

Valorització i aprofitament de subproductes del sector agroalimentari CAP A L'ECONOMIA CIRCULAR EUROPEA

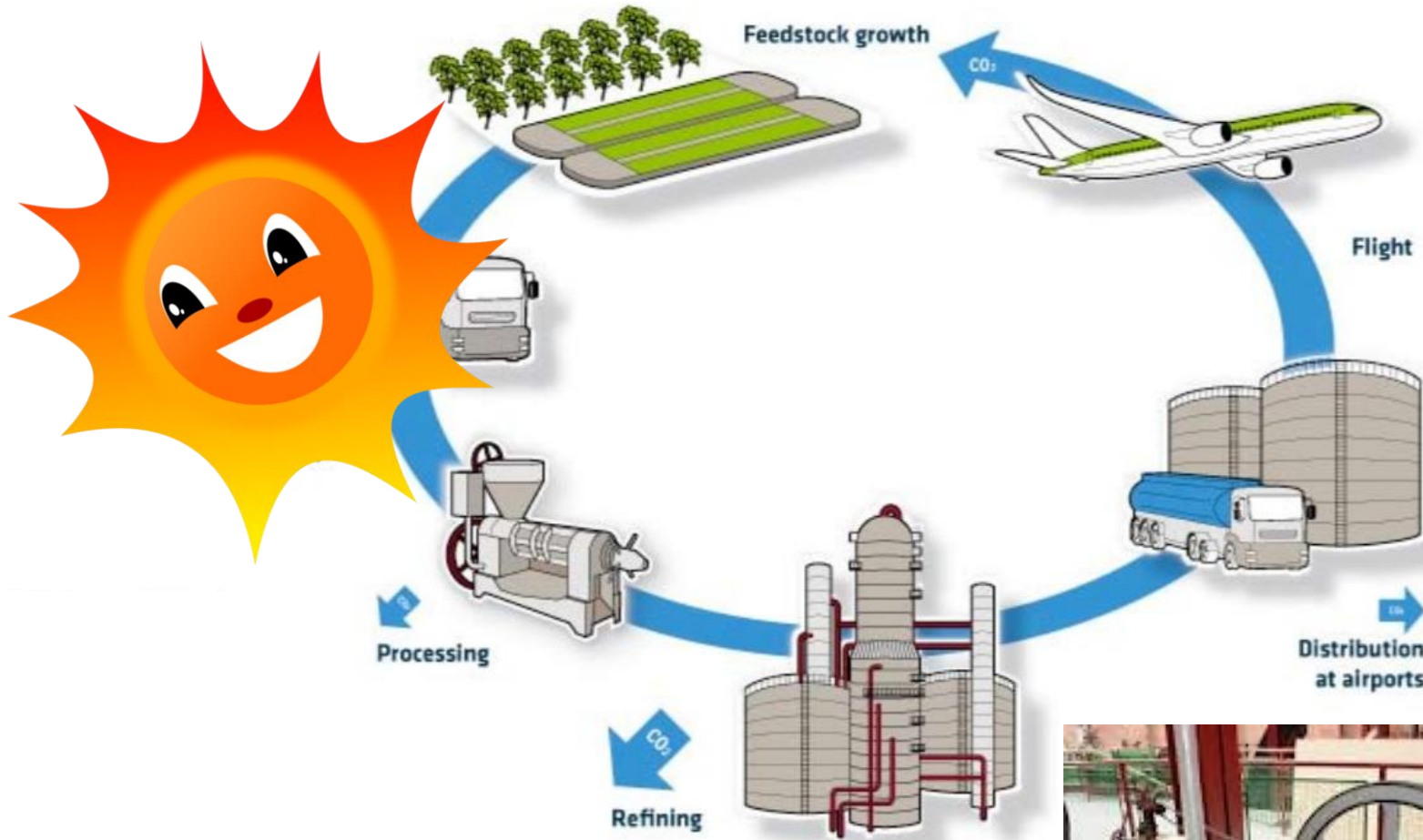
Lleida, 3 de març de 2017
Auditori Joan Oró, Parc Científic de Lleida
Ramon Canela i Garayoa



Índex

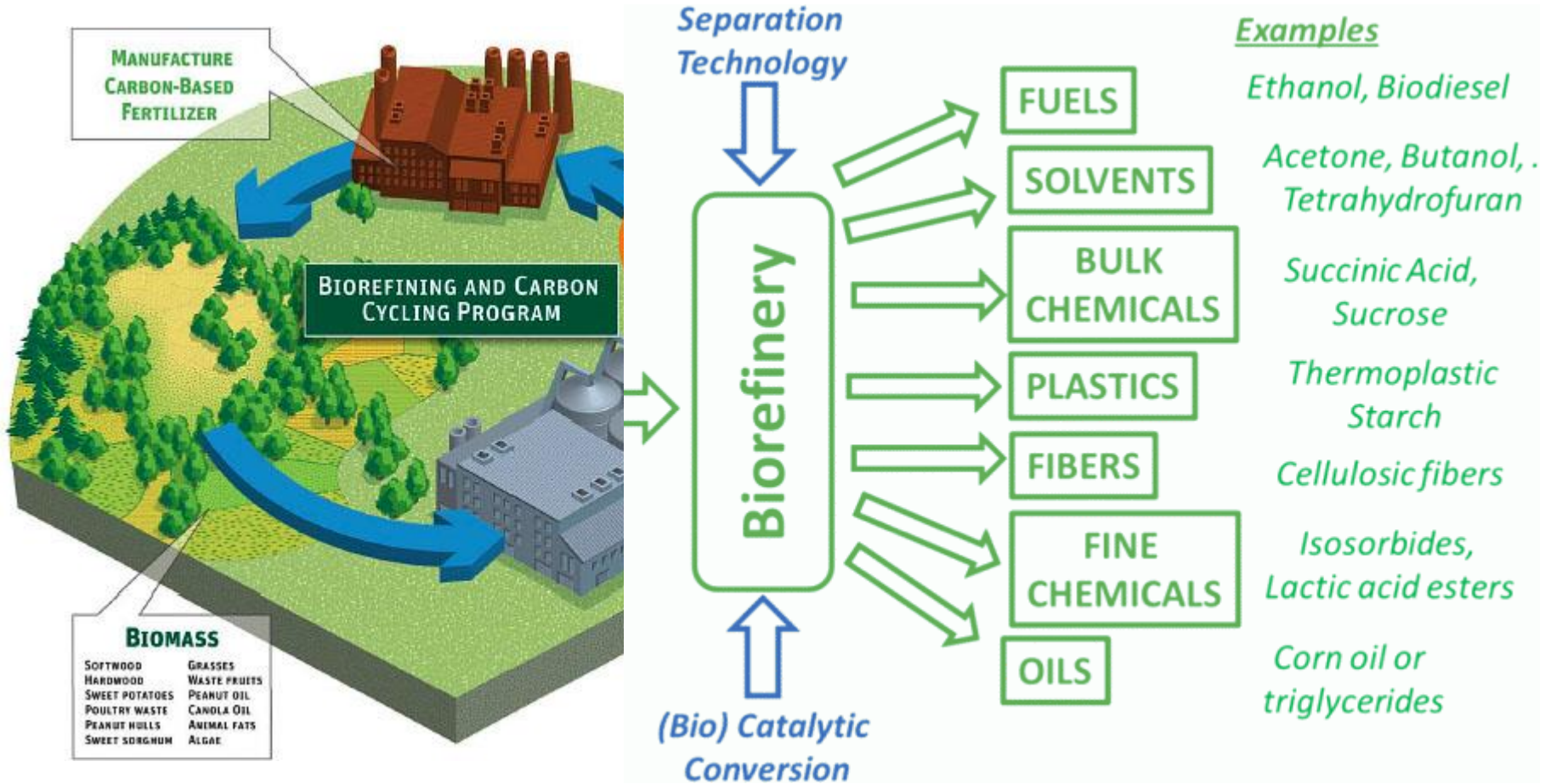
- a) La idea**
- b) La justificació**
- c) On som actualment?**
- d) Conclusió**





