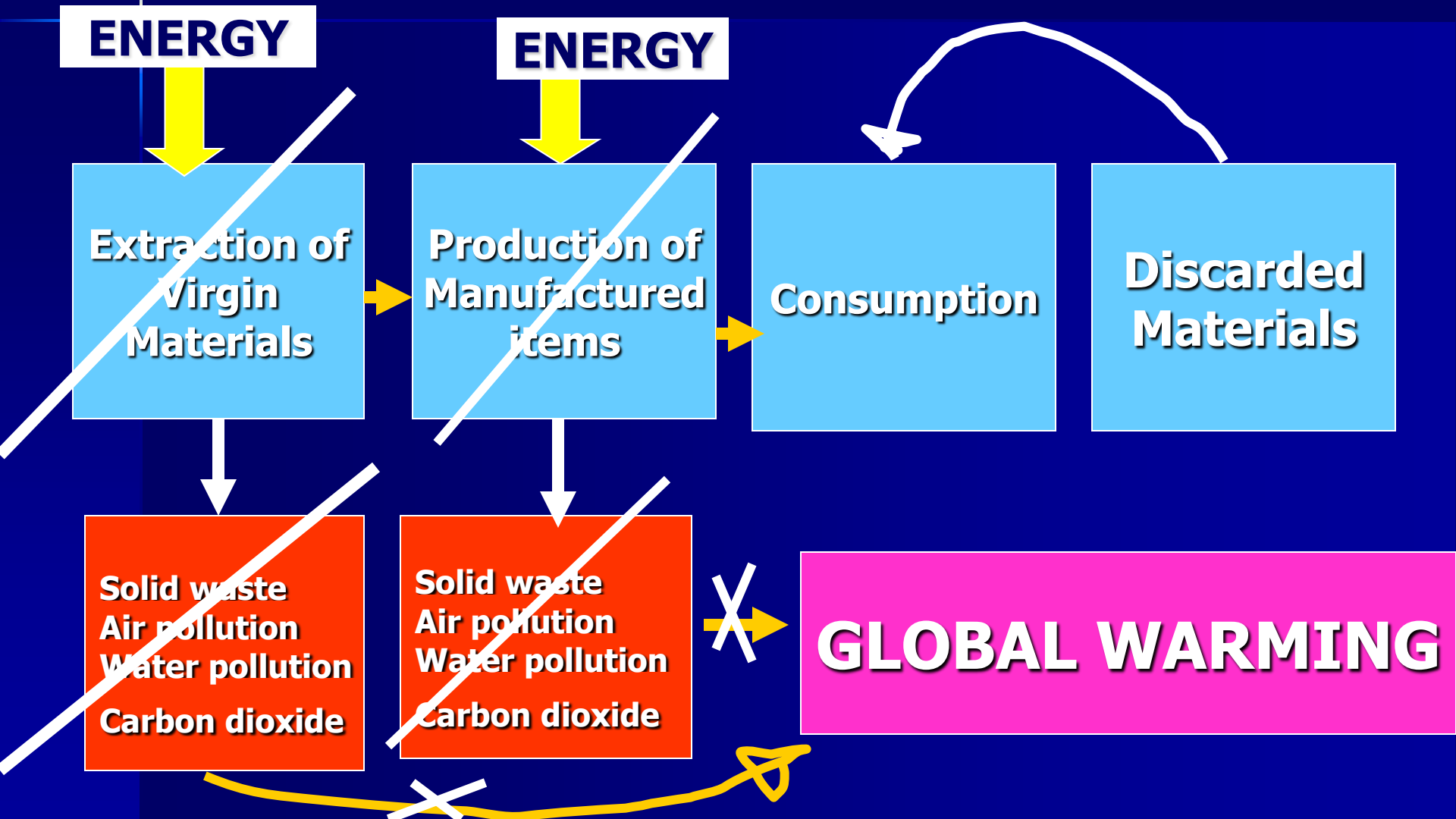
Consumption

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GLOBAL WARMING



COMPOSTING

ENERGY

ENERGY

**Extraction of
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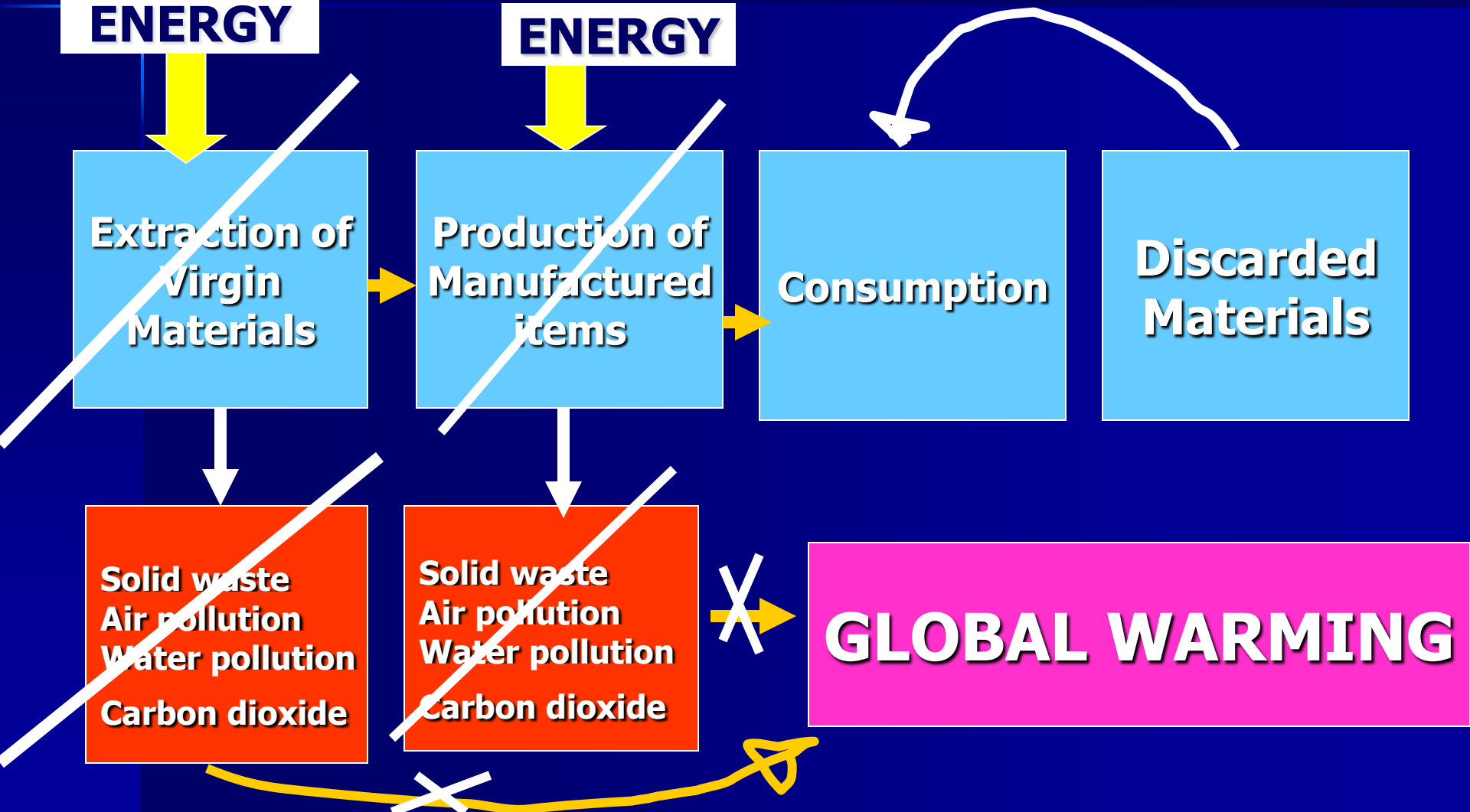
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GLOBAL WARMING



COMPOST




Kg Greenhouse gas/tonne Municipal Waste

<i>A combination of recycling and composting</i>	-461
<i>Incineration generating electricity</i>	-10

Waste Management Options and Climate Change. AEA 2001

Kg Greenhouse gas/tonne Municipal Waste

<i>A combination of recycling and composting is 46 times better</i>	-461
<i>at reducing greenhouse gases than</i>	X 46
<i>Incineration generating electricity</i>	-10



Waste Management Options and Climate Change. AEA 2001

Incineration is a waste of energy!

Energy Comparison: **Recycling** versus **incineration** (ICF consulting, 2005)

material	Energy savings from recycling GJ/tonne	Energy output from incineration GJ/tonne	Energy savings recycling versus incineration
Newsprint	6.33	2.62	2.4
Fine paper	15.87	2.23	7.1
Cardboard	8.56	2.31	3.7
Other paper	9.49	2.25	4.2
HDPE	64.27	6.30	10.2
PET	85.16	3.22	26.4
Other plastic	52.09	4.76	10.9

Incineration is not sustainable

Incineration is not sustainable

- Incineration does not challenge the **over-consumption** of finite resources

Incineration is not sustainable

- **Incineration does not challenge the over-consumption of finite resources**
- **Incineration sabotages genuine moves towards sustainability**