

## WORLD FERTILIZERS CONSUMPTION

Fertilizer consumption measures the quantity of plant nutrients used per unit of arable land. Fertilizer products cover nitrogenous, potash, and phosphate fertilizers (including ground rock phosphate).

The World consumption of fertilizers for the main nutrients (N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O) has increased by 0.4% in 2012 to reach a total of 178 million tons of nutrients.

### 2012 WORLD FERTILIZERS CONSUMPTION BY NUTRIENT

Nutrient	Million tons			% Share (2012)
	2010	2011	2012	
Nitrogen-based fertilizers	103.3	107.0	107.8	60.6
Phosphate-based fertilizers	39.7	41.3	41.3	23.2
Potash-based fertilizers	27.4	28.9	28.9	16.2
<b>TOTAL</b>	<b>170.4</b>	<b>177.3</b>	<b>178</b>	<b>100.0</b>

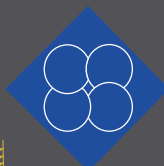
IFA 2012

On global basis, 2012 world phosphate-based fertilizers consumption has kept the same level of 2011 (41.3 million tons P<sub>2</sub>O<sub>5</sub>). As for Nitrogen and Potash world consumption was respectively 107.8 MT and 28.9 MT.



# Company Profile

- PHOSPHATES MINING SITES
- PROCESSING PLANTS
- GCT PRODUCTION
- GCT SALES
- 2012 GCT EXPORT DESTINATIONS
- QUALITY MANAGEMENT



GROUPE CHIMIQUE TUNISIEN



## PHOSPHATES MINING SITES

***It is over a 100 years since CPG started the exploitation of phosphate deposits in Tunisia. Currently, the mining operation is principally based around the deposits in the Gafsa basin located in the south of the country, north of Chott el jerid. Today, CPG works ten surface mines in 5 phosphate fields, all situated in the same Eocene geological level.***

For many years, CPG has been investing methods of reducing production costs while increasing capacity. This has been generally achieved by developing opencast mines to replace underground capacity. Opencast mining methods were recognized as being cheaper to operate. All Tunisian phosphate rock mines are now opencast. The move to open cast mining has brought significant savings in labor costs and increased productivity. Over the last 10-year period, CPG has seen its merchant rock output rise from 6 million metric tons in the late 1980s to more than 8 million tons in 2007.

Tunisian phosphate concentrates range in two main categories based upon the content of P<sub>2</sub>O<sub>5</sub>, the merchant-grade 65-68% BPL grade mostly used for chemical process, and the merchant-grade 60-62% BPL grade, well suited for direct application. CPG supplies around 80% of its phosphate production to the GCT plants for local processing and the balance is railed to Sfax for export. GAFSA is marketed in more than 20 countries throughout the world either for processing or direct application.

Phosphate deposits in Tunisia are located in the mining area of Gafsa Governorate while production units exist in Gabes, Sfax, M'Dhilla and Skhira.





## PROCESSING PLANTS



*After having been exporting all its phosphate rock production during the first fifty years of its activity, Tunisia entered successfully in the new activity based of ore beneficiation and production of various mineral fertilizers.*

*Tunisia is the second country in the world to develop a large percentage of its production of phosphate rock (85%).*

Since its founding in 1992, the GCT has four industrial clusters located at:



Sfax:  
TSP Plant

M'dhilla:  
TSP Plant

Skhira:  
Phosphoric Acid Plant

Gabes:

- Phosphoric Acid Plant
- Dicalcium Phosphate Plant
- Mono and Diammonium Phosphate Plant
- Ammonium nitrate plant.





## GCT PRODUCTION

*Phosphate rock after extraction and enrichment will be transported by rail to various sites of production of phosphoric acid and fertilizers located in Sfax, Skhira, Gabes and M'Dhilla for use as a raw material in the phosphoric acid plants.*

### PHOSPHATES PROCESSING

To produce merchant grade phosphoric acid, phosphate fertilizers and Di-calcium phosphate, GCT processed 4.223 million tons of Tunisian phosphate rock in 2012, 57.4% less than 2010 and 43.4% more than 2011.

