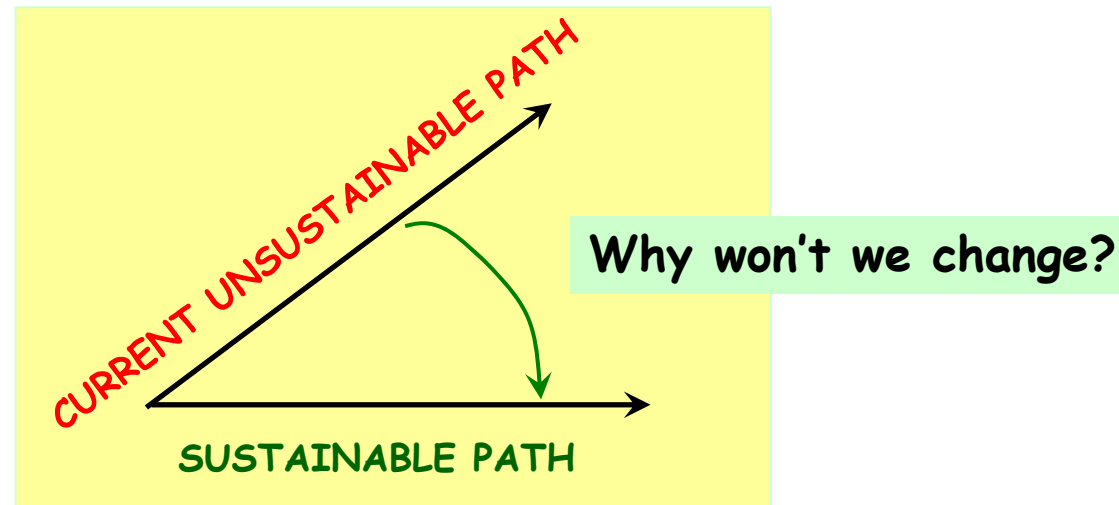


Why won't we change to a sustainable future?



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CONTENT of Presentation

- ❑ Our current unsustainable path
 - Energy / climate change as an example

Why won't we change to a sustainable future?

- ❑ Technological limitations

But, maybe,
the major reasons are economic and socio-political

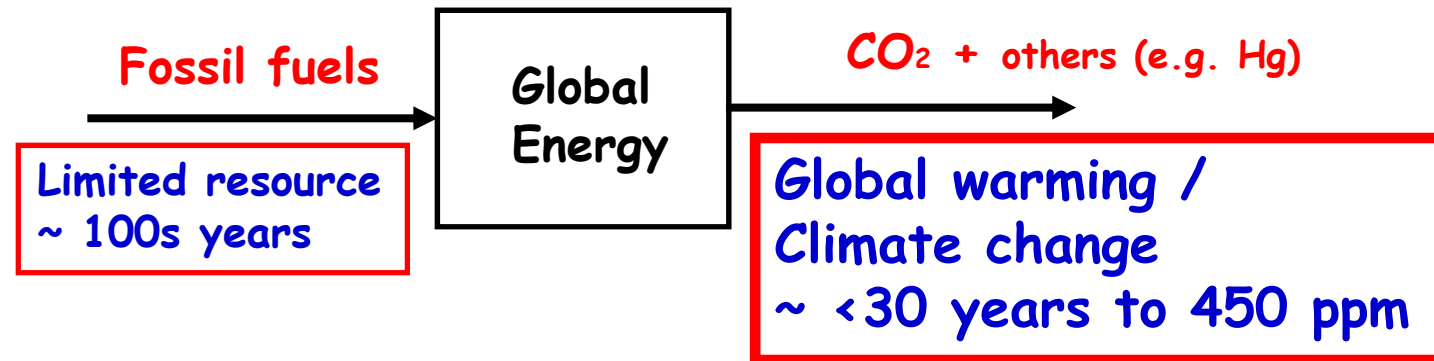
- ❑ Economic reasons
- ❑ Socio-political reasons

Motivation for this work

Identifying reasons for NOT changing **highlights** the barriers that must be addressed for significant change to be made.

EXAMPLE: Our current unsustainable energy situation

Our big current energy unsustainability
~ 81% fossil fuels



This means we have to move to an energy system with greatly reduced GHG emissions.

We know this, have known this quite some time, but we are still not changing, WHY NOT?

Technological Perspective

It is a **technically gigantic task** moving away from the current dominant CO₂ emitting energy technologies.

Current alternative clean technologies **cannot do it right now**.

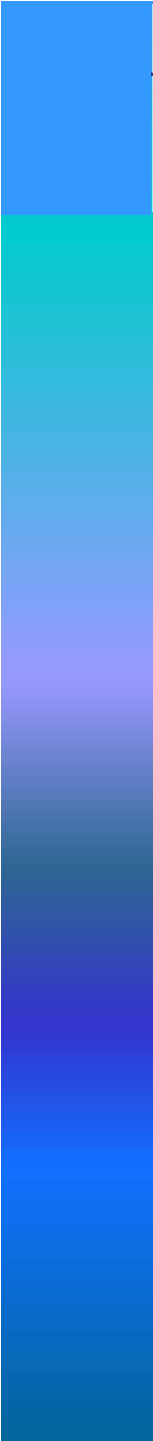
OK, there are **major technological barriers / challenges** in the MOVE, however there is enough technology available today to make a **good start** towards a sustainable energy paradigm.

