

NEW

Forecasts (2013 &amp; 2018) for 19 countries

# World Geosynthetics

Study # 2512

July 2009

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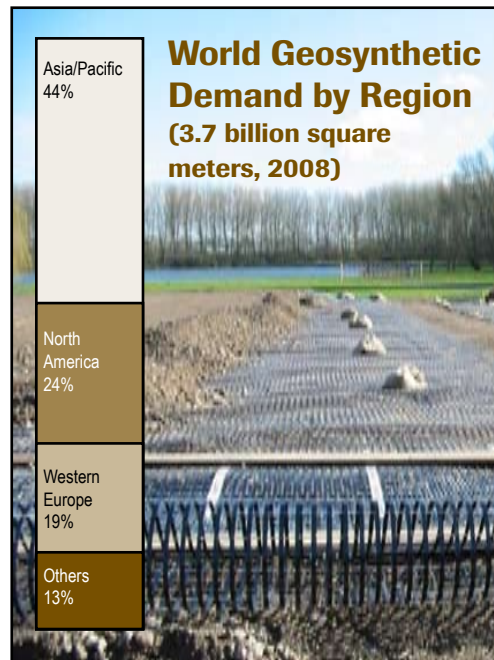
## Global demand to rise 5.3% per annum through 2013

Worldwide demand for geosynthetics is projected to rise 5.3 percent annually to 4.7 billion square meters in 2013. China, India, Russia and other countries with large-scale infrastructure developments planned, and evolving environmental protection regulations and building construction codes are expected to register the strongest advances. While growth in geosynthetic sales is expected to be substantial in nearly every region, the underlying reasons for that growth will vary widely.

## Strong growth in China will benefit Asia/Pacific region

The Asia/Pacific region, the largest market, accounted for 44 percent of global geosynthetic sales in 2008. Advances in this region are primarily driven by China, which itself accounted for three-quarters of the region's geosynthetic sales in 2008. Gains stem from the country's ongoing development of large-scale hydrological and transportation infrastructure projects, as well as its need to protect against erosion and soil loss. Similarly, India is expected to exhibit double-digit annual growth through the forecast period as it also develops its transportation infrastructure and landfills, as well as greater erosion protection. However, in many of the least developed countries of the world, growth will be more limited due to lack of adequate funding, a lack of regulations that require geosynthetic use and the presence of lower-cost alternatives.

The North American region was the second largest market in 2008, accounting for nearly a quarter of global sales.



Advances in the US market are expected to be aided in the near term by government spending initiatives on roads, bridges and other public works projects that have been included as part of an economic stimulus package. Canada's geosynthetics market is much smaller than that of the US, but benefits from a comparable level of development, regulation and ability to fund the upfront costs of geosynthetics. The Mexican market is smaller still and much less mature than its US and Canadian counterparts, largely because of competition from lower-cost alternatives such as rock aggregate and natural fiber geotextiles, as well as a less stringent environmental and construction regulatory environment.

Western Europe and Japan are fairly comparable to the US in terms of the level of maturity of their respective geosynthetic markets, as well as the type of regulatory

environment. These countries are constructing large-scale infrastructures and landfills at a much slower pace than in less mature markets. However, the relative affluence of these countries allows them to use advanced geosynthetic technologies to improve construction and environmental protection practices despite their larger upfront costs.

## Major markets to exhibit healthy advances

In 2008, the construction market accounted for the largest share of geosynthetic sales, benefitting from factors such as the passage of environmental regulations and building codes, as well as the rising need for erosion control and other practices to provide reinforcement and drainage and to protect against soil loss in a growing number of countries. The transportation infrastructure market was the second largest market in 2008, and both it and construction are expected to post strong growth through 2013. Gains will be aided by the increasing use of geosynthetics in transportation infrastructure to extend the useful life of these projects and reduce the maintenance requirements.

## Study coverage

These and other findings are contained in *World Geosynthetics*, a new Freedonia industry study available for \$5600. It presents historical demand data (1998, 2003 and 2008) plus forecasts for 2013 and 2018 by product and market in six regions and 19 countries. The study also considers market environment factors, evaluates company market share and profiles 38 players in the global industry.

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# World Geosynthetics

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**ASIA/PACIFIC**

**India: Geosynthetics Markets**

In 2008, transportation was the largest market for geosynthetics in India accounting for 36 percent of demand. India is in the process of rapidly increasing the amount of paved roads throughout the country as a way of better connecting rural areas and to enable a more efficient transport of goods to market. As kilometers of new paved roads by expected to include geosynthetics as life of these roads, even through is progressing with other transporting extending its railways, improving and runways.

second largest for geosynthetics in 2008, with 23 percent of demand. Additionally, this market is expected to post above average gains through 2013. Much of the use of geosynthetics in the construction market is to control erosion. The country faces a high level of soil loss because of its monsoon seasons. Therefore, geosynthetics are increasingly being used to control erosion along hillsides, embankments, riversides and coastal areas, as well as building foundations.

