



# PACOPAR

10 ANOS

Community Advisory Panel of the Responsible Care Program



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**TECHNICAL SHEET**

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# A Decade on Behalf of the Community



**Luis Ferreira,**  
**Head of the Secretariat of PACOPAR**  
**Director of Manufacturing production center of Air Liquide**

PACOPAR celebrates its first decade at the same time the International Union of Pure and Applied Chemistry together with the United Nations, appointed this to be the International Year of Chemistry (IYC). Pacopar's ambition meets the one established by IYC, which aims at clarifying the public in an educative manner so they may better understand the importance and the role that chemistry plays in answering the challenges placed on humanity along this century.

We would, therefore, like to take the opportunity to reflect upon the changes brought by PACOPAR and its efforts in the positioning of the chemical industry in Estarreja. We have asked for feedback from entities within our local community regarding the 10 years of the Panel's activities. May I say that the answers are certainly very positive, which leads me to believe that we are on the right track and feel proud and motivated to continue!

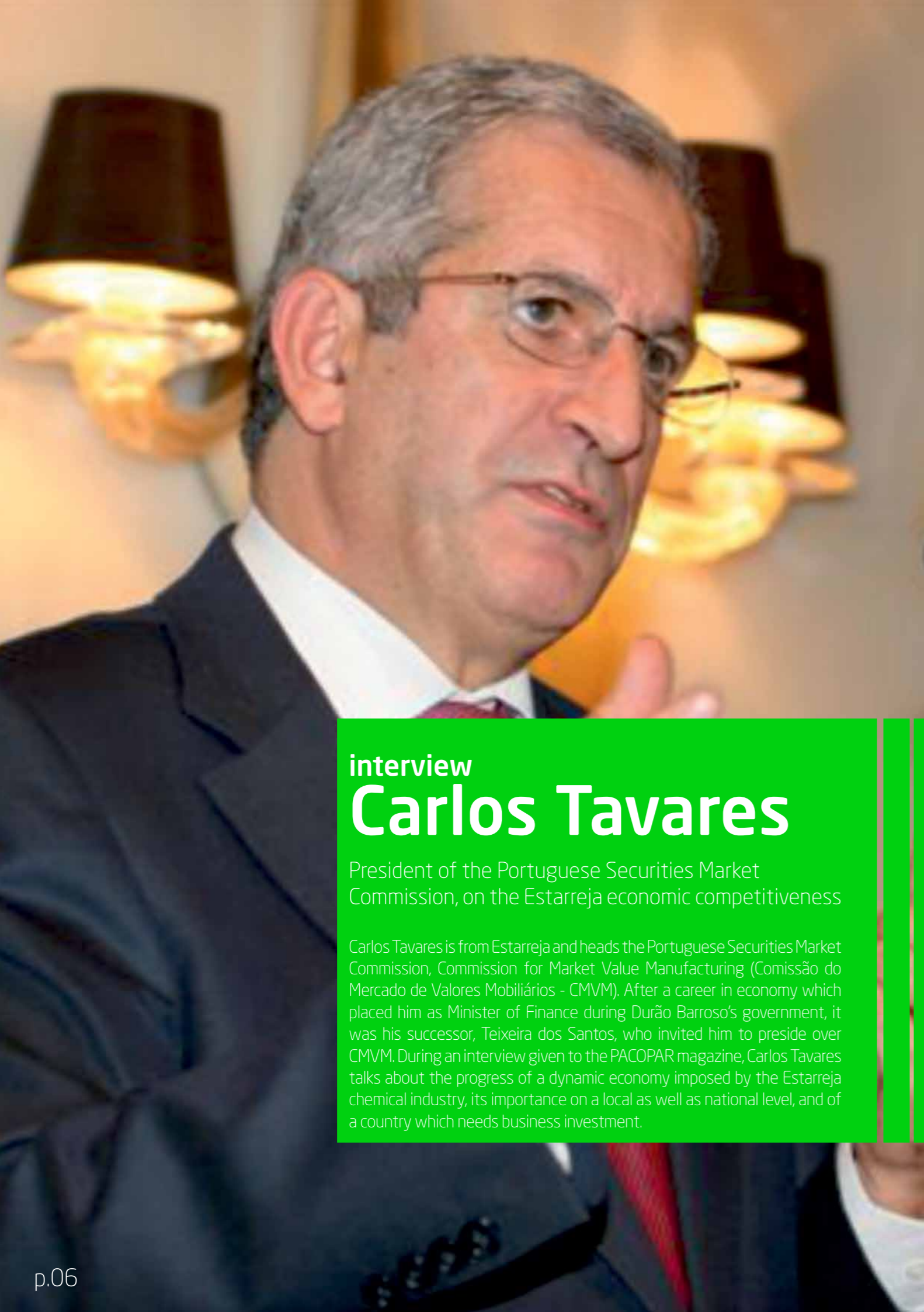
In this edition, we shall point out the International Year of Chemistry with an article where each chemical company belonging to the Panel will explain the types of products they produce and how they are applied, which

include the number of gadgets we use daily. These start from the toothbrush you pick up early in the morning and everything you use until you go to sleep. We are and we all use chemistry.

Chemistry is essential not only for human life but also under an economic perspective. The importance of the chemical industry is unquestionable, both to the local as well as national economy. This subject was the opening theme for the discussion with Carlos Tavares from Estarreja, President of the Portuguese Securities Market Commission Building Industry Market Value Commission (Presidente da Comissão do Mercado de Valores Mobiliários - CMVM) and former Minister of Economy. With a long career in Economy, Carlos Tavares gave us an interesting point of view.

These are only a few of the many subjects we invite you to go through in this edition. We wish you enjoyable reading while you flip through the pages, and invite you to celebrate the International Year of Chemistry with us while getting to know more about this science which is, in fact, part of all of us.





interview  
**Carlos Tavares**

President of the Portuguese Securities Market Commission, on the Estarreja economic competitiveness

Carlos Tavares is from Estarreja and heads the Portuguese Securities Market Commission, Commission for Market Value Manufacturing (Comissão do Mercado de Valores Mobiliários - CMVM). After a career in economy which placed him as Minister of Finance during Durão Barroso's government, it was his successor, Teixeira dos Santos, who invited him to preside over CMVM. During an interview given to the PACOPAR magazine, Carlos Tavares talks about the progress of a dynamic economy imposed by the Estarreja chemical industry, its importance on a local as well as national level, and of a country which needs business investment.

# The impact of the CQE in local and national economy

Interview by Luis Dias

A Rádio Voz da Ria Journalist

**Brought up in Estarreja, do you remember what you thought of the industrial zone and the chemical industry during your adolescence?**

I recall two different stages which succeeded each other; one corresponds mostly to my childhood, a time when the industry was prosperous and attracted many people even out of Estarreja, having made it one of the most prosperous areas in the Aveiro district.

**I remember there was a sort of differentiation, where the Estarreja municipal towns were ahead of Ovar...**

And ahead of the whole district in general, which was clearly rural. Estarreja was an industrial zone under development, known because of the "Amoníaco Português" and later, for the construction of the first multinational company in the area, CIREs, together with other smaller industries, but mostly all specialized in the chemical field.

Then we saw a deterioration of their image; first, due to the specialization of the chemical industry. In addition, there was lack of awareness in terms of environmental care.

**But this was rather accepted since the same was happening in the world at large. There was no environmental awareness the way we see today...**

There was indeed a lack of awareness. Even today we sometimes underestimate the importance of such issues, and we underestimate wrongly. In addition, there were extreme positions coming from environmental groups who were so radical in their position that they ended up having less influence than they might have had, if they had they taken more moderate approaches.

Today, we need to tackle these issues differently due to the environmental catastrophes happening around the world. We can even see it locally; if we recall what the Ria de Aveiro and the wetlands looked like... Now we are trying to recover them, but the Ria has never been the same. These are core values which cannot be substituted. The lack of care, which was normal at the time, is fortunately having an inversion today, though probably not enough. This is not only seen in Estarreja in particular, but in the world at large. The truth is that after the prosperity Estarreja underwent during my childhood and adolescence, we saw a phase of degradation, where the levels of pollution were very high...

"Economic issues in Estarreja and in our country will only be solved through business investment"

**Did it really exist or we only heard talk about it?**

I really do believe there was degradation. Although some industries were always very careful, we cannot say the same for all the others. When we began measuring the quality of the air, we heard talk about Barreiro, Sines and Estarreja over the radio and they were not spoken about for the best reasons. When I mentioned I was from Estarreja during my time at University, my peers associated the place with pollution. In addition, Estarreja was confused with Cacia, and the idea of a bad smell and pollution was associated to it.

