

# Hemp: An Important tool for reaching “Net Zero”



Nathaniel Loxley

Research Director - British Hemp Alliance

[nathaniel@britishhempalliance.co.uk](mailto:nathaniel@britishhempalliance.co.uk)

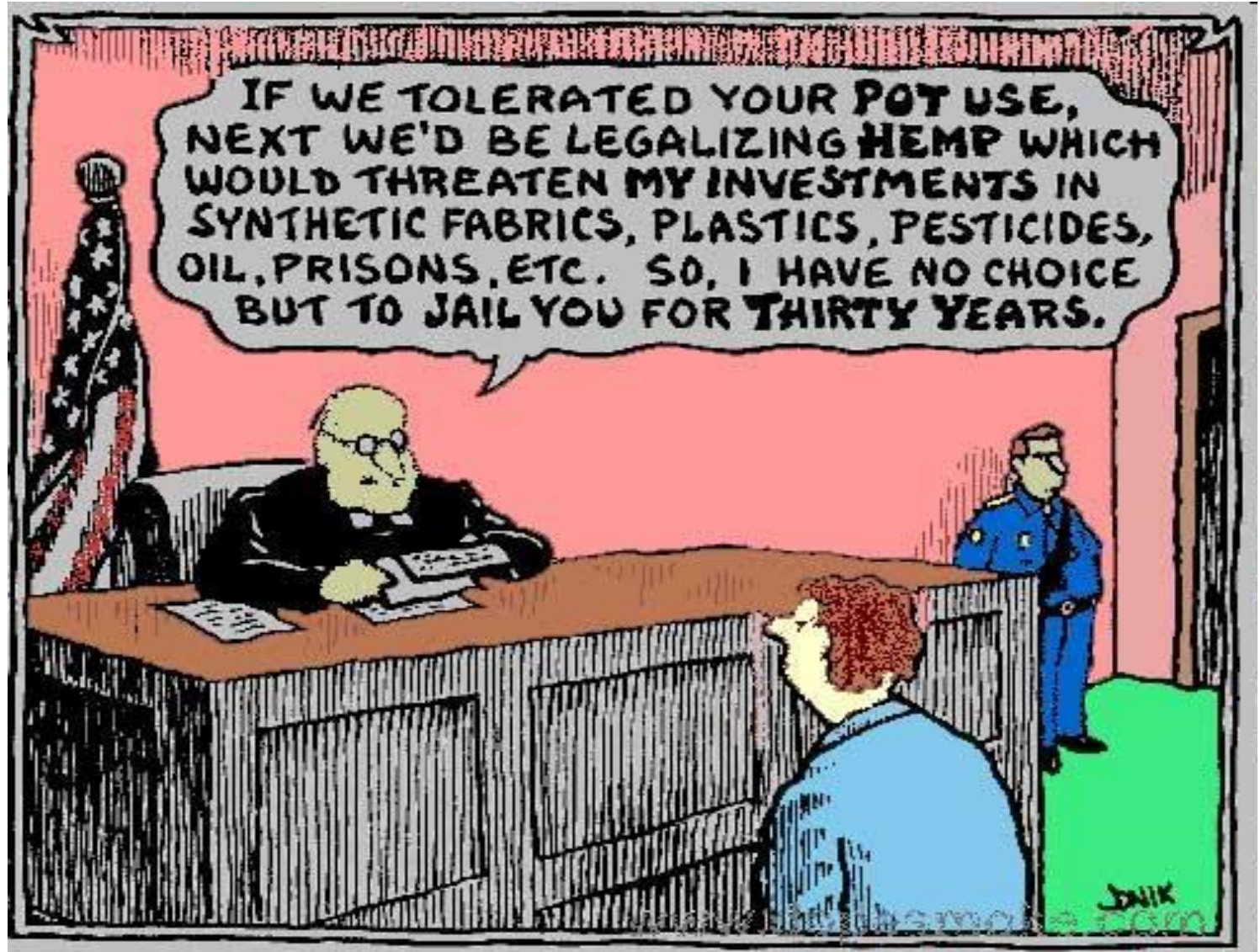
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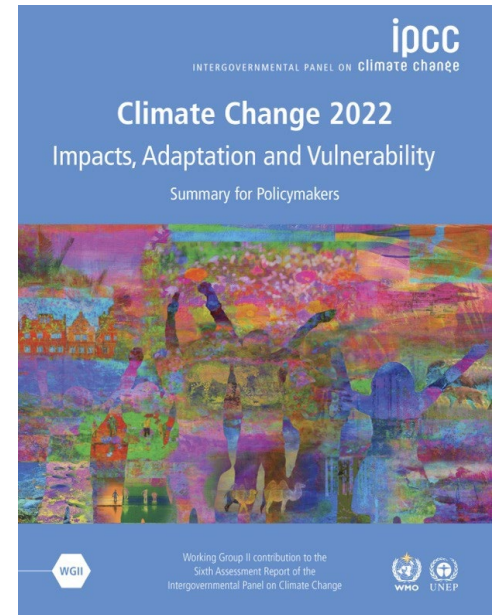