<https://rctom.hbs.org/wp-content/uploads/sites/4/2016/11/3.jpg>

<http://www.geograph.org.uk/photo/2836529>

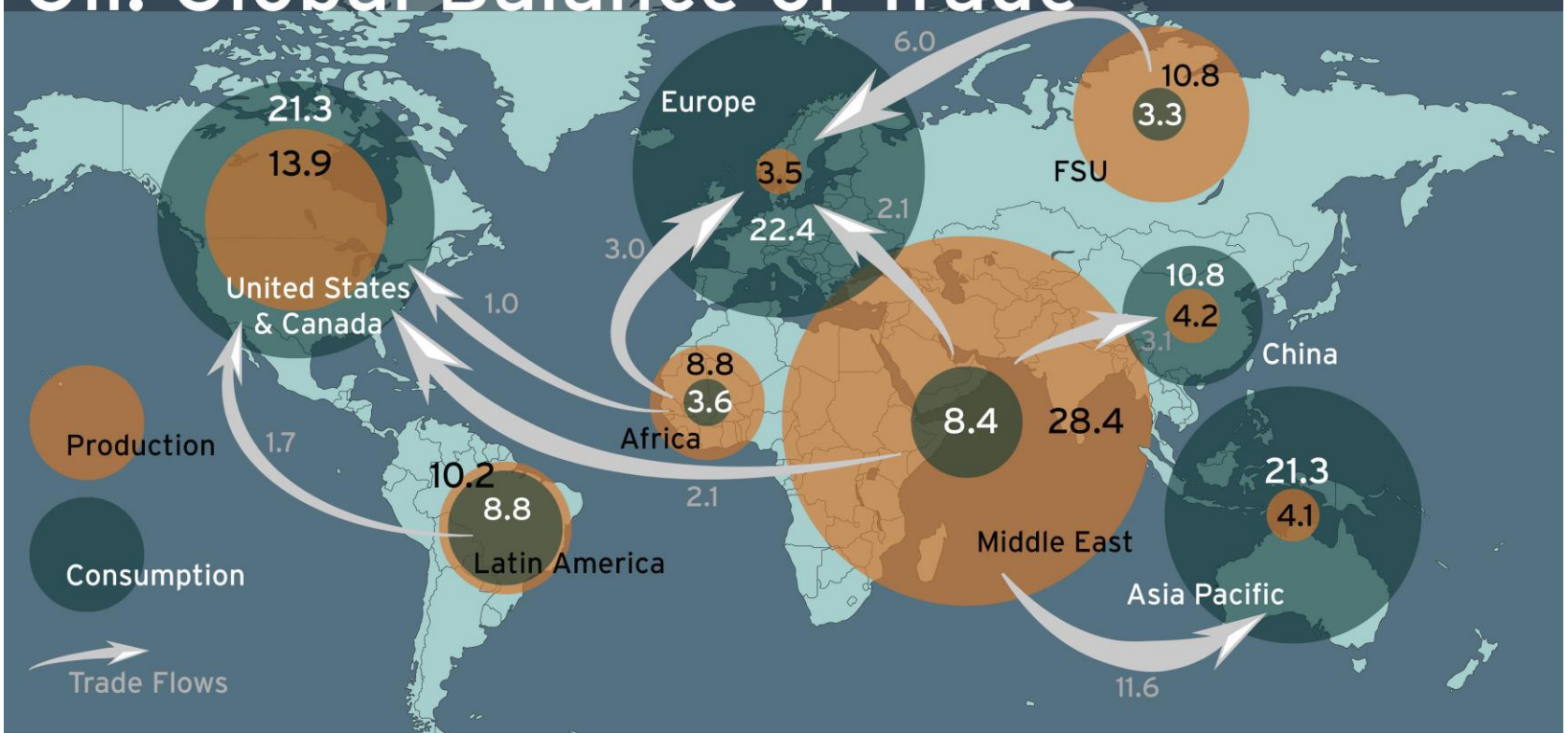


<http://www.biorefinery.uga.edu/images/illo1.jpg>

<http://labiotech.eu/wp-content/uploads/2016/11/biorefinery-diagram-concept-biomass-biobased-e1477984326367.gif>



