

# Sustainable Development

Nordiska Textilakademin

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# Yet More On Being Eco with Textiles

Sustainable Development

**Nordiska Textilakademin**

25/01/2024

[Charles@email.com](mailto:Charles@email.com)



**Royal College of Art**

# Schedule

2 hr presentation with break

Lunch

1 hr Q&As/ project



**Title**

*"A designer is an  
emerging synthesis of  
artist, inventor,  
mechanic, objective  
economist and  
evolutionary  
strategist."*

*R. Buckminster Fuller*

*Are you  
concerned about  
the increase in  
artificial  
intelligence?*

*No, but I'm  
concerned about  
the decrease in  
real intelligence.*



## **Fashion is dead,**

trend forecaster Li Edelkoort  
has declared, describing the  
fashion industry as "a  
ridiculous and pathetic  
parody of what it has been"

Design Indaba 2015





In persuading people to buy things they don't need, with money they don't have, in order to impress others who don't care, commercial design is probably the phoniest field in existence today.

— **Victor Papanek**

Dean, California Institute of the Arts





**The question is how to sell  
more, but claim to do it  
sustainably - when  
consumption  
might be the root  
of the evil**

WHICH SHALL WE  
SEE FIRST? THE ONES  
WE ACTIVELY SLAUGHTER  
OR THE ONES WHOSE  
HABITAT WE'RE RAPIDLY  
AND SYSTEMATICALLY  
DESTROYING?

APES

BIG CATS

ELEPHANTS

BIRDS

# Buy Once, Buy Right?

“There is hardly anything in the world that some man cannot make a little worse and sell a little cheaper. The people who consider price only are this man’s lawful prey. When you pay too much, you lose a little money – that is all. When you pay too little, you sometimes lose everything, because the thing you bought was incapable of doing the thing it was bought to do”

# Title



*'After Brexit I don't want  
EU boats coming into  
British waters and catching  
all our plastic'*

A large mural is painted on the side of a light-colored building with vertical siding. The mural consists of a question in large, bold, black, sans-serif capital letters. The building has several small, square windows along its upper edge. The sky in the background is a pale, hazy blue.

How can we be lower  
impact today than we  
were yesterday?

Would I be a snake oil salesman if I said  
we can create better by selling more?



WITH EVERY TREE WE PLANT, WE OFFSET  
SOME OF THE CARBON FROM ALL THE  
HOT AIR WE PRODUCE TALKING ABOUT  
HOW SUSTAINABLE THIS MAKES US.





“If you’re really going to be  
sustainable,  
you have to be regenerative.”

Vincent Stanley

# Title



“I am afraid the news isn’t good, word has it that consumers are starting to find out what actually matters.”

Highlighting ways to Futureproof your business & weather the inevitable disruption as there is a gap between stated consumer intentions and their actual behaviour around sustainable consumption

I'M JUST POPPING TO THE  
NON-ESSENTIAL SHOPS...  
CAN YOU THINK OF ANYTHING  
WE DON'T NEED?



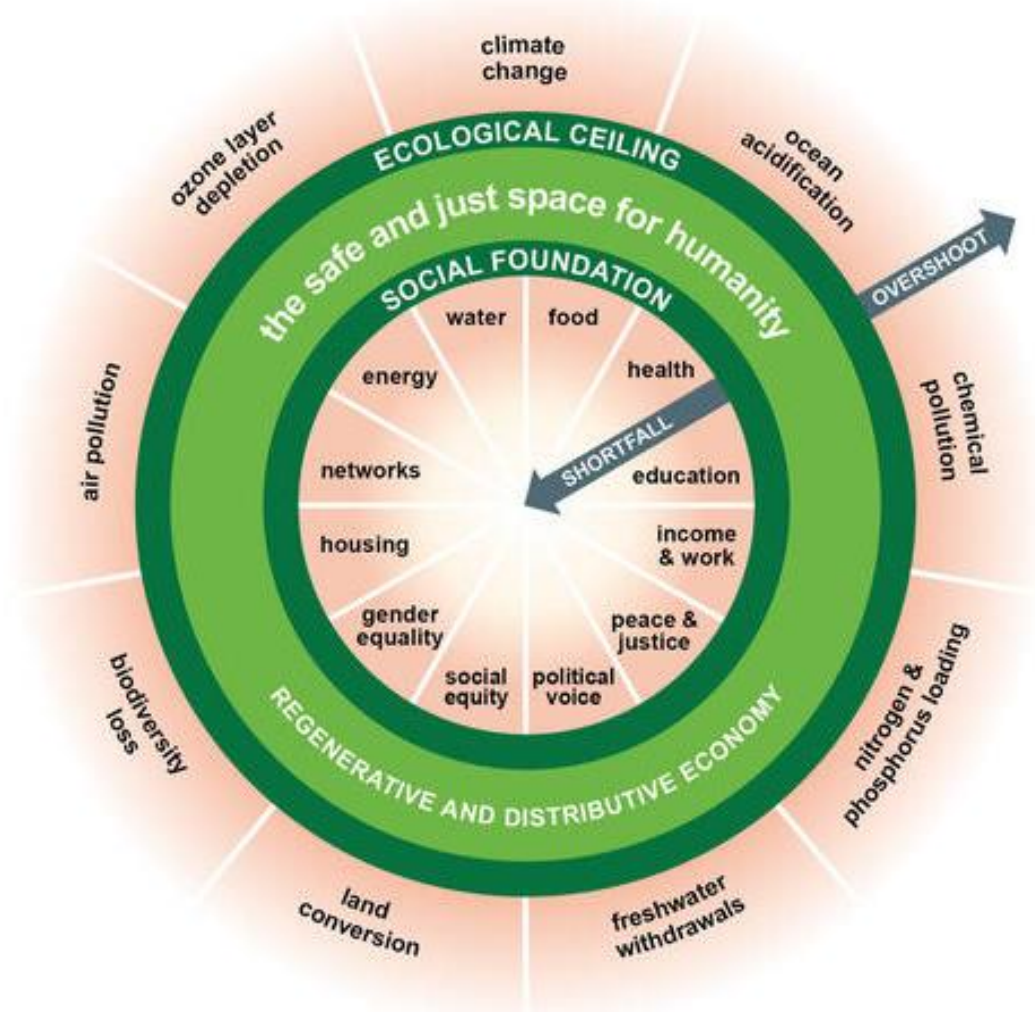
”