**In Miguel Sousa Tavares' chronicles in the Expresso, he spoke of Estarreja and the bad smell, confusing Estarreja with Cacia.**

Estarreja did not have that bad smell but pollution was higher than in Cacia, and in some cases, particularly serious. Effluents were flowing into the Ria de Aveiro with high polluting agents including mercury, for many years. Only recent technology stopped these sources of pollution, which caused irreparable damage to the Ria.

"I hope the attitude the industry has in terms of environmental care is generalized and may be school in our country."

**Then there was a long period away from Estarreja. Did you follow the changes when ISOPOR was built?**

I was already away at the time, and followed the news from far. Even so, and despite the benefits industry provides us, I always thought Estarreja posed a safety risk, probably high due to its specialization. Therefore, special care was justified in proportion to its risk. This attitude, which results from environmental care and public health, is justified in Estarreja especially in that which concerns public health infrastructures. We have all heard about people who suffered severe health problems due to environmental issues in Estarreja...

**There is nothing very clearly related, but even so, we heard talk about...**

Estarreja was able to attract a set of industries which are great intensive capital, but do not create many jobs, contrary to the time when "Amoníaco Português" created jobs for many people. The industry today is more intensive capital and less people oriented. And I am sad to see Estarreja with very little life and rather incapable of attracting new people. Even so, it had the capacity to attract and keep important companies, often not given their fair value.

I recall a rather sad episode, which I believe was when I was

Minister of Economy, where people took shifts standing outside a textile company because it was at risk of closing down, a factory with outdated technology and jobs which would not stay for long, while on the other side of the street, a factory was being inaugurated with the most advanced technology; it was Dow.

The Media, TV stations, concentrated themselves the side where people were protesting because with all due respect, they were about to lose their jobs, but no attention was given to the work and added value being created on the other side. This was not, in my opinion, a very happy episode at all. That is why when I went by the Municipal Assembly, I pointed out the need for Estarreja to recover its industrial vocation. I usually say I am an old-fashioned economist. I think all countries need industry in order to be competitive.

**I believe it was the incinerator as well as the requali-**



**fication program negotiated with the Government that the Eco and Eco-park concept came about, contrary to the idea of a negative chemical industry?**

Most important to me was to have an Industrial zone with an organized infrastructure, ready to receive companies. In addition to all the afore-mentioned conditions, it was also important to have other plots available, the infrastructures and even buildings to be rented so that the companies could easily and quickly settle here at the lowest possible costs.

Besides, there was an industrial zone in Estarreja which was almost non-explored at the time, the old Quimigal industrial



zone, with buildings which could be changed and reutilized, etc. I think too much time was lost with this process, it was too long. There was probably an unavoidable expropriation process... Because we must admit: the economic issues the country and Estarreja face today will only be solved with investment in industry. The political economy today has very few instruments, making business investment absolutely essential.

**Investment linked to export?**

Not only to export. Export is needed since we have a small market, and a company which wants to compete on an international level needs to go up scale. And to do this, it needs a vaster market and that is, of course, export. But another thing is certain: no company can be competitive in export if they are not first competitive in the internal market. In other words, those which are constantly surpassed by foreign companies in the internal market, (which is becoming very frequent: our import rate is increasing tremendously and the Portuguese companies have lost their

market share in the internal market) leaves little hope to beat foreign companies in our own market. When companies lose their internal market share, they turn to export and try to sell outside. Sometimes they manage it for a while, selling at a lower price, but that is unsustainable on the long-run. That is why effort should not be set on export itself, but on the company competitiveness, within the so-called transactional goods area, those which are imported and exported. It is just as well to export as to substitute an import in terms of our external balance. Besides all of this, it is easier to start by selling inside the country. That is why companies need to accept this dimensional concept supported by investment and creativity. There is a lot of care for micro and small companies; they are truly important in those areas which turn to the domestic market.

There is no doubt that in the area open to external competition, companies need to be bigger and better because they have to battle with huge and very competitive companies.

"No company can be competitive in export if they are not first competitive in the internal market."

**In that sense, three companies from the Chemical Complex got together completing an investment which doubled their production capacity, especially in export, last year. From what you have just said, this is extremely positive and it gives us the idea that we have local companies which are in counter-cycle comparing to what is going on in the country itself. What is your opinion?**

They are a good example in this case, especially if the companies are from the same type of activity. This association makes sense and may even end up in a fusion to create an even bigger company. This is also something the Portuguese businessmen should understand. Sometimes it is better to have 20 or 30% of a big competitive enterprise than 100% of a small non-competitive company. Even if they do have different activities, there are common issues. For example, their presence in foreign markets with costs inherent to it, marketing and a combination of sales, it may make sense to have some common infrastructures to support these same costs. Therefore, our companies need to cooperate with each other and win.

“Sometimes it is better to have 20 or 30% of a big competitive company than 100% of a small company which is not competitive.”

**You were a Minister. I believe it was about that time the companies created PACOPAR with the aim to solve environmental problems together and talk with the community. Under the present situation, what do you think of this Industrial Complex; is it already typical in terms of international competitiveness?**

I do not exactly know how the Estarreja Chemical Complex is composed. I cannot say. I hope so, but I also hope it will grow. As I mentioned before, there are many cases of industrial zones in our country which even hold foreign investment, but are not very rational. People need to understand there are higher values than the pure and simple dispute for immediate gain, even inside our own country. The Town Halls' attitude to attract investment to their districts is very positive. But on a country level, the utility of what is being done needs to be maximized. And it is being done here, which leads me to believe that it will be very difficult for this industrial zone to be surpassed by others.

It hurts me to see industries built on agricultural ground leading to a new infrastructure of those plots, creating environmental problems. A realignment of the business construction needs to be created in order to avoid such costs for the country. We have very few resources and need to make the most of what we have.

When I was in the Government, I encouraged areas for business construction as well as having innovated industrial zones with common services for the industries. Some tax incentives were created, which were attractive for the companies, but the Portuguese tend to look at what is lacking instead of looking at what they do have, and always believe something else is missing.

I think this is one of the problems our country has. There are far too many people looking for a reason not to do what should be done. In the end, they turn to the Government for help. This state of mind is one of the reasons why this country has lost so much of its competitiveness and positioning in the market. Although governments need to work well in the political area, there is nothing that will substitute those who produce and are creative. What is asked of the governments, in this case, is to allow space for those who want to work, avoid creating obstacles and avoid excessive taxes on those who work and produce.

**This area with its infrastructures, is a place which deserves to be populated by other types of industry within the future economy around the world?**

I believe all the conditions are there for that to happen. In fact, the international companies we find here have settled down and continue investing in Estarreja because they have found the business and logistics conditions which justify it.

**Yes, this last project is valid for 15 years...**

This is proof that we have the conditions to attract the industry, be it national or foreign. What is worse is when politics are mixed within the business area...

**This always happens because each Town Hall wants to attract the best to its district.**

This is true, but sometimes they go a little too far and al-

most end up paying to have those investments there, creating artificial advantages which are diluted with time; this is not good politics, either.

**A short while ago we said the Estarreja Chemical Complex had a rather unfavorable image in terms of environmental care. There was an evolution in terms of environmental laws passed in Europe, and I do believe the ECC and its factories slowly created the conditions to banish that negative point of view. They managed to create PACOPAR, a Community Panel for Responsible Care which is actually a connection between the industry and the community. Is this not already a platform for the future?**

It is an experience in terms of business cooperation within a domain which, as said, is becoming all the more important...

**In fact, the Panel abides precisely by Responsible Care...**

The industry, infrastructures and transport do not have to be done by sacrificing people. There is nothing that can pay the loss of quality of life. There is no use in creating industry which is not sustainable. Moreover, I do think companies also have a different sense of responsibility today. But there is still a lot of work to be done. However, in the industrial area, just like you mentioned, we are on the right track, and Estarreja has the advantage of the bad examples of the past. You know, many environmental issues were borne here, and it is extremely costly to recover polluted soil, degraded wetlands, etc. However, I also think these issues go beyond the industrial zone. For example, it hurts me to see highways passing by people's windows. There is much care to preserve wildlife and nature, which is very positive; but we all know of the case of the new highway which was not built west for environmental reasons. I respect that. But at the same time, it does seem people's quality of life was not respected. It is a mentality which needs to be changed, in general. The industry was probably the main responsible cause for that lack of respect.