Oil: Global Balance of Trade



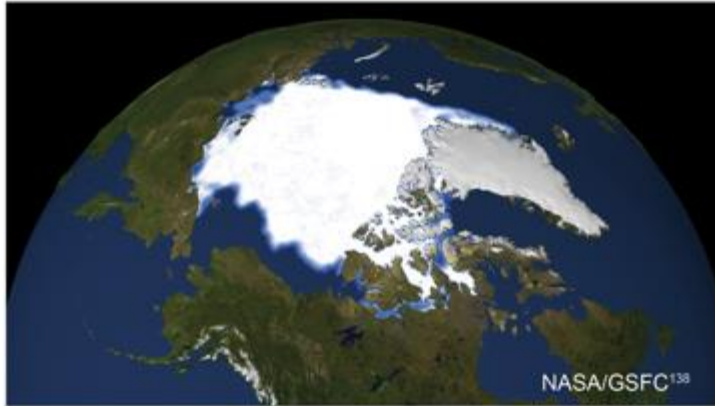
Source: SAFE analysis based on data from BP Statistical Review, all values in million barrels per day
Production and consumption values represented at scale. Only trade flows above 1 mbd represented



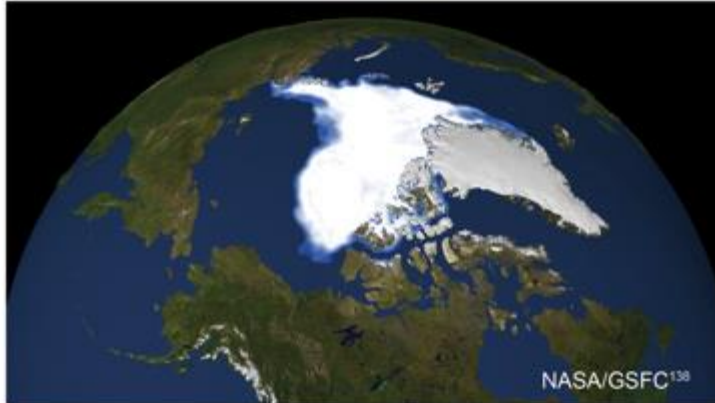
<http://energyfuse.org/wp-content/uploads/2015/04/crude-oil-balance-of-trade.jpg>



1979



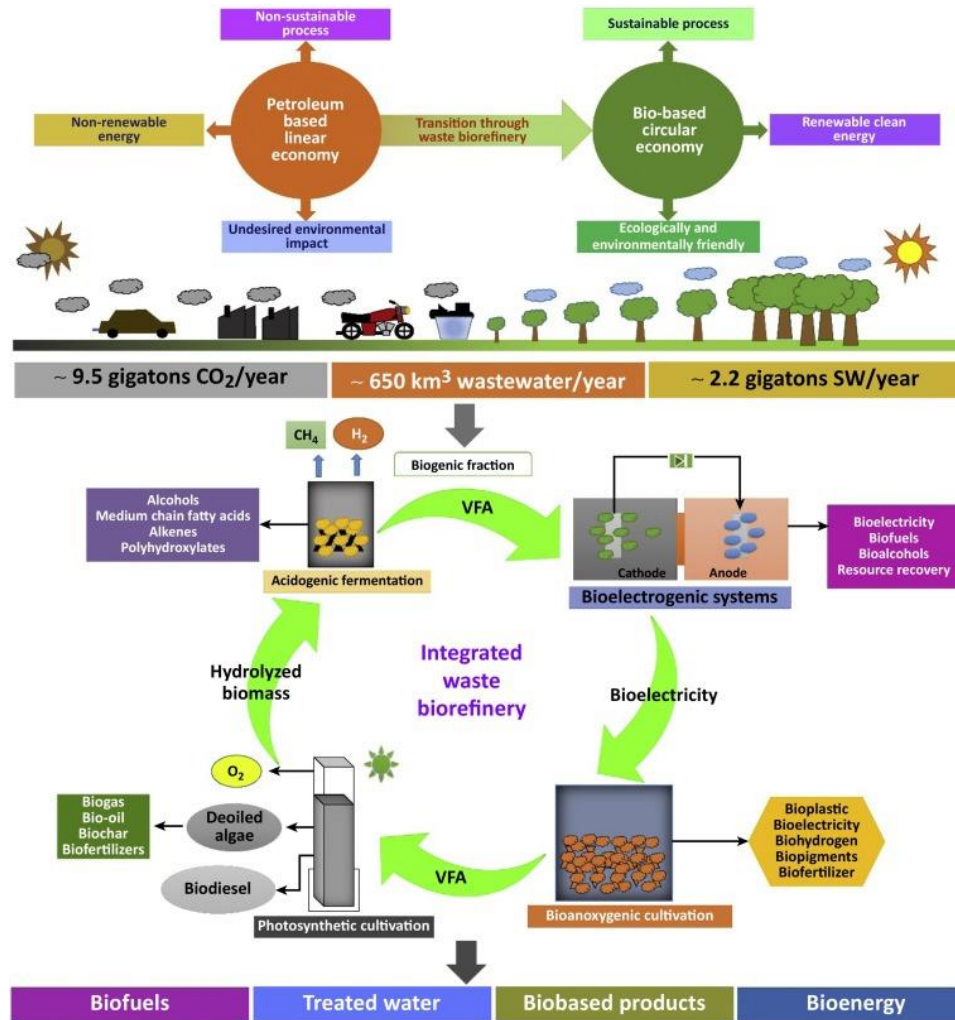
2007



<http://www.goworldclass.com/images/ccarcticseaice.jpg>

Arctic sea ice reaches its annual minimum in September. The satellite images above show September Arctic sea ice in 1979, the first year these data were available, and 2007.



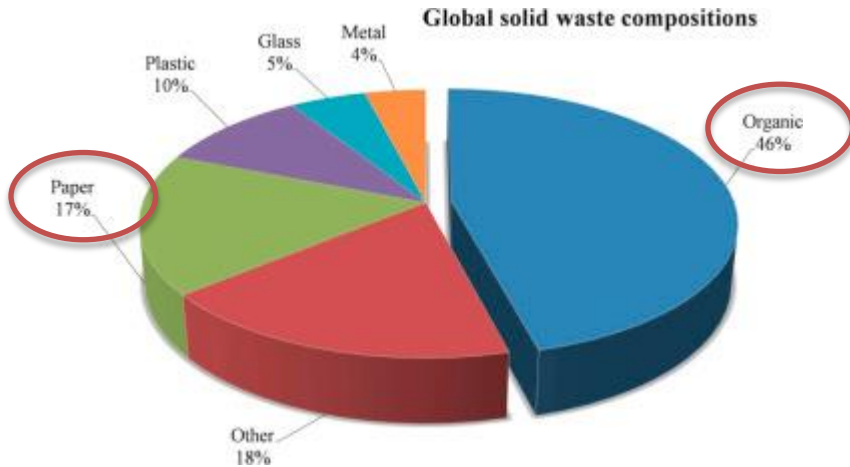


Trends in Biotechnology

Trends in Biotechnology 2016 34, 852-855DOI: (10.1016/j.tibtech.2016.06.006)