### GCT PRODUCTS

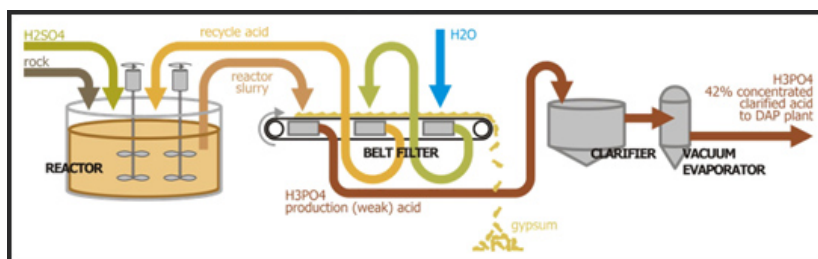
#### 1. Merchant Grade Phosphoric Acid (MGA)

GCT phosphoric acid production totaled 776 million tons P2O5 during 2012. GCT has three production units for MGA.

The processing applied to produce phosphoric acid in the GCT plants is the Di-Hydrate process or SIAPE process developed in Tunisia in the first Phosphoric Acid unit since 1952

GCT imports sulphur from Canada and the Middle East to produce sulphuric acid, a raw material which is also used in the production of phosphoric acid.

GCT is one of the largest suppliers of phosphoric acid to India, the world's largest market for the product

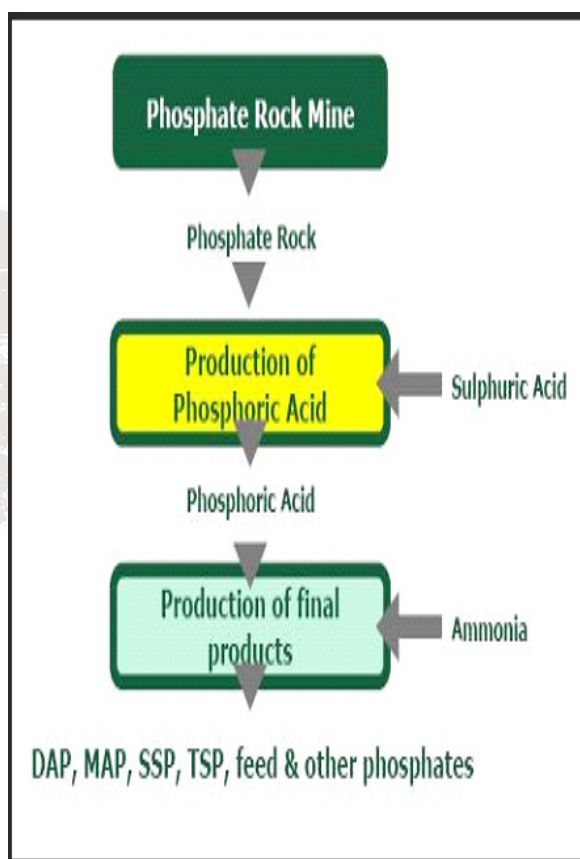


## 2. Phosphate-based Fertilizers: DAP/TSP

GCT production totaled 653 000 tons DAP during 2012. GCT has two production units for DAP. For the TSP, GCT production totaled about 500 000 tons TSP during 2012

GCT manufactures coated and uncoated various types of granular fertilizers such as Di-Ammonium Phosphates (DAP), Ammonium Nitrates (AN) and Mono-Ammonium Phosphate (MAP).

Also, GCT is able to produce many kinds of granular fertilizers enriched by micronutrients elements requested by our customers such as Zn, Bore, etc...