Today, I believe industry has become more responsible, but construction, on the other hand, has become less...

**People who knew the industry 15 years ago see it is totally different. The change in terms of image, the control of pollution levels has made it possible to stop talking about Estarreja. In your political life, and considering you are in contact with so many people, you do mention you are from Estarreja. Don't they have the same reaction they used to have?**

No. The environmental issue is no longer a subject. There are still people who confuse Estarreja with Cacia but besides that, it is no longer a subject today and they have stopped feeling sorry for me for having to breathe in Estarreja.

**Five years ago, PACOPAR won a prize in Europe for a project on Responsible Care. This is in line with what we mentioned about walking towards a better world...**

I hope so. Because this is, after all, a localized experience. I hope the attitude the industry has in terms of environmental care is generalized and may be school in our country.



# Evaluating the past with eyes set on the future

Dina Sebastião

## pacopar

### 10 years back

Ten years of many changes in Estarreja, for which PACOPAR has no doubt also been responsible for. However, what has been done well or not so well? No-one better than the people from Estarreja, connected to the different areas of social development, to say so. They are in a position where they can best evaluate the past in order that we may pave the way to the future. We spoke with them and concluded the Panel has contributed greatly to the change in the paradigm of industrial development in Estarreja. Even so, there are many problems yet to be solved and just as many challenges ahead.

“We are talking about self-esteem and the way Estarreja has been eyed upon, which has been traditionally negative. We are talking about a case study rising from a pure and hard model of industrialization after the II World War, to sustainable growth and development”. This is the way the Estarreja Mayor summarizes the paradigm on the growth of the chemical industry in Estarreja, of which PACOPAR is both a cause and a consequence.

### Cause and consequence of an industrial change

António Esteves, a doctor in Estarreja and connected to social activities, believes technological innovation will have been one of the impulses towards change. “We have seen a significant improvement in the attitude of the surrounding chemical industry to avoid polluting water and the environment. Thanks to a modern industry, a new culture and attitude have been developed in relation to safety and environmental issues, which



has included the protection of employees as well as the environment”. **Miguel Oliveira e Silva** agrees there has been a positive change towards protecting the environment. Comparing to the situation “a decade ago, we have seen a gradual improvement, which definitely

leads us to consider the results to be positive”, says the Quercus and Stork Association spokesman (an Environmental association from Estarreja).

Oliveira e Silva refers several examples such as the liquid effluents which “now flow to the ocean”, a task undertaken by SIMRIA (The Ria de Aveiro Multi-municipal Wastewater System); however he does point out the results have yet to be evaluated. The president of this small county refers ERASE as a project “essential to recover the historical passive” of Estarreja.

On the other hand, ERASE’s future is precisely one of the points that Oliveira e Silva says needs PACOPAR’s

attention, considering there should be a vaster and more integrated discussion between the industry and the community regarding the future of the project. Although there are signs of improvement, this Quercus representative refers he is sorry to see there have not been enough measures established by the State for an environmental monitoring.” He points out that “there is only one air monitoring station in Estarreja now,” and recalls: “There were two before: one in Avanca and the other in Teixugueira”. Oliveira e Silva adds there is still a gap since “the present station does not monitor industrial pollutants” such as “chlorine”. António Esteves places the ten years on a weighing scale and states that “we have gone ‘from eight to eighty’, and 20 are still missing 20 to reach 100%.”

### More transparency and open mindset

“PACOPAR helped establish a connection between the companies belonging of to the chemical complex and the community, allowing fundamental aspects of its activity to be clarified”, says Luís Dias, a journalist in Estarreja. Miguel Oliveira e Silva agrees. If, on the one hand, the industry “was focused on increasing its capacity” ten years ago, on the other hand, he admits, the Panel has been responsible for many changes. “One of the (positive) changes is less opacity coming from the companies, along with the fact that although there may be different opinions (sometimes quite marked), there is cordiality and dialogue between the different PACOPAR entities, especially those I represent (environmental associations) and companies” he says. Luís Dias points out that the Panel has been able “to group very different

activities such as health, education, civil protection, the university and environmental associations”, allowing “an in-depth discussion of the reality around the Estarreja Chemical complex.”



**Rosa Domingues** witnesses this attitude within the educational area. This Estarreja teacher says that before PACOPAR, “the contact between the school community and the companies” was “very restricted”, happening “according to the needs and as requested by the schools”, for “school visits and some apprenticeships/internships.” Besides that, the reality of the chemical complex, “its products, strategies and technology used on environmental protection were only known to chemistry teachers and students who worked on that subject.” PACOPAR “allowed a mutual knowledge of the reality, skills and experience coming from the various entities. It also allowed the companies to know what was going on at school and within the educational community, their needs and the way they functioned.”

ter systems through shared investment”.

PACOPAR has also been aware of its social responsibility and the role the chemical industry plays upon education. Rosa Domingues gives as an example the “Open Door day to different parts of the community, the various formative and informative speeches” on “several areas” and for “diverse public”, pointing out “thematic competitions for the Primary School students, divulgation programs through the local radio station, “Rádio Voz da Ria”, and the PACOPAR magazine itself.”

However, there is more. From economy to the environment and education, the Panel has extended itself to other areas amongst which health (providing Material Safety Data Sheets to hospitals and giving training to doctors), civil protection (promoting training to the Fire Brigade, adding technical and human capacity to civil protection, cooperating in the revision of emergency plans, promoting drills and cooperation between compa-



### Additional areas of activity

The development of PACOPAR as a discussion and action group provided diversified areas of performance as well as an ever increasing exchange of knowledge between the different members and entities. Rosa Domingues says, “This shared knowledge led to the development of coherent and continued initiatives, providing support to schools in areas such as safety and the elaboration of emergency plans.” The Estarreja Mayor declares, “I do recognize that the work between the Chemical Industry and the Community is obviously incomplete and unfinished, but it proves to be an effective gain achieved together, by innovating in Portugal.” He adds, “We find new solutions to old problems, such as basic waste-wa-

nies in case of accidents). In the social area, the Panel has been dynamic in creating a donations program, considered an important way to help in the development of the Estarreja community.

“PACOPAR’s policy is to get closer to society, thereby supporting projects to the most dynamic social forces (associations, schools and IPSS). Without this support, these projects would have been difficult to implement and in some cases, they wouldn’t even “see the light of day”,



admits António Esteves, who is involved in social activities. **Maria de Lurdes Breu**, also from Estarreja and dedicated to social aid, points out that PACOPAR totally fulfills the rarest role economy should have towards society. “All companies

are born to assure production and profit in an economic fusion, where you have several individuals playing their parts at different levels, building the structure of development standards and economic stability in any society. However, when in the midst of this logical creation there is space to distribute amongst those who are socially weak, we must admit we are before an uncommon business position”, she declares.

### The future as a continuous challenge

All agree not everything has been done, yet. In the social area, António Esteves believes the Panel shall need to have an additional intervention. On the one hand, the companies must “invest some of their profits in upgrading their technology, preserving the environment and providing employment.” Miguel Oliveira e Silva considers “there is much to be improved” both at company level “in their work processes”, as well as in the community, represented by PACOPAR with “a lot of work together”, giving as an example “thea greater activity” which “the contamination of the Estarreja Esteiro and Largo do Laranjo” needs and deserves. The Quercus president repre-

sentative also points out the need of more information about industrial pollutants and access to technical studies promoted by the Panel.

In-depth work is yet to be done within the communication area. As an example, Luís Dias suggests the creation of a kind of public forum either over the radio or newspaper, where “specialized people from the industry openly clarify matters related to the activity of each company.” Rosa Domingues agrees. Although she recognizes the communication strategies during the past years have contributed to a vaster divulgation of PACOPAR, this teacher has the impression “there are still people who have no idea of what the Panel actually does”, and suggests this should go through national means and entities.



With the growth of the Eco-park and new companies, **António Esteves** suggests “PACOPAR may be extended to these companies, too”; at the same time he sees a margin for the practice of a “policy to support live forces in the vicinity, from amateur sport to children and the elderly.”

Because, “apart from the way the social-economic situation may develop in our country and the world at large”, adds Rosa Domingues, “many situations of need will rise within the Estarreja population to which the Panel should be attentive (...) providing its contribution in view of this change.”