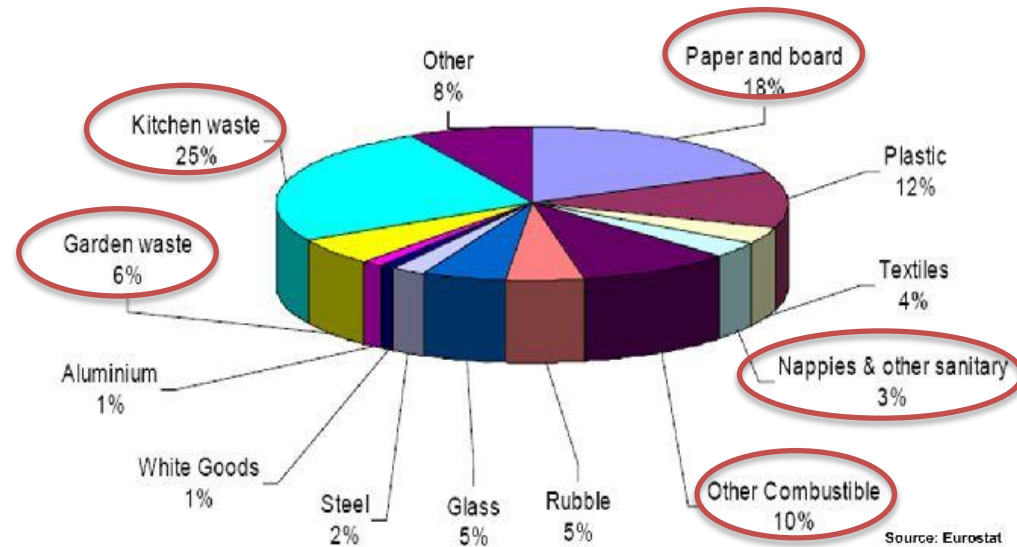
Copyright © 2016 Elsevier Ltd [Terms and Conditions](#)





<http://ars.els-cdn.com/content/image/1-s2.0-S1364032115003846-gr1.jpg>

Municipal Solid Waste composition EU 27



<http://www.zerowasteurope.eu/wp-content/uploads/2012/05/Waste-composition-EU-2007-eurostat.jpg>



	Municipal waste generated,	Total municipal waste treated,	Municipal waste treated, %			Residual waste per person
	kg per person	kg per person	Recycled & composted	Landfilled	Incinerated	kg per person
EU28	492	480	42	34	24	285,36
Belgium	456	458	57	1	42	196,08
Bulgaria	460	433	27	73	0	335,8
Czech Republic	308	308	24	57	20	234,08
Denmark	668	668	45	3	52	367,4
Germany	611	610	65	0	35	213,85
Estonia	279	220	40	44	16	167,4
Ireland	570	570	45	39	16	313,5
Greece	503	493	18	82	0	412,46
Spain	464	464	27	63	10	338,72
France	534	534	39	28	33	325,74
Croatia	391	381	16	85	0	328,44
Italy	529	523	38	41	20	327,98
Cyprus	663	663	21	79	0	523,77
Latvia	301	301	16	84	0	252,84
Lithuania	469	458	21	79	1	370,51
Luxembourg	662	662	47	18	36	350,86
Hungary	402	402	26	65	9	297,48
Malta	589	559	13	87	0	512,43
Netherlands	551	551	50	2	49	275,5
Austria	552	528	62	3	35	209,76
Poland	314	249	25	75	1	235,5
Portugal	453	453	27	54	20	330,69
Romania	389	313	1	99	0	385,11
Slovenia	362	301	47	51	2	191,86
Slovakia	324	313	13	77	10	281,88
Finland	506	506	34	33	34	333,96
Sweden	462	462	47	1	52	244,86
United Kingdom	472	465	46	37	17	254,88

Source: Eurostat 2012

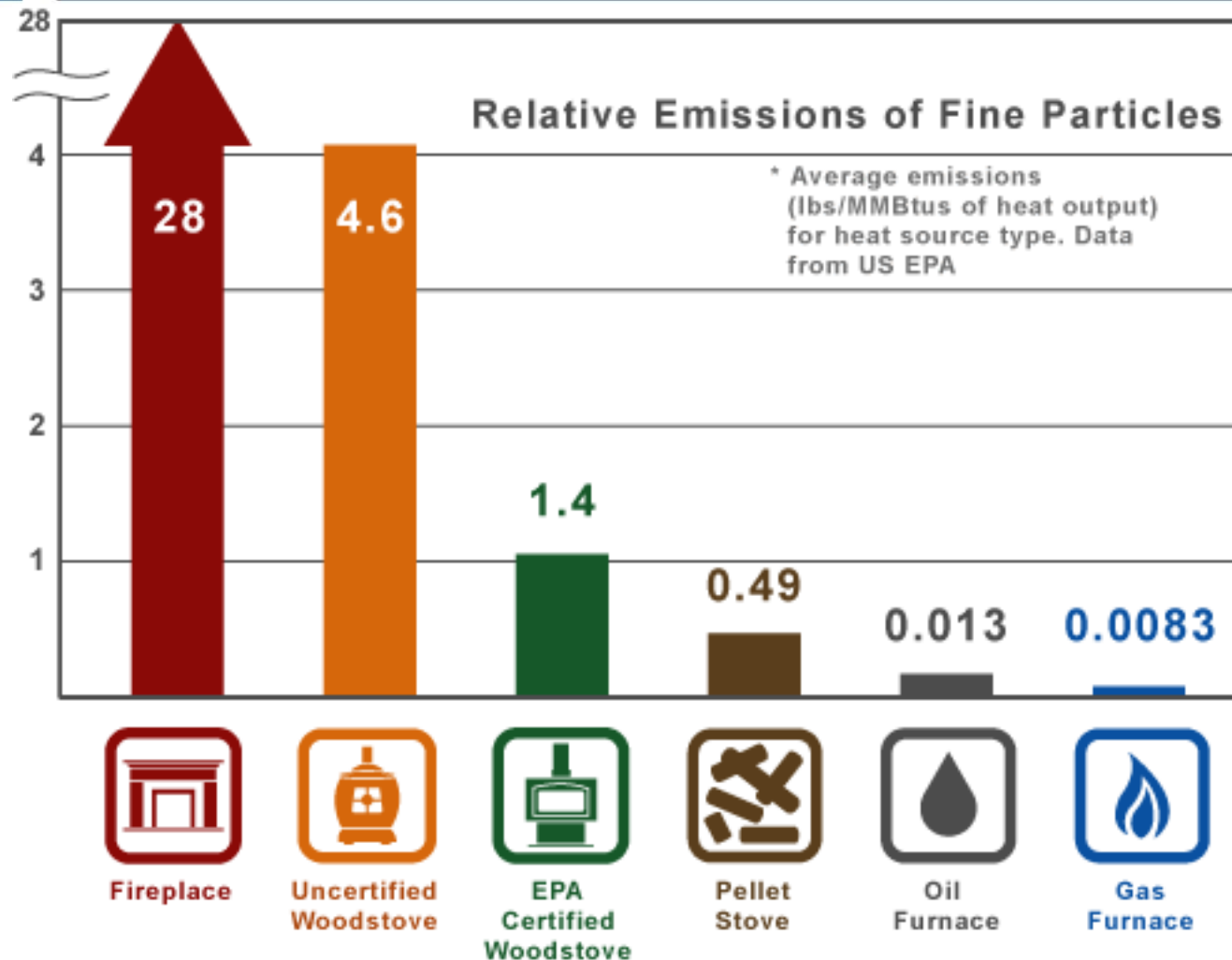
<http://www.zerowasteurope.eu/wp-content/uploads/2014/04/Eurostat-2012--residual-waste.jpg>



