



WCO symposia Greening the Harmonized System

Session:

Chemicals - reflecting the good, the bad and the revolutionary

Toward a greener HS and a greener society, an EU perspective

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A more environmentally friendly HS

- Green Deal, Greening Customs, Greening the HS, everybody is going green
- Facts:
 - Increase of global population, consumption, pollution, temperature, with catastrophic consequences in environment, health, and life in general
 - Decrease/disappearance of natural resources
 - Increasing interest for nature and natural products
- Focus of this presentation obviously on a greener HS
 - Certainly on carbon consumption but also on some other important products and interest for nature
 - Largely on concerns from EU economic operators and activities of EU Customs Laboratories, but not exhaustive
 - Some words on chemicals of concern and customs control

Ethyl alcohol and ethers

- Ethyl alcohol: an important and versatile raw material
 - Agricultural and synthetic (from fossil source)
 - Main EU regulations request agricultural (fuels, beverages)
 - Agricultural and synthetic should be separated in the HS
 - Gasoline is mixed with dry alcohol, dry and wet should be separated
- Ethers
 - Various ethers used in gasoline: ETBE, MTBE, DME, THxEE...
 - They should be distinguished from “other”

Energetic gases and electricity

- Hydrogen
 - Big development of solar and wind energies
 - Intermittent electrical energies → must be stored
 - Hydrogen (water electrolysis) seen as the solution
 - Hydrogen should be divided in green and other
- Electrical energy
 - Increasing production and demand of green electricity
 - Should be also divided in green and other
- Natural gas
 - More and more produced from agriculture waste, manure, food waste...
 - Green and fossil gas should be distinguished

Mineral oils

- HVO, Bio-GTL...
 - Sales of new cars producing carbon emissions banned as of 2035 in EU
 - Hydrocarbons still necessary now and maybe in the future (e.g. airplanes) but as green as possible
 - Hydrotreated Vegetable Oil, Biological gas-to-liquids...: green hydrocarbons from agriculture, algae, or fermentation of waste
 - Biodiesel (FAME) and fuels containing biodiesel already well identified in the HS but not green hydrocarbons, lost in the fossil ones
 - Pure green hydrocarbons should have their own HS code
 - Fuels containing green hydrocarbons should be separated from fossil fuels or added to fuels containing biodiesel (revision of the definition of biodiesel, clarification of the rule of 70%?)

Mineral oils

- Sulphur content
 - Sulphur, an important pollutant when burnt (acid rain)
 - Industry, power plants and sea transport burn considerable quantities of coal and petroleum then generating sulphur dioxide and later sulphuric acid
 - In EU, sulphur content in mineral oils strictly controlled and gas oils and fuels oils then divided according their content (< 0,001% by weight ... > 0,1% ... > 0,5%)
 - Gas oils and fuels oils could be also categorized in the HS by their sulphur content

Chemicals and pharmaceuticals

- Helium
 - Helium widely used (cryogenic, balloon, welding) but becomes rare
 - It would deserve its own code
- Critical raw materials
 - Technological progress and quality of life relying on access to a growing number of raw materials, also and especially with green technologies (solar panels, wind turbines, electric vehicles, energy-efficient lighting)
 - Many of them are already identified in the HS but rare-earth metals, strontium, niobium, gallium, indium, germanium, vanadium, tellurium, lithium, iridium, ruthenium would deserve each a specific code