”

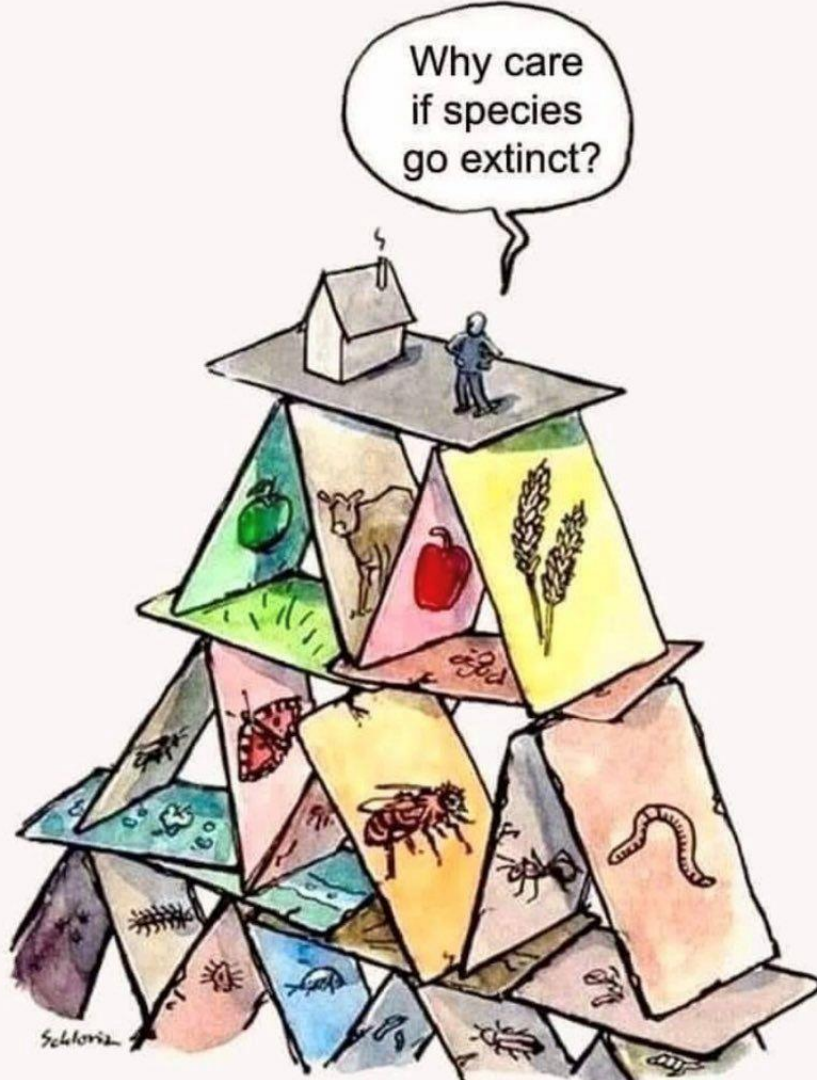
**EVERYTHING WE MAKE POLLUTES.  
THE MOST RESPONSIBLE THING WE  
CAN DO IS TO MAKE EACH PRODUCT  
AS WELL AS WE KNOW HOW SO IT  
LASTS AS LONG AS POSSIBLE.**

– YVON CHOUINARD









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**76% of the UK public think  
business has a responsibility to  
protect the natural environment**

# BEAUTY

We are beginning to reduce UK consumption but there will be 2 billion more middle class by 2030.