- Energia
- Fibres i plàstics
- Productes químics “base”
- Activitat econòmica a Europa

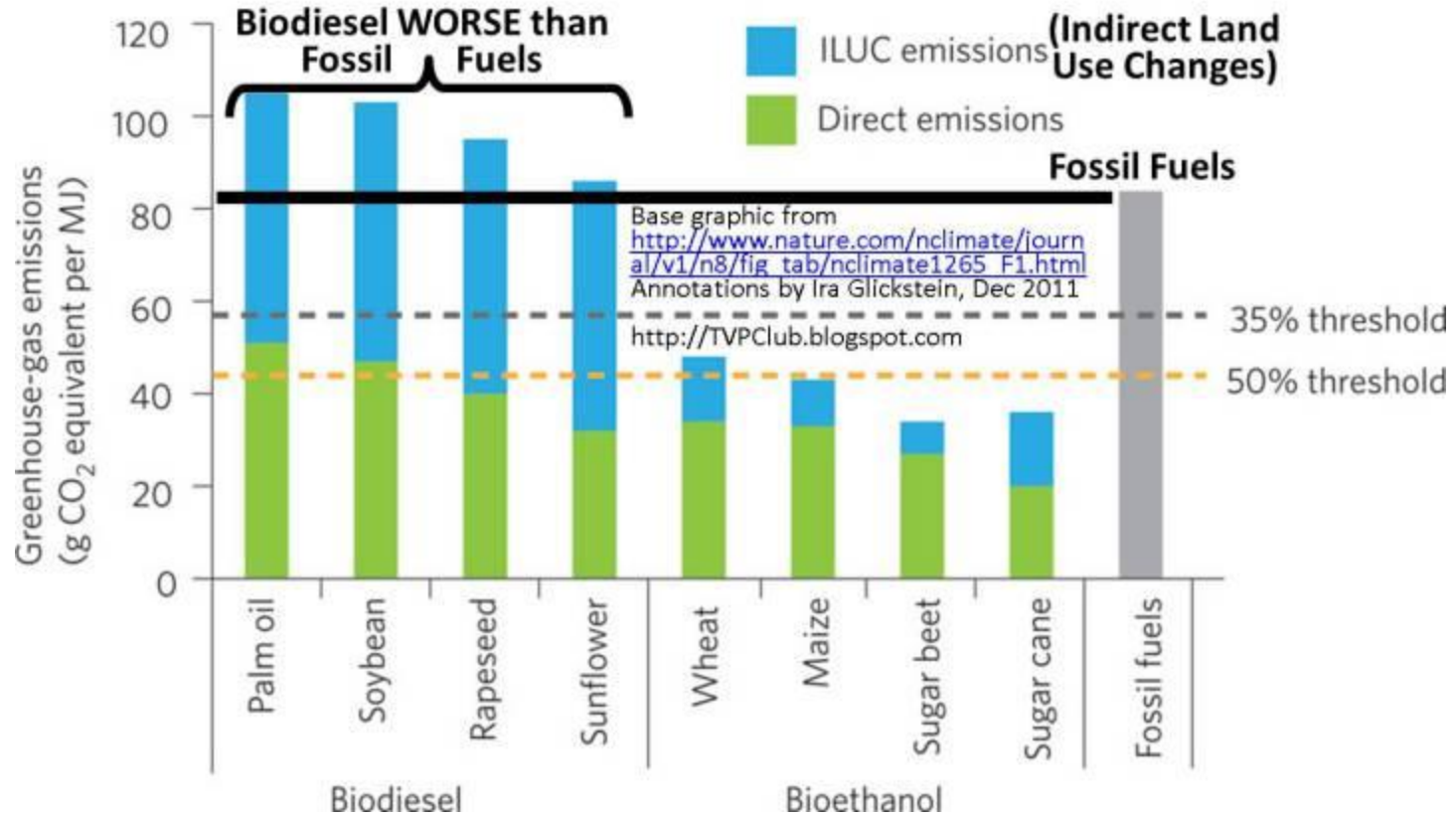




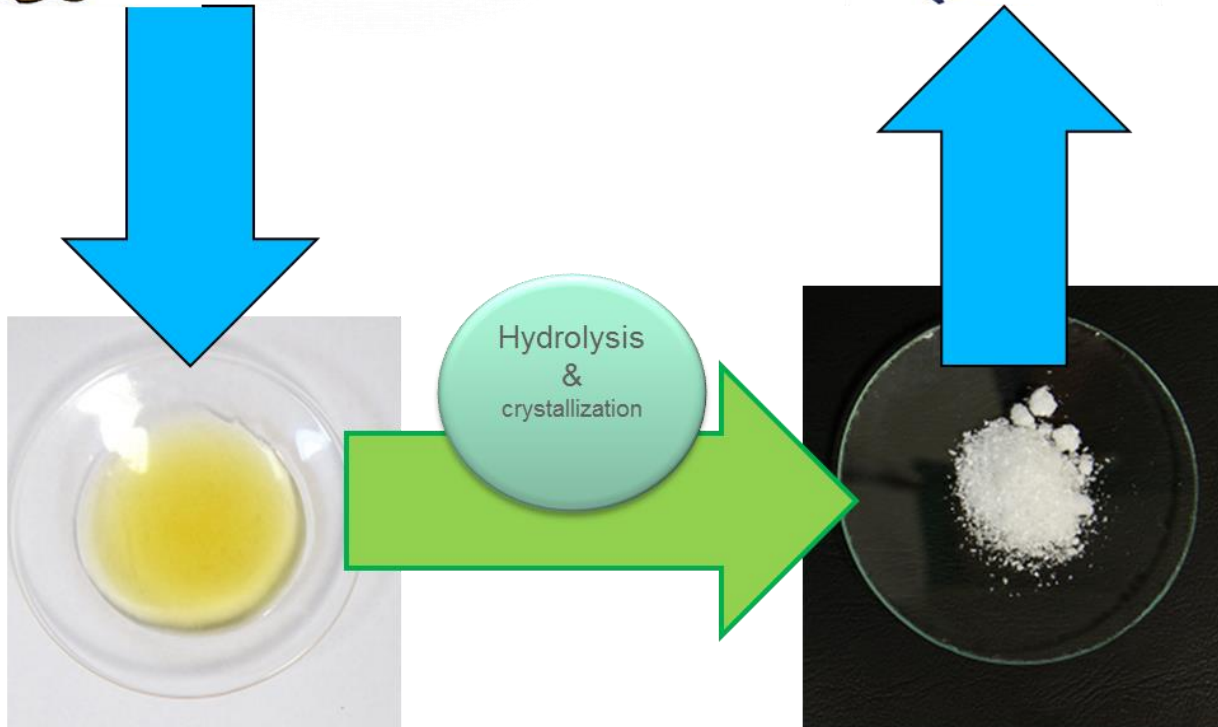
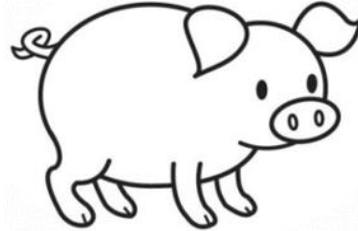


https://www.google.es/imgres?imgurl=http://www.epa.gov/burnwise/images/regraph.gif&imgrefurl=http://www.epa.gov/burnwise/energyefficiency.html&h=387&w=497&tbnid=m_2m2EShzXS18M:&docid=4FRq4c-oR3YDaM&ei=nV34VfK7EsO8aai4p-gl&tbn=isch&ved=0CEoQMyhHMEc4yAFqFQoTCLL-xZPQ-ccCFUNeGgodKNwJjQ





<https://wattsupwiththat.files.wordpress.com/2011/12/wuwt-topsy-turvey.jpg>



<http://www.dba.udl.cat/>



Acetat de cel·lulosa



<http://www.solvay.com/en/markets-and-products/featured-products/cellulose-acetate.html>





Adidas's spider silk running shoes will be AMSilk's largest application when they launch later this year.

18 C&EN | CEN.ACS.ORG | FEBRUARY 20, 2017



<http://www.tribuneindia.com/2005/200:0204/bz2.jpg>



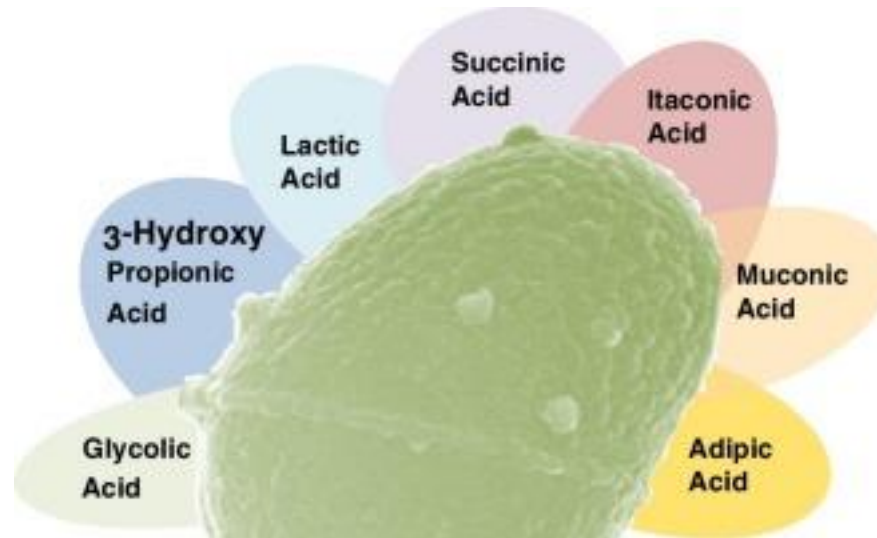
<http://media.treehugger.com/assets/images/2011/10/prima-bottle-pla.jpeg>



The North Face's Moon Parka, made with Spiber's synthetic spider thread, has experienced product launch delays.

FEBRUARY 20, 2017 | CEN.ACS.ORG | C&EN 19





Judith Becker, Anna Lange, Jonathan Fabarius, Christoph Wittmann

Top value platform chemicals: bio-based production of organic acids

Current Opinion in Biotechnology, Volume 36, 2015, 168–175

<http://dx.doi.org/10.1016/j.copbio.2015.08.022>



BIOBASED CHEMICALS

Avantium eyes \$100 million IPO

Avantium, a 2000 spin-off from Shell with technologies for converting plant sugars into biochemicals and polymers, says it will make an initial public offering of shares on two European stock exchanges by the end of March. The firm hopes to raise a little more than \$100 million.

It is an unusual move. Biobased chemical companies have shied away from stock offerings in recent years because biomaterial prices have been suppressed by the low price of crude oil.

Avantium says it will invest up to \$80 million of the money it raises in its Symvina joint venture with BASF. The venture plans a 50,000-metric-ton-per-year plant for 2,5-furandicarboxylic acid, a sugar-derived intermediate for recyclable polyesters such as polyethylene furanate (PEF).