## 3. Feed Phosphate Products: Di-Calcium Phosphate (DCP) and Mono-Calcium Phosphate (MCP)

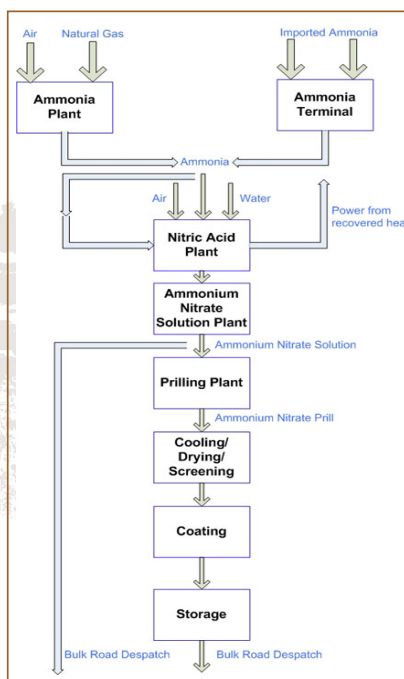
GCT unit produced 57000 tons of DCP in 2012 (2.7 % of 2012 total sales).

#### 4. Agricultural Ammonium Nitrate (AAN) & Porous Ammonium Nitrate (PAN)

GCT produces AAN and PAN at Gabes unit (3 % of 2012 total sales). During 2012, GCT production totaled 172 000 tons AN and 11 000 tons PAN. The process used is the KT process or Kaltenbach-Thuring process.

We produce porous prill ammonium nitrate in a three-step process:

- ❖ First, ammonia is reacted with oxygen from the air and absorbed into water to form nitric acid.
- ❖ Second, the nitric acid is then combined with ammonia in a pressure reactor to produce ammonium nitrate solution.
- ❖ Third, the ammonium nitrate solution is concentrated and sprayed into a prilling tower to produce dry prills.



GCT is internationally respected for competing vigorously in world markets built on the profitable and responsible beneficiation of phosphoric acid and fertilizers derivatives for the sustained benefit of all stakeholders.

#### 5. Global Production

	2010	2011	2012	Variation % 2012/2011
MGA	1213	526	776	74.7
DAP	1277	428	653	55.1
TSP	754	406	492	21.2
DCP	76	55	57	5.1
AN	155	83	172	108
PAN	21	8	11	40.1





## GCT Sales

Groupe Chimique Tunisien (GCT) is among worldwide leading producers and exporters of phosphate derivatives. It processes about 6.5 million tons of Tunisian phosphate rock each year, into Merchant Grade Acid (MGA), Di-Ammonium phosphate (DAP), Triple Super Phosphate (TSP) and Di-Calcium Phosphate (DCP).

Moreover, GCT produces Agricultural Grade Ammonium Nitrate and Porous Ammonium Nitrate mainly for the local market.

GCT has 4 production sites located in southern Tunisia (Gabes, Sfax, Skhira and Mdhilla) and employs 6939 people at the end of 2012.

In the year 2012, more than 84% of GCT production has been exported to 20 countries all over the world.

### TOTAL SALES

In 2012, GCT realised 84% of its total sales in the export market, the rest 16% has been realised in the local market. More than half of GCT total sales have been realised in its traditional market: Europe is the first destination with 40% of total sales, followed by Far East Asia with 28% of total sales, Near, Middle East and Africa with 11% of total sales.

(Million US\$)

	2010	2011	2012	Variation % 2012/2011
MGA	475.6	323.8	425.7	31.5
DAP	573	248.9	351.5	41
TSP	246.5	205.9	217.3	5.5
DCP	30.8	24.2	29	19.8
Other (AN, PAN)	39	28.1	38	35.2
<b>TOTAL</b>	<b>1365</b>	<b>831</b>	<b>1062</b>	<b>27.8</b>