# THE REALITY



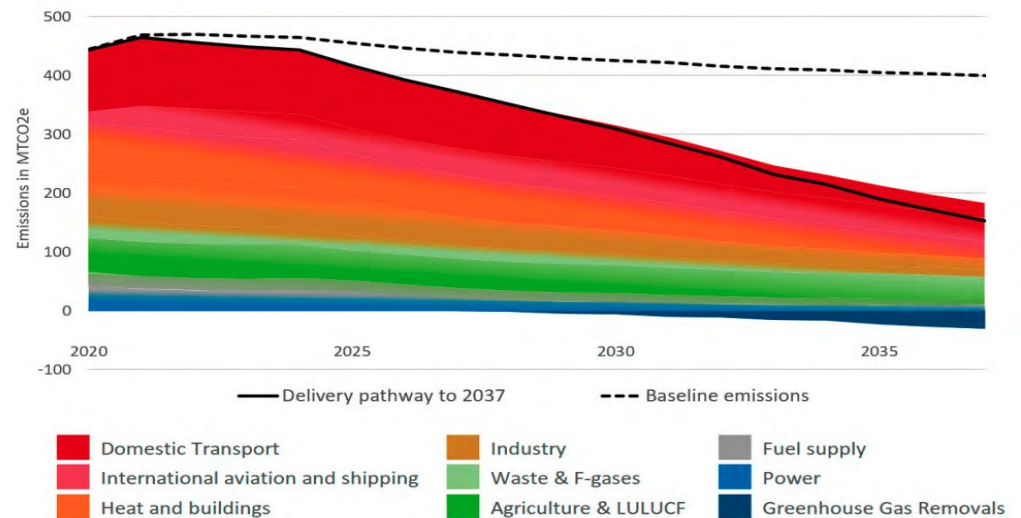
# The scene in 2022

- ❖ IPCC February:
- ❖ **Climate Change 2022: Impacts, Adaptation and Vulnerability**
- ❖ **Chapter 5 - Food, fibre, and other ecosystem products**
- ❖ **Nature Based Solutions (NbS)**



## BEIS Delivery Pathway (right)

The strategy says it has, to date, “mobilised £26bn of government capital investment” which will, along with regulations, “leverage up to £90bn of private investment by 2030”.





# UK GOVERNMENTS CLIMATE COMMITMENT

*“Holding global temperature rise to 1.5 degrees C is still possible but only if we act immediately. The world needs to peak GHG emissions before 2025, nearly halve GHG emissions by 2030, and reach net-zero CO<sub>2</sub> emissions around mid-century, while also ensuring a just and equitable transition.” IPCC Report 2022*

- ❖ NFU have committed to net zero by 2040. Using agriculture is an essential part of policy.
- ❖ Prime minister Boris Johnson has staked his personal reputation on the UK’s net-zero target, making the goal one of his signature manifesto commitments ahead of the last election.
- ❖ The IPCC found that all pathways that limit warming to 1.5 degrees C (with no or limited overshoot) depend on carbon removal. These approaches can include both ‘Nature-based Solutions’, such as sequestering and storing carbon in trees and soil, as well as technologies that pull CO<sub>2</sub> directly out of the atmosphere.