The facility will be located at BASF's site in Antwerp, Belgium. BASF will put up the rest of the money for the plant, which is expected to cost up to about \$300 million.

Construction of the plant will create global interest from big companies that are seeking biobased materials, Avantium says. The firm already has collaborations with Coca-Cola and Danone to develop PEF as a biobased alternative to polyethylene terephthalate in beverage bottles.

Most of the rest of the IPO proceeds will be used to build pilot plants for making ethylene glycol from glucose and generating high-purity glucose from nonfood biomass.

Separately, Avantium has teamed up with AkzoNobel and other partners to develop a wood-to-chemicals biorefinery in the Netherlands.—ALEX SCOTT



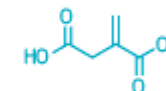
2,5-Furandicarboxylic acid



BIOBASED MATERIALS

► Partners to develop itaconic polymers

Itaconix, a U.S. subsidiary of the U.K.-based polymer developer Revolymer, is working with two specialty chemical companies to develop polymers based on fermentation-derived itaconic acid. With Croda, Itaconix will advance the polymer Zinador 22L as an odor-removing additive for household, municipal, animal, and industrial applications. With AkzoNobel, Itaconix will work on biobased polymers for water quality, cleaning, and hygiene uses. Akzo-



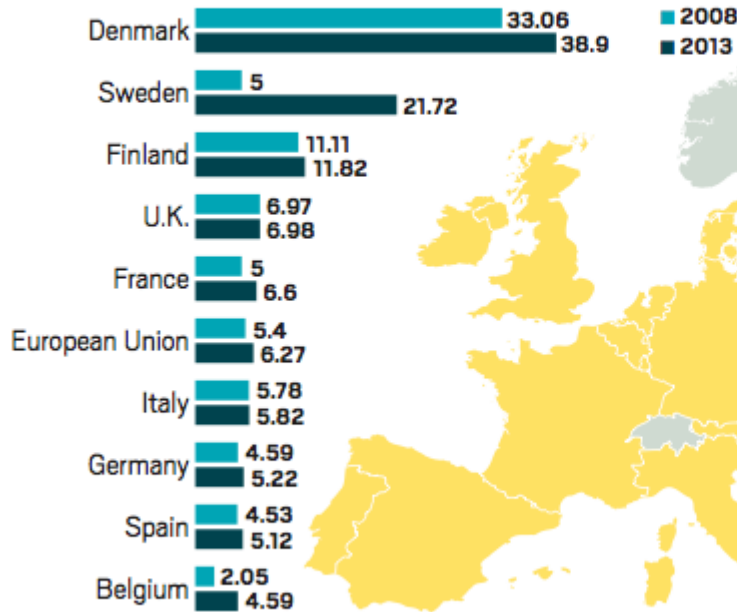
Itaconic acid



More bio

Biobased share of European chemicals market has grown.

Biobased chemical production as % of total chemical production



Note: Total sales of biobased chemicals for the 28-member EU were approximately \$35.8 billion in 2013.

Sources: Biobased Industries Consortium, Nova Institute

CHEMICAL & ENGINEERING NEWS

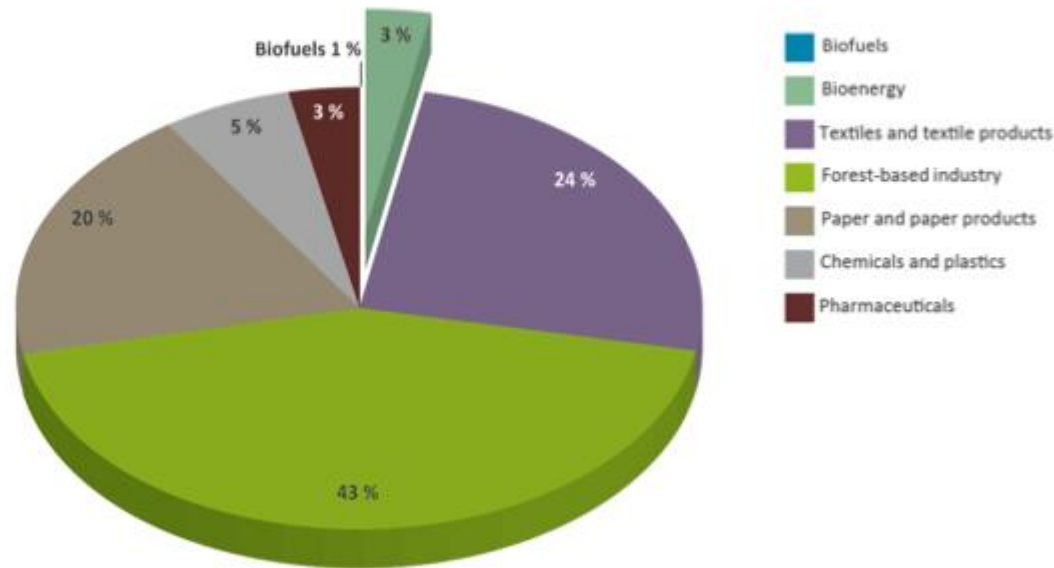
MAY 9, 2016



Employment in the EU “biobased industries”



Total: 3.2 million



*excluding Agriculture, Forestry, Fishery, Food, Beverages and Tobacco Products

Prepared by -institute.eu | 2015

Dirk Carrez
Executive Director



Info Day 2016



Montmeló Succinic Acid Pl...

nombre

Montmeló Succinic Acid Plant

descripció

<http://biorrefineria.blogspot.com/2015/10/montmelo-succinic-acid-plant-biorrefineria.html>