“Having treaded together along this decade allows us a new dimension”, says **José Eduardo de Matos**, wishing the best for “the next ten years, convinced there is no turning back.” And within Maria de Lurdes Breu’s concept of an evolution in civilization, we may see PACOPAR in the mirror.

“I believe civilizations are truly advanced when they are able to include everyone in their progress.”



## PACOPAR's history

Eight years after having signed the agreement to the principles of the Responsible Care program, Air Liquide, AQP (Aliada Química de Portugal), Cires, Dow Portugal, Quimigal (presently CUF) and Uniteca invite entities from the local community - the Estarreja Town Hall, Fire Brigade, Visconde de Salreu Hospital, Health Centre, Police - GNR - and APEQ (Portuguese Chemical Industry Association) to form a community panel representing the various social-economic areas and be able to intervene more adequately in handling environmental issues, health and safety, and contributing to the sustainable development of Estarreja. This is how, in 2001, PACOPAR came about. In 1993, the companies had already begun issuing their environmental report covering Responsible Care, which was later converted to the present PACOPAR Magazine format.

The Panel began with 12 members and now has 20, having gone through many activities, amongst which are: the organization of conferences and thematic seminars on the environment, health and safety; cooperated with the fire-brigade and civil protection to improve emergency response (such as the creation of a Permanent Civil Protection Service); emergency drills; revision of emergency plans; promoted scientific studies on environmental screening; educational activities promoted by schools; Open Door days; collecting information for hospitals and training doctors to improve emergency response; signed a protocol with the Estarreja Town Hall to provide answers to citizens' questions on environmental issues.

In 2005, PACOPAR received the European Responsible Care Award attributed by the European Council for the Chemical Industry (CEFIC). The Panel was selected out of 25 participants coming from nine European countries. It has since then, continued to develop and broaden its activity.

For more detailed information regarding PACOPAR's history, please click on the following link [www.pacopar.org](http://www.pacopar.org)



# Revisit the past 10 years

## What I have witnessed

**Alberto Augusto Linhares Vidal**



*I was asked to talk about how Estarreja developed during the past years at a time PACOPAR celebrates its 10th anniversary.*

*Doing so would imply revisiting a past beyond any timeline and, what is intended*

*is a reflection on the evolution of the relationship between the inhabitants and the Estarreja Chemical Complex, which like everyone knows, is deeply rooted in time.*

*Talking about the past is doing a selective memory exercise, selective and partial, if we consider the subjectivity of each person's point of view. Consequently, there is not only one past - but several. However, I shall be talking, though briefly, about "my" past.*

*As the past cannot be evoked in its wholeness (a gigantic task in itself), since it could appropriate the very present, it is mandatory to do so in order that it may be understood. More than that, it is a way of learning some of life's lessons with humbleness. Apart from that, the past cannot be relived, only rehearsed.*

*But there are lessons to learn from the past: paths which were tread and should not even have been opened, decisions which were taken and whose goals have not yet been met; cracks that*

*were opened, where hopes about our unknown future continue to slither.*

*However, Man is made up of all this: what we were, what we are and are not - and also what we shall one day become.*

*I recall the 60s and 70s back from the XX century where my and our Land was seen by the whole World as a place where no-one could live due to the harmful effects of the Estarreja Chemical Complex. Today, however, we look upon that past with a mixture of pride and sadness. Pride due to the progress that was reached, but sadness due to some country peace which was forever lost.*

*The effort of some very good elements that went through Estarreja and fought so that the situation may have changed was great. Many meetings were held to unite the Public and Business world at the time, changing, whenever possible, toward the importance regarding the preservation of the Region's richness, such as the one of the Antuã River and the Ria de Aveiro along with an increment of the means of communication, especially the railway from Porto to Aveiro.*

*The years have gone by in the meantime and it is in the first decade of the XXI century that, thanks to PACOPAR, our district has been able to count on the support of the companies inte-*

*grating the Estarreja Chemical Complex. These companies decided to unite all efforts to minimize some mistakes made in the past and provide a more decisive support to our development.*

*We are witness to the support we have received of hundreds of thousands of Euros to Sports, Cultural and Recreational Associations as well as to Social Aid Institutions, Humanitarian Associations and to both Private and State Schools.*

*However, we should not have any illusions: the present exists by itself. We should learn today to make options which neither let our forefathers down nor bring shame to those yet to come. I believe we are on the right track.*

*Consequently, I hope that together - Community and PACOPAR - will do more and even better towards the development of our Region, District and Country.*



*Talking about the past is doing a selective memory exercise, selective and partial, if we consider the subjectivity of each person's point of view. Consequently, there is not only one past - but several.*

The companies from the Estarreja Chemical Complex (ECC) have behavioral and internal risk control measures in addition to the legal obligation of applying the necessary measures to protect their employees against any accidents. The accident rate shows to a certain extent, the investment the companies have made in Safety. The frequency rate is reached by taking the number of accidents which caused sick-leave over the whole year, divided by each thousand working hours. The severity rate represents the number of working days which were lost during the year divided by each thousand Man working hours. The following graphs show the safety curve over the years together with the results in context.

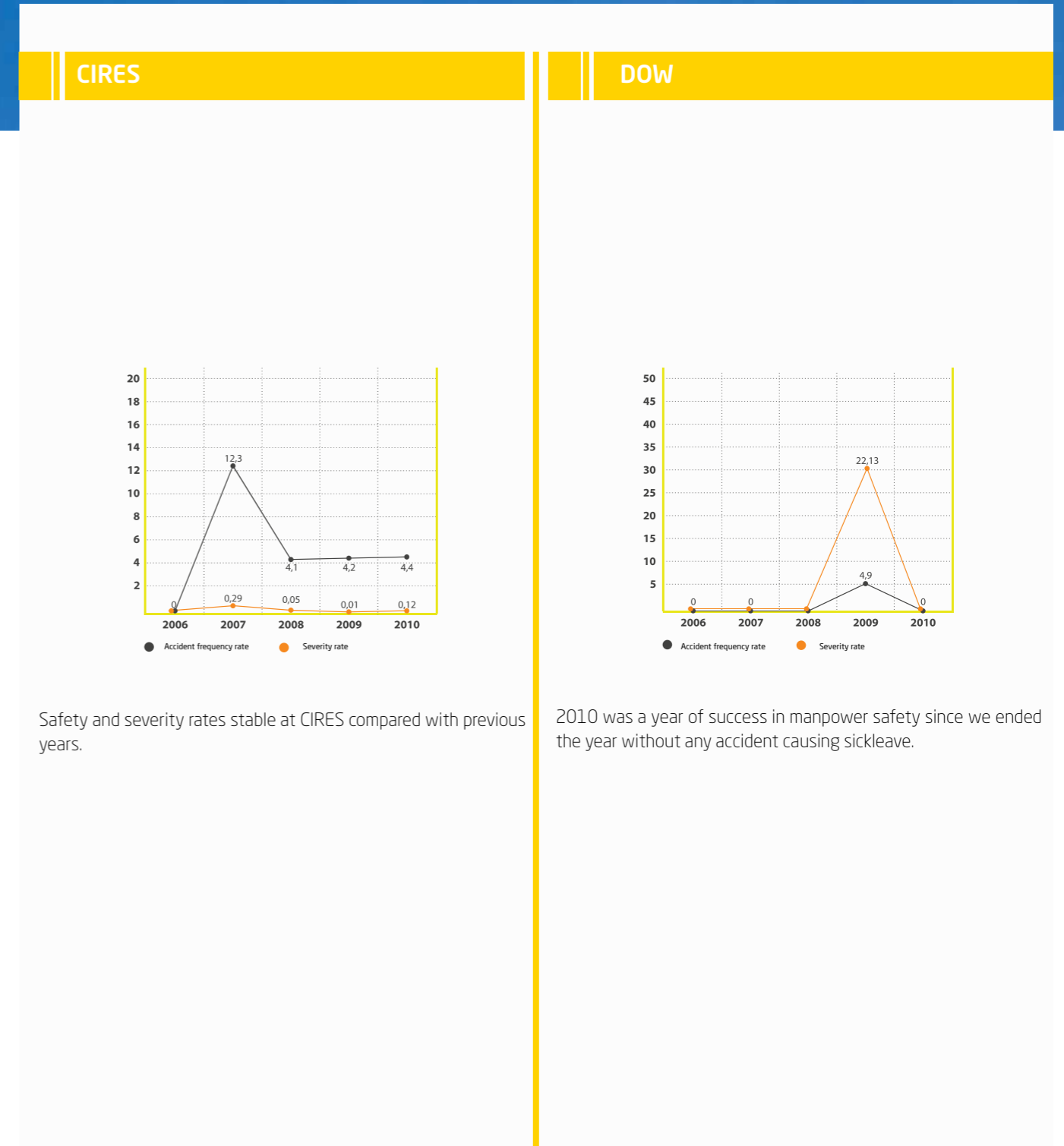
# The Estarreja Chemical Complex (ECC) Safety Performance



During the years under study no accidents happened, reason for rates being zero.