The concentration is now to make things that are needed



Textiles' reputation  
is of being the 2<sup>nd</sup>  
most polluting  
industry on the  
planet

Fashion, more than any  
other industry in the world,  
embraces **obsolescence** as a  
primary goal

Resource  
Scarcity

Ecotoxicity

Affordable  
Goods &  
Services

Biodiversity  
Loss

Water  
Pollution

Air  
Pollution

**Carbon**

Poverty

Water  
Shortage

Overconsumption

Education

Health

Longevity

Inequality





# EU Green Deal

Eco-Design

Due Diligence (incl. DPPs)

Green Claims

218 ESPR 19 Dec 7854/23+ADD1 2022/0095(COD)



House of Commons  
Environmental Audit Committee

# **FIXING FASHION:**

**clothing consumption  
and sustainability**

# Recycling rates

1 H																	2 He
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
55 Cs	56 Ba	*	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
87 Fr	88 Ra	**	104 Rf	105 Db	106 Sg	107 Sg	108 Hs	109 Mt	110 Ds	111 Rg	112 Uub	113 Uut	114 Uug	115 Uup	116 Uuh	117 Uus	118 Uuo



\* Lanthanides

57 La	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu
89 Ac	90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr

\*\* Actinides

# Circularity – it starts with Design

Revitalise/ Recondition

Repair/ Resize

Reduce

Reappropriate

Relegate

Only then would you Recycle then talk  
biodegradation...

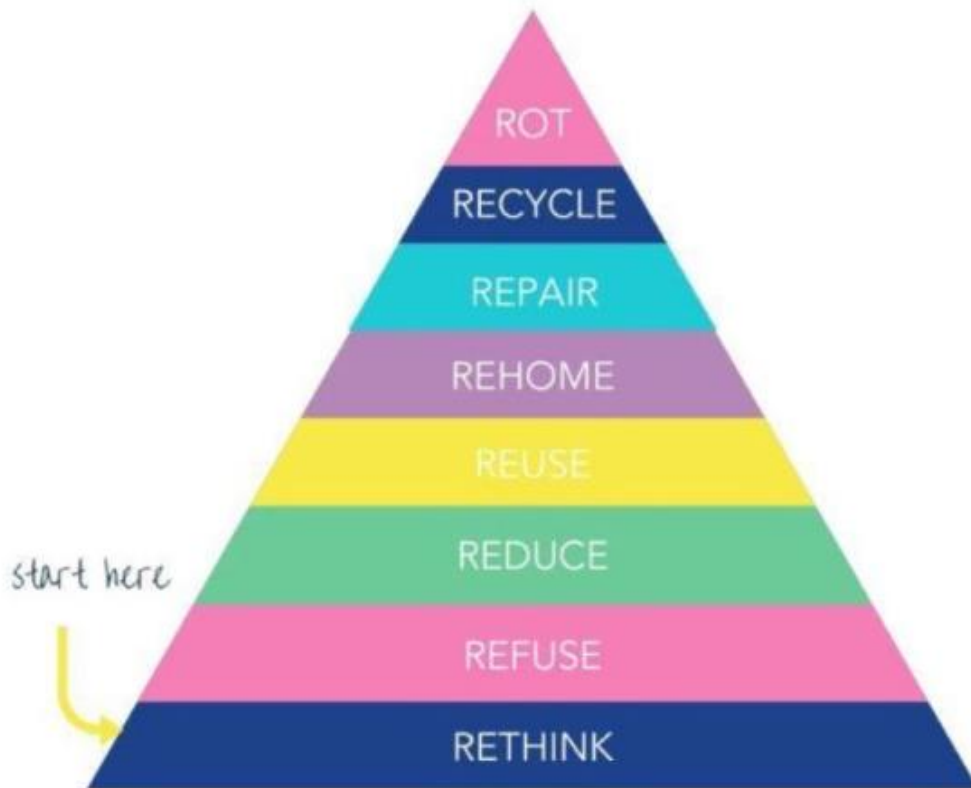
**Eliminate** waste &  
toxics

**Circulate** products  
for longer

**Regenerate**  
systems & nature

# THE WASTE HIERARCHY

(not as dull as it sounds...!)