### SALES DISTRIBUTION

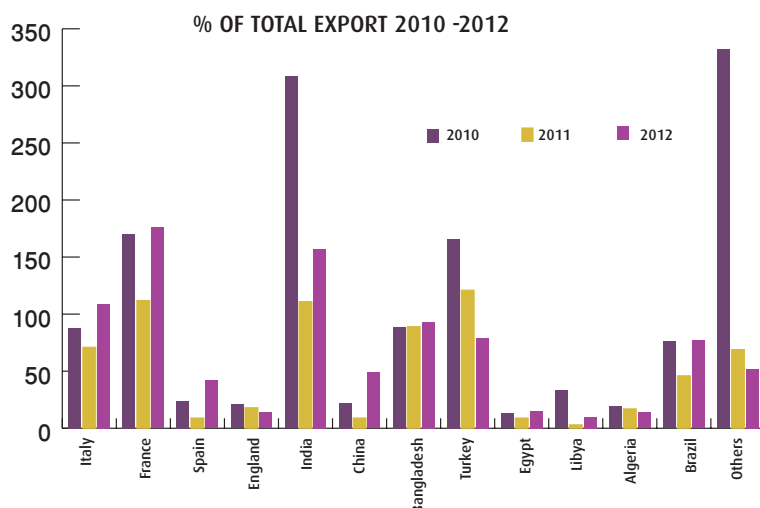
	2010		2011		2012		% Variation 2012/2011
	US\$ Million	% of total sales	US\$ Million	% of total sales	US\$ Million	% of total sales	
Far East Asia	462	33.8	226.2	27.2	302.2	28.5	33.6
Near, Middle East & Africa	292	21.4	150.6	18.1	119	11.2	(21)
Europe	331	24.2	224.9	27.1	360.6	34.0	60
America & Oceania	118	8.6	84.3	10.1	107.4	10.1	27.4
Local Market	163	12.0	145	17.5	172.4	16.2	18.9
<b>TOTAL</b>	<b>1365</b>	<b>100</b>	<b>830.9</b>	<b>100</b>	<b>1061.9</b>	<b>100</b>	<b>27.8</b>



## 2012 GCT EXPORTS BY DESTINATION

*In the year 2012, more than 84% of GCT production has been exported to 20 countries all over the world. GCT serves agriculture worldwide by marketing its products through networks matched to each country's specificities (cooperatives, trade offices, wholesalers, traders, local producers, etc). Major export destinations are listed below:*

Area	Country	Total sales			% of total sales 2012
		2010	2011	2012	
Europe	Italy	88.3	70.9	108.8	12
	France	170.1	112.1	175.9	20
	Spain	23.8	8.6	41.6	5
	England	21.4	18.2	14.3	16
Far East Asia	India	307.6	111.3	157	18
	China	21.7	8.9	52	6
	Bangladesh	93.3	91.8	93.1	10
Near, Middle East and Africa	Turkey	165.5	121.1	79	9
	Egypt	13.3	8.5	14.8	2
	Libya	33.1	2.5	9.8	1
	Algeria	18.6	17.4	14.4	2
South America	Brazil	75.8	45.6	76.8	9
Others		332.4	69.1	52	6%
<b>TOTAL</b>		<b>1365</b>	<b>686</b>	<b>890</b>	<b>100</b>



## Quality MANAGEMENT



***Following the accreditation of GCT's Quality Control Laboratories (according to ISO / CEI 17025) in 2008, it was the preparation process to certificate all GCT's structures (factories and Departments) according to the ISO 9001.***

In 2010 the Mdhilla plant of GCT was certified according to the ISO 9001 (2008), and in 2012 this certification was renewed for three years.

The GCT policy is to hire a progressive certification program for establishment of an Integrated System QSE "Quality Safety and Environment" and the following generalization of the Quality Management Certification according ISO 9001. The certification program takes into account the geographic scope and diversity of products.

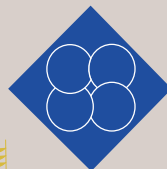
After the certification of all GCT plants and different structures according to ISO 9001, the GCT will certificate according to the Environment Certification (ISO 14011) and the Safety Certification (OHSAS 18011).

**The activity of the Quality Department in 2012 was characterized by:**

- The maintenance of accreditation of GCT's Quality Control laboratories according to ISO / CEI 17025 in March 2012 by TUNAC;
- The purchase of materials and equipment necessary to improve the quality of analysis;
- The extension of the ISO 9001 certification for the Purchasing Department until the completion of the implementation of GMAO;
- Preparation for the renewal GCT's Quality Control Laboratories according to ISO / IEC 17025;
- The renewal of Material Safety Data Sheets for all GCT products exported to Europe (seven languages);
- The preparation and analysis of records to submit subsequently to the European Chemicals Agency;
- All GCT products exported to Europe are registered REACH.