**SAMPLE PAGE**  
 Explanations that support each table's data and forecasts

The landfill market is also expected to achieve the strongest gains through 2013. Advances will be driven by the rising implementation of municipal-level regulations regarding the development and use of controlled landfills. Still, in much of the country, formal waste collection is not available and waste is simply stockpiled in an uncontrolled space, or allowed to flow into the waterways. Additionally, among the waste that is formally collected, almost all of it goes into landfills, with minimal incineration and composting activity and a largely informal recycling industry. Greater awareness and care in handling hazardous waste -- industrial and otherwise -- will also boost demand for geosynthetics in the landfill market since they provide greater protection from leachate. However, the adoption rate of these products is still relatively low since upfront costs are high and regulation monitoring is not yet mature.

**NORTH AMERICA**

as adequate lining of landfills and waste reservoirs. Although their use generally extends the useful life of construction projects, further gains will be restrained by the high up-front cost of including geosynthetics in construction plans.

In 2008, geotextiles accounted for the largest share of geosynthetic demand with 69 percent. This strength is attributable to their low cost and good performance across the range of applications for geosynthetics, particularly erosion control, soil stabilization, drainage and filtration. Growth will be slowed, however, by competition from natural geotextiles, which are even lower cost products, although they do not have as long a useful lifespan as synthetic versions. However, sales of geomembranes, geogrids and geonets are expected to achieve stronger gains through 2013, albeit from small bases. Growth of these products will benefit from their use in more specialized applications, such as geomembranes for more complete separation and protection and geogrids for erosion control, particularly on steeper grades

**TABLE IV-10**  
**MEXICO: GEOSYNTHETIC DEMAND BY TYPE**  
 (million square meters)

Item	1998	2003	2008	2013	2018
Nonbuilding Construct Expend (bil 2007\$) sq m geosynthetics/000\$ construction					
Mexico Geosynthetic Demand					
Geotextiles					
Geomembranes					
Geogrids					
Geonets					
Other					
% Mexico					
North America Geosynthetic Demand					

**SAMPLE TABLE**  
 Historical data for 1998, 2003 and 2008 as well as Freedonia forecasts for 2013 and 2018; data illustrated with the aid of more than 110 tables and charts

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Global demand for nonwoven fabrics is forecast to rise 6.9% yearly through 2012. Gains in developing parts of Asia/Pacific, Eastern Europe, Africa/Mideast and Latin America will outpace demand in developed countries. Spun-melt nonwovens, the largest segment, will also grow the fastest. This study analyzes the \$21.2 billion world nonwovens industry, with forecasts for 2012 and 2017 by formation process, application, market, world region and for 19 national markets. It also evaluates market share and profiles industry players.

#2482..... 03/2009..... \$5600

## World Membrane Separation Technologies

Global membrane demand is projected to grow 8.6% annually through 2012, driven in part by concerns about water quality and waste stream disposal. Large, developing countries with stressed local water resources will be the fastest growing markets. North America will remain the largest outlet and post strong advances. This study analyzes the \$10 billion world membrane industry, with forecasts for 2012 and 2017 by product, market, world region and for 18 countries. It also evaluates market share and profiles industry players.

#2468..... 04/2009..... \$5700

## Specialty Films

US demand for specialty films will grow 4.7% annually through 2012. Their penetration into new, high-growth market areas such as photovoltaic modules and biodegradable bags will bolster demand. Rapid adoption of modified atmosphere packaging will further fuel gains, as will improved processing methods in film coating and metallization. This study analyzes the \$6 billion US specialty film industry, with forecasts for 2012 and 2017 by product, function and market. It also evaluates market share and profiles industry players.

#2452..... 01/2009..... \$4700

## Geosynthetics

US geosynthetics demand will reach \$2.1 billion in 2012 based on rebounding road and highway construction and other public works spending. High-performance products such as geomembranes, geogrids and preformed geocomposites will outpace less costly types. Value demand will grow the fastest in the transportation infrastructure market. This study analyzes the \$1.7 billion US geosynthetics industry, with forecasts for 2012 and 2017 by product, market and region. It also details market share and profiles industry players.

#2435..... 01/2009..... \$4600

## Waste Management & Remediation Services

Demand for US waste management and remediation services will rise 5.3% annually through 2012. Waste collection will remain dominant while remediation and material recovery grow the fastest based on more interest in public/environmental safety, brownfield development, waste recycling and material reuse. This study analyzes the \$84.6 billion US waste management and remediation industry, with forecasts for 2012 and 2017 by service, market and region. It also evaluates company market share and profiles major players.

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