# CARBON SEQUESTRATION

- ❖ One hectare can produce 13 tonnes of stem over one growing period (4 to 6 months)
- ❖ A total of 11.26 tonnes of Atmospheric Carbon is sequestered per hectare (single crop) of Industrial Hemp (Including stem, root and leaf material), based on 13 tonnes of harvested stem per hectare, and 866 kilos of carbon sequestered per tonne of harvested stem.
- ❖ Builds soil organic carbon due to the amount of root matter and green mulch





# NET ZERO CHALLENGES

4 key problems highlighted by the latest IPCC report that hemp can solve..

- ❖ **Scale up clean energy**
- ❖ **Double-down on innovation to decarbonize industry**
- ❖ **Incentivise green buildings**
- ❖ **Conserve ecosystems and improve food systems**



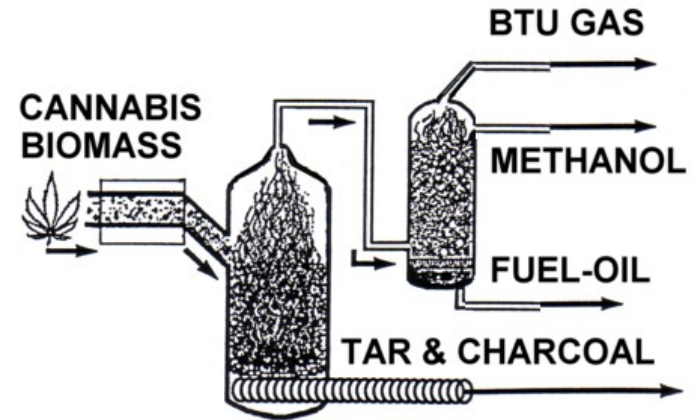


# SCALE UP CLEAN ENERGY

Alternative energy carriers must substitute for fossil fuels in sectors where electrification will be difficult, such as industry and heavy-duty transport.

Without a change in trajectory, CO<sub>2</sub> emissions from the transport sector are set to increase by up to 50% by 2050.

For industries, such as shipping and aviation that are hard-to-decarbonize, advanced biofuels, are emerging as viable options, but they require more financing and policy support.







# DOUBLE-DOWN ON INNOVATION TO DECARBONISE INDUSTRY

- ❖ Improving energy efficiency
- ❖ Reducing material demand through circular economy solutions
- ❖ Switching to new low- and zero-emission industrial processes are necessary for producing materials like steel, cement, plastic, pulp and paper, and chemicals.



Courtesy of CannaPaper





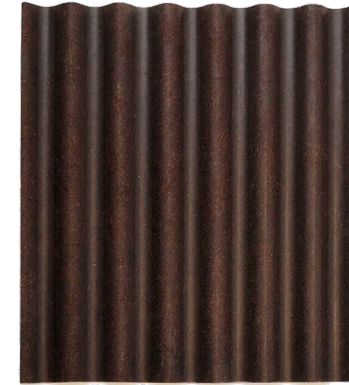
# INCENTIVISE GREEN BUILDINGS

Homes expected to produce 75-80% lower carbon emissions compared to current levels.

To ensure industry is ready to meet the new standards by 2025, new homes will be expected to produce 31% lower carbon emissions from 2021.

## Hemp Building Materials

- ❖ Hempcrete - new binders and systems
- ❖ Biocomposites - alternatives to polymers
- ❖ Panels - internal fit out and insulation gains
- ❖ Rendering



Hiive (right)

Adaptavate,  
Breathaboard  
(below)

Margent  
Farm (Left)





# CONSERVE ECOSYSTEMS AND IMPROVE FOOD SYSTEMS

The IPCC finds that protecting, restoring and sustainably managing carbon-rich ecosystems like forests and peatlands — as well as reducing the GHG intensity of food production, curbing food waste, and shifting to more sustainable diets — can mitigate 8-14 GtCO<sub>2</sub>e per year from now through 2050 at relatively low costs.