Similar to previous years, there were no accidents in 2010, maintaining good safety results.

There is a positive tendency as a result of the company prevention policy.



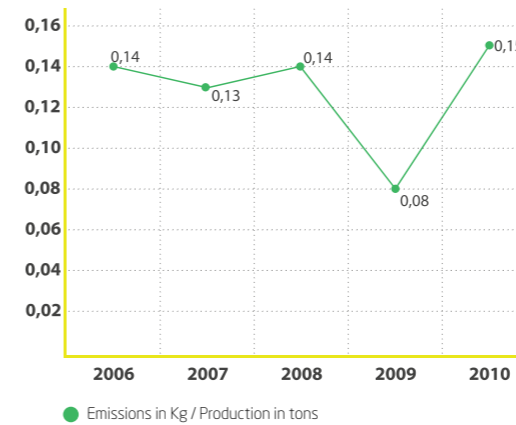
Safety and severity rates stable at CIRES compared with previous years.

2010 was a year of success in manpower safety since we ended the year without any accident causing sickleave.

# The ECC Environmental Performance

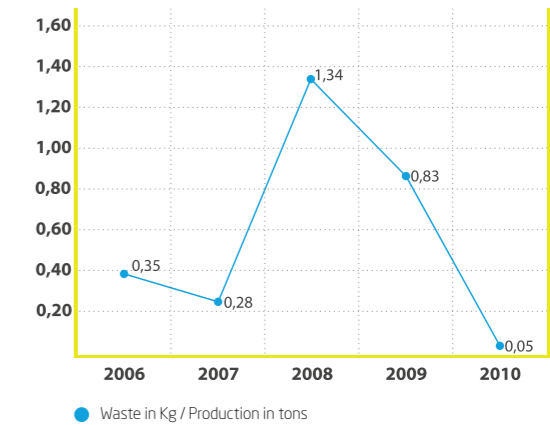
## AIR LIQUIDE

### GAS EMISSIONS



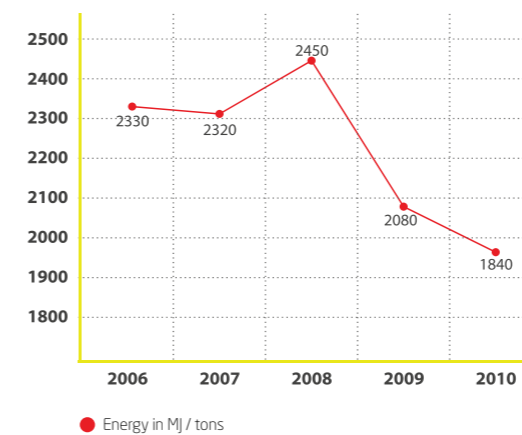
In the ratio of total emissions (tons) versus production (tons) a tendency was verified in line with former years.

### SOLID WASTE



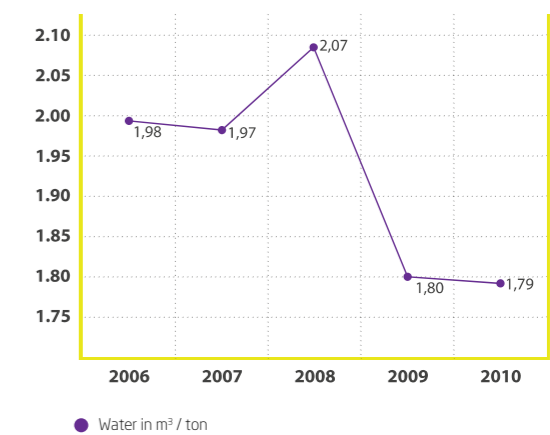
In the ratio of total waste versus production (tons) in 2010, this ratio lowered significantly resulting from a lower quantity of waste generated while the production rate actually increased.

### ENERGY CONSUMPTION



In the ratio of energy consumption (Mj) versus production (tons), in 2010, lower values resulted from an improved performance of HyCO3 - Production of Hydrogene and Carbon Monoxide .

### WATER CONSUPTION



In the water consumption ratio (m³) versus production (tons), in 2010, this indicator was slightly lower.

The environmental performance data of the companies belonging to the Estarreja Chemical Complex (ECC) show the type of industrial activity as well as the investment policy made in protecting the environment. Legal and internal measures along with continuous technological innovation, have allowed the implementation of highly efficient process systems, which minimize the environmental impact of their production processes.

The indicators are shown through a relationship of the consumptions made by production and the emission values. Gas emissions represent the ratio between total emissions (the sum of total particle emission, sulfur dioxide, nitrogen oxide, carbon dioxide, COV and heavy metals) and production expressed through the relationship of kilograms per ton.

The waste indicator expresses production in tons and the proportion of corresponding waste, in kilograms. Energy consumption is represented by production in tons and the proportion of energy consumed in Kj. Liquid effluents are not mentioned because the companies now send their wastewater to SIMRIA - the Ria de Aveiro Multi-municipal Wastewater Treatment System.

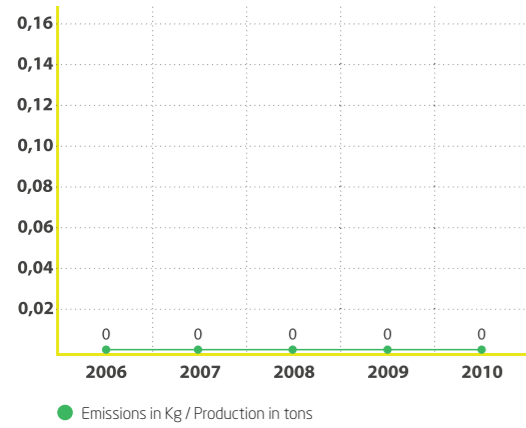
Last year, we initiated the publication of our environmental performance indicators in graph format for better understanding, a format we continue to use.

If you would like to check all the company performance indicators, you may do so through the following site [www.pacopar.org](http://www.pacopar.org)

# AQP

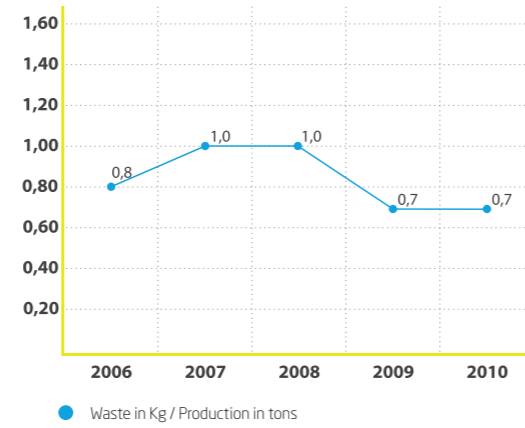
# CIRES

## GAS EMISSIONS



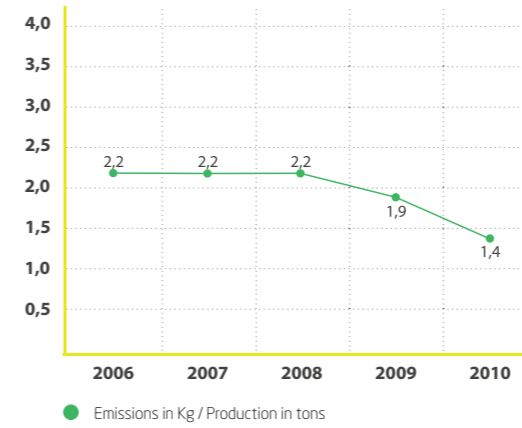
Gas emission values are very low, almost meaningless.