# Financial Overview

- FINANCIAL INDICATORS
- WORKING CAPITAL MANAGEMENT
- PERSONAL EXPENSES AND EMPLOYEES
- PROJECTS INVESTMENT
- FUNDING AND LIQUIDITY

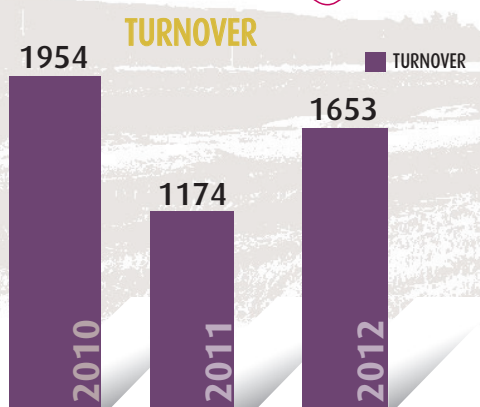


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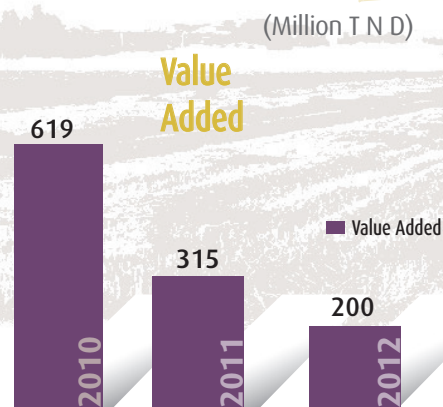




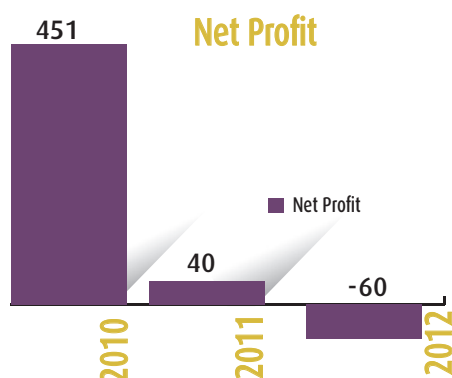
# FINANCIAL INDICATORS



The turnover shows a substantial 41% increase from 2011, at TND 1 653 million against 1 174 Million, an improvement essentially due to increased levels of production.



The added value posted a 36% lessening, at TND 200 Million, after 315 million in 2011; the diminution is essentially due to higher inputs prices.



The GCT net profit dropped from TND 40 Million to -60 million. This decrease is explained by the sub-activity production and higher inputs prices.

## Funding and LIQUIDITY



***The capacity of the M'dhilla 2 plant for the production of TSP will be 500 thousand tons of super triphosphate per year, which will increase the total production of 900 thousand tons per year of TSP. The completion of this project takes place with the use of the most modern technical world.***

The project cost is estimated at 530 million dinars (MDT). The financing plan of the project is as follows:

**85%** Credit

**15%** Equity.

- In 2011, a long term loan of 140 Million Euros equivalent to 280 MDT was given by the European Investment Bank (EIB) to finance M'dhilla 2 Project.
- 125 MTD as credit will be obtained by the GCT from the Arab Fund for Economic and Social Development (FADES), to create 500 job opportunities.



## WORKING CAPITAL MANAGEMENT

***In this financial section, unless otherwise indicated all financial information has been prepared in accordance with generally accepted accounting principles in Tunisia, and derived from audited financial statements.***

GCT is considered as a wholly engaged export company (as defined by article 10 of Tunisian Investment Incentives Code) as at least 70% of its production is intended for foreign countries or companies rendering services abroad or in Tunisia for use abroad. In this respect, GCT benefits from a special fiscal status.