# Extended Producer Responsibility in a circular economy



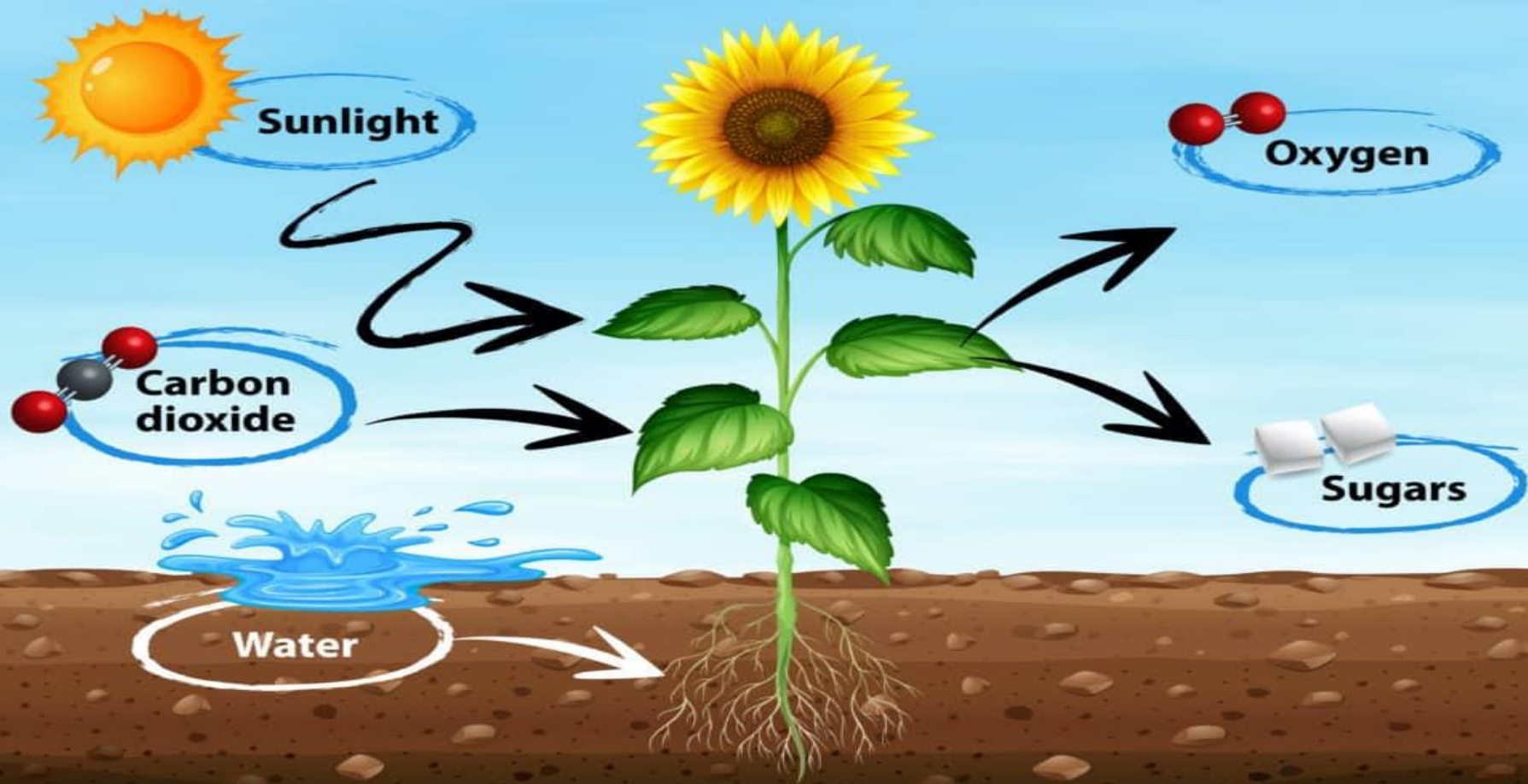
In a circular economy, all materials need to be captured, recycled and used in a wide range of sustainable end markets – independent of cost and recycling targets



# Big Agriculture Is Broken

- Top cause of soil degradation
  - Top user & polluter of fresh water
  - Top emitter of carbon into the atmosphere
- 
- **Conventional agriculture contributes up to 25% of the emissions driving the climate crisis**

# Process of Photosynthesis



# **Soil Health is key to our future**

**Biodiversity**

**Water irrigation & the soil sponge**

**Restoration of local communities**

**Carbon sequestration**

The Apparel Industry is major contributor with conventional natural materials e.g. cotton, MMCs, and animal fibers





“Agriculture really represents the best chance that we have of mitigating and ending the Climate Crisis. The Science is saying that if we converted all industrialised agriculture to ReGenerative organic practices, we could sequester all the world’s carbon”

Rose Marcario





A landscape showing severe soil erosion, with deep, winding channels of reddish-brown soil. In the background, a small, rounded green hill stands against a pale sky. The foreground and middle ground are dominated by the eroded soil, with some sparse green vegetation visible in the crevices and on the distant hill.

Rodale Institute 'If we converted all global croplands and pastures to Regenerative Organic Agriculture we could sequester more than 100% of the current annual CO2 emissions'



A vertical cross-section of soil. The top layer is dark brown, rich organic matter with green grass and small yellow flowers growing from it. Below this is a lighter brown, more compact layer of soil. Numerous plant roots, some thick and some thin, are visible extending downwards from the top layer into the lower layer. The background is a clear blue sky.