# INNOVATIVE FARMERS x BHA

- ❖ During 2021 IF x BHA project launched with a small pilot group of hemp growers on board
- ❖ Project to develop a methodology to measure and assess the impact hemp has on:
  - Carbon sequestration (Soil Organic Carbon),
  - Soil health - Visual Soil Assessments
  - Biodiversity - Monitoring and recording
- ❖ Project to cover 2023, expanded to the wider community of growers to input and access data
- ❖ Cranfield University Soil, Newcastle University - Biodiversity + NRM

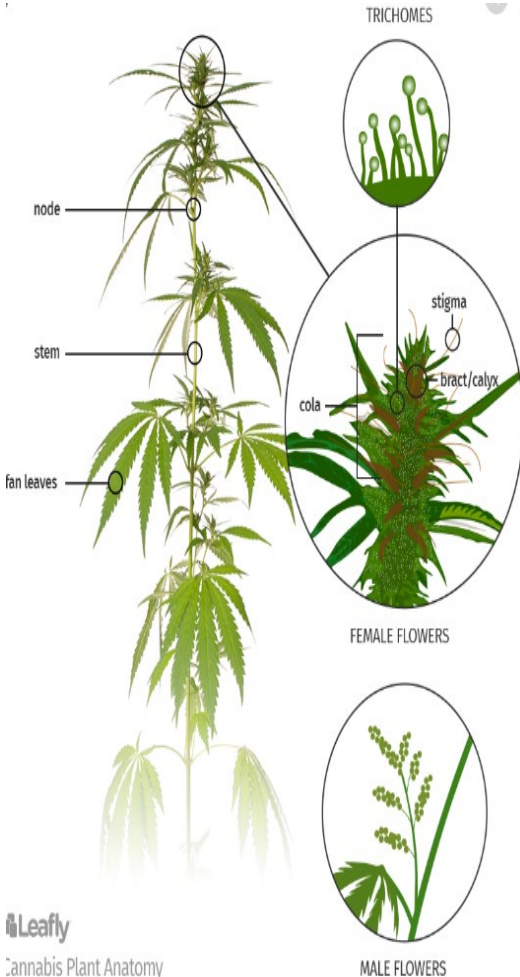






# WHAT NEEDS TO CHANGE

- ❖ Remove the *controlled substance* stigma so hemp can become an agricultural crop
- ❖ Utilization of the whole hemp plant
- ❖ All UK hemp to be administered by DEFRA
- ❖ 1% permitted levels of THC hemp in the field





# HARVEST THE WHOLE PLANT

## From Root to Flower

- ❖ **Flower** - Boosts our immune systems and brain function.
- ❖ **Seed** – One of the most nutritious foods with all the omegas, GLA's, essential fatty acids and proteins.
- ❖ **Fibre** – Produces sustainable materials that don't cost the earth, sequesters carbon.
- ❖ **Root** – Remediate soil and breaks down compacted soils. Remedy for bone and muscle aches, swellings, deep tissue healing, rejuvenates cell growth,
- ❖ British farmers can economically benefit from the whole plant.
- ❖ Hemp supports and helps the local bio-economy flourish.





# CHALLENGES FOR THE HEMP INDUSTRY



- ❖ Crippling and outdated legislation
- ❖ Lack of infrastructure
- ❖ Lack of education and research
- ❖ Obstacles to banking and investment
- ❖ Limited government funding, support and assistance
- ❖ Constantly shifting goalposts and no clear and reliable guidance and support from the Home Office.





# THE BRITISH HEMP ALLIANCE:

## Seeding the Future of British Hemp

- ✓ Lobby to remove all barriers to growth to enable a vibrant, profitable UK Hemp industry.
- ✓ Educate on the importance of Hemp as an agricultural crop for human and environmental health.
- ✓ Support hemp farmers and growers
- ✓ To provide a healthy thriving Hemp industry for now, and for our future generations.

# THANK YOU

[nathaniel@britishhempalliance.co.uk](mailto:nathaniel@britishhempalliance.co.uk)



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