Working Capital Requirement (defined as accounts receivable plus net inventory less accounts payable) has significantly increased since 2005 (from 19.4% of total sales to 21.1% in 2010) then decreased and returned to a 17.6 % rate in 2012, as both accounts receivables and accounts payables increased. This can also be explained by the prices changes

	2005	2006	2007	2008	2009	2010	2011	2012
WORKING CAPITAL REQUIREMENT / TOTAL SALES %	19.4	16.4	18.9	10.4	19.5	21.1	4.7	17.6



## Personal expenses and employees

***The increase in remuneration expense GCT during the last 3 years is attributed to the growth in the number of employees occurred as a result of social movements that accompanied the revolution of January 2011.***

The Payroll expenses and the Manpower during the last three years were as follows:

Year	2010	2011	2012
Payroll (Million DT)	127 770	164 197	203 964
Manpower	4435	6920	6939



# Investment Projects

*Generally, a viable investment project aims at achieving a profitable return that ensures (1) timely payment of interest and principal, (2) attractive return on the invested capital, and (3) positive and consistent cash flows.*

In this context the planned investment in GCT in the 10th, 11th and 12th Plan can be classified into five categories:

- ◆ Investment Development
- ◆ Investments related to the production tool
- ◆ Investments environmental upgrading
- ◆ investment in scientific research
- ◆ Investment for informatics development

GCT is pursuing a very ambitious investment program, whose main purpose is to increase the GCT's production,

capacity, improve its operational efficiency, contribute to a better environmental balance and diversify its products.

There may be mentioned:

## Project «Mdhilla 2»

The M'Dhilla 2 project is a substantial interest for the GCT and for the region. The capacity of this plant will be 500 000 tons of super triphosphate per year, which will increase the total GCT production of that 960 thousand tons per year. The promising opportunities to the creation of 500 jobs will be considered.

Its realization in 4 lots has already started:

Lot No.1: Sulfuric Acid Unit

Lot No.2: Diluted and Concentrated Phosphoric Acid Unit

Lot No.3: Interconnecting utilities and logistics

Lot No.4: TSP Unit

This project takes place with the use of the most modern techniques in global elimination of gas produced by the manufacture of sulfuric acid and phosphoric acid.







### Project «GCT's Environmental Rehabilitation Plan»

The objective of the Groupe Chimique Tunisien (GCT) Environmental Upgrade Project is to upgrade certain facilities of GCT according to international best practices to eliminate or reduce environmental pollution.

Since 2008, GCT has spent 313 million DT on 16 environmental projects.

Through the various environmental projects GCT envisages an environmental upgrading of all its production units located in Sfax, Gabes, Skhira and M'Dhilla for a total investment of about 800 million DT.

One of these projects is a system to monitor the emissions of GCT facilities into the atmosphere, equipping smokestacks with instruments to analyze and control emissions.

Another important project would reduce the emission of ammonia from DAP unit at Gabes industrial site.



### Project «Purified Phosphoric acid and soluble fertilizer»

The project involves building a complex dedicated to the production of purified phosphoric acid and soluble fertilizer.

Set design capacity of the unit integrated as follows:

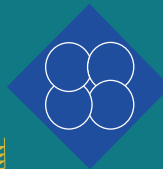
- 60 000 tons  $P_2O_5$  per year of food by the acid concentration of 61.5%  $P_2O_5$ ;
- 120 000 tons per year of soluble fertilizers.

The total approximately investment cost is about 200 million dollars.

GCT plans to build current 12th Plan a purification phosphoric acid unit with a capacity of 60 000 T  $P_2O_5$  acid per year, for a total investment of 150 million DT. The "soluble fertilizers" project will be carried out later.

# Environmental Performances

- GCT'S ENVIRONMENTAL STRATEGY
- OBJECTIVES
- GCT'S ENVIRONMENTAL PLAN (2009/2016)
- PHOSPHOGYPSUM DISPOSAL MANAGEMENT AND WATER PRESERVATION



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*Environmental issues concerning the production of phosphoric acid and fertilizers include potential pollution of air, water and land. There are hazards to be avoided in each part of the production chain, as well as questions of occupational health and safety for all those who work in close proximity to these products and for the citizens who live around the places of production. The GCT industry has made significant progress to improve its efficiency and thus reduce its environmental footprint.*