Organic matter in our soils is approximately  
10% of what it should be

1% increase in the carbon in the soil will lead to  
the retention of an additional 22,000 gallons of  
water per acre

3 million tonnes of topsoil are lost in the UK  
every year because of intensive agriculture

**Return to traditional practice**

# Carbon Capture Yarns

Using CO<sub>2</sub> captured from Industrial processes to create the 'skeleton' of a synthetic material



Taking old car  
tyres: dropping out  
the metal the  
carbon black =  
rPolyamide

# Basics of Insulation

It is all about the dead-air space

How to create & protect dead-air

- that is compressible
- that is weather resistant
- that is lighter weight

Hydrophobic Down versus Synthetic

the whole microplastics miscomprehension



# Membranes

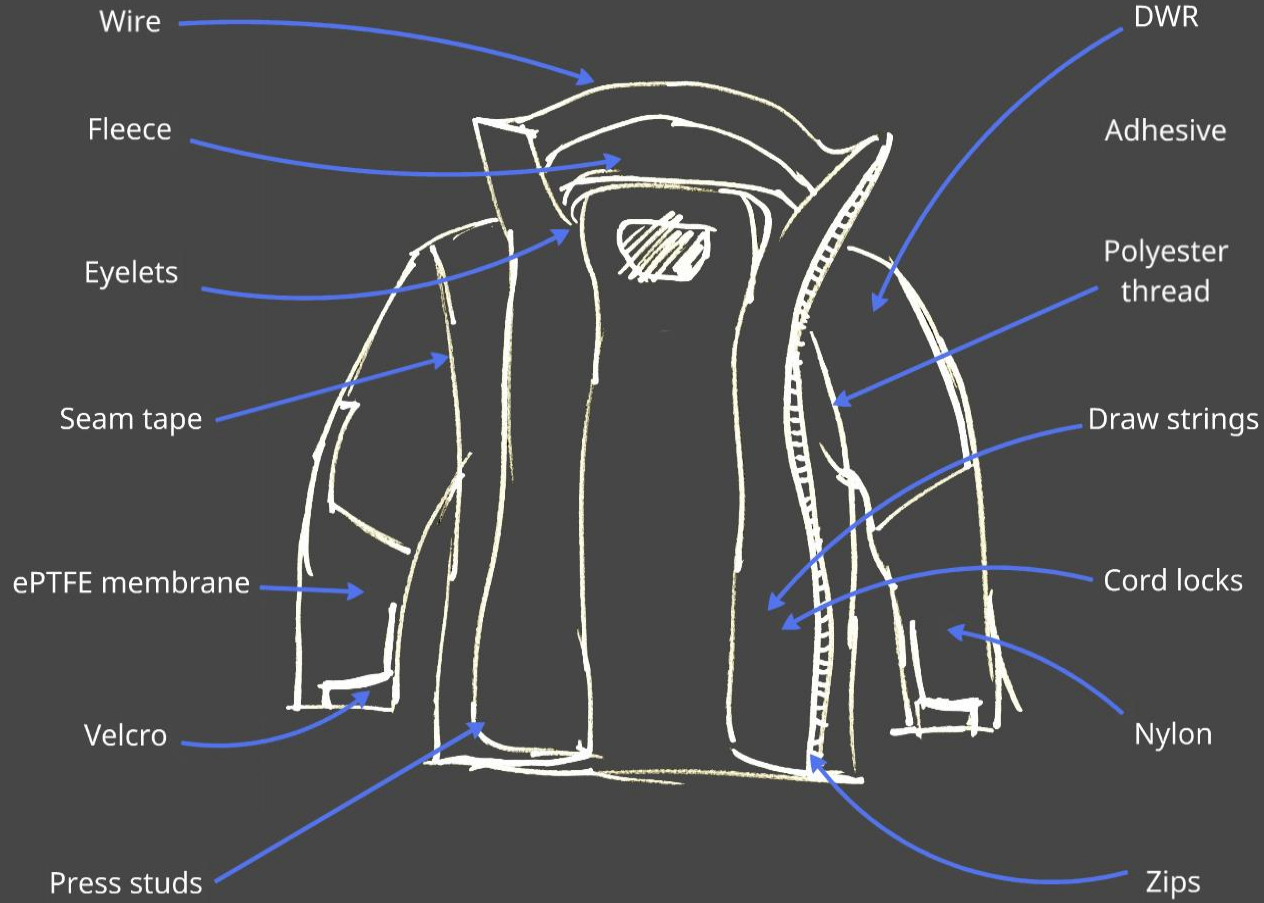
3 main types (ignoring windproof shells)

- (Poly)olefin **Microporous** (Goretex)
- Polyurethane **Hydrophilic** \*\*\*  
*Polyester* (Sympatex)
- **Electrospun** (Futurelight)

Don't forget **Durable Water Resistant** tech



# Materials in your jacket.



# Geo-political sourcing

The product is eventually transported to the UK to be sold



"Fashion is the most distributed, opaque and difficult to understand industrial system in the world."  
Jason Kibbey President & Founder Worldly

# Four Aspects of Permeables

- a) Outside Humidity
- b) Perspiration Rate
- c) Membrane
- d) Durable Water Resistant finish

Just because the DWR has been compromised – it does not mean the waterproofing has gone BUT the breathability rate has sunk.