Chemicals and pharmaceuticals

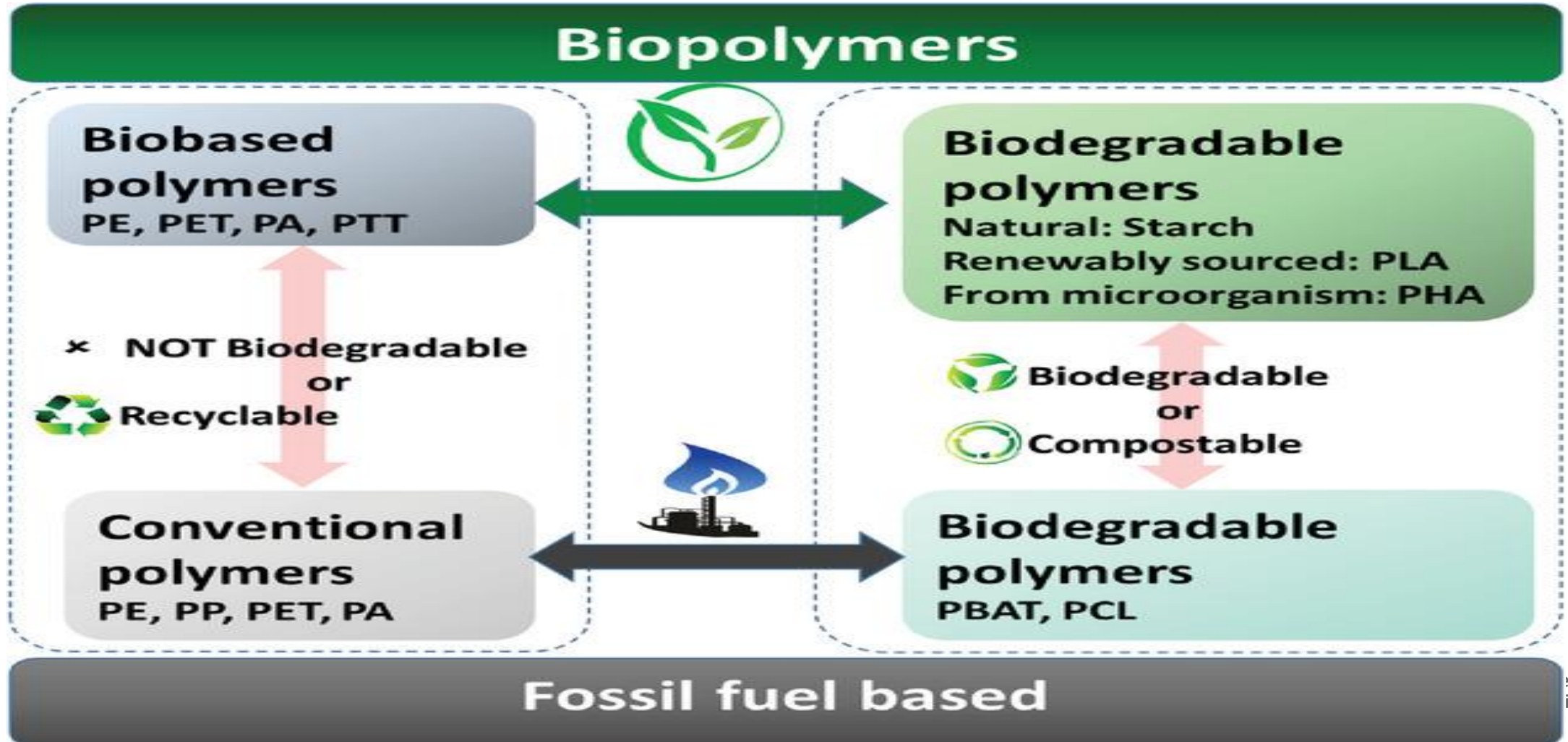
- Nucleic acids
 - Nucleic acids, DNA, RNA, nucleotides, became an important category of chemicals, in scientific research, manufacture of vaccines, control of food products or of products containing possibly protected species
 - Synthesis of nucleic acids became also very important, not only of some commercial DNA/RNA in big quantities but also of thousands of specific DNA/RNA in small quantities for scientific research
 - Currently all these substances are lost in “other” (while mentioned first in the HS code description)
 - All these substances deserve specific codes

Chemicals and pharmaceuticals

- CBD and cannabis
 - Cannabidiol now everywhere, in oil, gummies, cosmetics, sport cream, e-cigarettes... even for dogs
 - Currently pure CBD and CBD oil are lost in “other”, like all other products containing CBD
 - Fashion phenomenon or not, at least pure CBD and oil extract would deserve specific codes
 - Hemp seeds and flowers could also have their own code
 - THC as a medicament could also appear but then other groups could also appear (e.g. fentanyl)