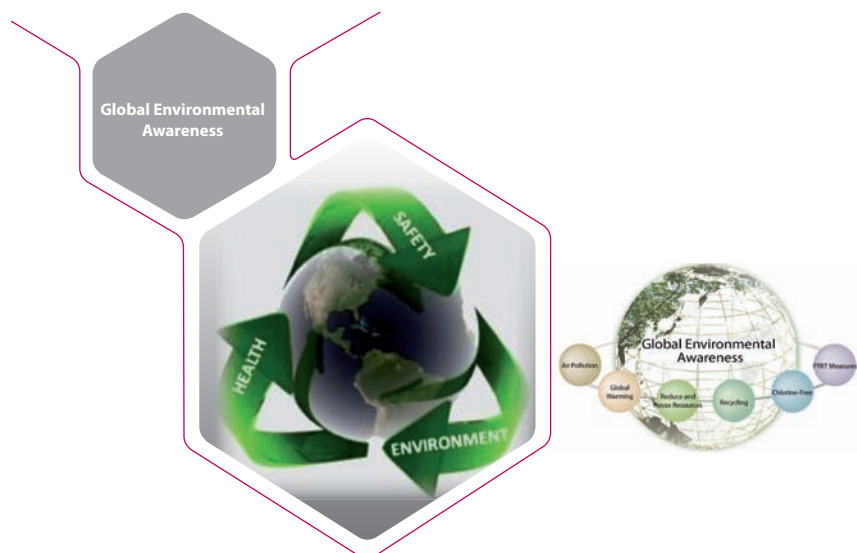
## GCT'S ENVIRONMENTAL STRATEGY

GCT has implemented a new environmental strategy focusing on the reconciliation of the company with its environment. This strategy will deal with the following actions:

- ❖ Environmental Rehabilitation Plan of production units by introducing the best available technologies «BAT»
- ❖ Adopting environmental phosphogypsum Disposal mode
- ❖ Adopting Sustainable Water Management
- ❖ Continuous Environmental Monitoring

## OBJECTIVES

- ❖ Gaz emission in conformity with standards
- ❖ Zero-outflow for liquid effluents
- ❖ Environmental PG disposal
- ❖ Preservation of water resources
- ❖ High energy production & use efficiency
- ❖ Better public image & better company-community relations



## GCT'S Environmental Plan (2009-2016)

*This Plan aims to improve the environmental situation in all GCT production sites with a cost of almost 370 Million Tunisian Dinars. In this regard, GCT has concluded a loan agreement with the European Investment Bank (EIB) to finance the GCT's environmental rehabilitation Plan, which amounted to 55 Million Euros with a bonus from the European Commission estimated at 10 Million Euros. The realization of GCT's environmental rehabilitation plan is going to spread out until year 2016.*

### GCT'S ENVIRONMENTAL REHABILITATION PLAN

Item	PROJECTS
Skhira site	1. The integration of Double Absorption technology with HRS in sulphuric acid production units to reduce sulphur dioxide emissions and to recover energy
	2. Retrofit of phosphoric acid production units to stop discharge of waste-water into sea
	3. Construction of dike around phosphogypsum stack to protect environment
	4. Construction of treatment station for domestic waste water
	5. Construction of phosphogypsum discharge, using wet stacking mode with bottom liner, under-drain and water recycle system
Mdhilla site	1. The integration of Double Absorption technology with HRS in sulphuric acid production unit to reduce sulphur dioxide emissions and to recover energy
	2. Construction of phosphogypsum discharge, using wet stacking mode with bottom liner, under-drain and water recycle system
	3. Fuel switching project from bunker fuel oil to natural gas (MDP Project)
	4. Retrofit of fertilizer sieving stations to reduce the spread of dust
	5. Retrofit of phosphoric acid production units by integration of Flash cooler system and water closed loop process
Gabes site	1. Phosphogypsum discharge Project, using transport by pipe line and wet stacking mode with bottom liner, under-drain and water recycle system
	2. Retrofit of gas washing system at "DAP" fertilizer production units in Gabes to reduce ammonia emissions
	3. The integration of Double Absorption technology with HRS in sulphuric acid production (ex ICM2 unit) to reduce sulphur dioxide emissions and to recover energy
	4. Tertiary treatment of urban waste water to reuse as industrial water
Joint Projects of GCT	1. Implementation of gas emissions Monitoring system at GCT's production sites
	2. Green belts around production centres
Total cost	770 Million Tunisian dinars