# Physical, Fit, Cultural & Emotional Durability

Practical

Comfortable

Identifying

Fun

## Aesthetics

- On display
- On the hanger
- On the user

## “The deal”

- Value proposition

## Function

- Fit & features
- Performance claims
- Explicit eco-features

## Other

- Brand
- Marketing
- Peer influence
- Previous experience




A dense crowd of Minions, the yellow, pill-shaped characters from the "Despicable Me" franchise. They are all wearing their signature blue overalls and large, round, silver-rimmed goggles. The Minions are packed closely together, filling the entire frame. They exhibit a variety of expressions, from wide-eyed excitement and open-mouthed smiles to more neutral or slightly grumpy looks. The lighting is bright and even, highlighting the yellow of their skin and the blue of their clothing. The overall effect is one of a vast, bustling crowd.

**Average is a crowded market.**





The 'Rana Plaza' garment factory collapsed April 2013, the day after H & S cleared the cracks in the wall as being suitable for return-to-work



Stand with  
Uyghur



# HEALTH ADVISORY



Do not eat deer from the advisory area. High amounts of PFAS may be found in deer and could be harmful to your health.

## Map Legend

	Clark's Marsh		Town Range
	Advisory Area		USFS Land
	Sections		State Land

For more information, call MDHHS at 800-648-6942 or visit [Michigan.gov/PFASresponse](https://Michigan.gov/PFASresponse).





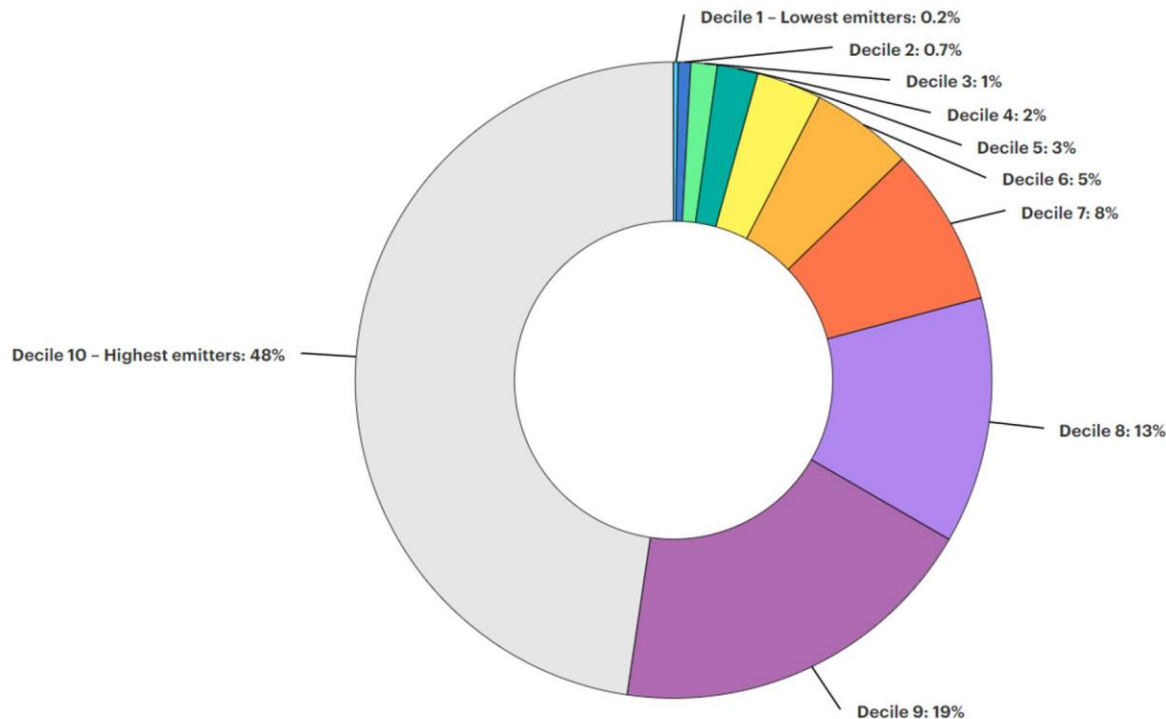






# Global CO<sub>2</sub> emissions by decile

*The top 10% emit 200x the bottom 10%*



A TODD HAYNES FILM

MARK  
RUFFALO

ANNE  
HATHAWAY

TIM  
ROBBINS

BILL  
CAMP

VICTOR  
GARBER

AND  
BILL  
PULLMAN

# DARK WATERS

ONE OF THE DEADLIEST COVER-UPS IN AMERICAN HISTORY

"A PERFECT FILM.  
RIVETING, POWERFUL  
AND IMPORTANT"

OBSERVER

"MARK RUFFALO'S  
BEST PERFORMANCE YET"