## SOLID WASTE



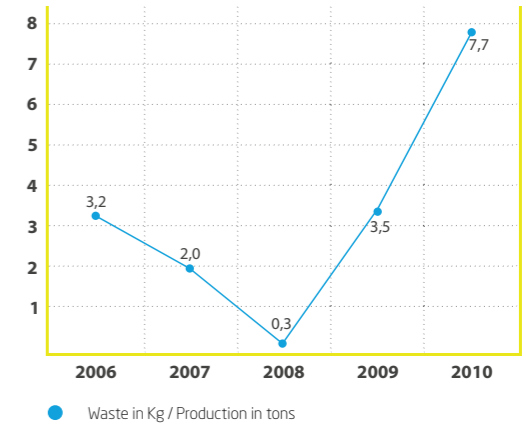
No significant changes comparing to previous years showing low production of solid waste.

## GAS EMISSIONS



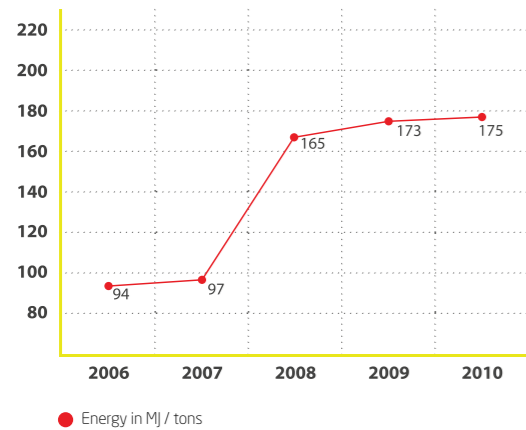
No significant investment to reduce environmental emissions, which means lower values are especially due to better operation of equipment in the PVC and vapour production process.

## SOLID WASTE



Significantly higher rise of solid waste mostly due to increase in production. However, it is made up of innocuous PVC waste with high commercial value and sent to PVC recycling industry who use it in articles of lower demand in performance. They were considered sub-products since mid-2007. As they require previous treatment in order to be recycled, APA-Portuguese Environmental Agency, does not consider them to meet the criteria to be classified as subproducts.

## ENERGY CONSUMPTION



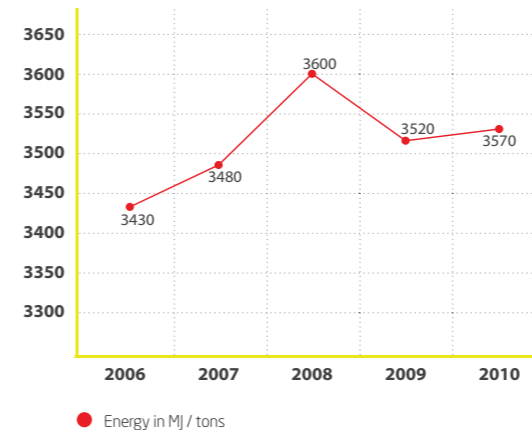
This value is not much different to last year since there were no significant changes in production.

## WATER CONSUMPTION



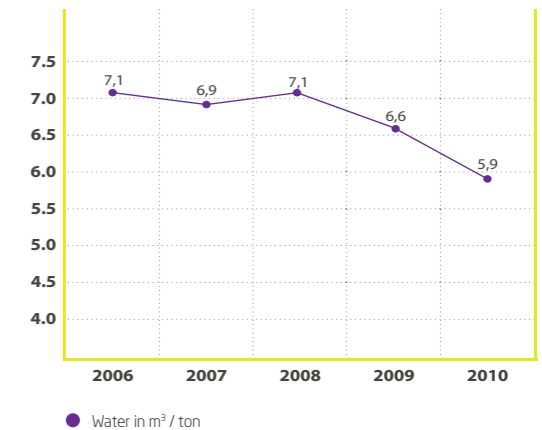
Similar to energy consumption rate, there are no significant changes due to the same reason.

## ENERGY CONSUMPTION



Values practically identical to those in the previous year. Its reduction to significantly lower level will be quite dependent of measures to be taken regarding the PRCE - Energy Consumption Rationalization Plans in order to invert the growing tendency resulting from the functioning of installations to reduce emissions which are not directly productive.

## WATER CONSUMPTION

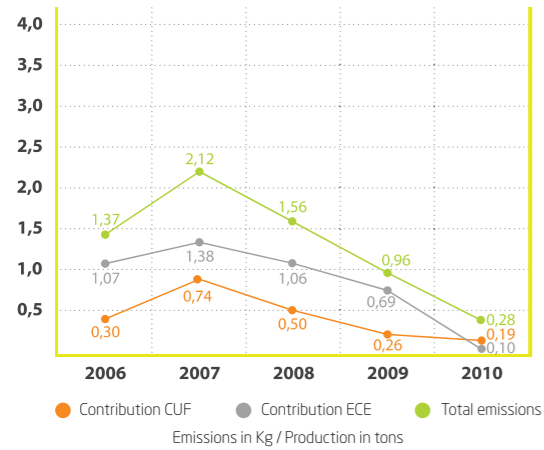


Much lower due to an improved performance of raw water treatment processes. The water is received directly from the Antuã River and at the plant.

# CUF

# DOW PORTUGAL

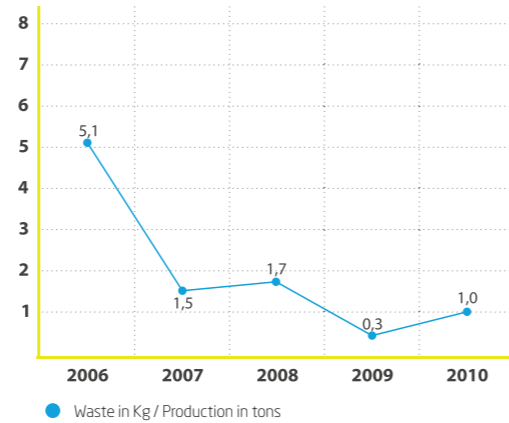
## GAS EMISSIONS



In 2010, CUF reduced its specific emissions significantly along with the quantity of pollutants which shows a continuous effort in this area. The data shown follows new emission reporting criteria.

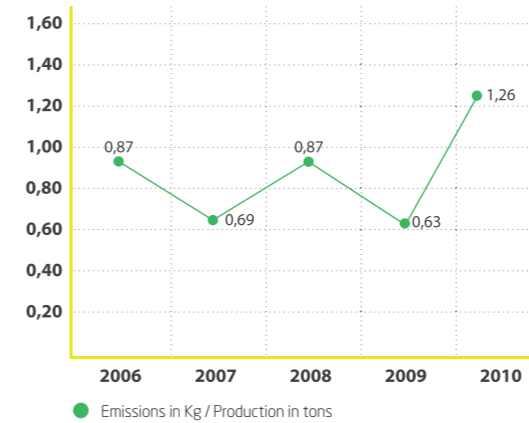
In 2006, ECE - Empresa de Cogeração de Estarreja Lda, and CUF QI integrated their emissions as imposed by the Portuguese Environmental Agency.

## SOLID WASTE



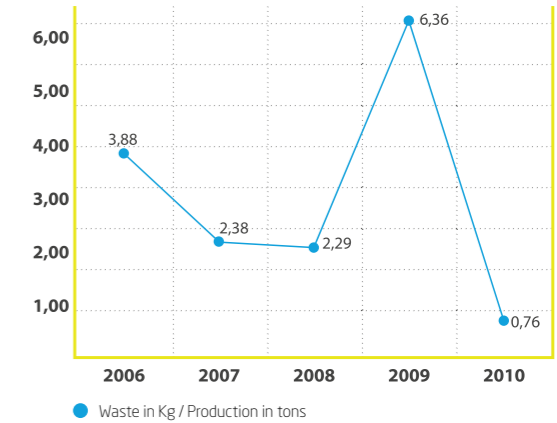
Despite the slight increase in 2010, there is a tendency toward a reduced production of waste.

## GAS EMISSIONS



Gas emissions increased in 2010 due to new parameters in monitoring plan and changes in frequency monitoring in some emission sources.

## SOLID WASTE



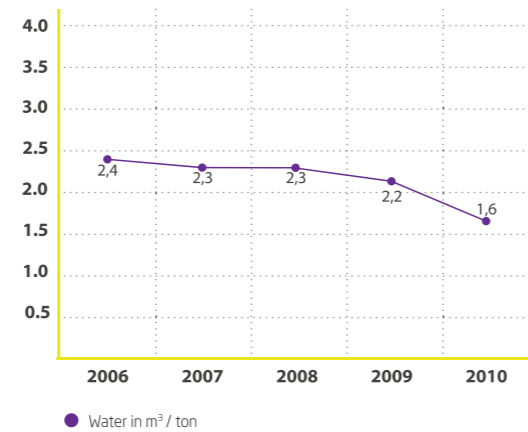
Adequate waste management has been a priority at Dow Portugal. Value-creating Solutions are continuously sought instead of disposal.