Polymers and plastics

- Biopolymers: biobased/biosourced, biodegradable, compostable



Polymers and plastics

- So, what do we want, spare/abandon fossil carbon or plastics which disappear rapidly when in the nature... or both?
 - Note that plastics can break down in small particles but not disappear
- Biosourced polymers
 - Conventional polymers but from biosourced monomers
 - What if partially biosourced, when does it become “biosourced”?
 - Is it not possible to create all monomers “biosourced”? In which case, all codes of polymers should be duplicated
 - At least the most important ones (PE, PET, PA) should appear in the HS
 - It would be good also to group the biosourced polymers... but there is no free heading in the part I Primary forms

Polymers and plastics

- Biodegradable polymers (fossil fuel based)
 - Note, we consider that biodegradability is linked to the chemical structure
 - They should appear in the HS possibly together... but there is no free heading in the part I Primary forms
- Recycled polymers
 - Also an increasing interest from consumers and industry
 - But they are identical to primary ones, customs control is impossible
 - Nevertheless the most important ones should appear in the HS
- Monomers
 - Monomers of these polymers should appear in the HS
 - In EU: butane-1,4-diol and succinic acid having a bio-based carbon content of 100% by mass

Polymers and plastics

- Natural polymers and modified natural polymers
 - Produced by plants, algae, bacteria, animals: starch, cellulose, cotton, rubber, wool, silk, gelatine...
 - But in the polymer chapter, only cellulose and alginic acid identified
 - Again increasing interest for natural products, in food, cosmetics...
 - But also opportunity to valorise new waste: carapaces of shrimps with aquaculture, insects with developing insect feed and food industry
 - Chitin and chitosan are extracted from them; chitosan is used in biomedical field, pharmaceuticals, pesticides, packaging, food additives...
 - This heading covers also important polymers for medicine and cosmetics (e.g. hyaluronic acid, chondroitinsulphate)
 - Some of them would deserve a specific code

Chemicals of concern

- The HS identifies a lot of chemicals, among them a lot are dangerous for health and environment (PIC, ODS, narcotics...)
- EU implements all the international conventions, including even more substances:
 - Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals
 - Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer
 - Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases
 - Regulation (EU) 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants
 - Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- These regulations can be sources of inspiration for the HS

Chemicals of concern

- The big problem: 100s of substances or groups of substances (groups can be 100s, e.g. cadmium and its compounds, benzidine derivatives) + possibly finished preparations, articles
- REACH contains > 100.000 substances, of which some 3.000 really problematic and needing a real control (but the others will need a control of the registration soon or later)
- Greening customs and HS is absolutely necessary, dangerous substances and products must be banned or restricted, but it means the follow-up of 1.000s substances
- HS identifies well the most important, subheading notes 1-3 of Chapter 38 are a good progress, on the other hand annexes in HSEN or laboratory guide are not convenient (current work in the laboratory guide: in practice > 3.000 substances)

Chemicals of concern

- So, in practice:
 - 1.000s substances
 - mostly in HS codes “other” or of groups
 - declared name usually not the official name in the HS or the regulations (“acetic acid salt and sodium acetate”)
 - → efficient control impossible
- EU has decided to request in the customs declaration the CUS code, the univocal identifier of European Customs Inventory of Chemical Substances
https://ec.europa.eu/taxation_customs/dds2/ecics/chemicalsubstance_consultation.jsp?Lang=en
- It will facilitate the link with customs tools and other tools managing regulations and measures to be applied and therefore will make possible an automated customs control of all chemicals

Customs laboratories

- HS motto usually to be controllable (by laboratory)
- Means a lot of equipment, often sophisticated and expensive, qualified staff and good analytical methods
- Some controls could be impossible for an average laboratory (even for a developed one)
- But not a reason to refuse greening customs and HS, greening is now important
- WCO Regional Customs Laboratories are essential
- Another fact, customs laboratories will have clearly to be more involved in controls for environment and health

Conclusions

- Greening is necessary, rapidly (but is it always sustainable?)
- WCO and HS have an important role to play
- Interesting and feasible proposals, but not necessarily easy to implement... and certainly not exhaustive
- Could need to revise, clarify or simplify the HS, possibly also some Chapter notes and even complete Chapters... but it can be seen also as an opportunity
- HS motto to be controllable good but not always easy or possible, nevertheless greening HS needed → certification schemes
- In some cases, 5 years cycles should be reduced and/or decisions taken in one cycle (e.g. electronic waste)

Thank you for your attention