HOLLYWOOD NEWS



SCREENPLAY BY MARIO CORREA AND MATTHEW MICHAEL CARNAHAN DIRECTED BY TODD HAYNES

PARTICIPANT PRESENTS A WOLFF HILL / KILLER CONTENT PRODUCTION A TODD HAYNES FILM "DARK WATERS" MARK RUFFALO ANNE HATHAWAY TIM ROBBINS BILL CAMP VICTOR GARBER MARK WINNINGHAM AND BILL PULLMAN COSTUME DESIGNER LAURA ROSENTHAL EXECUTIVE PRODUCERS RANDALL POSTER PRODUCED BY MARCELO ZARVOZ EDITOR CHRISTOPHER PETERSON  
EXECUTIVE PRODUCERS AFFONSO GONCALVES AND PRODUCED BY HANNAH DEANLEN PRODUCED BY EDUARDO LACHAMAN EXECUTIVE PRODUCERS JEFF SKILL JONATHAN KING ROBERT KESSEL MICHAEL SLEED COSTUME DESIGNER MARK RUFFALO CHRISTINE VACHON PAMELA KOFFLER EXECUTIVE PRODUCERS MARIO CORREA AND MATTHEW MICHAEL CARNAHAN DIRECTED BY TODD HAYNES



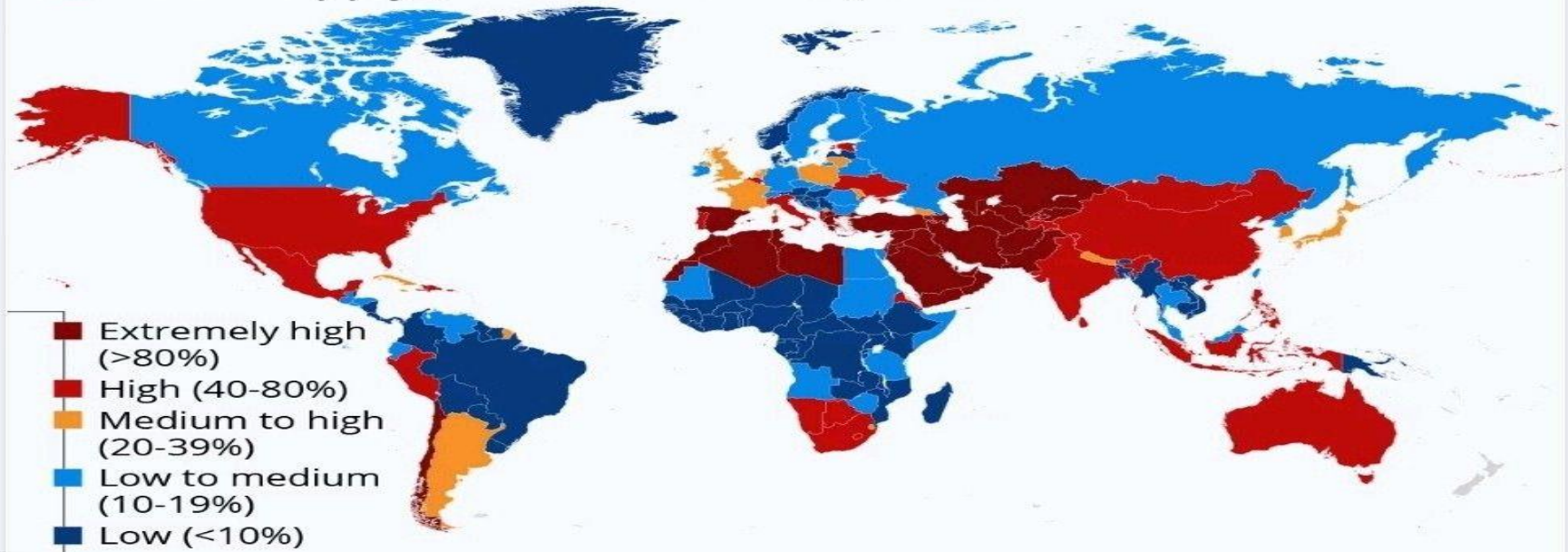
IN CINEMAS SOON

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# Where Water Stress Will Be Highest by 2040

Projected ratio of water withdrawals to water supply (water stress level) in 2040