## ENERGY CONSUMPTION



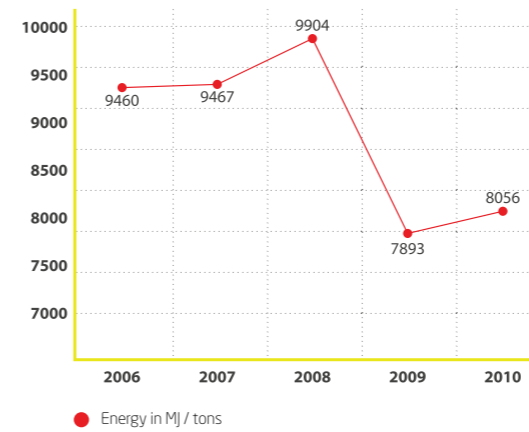
Tendency toward lower energy consumption is maintained, which show result of investment company has made.

## WATER CONSUPTION



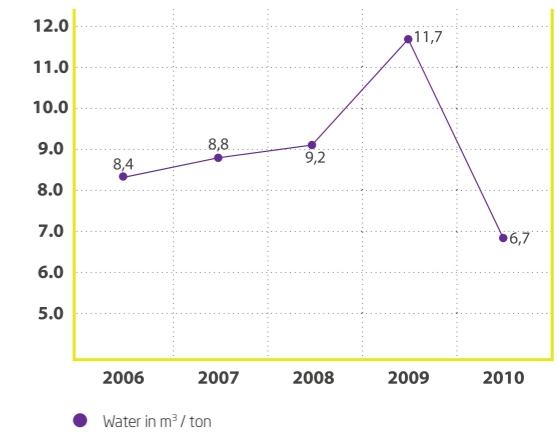
Significant reduction in water consumption in 2010 due to investment made in production process, both in water acquired as well as its treatment.

## ENERGY CONSUMPTION



Dow Portugal specific energy consumption value reduced due to increase in production capacity.

## WATER CONSUPTION



Dow Portugal specific water consumption reduced due to increase in production capacity.

# A year dedicated to Chemistry

**Ana Paula Valente**

2011 is a year dedicated to several celebrations: the International Year of Chemistry and the centenary attribution of the Marie Curie Noble Prize. Organized by UNESCO in association with the International Union of Pure and Applied Chemistry (IUPAC), the main goals this year are for the public at large to be conscious of the way chemistry replies to the great challenges around the world.

In addition, the aim is also to involve young people and consequently create enthusiasm regarding the

promising future of chemistry. Finally, and just as important, is the contribution women have given to chemistry. This is done by celebrating the 100th anniversary of the Madame Curie Noble Prize, the first woman to have received that distinction and the first person to receive two Noble prizes (Physics in 1903 together with her husband).

Chemistry and its contribution towards the improvement of health and the development of economy will be notorious along 2011.



Ano Internacional da  
**QUÍMICA**  
2011

## ■ The importance of Chemistry in our daily lives

Nowadays, Chemistry is associated with social responsibility, protection of the environment and natural resources, health and advanced technology, as well as energy and the fight against climatic changes. In summary, Chemistry is the key to the sustainability of our future. Chemistry is also a source of innovation and a driver toward economic development in almost all activity sectors.

To celebrate the International Year of Chemistry, the companies belonging to the Estarreja Chemical Complex, members of PACOPAR, explain their products to the Estarreja community along with the importance and contribution to improve people's daily lives.

# AQP

## Water, a precious resource

Beginning with the inorganic coagulants (aluminium salt) produced by AQP, there are two main groups: aluminium sulphate and aluminium polychlorides. Both are used in order to clean water (urban and industrial), eliminating suspension solids, organic matter and nutrients present in urban waste water. These products are supplied in liquid form and are mainly applied in water treatment - to produce potable water, in the treatment of in-

dustrial process water and in the treatment of effluents. All these coagulants may present different benefits, depending on the type of water to be treated as well as impurities desired to be removed.

Besides water treatment, these products are also used in the paper industry where they are applied in the manufacture of paper as well as to their water treatment system.

### Water for human consumption (drinking water)

Water is a unique and invaluable resource. Very often it contains products derived from organic decomposition and sand/clay particles as well as algae and bacteria. The pH in water may also vary a lot. The chemical treatment of raw water to obtain drinking water is, therefore, of great importance.

Water is fundamental for the existence of life; and drinking water is needed to maintain a healthy life.



### Treatment of waste water (municipal and industrial)

These products are also used in the treatment of municipal or industrial water, satisfying the strictest demands required in the production of drinking water as well as in the treatment of waste water.

### The paper industry

These products may contribute towards the optimization of processes in the paper industry increasing productivity and reducing factors which lead to higher costs, such as wood, energy and chemical products.



### Treatment of industrial process water

Water is a very important resource for almost all industries where process water is normally used and/or treatment of water for the production process. Inorganic coagulants guarantee the quality and the properties needed in water, avoiding harm to industrial equipment and guaranteeing the quality of process water.

# Air Liquide

## Air Liquide Gases present in our daily lives

Oxygen, Nitrogen, Argon, Hydrogen, Carbon Dioxide... These are only some of the gases produced at the Estarreja Air Liquide plant, a world-wide leader in the production of gases for the industry, health and environment.



**And do you know what else?** They are present in our daily lives, in many of the foods we eat or in products we use and which are produced with the help of these gases. Our gases are side-by-side with medicine: during surgery (anesthesia, in fighting pain...), in the improvement of our daily lives and mobility of people with breathing problems (asthma, sleep apnea ...). Moreover, our gases help protect the environment by intervening in water treatment so it may reach your homes with utmost quality and in the manufacture of less polluting gasoline (by removing sulfur). The list is long.



**Carbon Dioxide** - The gas in drinks we normally buy, such as beer, is acquired naturally; sparkling water also has its gas acquired partially naturally, whereas colas, sodas and some white wines acquire it by the having addition of carbon dioxide added to it.

Carbon dioxide is also used for safety purposes; it is commonly used in fire extinguishers in the form of carbonic snow. It is applied in office fire extinguishers, electronic appliances, cars, and other domestic uses since its properties avoid further ruin of material affected during a fire.



**Oxygen** - One of the most well-known uses of oxygen is in the health area. It is especially used in the treatment of breathing difficulties or in assisted breathing during anesthesia. The fabrication of windows for housing or other types of applications (car windscreens) need oxygen, which allows improved combustion of ovens during fusion and reduces the emission of pollutants.

Oxygen is also used in water treatment stations to improve their capacity and eliminate bad smells.

It is usually used to increase the production capacity of the exploration of aquaculture and improve conditions for breeding fish.



**Argon** - Similar to oxygen and nitrogen, argon is widely applied in the Food industry for the preservation of goods packed in bags or corvettes (salad, meat, sausages...), avoiding early deterioration and preserving its quality and freshness.

Another common application of argon is during the cut and welding during for the fabrication of machinery, cars and metal construction. Due to its physical properties, argon allows for a highly resistant and clean welding. This is the reason why it is so vastly used.



**Nitrogen** - Has an ample usage in the food industry, namely as a cooling agent for fridges and to freeze and transport food in isothermal containers, maintaining its quality so it may reach your table with its full nutritional value.

Nitrogen is used for the cryopreservation of tissues and organs in the health sector. Its extremely low temperature, below 180° C in its liquid state, allows cells to be frozen and stored for later use, which is the case of histamine cells collected from babies' umbilical cords. Due to the inert properties of nitrogen, it is used in different phases during the production of tyres, starting from the oven stage to pumping up the tyre with nitrogen, a method used to extend durability and reduce consumption.

You probably did not know that the game console you have at home, the radio and deck, the high resolution screen, mobile and computer... need nitrogen during their fabrication. These electronic appliances are made of electronic component circuits assembled within a protected environment, free from humidity, with nitrogen to guarantee its quality and lifespan.



**Hydrogen** - Hydrogen has been used to eliminate sulfur in fuel for years, in order to produce less polluting petrol through a process known as desulphurization.