And massive financial investment could spawn the huge innovation required to solve problems that will make significant impact.

It is kind of like **"we really have not tried on the scale required"**.

We suggest that the **biggest barriers** exist in the **economic, political, social domains**.

So, let's explore these!



**Why won't we change to a
sustainable future?**

Economic Reasons

Economic Reasons

To move to a sustainable energy future requires:

- Huge clean energy infrastructure and
- Loads of people (for infrastructure and innovation)

All this requires massive investment
- **Trillions of Euro**

This scale of investment is not forthcoming !

Why not?

Really can't compete with fossil fuel energy now or in medium term.

Fossil fuel energy is:

- Cheap
- Well developed technology
- Huge infrastructure already in place
- And highly subsidised.

Really doesn't make economic sense to take
a multi-trillion euro bet right now

Economic Reasons

What will make the market move
and make that multi-trillion euro investment?

Usually **Money, Price, a Price Signal**
Also, **Regulations and Standards**

Looking at price: Fossil fuel energy is miles too cheap
Its price needs to **greatly increase** to facilitate
the **MOVE** to a sustainable energy paradigm
by allowing clean energy technologies to compete.

Approaches to do this include:

- o Carbon taxes
- o Fossil fuel floor (minimum) prices
- o Cap and Trade schemes
- o Etc.

Economic Reasons

Will these economic measures happen any time soon?

Don't think so! Why NOT?

- ❑ **Global economic recession** in the short to medium term (decades),
Increased energy prices => global recession
=> increased unemployment => social instability
- ❑ **Fossil fuel corporations** + allies will lobby strongly against this.
 - Cause global recession / unemployment / social instability
 - It affects their profits / return on investments

Very Powerful Lobby
- ❑ **Governments won't implement** necessary economic / regulatory measures because:
 - o Fossil fuel corporate lobby
 - o Recession / unemployment / social instability
 - o Revenue decrease
 - o Currently, no major bottom-up push from general public
- ❑ **General population will revolt** against decrease in incomes.
Our current lifestyle is fuelled by cheap energy supplied by fossil fuels.



**Why won't we change to a
sustainable future?**

Social / Political Reasons

Social / Political Reasons

Why ordinary global citizens are not changing?

- ❑ **General Lack of understanding** of the seriousness of the problem amongst the public => little bottom-up push.

OK, aware of climate change as something that may be out there, somewhere!

But, still not really feeling its effect physically or financially.

- ❑ **Climate change scepticism** - Some don't believe that our energy system is influencing climate change.
- ❑ **"Genetic programming" and "discounting" the future**
Humans don't react to a threat until they can physically sense it.
- ❑ **Survival today or life is currently tough enough**
 - Getting food today is a lot more important.
 - Even though I live in a developed country, I am struggling.

Social / Political Reasons

Why ordinary global citizens are not changing?

- ❑ **Everyday life is just too busy** - work, family, children, social activities, social networking, love-life, sport, internet; don't have time to engage with climate change and sustainability.

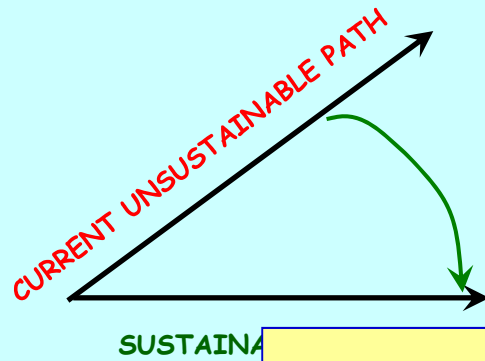
- ❑ **Technology will fix it** - Remember Thomas Malthus; Technology came to the rescue!

- ❑ **Lack of empowerment**
What can I do, this is much bigger than me.

Social / Political Reasons

Why governments and those with power are not changing?

- ❑ **“Vested interests”** - There are a lot of folk making a lot of money out of the current economic system and they don't want change.
- ❑ **Trapped by the current economic paradigm** - Of economic growth
- ❑ **Social-economic inertia** - The change needed requires HUGE effort. Who wants all this work and stress?
- ❑ **Little bottom-up push** - Remember politicians are elected!
- ❑ **Lack of empowerment** - “Can't control the juggernaut”



In Conclusion

Why won't we change to a sustainable future?

Current state of technology is a major barrier, however, we suggest that the **biggest barriers** exist in the **economic, political, social domains**.

This paper has tried to identify reasons for **NOT** changing. These reasons **highlight** the barriers that must be **addressed and overcome** for significant change to be made.

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