Source: World Resources Institute via The Economist Intelligence Unit



# June 1976

June 1976

L-OTI(°C) Anomaly vs 1951-1980

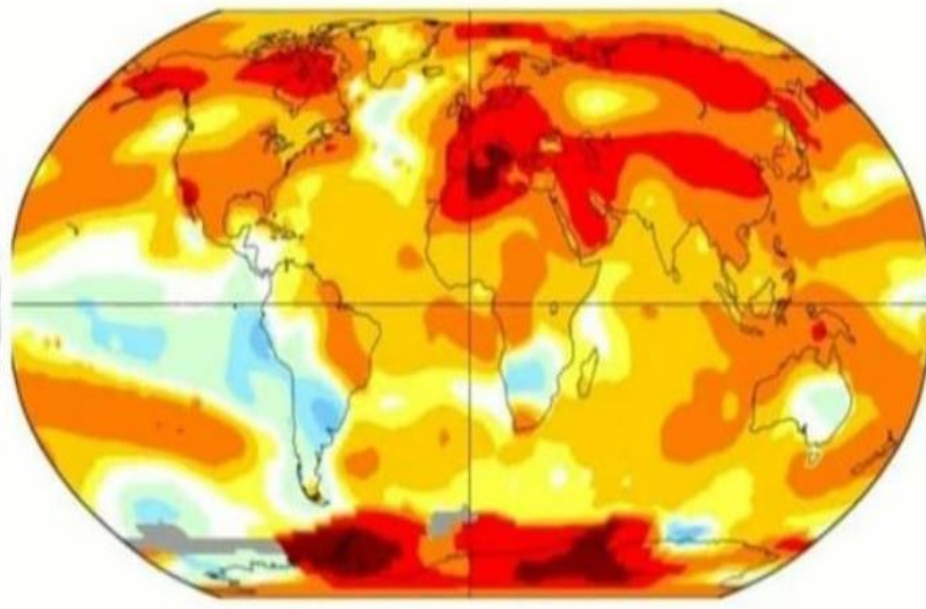
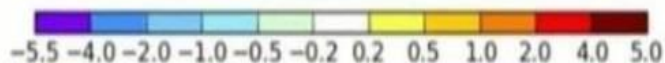
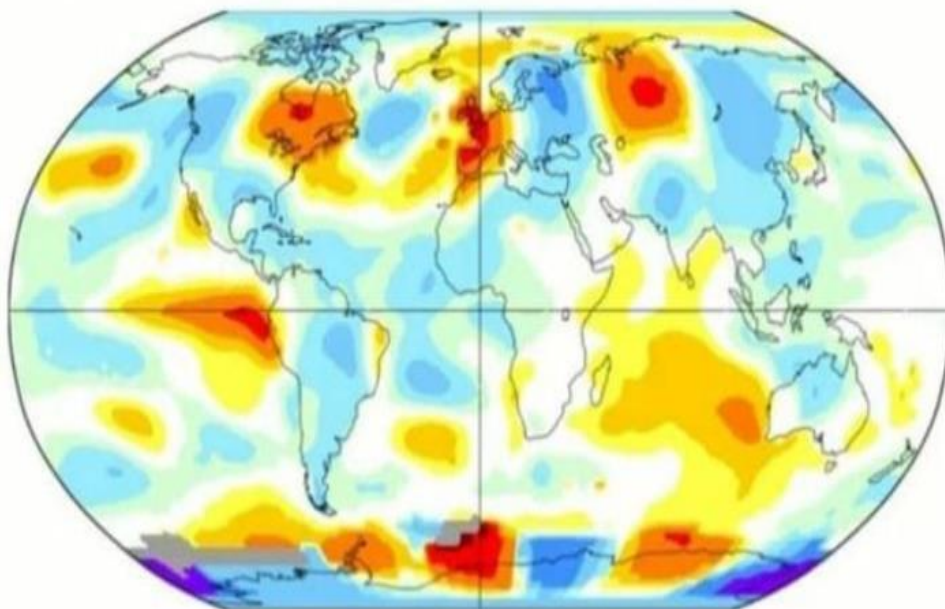
-0.15

# June 2022

June 2022

L-OTI(°C) Anomaly vs 1951-1980

0.93





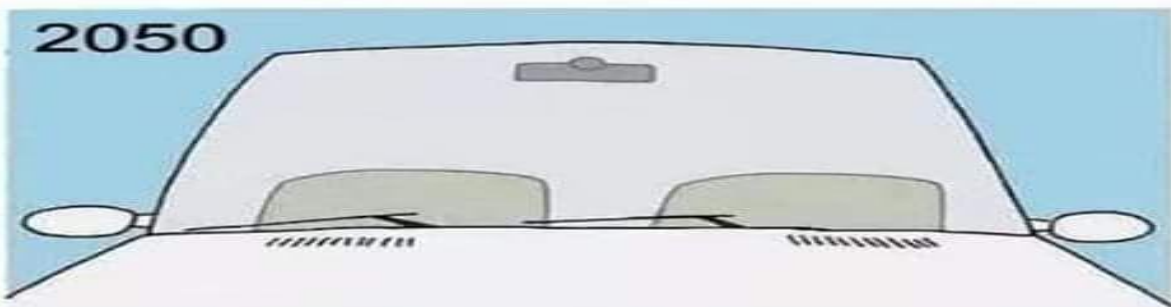
1990



2020



2050



# Average has a long half-life



# Books worth Reading

## YOU CAN'T MAKE MONEY FROM A DEAD PLANET

The sustainable method for driving profits

Mark Shayler



## WE CAN'T RUN AWAY FROM THIS

RACING TO IMPROVE RUNNING'S FOOTPRINT IN OUR CLIMATE EMERGENCY

DAMIAN HALL

FOREWORD BY KILIAN JORNET

## THE CLIMATE BOOK

CREATED BY  
GRETA THUNBERG

Illustrated by

THE WORLD IS ON FIRE BUT  
WE'RE STILL BUYING SHOES

# Brand Questions

1. Trash the planet for profit
2. Why not responsible for the Supply chain
3. Commission manufacture, but absolved of post purchase
4. Why is good practice only an option?

Charles@email.com

Its easy to  
let go of  
your  
purpose





transiti\*ns