

**ONLINE WORKSHOP SUMMARY REPORT**  
**Petrochemicals and Climate Change: Corporate power,  
networks and international governance**

**March 8th and 9th 2021, 1 pm – 4 pm CET**

*Organisers*

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The workshop was organized as part of the research project *Petrochemicals and Climate Change: Powerful Fossil Fuel Lock-ins and Policy Options for Transformative Change* led by Lund University and IVL Swedish Environmental Research Institute. The project aims to provide a much-needed investigation into the petrochemical sector to strengthen awareness of its relevance to the climate crisis and to provide tools and recommendations for decisions makers as well as other stakeholders on how to approach change in this sector.

The workshop aimed to provide an opportunity for participants to present and discuss ongoing work, preliminary findings, knowledge gaps, and a research agenda for the field. The workshop had just over 30 participants from academia, NGOs, and international institutions. It was organized in four thematic sessions with presentations and discussions on important developments and trends.

**Session 1: Petrochemical sector dynamics**

The session took off highlighting three paradoxes of the petrochemical sector: everywhere yet invisible, needed yet inherently problematic, and booming yet based on a sector in decline. The petrochemical sector includes various kinds of actors: international oil firms, national oil firms, long-standing (petro-)chemical firms, emerging market firms. State-owned companies comprise of 7 of the top 50 petrochemical producers. National oil companies and emerging market actors are the fastest growing. The session also provided evidence of how integrated the petrochemical sector is and showcased the large degree of interdependencies. Much of (European) petrochemical history has been one of co-evolution with high level of interdependencies among producers and role of industry clusters is important to consider rather than individual actors alone. The sector is also characterised by high levels of diversity in terms of outputs. Indeed, unlike many other sectors ‘over-specialisation’ is bad for economic performance, while diverse portfolios often equal economic success. The high level of interconnectivity allows the sector to adopt to changes and external shocks (not necessarily through deliberate collusion), but also means that the sector could potentially change fast if influenced

in the right way. The session also gave input to the momentous task of what is needed to reduce CO<sub>2</sub> emissions from the petrochemical from a technical perspective and why this is so difficult including the complexity of switching feedstocks (interlinking processes), and the inertia of capital intense clusters. It also underlined that production facility dynamics makes the timing of (low-carbon) upgrades important. The session highlighted the importance of regional differences, not least when it comes to industry structures, future demand, and decarbonisation pathways.

## **Session 2: Finance**

When it comes to publicly traded petrochemical producers, ownership is commonly highly diverse. A few asset managers like BlackRock, Vanguard and the Norwegian sovereign wealth fund own significant positions in just about all the listed petrochemical producers, although far from controlling positions. In terms of public finance, since 2000 more than USD 5,5bn have gone to the petrochemical sector from multilateral banks, including the Asian Development Bank, African Development Fund, and European Investment Fund. The green bond instrument is one potential lever to influence the low-carbon trajectory of the sector, but the effects of green bonds are often inconclusive and complex to monitor. There is 'perhaps' a greater need to identify who the good, the bad, and the ugly are in terms of carbon emissions from petrochemical actors. Public funding also comes in the form of subsidies, and the session also provided an illustrative example from the USA of how a petrochemical site received considerable and ongoing public subsidies. It is likely that the amount of public finance finding its way into petrochemical sector is underestimated giving the sometimes low reported spending compared to how capital intensiveness the sector is. A key challenge of exploring the areas of finance is a lack of transparency and difficulty in getting information on the financial flows in the petrochemical sector.

## **Session 3: Narratives of incumbents**

The session provided evidence of examples where the petrochemical sector has attempted to influence legislation, including bans on plastic bag bans (USA), pressure on countries to reduce plastic waste policies (Kenya), and removing *reduce* from the EU plastic strategy (EU). There is a recent yet growing awareness of sustainability but this is interpreted in various ways and the petrochemical sector seems to be adamant in being in control of the changes. The European trade association (CEFIC) spends 9 MEUR per year on lobbying in the Brussels and often has very close ties to relevant policy-makers. This has led to NGOs advocating for a 'firewall' to separate them – similar to the firewall between health officials and tobacco lobby. Concerns of the role of gas (no longer a bridging fuel), hydrogen (fossil based), and oil/gas influence on renewables were raised. When it comes to climate denial there are four main pillars of contention: that climate change is real, human-caused, serious, and solvable. In general, there are different strategies to influence the public: long-term (education), mid-term (capturing policy research

and proposals), short-term (advertising and branding). Some hopes were identified on how to 'fight' negative effects of the petrochemical sector: firewall, green trolling on social media, green lawsuits, and activism.

#### **Session 4: Global governance**

The session provided an overview of a fragmented global petrochemical governance architecture which cuts across: climate, chemical, trade, oil & gas, plastics and finance governance domains. It highlighted how petrochemical sector has deflected attention in several of these domains, but also how they can be used as potential governance hooks to govern a low-carbon transition of petrochemicals. The session highlighted that the global green new deal needs to move beyond mitigating risks to taking on a more holistic view on transition, and to learn from history, in particular how the 1930's new deal was developed and implemented. Public (central) banks have a pivotal role to play in facilitating transformation and should be given more room to invest in transformation rather than incremental change. Central banks in developing countries will play a crucial role in providing the necessary investments and support – developing countries already account for half of plastic consumption and a growing market share as well as over half of the production. The session also gave insights to a potential governance paradox, namely that while modern life is saturated with petrochemicals and therefore offer a multitude of potential intervention points, it is incredibly hard to grab it from any one angle as the sector can shift between a vast number of outputs as some become targeted for regulation. The geopolitics are shifting with production and markets from an EU-USA centric to Asian and Middle Eastern gravitational centre. Concerning transformation there is a need to move focus from 'plug and play' (ex. feedstock substitution) that benefit incumbent power structures to broader socio-cultural focus.

#### **Concluding discussions**

One should not forget that the petrochemical industry is made up of individuals many of which want to rectify the current trajectory and who push for change, while also maintaining that the industry simply cannot continue to expand fossil-base production and needs to change. Although the workshop highlights the diversity and complexity of petrochemical sector and thus how difficult it will be to change, one should remember that change can come fast – the steel industry has taken significant strides in recent years towards low-carbon production. The interconnected networks of the sector may give it resilience to external shocks but also enables change to be diffused fast if introduced at the right point of the network. Finance was highlighted as a central lever to promote change.