Detalles de Google Maps

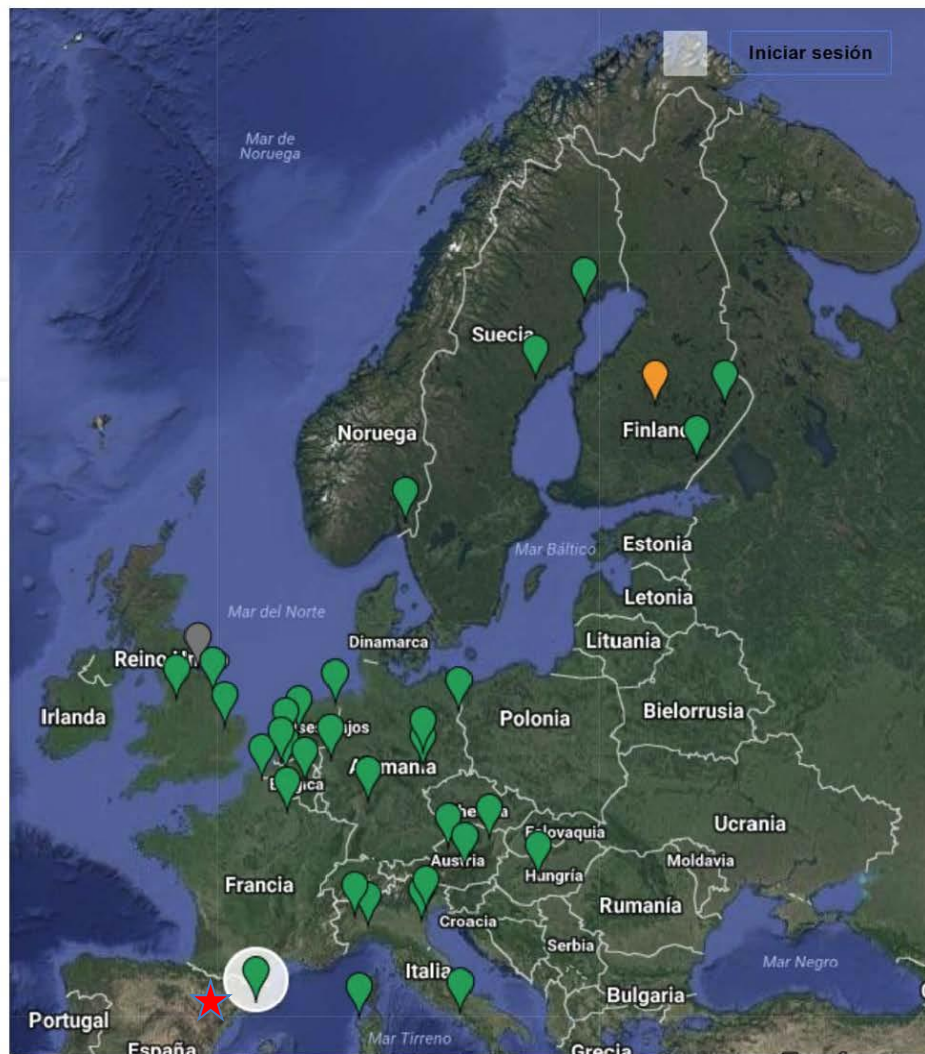
Carrer del Gran Vial, 19, 08160 Montmeló, Barcelona, España

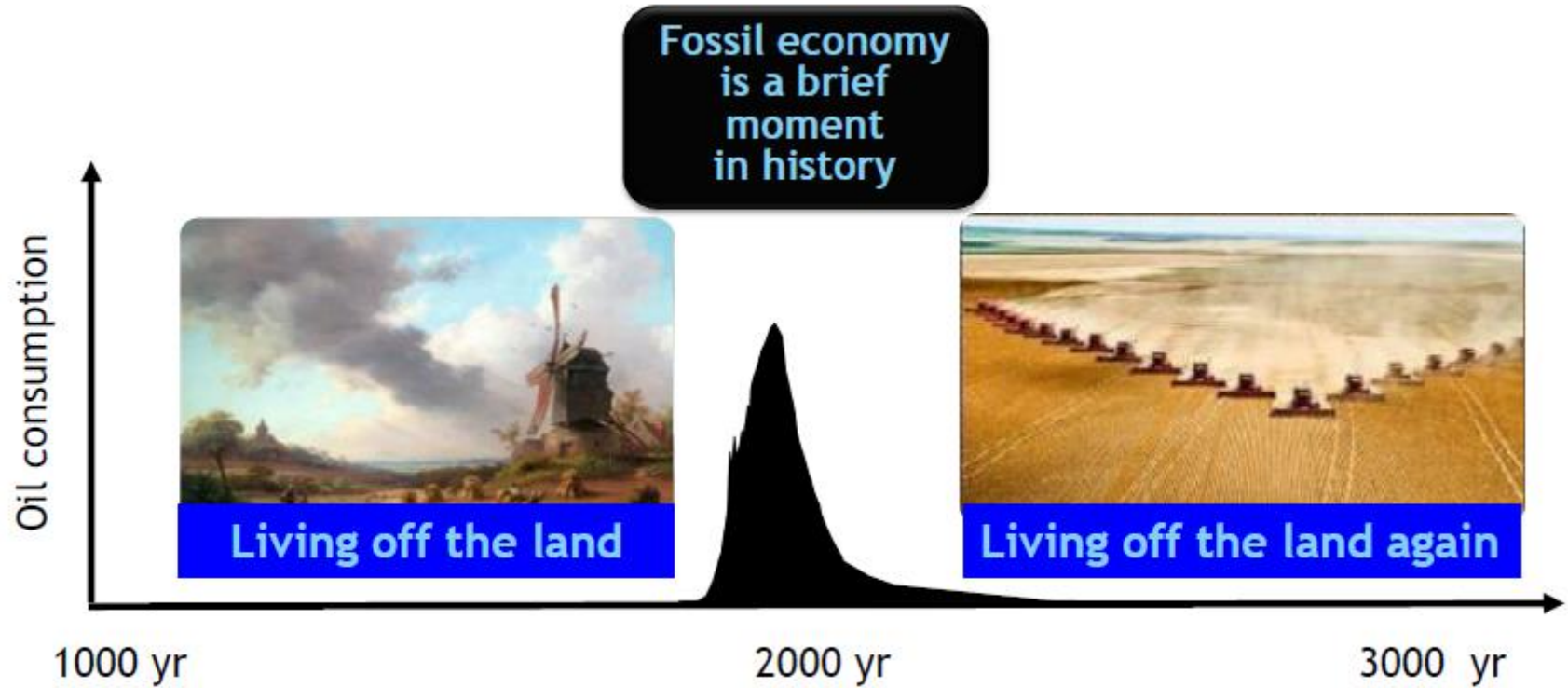
+34 935 68 63 00

www.corbion.com

1.0

[Ver en Google Maps](#)





Philippe MENGAL Info Day 21 April 2016

http://t1.gstatic.com/images?q=tbn:miuBrZ-e7RhoAM:http://www.juntadeandalucia.es/medioambiente/clima_atmosfera/ozono/image001.png



GRÀCIES

<http://www.dba.udl.cat/>

