

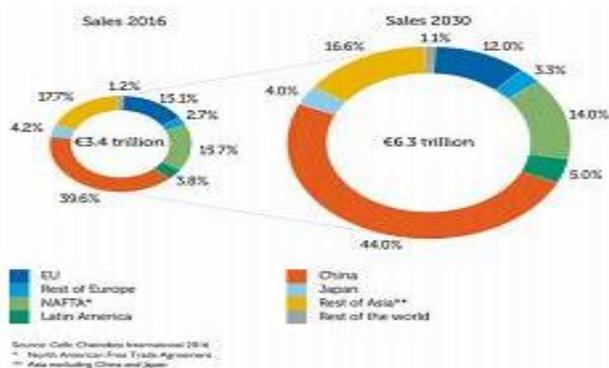
## 2020 Market Analysis of Environmental Chemistry and Engineering Conference August 19-20, 2020 | Paris, France

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The global chemical industry has grown by 7 percent annually, reaching €2.4 trillion in 2010. Most of the growth in the past 25 years has been driven by Asia, which now owns almost half of global chemical sales. The global chemical markets are expected to grow an average 3 percent in the next 20 years. Asian players are positioned to own two-thirds of the market by 2030.

The global market for renewable chemicals is expected to grow from \$51.7 billion in 2015 to \$85.6 billion by 2020, with a compound annual growth rate (CAGR) of 10.6% for the period of 2015-2020. Renewable alcohols dominated the market with about 40.7% of total sales in 2014 but will likely decrease to 39.1% market share by 2020. Raw materials for renewable chemicals production, which ranked second at a 40.6% market share in 2014, is expected to fall to 35.5% during the forecast period (2015-2020) due to the uptake of alternative feedstock used in the production process. Bio-based organic acids, ketones and aldehydes accounted for the third-biggest market share in 2014, at 8.1%, including some well-known and used chemicals. Market share for this segment should increase to 13.9% by the end year.



Key players such as BASF SE, Cargill, Inc., The Dow Chemical Company, Eastman Chemical Company, Myriant Corporation, Celanese Corporation, Archer Daniels Midland Company, Henan Jindan Lactic Acid Technology Co. Ltd., Tate & Lyle Plc., and E. I. Du Pont De Nemours

and Company have largely invested in R&D activities to develop advanced products to cater to the requirements of the consumers.

United States Chemical industry:

The chemical industry is one of the largest and most important industries worldwide. The United States is the largest national producer of chemical products globally. Including the pharmaceutical sector, its chemical output value was more than 767 billion U.S. dollars in 2016.

2018 ranking of leading United States chemical companies based on revenue (in billion U.S. dollars)

Scope and Importance

The environment consists of four segments of the earth namely atmosphere, hydrosphere, lithosphere and biosphere:

1. Atmosphere: The Atmosphere forms a distinctive protective layer about 100 km thick around the earth. A blanket of gases called the atmosphere surrounds the earth and protects the surface of earth from the Sun's harmful, ultraviolet rays. It sustains life on the earth. It also regulates temperature, preventing the earth from becoming too hot or too cold. It saves it from the hostile environment of outer space. The atmosphere is composed of nitrogen and oxygen besides, argon, carbon dioxide and trace gases.

The atmosphere has a marked effect on the energy balance at the surface of the Earth. It absorbs most of the cosmic rays from outer space and a major portion of the electromagnetic radiation from the sun. It transmits only ultraviolet, visible, near infrared radiation (300 to 2500 nm) and radio waves. (0.14 to 40 m) while filtering out tissue-damaging ultra-violet waves below about 300 nm.

2. Hydrosphere: The Hydrosphere comprises all types of water resources oceans, seas, lakes, rivers, streams, reservoirs, polar icecaps, glaciers, and ground water.

Oceans represent 97% of the earth's water and about 2% of the water resources are locked in the polar icecaps and glaciers. Only about 1% is available as fresh water as surface water in rivers, lakes, streams, and as ground water for human use.

3. Lithosphere: Lithosphere is the outer mantle of the solid earth. It consists of minerals occurring in the earth's crusts and the soil e.g. minerals, organic matter, air and water.

4. Biosphere: Biosphere indicates the realm of living organisms and their interactions with environment, viz atmosphere, hydrosphere and lithosphere.

The environment studies make us aware about the importance of protection and conservation of our mother earth and about the destruction due to the release of pollution into the environment. The increase in human and animal population, industries and other issues make the survival cumbersome. A great number of environment issues have grown in size and make the system more complex day by day, threatening the survival of mankind on earth. Environment studies have become significant for the following reasons:

#### 1. Environment Issues are being of Global:

It has been well recognized that environment issues like global warming and ozone depletion, acid rain, marine pollution and biodiversity are not merely national issues but are global issues and hence require international efforts and cooperation to solve them.

#### 2. Development and Environment:

Development leads to Urbanization, Industrial Growth, Telecommunication and Transportation Systems, Hi-tech Agriculture and Housing etc. However, it has become phased out in the developed world. The North intentionally moves their dirty factories to South to cleanse their own environment. When the West developed, it did so perhaps in ignorance of the environmental impact of its activities. Development of the rich countries of the world has undesirable effects on the environment of the entire world.

#### 3. Explosive Increase in Pollution

World census reflects that one in every seven persons in this planet lives in India. Evidently with 16 per cent of the world's population and only 2.4 per cent of its land area, there is a heavy pressure on the natural resources

including land. Agricultural experts have recognized soil health problems like deficiency of micronutrients and organic matter, soil salinity and damage of soil structure.

#### 4. Need for an Alternative Solution

It is essential, especially for developing countries to find alternative paths to an alternative goal. We need a goal as under: A true goal of development with an environmentally sound and sustainable development. A common goal for all citizens of our planet earth. A goal distant from the developing world in the manner it is from the over-consuming wasteful societies of the "developed" world. It is utmost important for us to save the humanity from extinction because of our activities constricting the environment and depleting the biosphere, in the name of development.

#### 5. Need for Wise Planning of Development

Our survival and sustenance depend on resources availability. Hence Resources withdraw; processing and use of the products have all to be synchronized with the ecological cycle. In any plan of development our actions should be planned ecologically for the sustenance of the environment and development.

#### Related Companies/Industries:

BASF  
 Bayer  
 Braskem  
 Celanese  
 Dow  
 DuPont  
 Eastman  
 Dow Chemical  
 Sinopec  
 Ineos  
 Formosa Plastics  
 ExxonMobil  
 LyonnellBasell



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Mitsubishi Chemical

DuPont

LG Chem

Air Liquide

Linde

AkzoNobel

Toray Industries

Evonik

PPG Industries

Braksem

Yara

Covestro

Related Associations and Societies:

Society of Environmental Toxicology and Chemistry  
(SETAC)

TCNJ's Student Chemists Association

Lombardy Green Chemistry Association

A Sustainable Global Society

Chemistry Society of Peru