Hydrogen has recently been applied to sustainable mobility (a fuel battery for cars and in buses). He will shortly be used as an energetic vector to fight gas emissions with a greenhouse effect, pollution of our cities and the dependence on fossil fuels.



Air Liquide gases are in the most important front-line of the most important challenges faced by our planet (health, environment...). To overcome these challenges, the Group develops innovative technology and sustainable solutions which help optimize the use of air and the planet's natural resources, promoting progress and the preservation of life.



# CIRES

## PVC, versatile plastic material

Poly chloride vinyl, PVC, is the most versatile of plastics or synthetic polymers. This product comes in the form of a white powder and is obtained through the polymerization of a vinyl chloride monomer (VCM) which in turn, is obtained from salt and fuel. Its minor dependency on fuel is considered an advantage comparing to other polymers, making it widely attractive. A demand of about 30 million tons per year makes PVC one of the most highly sold plastics. During its the processing, specific additives are used to provide it with additional properties which allow its use in the most varied final applications ranging from rigid forms to extremely flexible ones.



Its durability and excellent chemical resistance, low heat and electrical conductivity along with its performance in the presence of fire, make PVC particularly adequate for the construction industry with a long lifespan and high consumption volumes. The most well-known applications are water and wastewater pipes, wall lining, false ceilings, divisions, window profiles, electrical ducts, isolation for electric wires and cables, electric products, hoses and valves for several liquids and gases, among many other applications.

PVC is an inert and safe chemical polymer for the food industry, for the environment as well as for additives which will be in contact with food, making them equally innocuous, which justifies the frequent use of vinyl materials in demanding applications such as wrapping films, glues and laminates for food and toy packages, hospital and medical accessories such as gloves, blood packs and tubes for serum.



PVC is extremely versatile due to its various properties; it can be processed through uncountable transformation techniques such as extrusion, injection, molding through blowing amongst many other transformation methods.

About 45 to 50% of all PVC products are obtained through extrusion, mainly for the production of piping – water ducts, drainage and wastewater – window profiles, protection of electric tubes, wrapping films and sheets. Rigid and flexible PVC films may be obtained through a blow extrusion process, with widths even lower than 20 µm.

Spareparts or connections for piping, finishing for profiles, footwear and diverse technical parts are examples of

products molded by injection. Packaging such as bottles and jars with excellent transparent characteristics, shine, mechanical resistance and increased resistance to impact and compression are produced through a blow extrusion process.

Emulsion PVC resins (PVC-E) is used for the production of balls and doll parts (rotational molding), production of one-side open hollow parts (slush molding), lining for tool handles and glass jars (heat immersion) or the production of gloves in PVC (cold immersion) or cloth lining (curtains, synthetic leather) or the impregnation of cloths (impermeable clothing), flooring and carpets, mats, etc.

Presently, the Industrial Synthetic Resin Company (CIRES, Ltd) has a capacity of 200 thousand tons/year of suspension PVC, (PVC-S) and around 15 thousand tons/year of emulsion type resins, PVC (PVC-E). In its range of PVC resins, there are eight types of PVC-S and five types of PVC-E developed for all types of applications, exporting about 65% of its production.

# CUF

## Chemistry in our Lives

We have no idea of how much the world of Chemistry contributes to our modern world and quality of life. In fact, the lack of these products in our daily lives would make it very different.

Below are some examples of our products:

### Agriculture

Present in fertilizers, fungicides, herbicides and many other products which enable crops to become more resistant to plagues. Production is, consequently, greater in order to meet the needs of present consumption worldwide.

Also present in greenhouses and used for growing food, plants or flowers.

### Food Industry

They are used in the disinfection of production lines up to the packaging stage.

CUF products are found in the basic treatment of essential items to life, such as the case of water as well as for the preservation of food. This is basically done in packaging allowing food to have a longer shelf life.

### Cosmetics

They are present in the production chain of perfumes, cream, shower gel and soap.

### New technology

Some items can be easily identified in this area, such as CDs, DVDs, computers, different electronic components, mobiles, I-pods, I-pads, televisions, consoles, screens and many other appliances.

### Comfort at Home

CUF chemicals are present in the whole household beginning with the basic structure up to decoration. Some examples are: cement, isolation, window, paint, fiberglass, piping and ceramics, furniture, carpeting...



### Clothing

It never crossed our minds that the jeans with the different colours we know today have the need for chemicals produced by CUF.

New fabrics among which are animal skin or satin imitations and fibres for example, were developed based on a chemical chain we are part of.

Besides clothes, our products are also used in the shoe industry. Similar to fabrics, shoes are modernized through the use of new chemical materials.

### Sports

Innovation in clothing, especially high competition sports items, give way to lighter clothes and shoes which allow athletes an even better performance. These are present in sports items such as footballs, goal nets, basketball tables, tennis rackets, and golf bags, among many other items.

### Car Industry

An endless number of materials in this area come from CUF chemicals: airbags, anti-freeze products, car seats, mats, electronic panel, bumpers, lubricants, oil for brakes, safety seatbelts, tyres...

They are also present in racing car structures.



### Health

They are part in the production process of some medicines and vitamins, among which the most well-known is "Paracetamol" (approved for reducing fever in people of all ages).

They are present in many hospital items such as, surgery materials, medical packaging, blood containers, and clearly in products for the disinfection of operating theatres.

### Cleaning

At this level, CUF is present in a great variety of products, starting with bleach, detergents for several usages, disinfectants, products used to unclog pipes and even in dry-cleaning.

### Utilities

Our products are used in the production of credit cards, paper, pens and brushes amongst many others.



We can now understand how CUF products are so present in our daily lives, and it is only natural that we ask how they are produced.

The answer is, without chemistry we would not be who we are. Chemistry provides us with a better World.



# Dow Portugal

## O MDI e o Styrofoam™

### MDI? What does this strange name mean?

MDI (Methylene-Diphenyl-isocyanate) – the name may seem strange, but this product produced by Dow Portugal is nearer to us than we think. We find it in our daily lives, camouflaged in the most different equipment without which we cannot imagine our life.

MDI is a product derived from aniline and looks like honey in its liquid state. When mixed with Polyol (an alcohol), a rigid foam is formed called polyurethane, a name better known by the final consumer. Most of the MDI produced in Estarreja is shipped to other Dow plants in Europe for the production of polyurethane, used as a raw material by several transformation industries in the manufacture of products essential to human life.

Polyurethane foams may be obtained in several rigid levels depending on the characteristics of the product they are meant for. Following are some end applications of MDI:

### Application of MDI

- Isolation in the refrigeration industry
- Car interiors and Instrument panels
- Footwear
- Furniture (chairs, tables, decorative items)
- Sports Material (balls, rackets)
- Pavements
- Sofas
- Adhesive sealants
- Synthetic floors
- Electronic appliances (computers, televisions)
- Medical Equipment
- Packaging



### STYROFOAM™ - - the famous blue boards

Styrofoam™ is a trade name of reference for the The Dow Chemical Company rigid extruded polystyrene boards. They were invented by the company almost 70 years ago and are integrated in the Dow Building Solutions business. These characteristic blue boards are produced in Estarreja and cover the Iberian region demand. The boards contribute to a higher isolating efficiency in the building industry resulting in energy cost savings. Styrofoam™ expresses Dow's engagement in continuing its research on the potentials of chemistry to find answers to severe environmental issues, such as fighting climatic change.

Besides its high isolating efficiency, Styrofoam™ is not sensitive to water nor humidity; it possesses great mechanical resistance, easy to handle and apply, resistant to fire and to water vapour diffusion.

### Styrofoam™ Applications

Styrofoam™ boards are used for isolation in the building industry. They can be applied in building foundations, bottom layers, walls, roofs, cellars and many other spaces. Styrofoam™ has been used in several nationally renowned buildings such as "O Centro Cultural de Belém", "Palácio de Belém" (both in Lisbon), the complex III infrastructure of the Coimbra University or the Bank of Portugal.

### Styrofoam™ Solutions

- Inverted horizontal roofs
- Inclined roofs
- Isolating bridge for wall correction
- Pavements



# breves

## PACOPAR Program - Debate on the Hospital Visconde Salreu service

Another PACOPAR program took place in March 2010 under the partnership with "Rádio Voz da Ria". The "Hospital Visconde de Salreu" service was debated with Pedro Almeida, hospital administrator, José Félix manager of the Estarreja Health Center, and program resident, José Fernando Correia. The discussion was centralized on the number of appointments for the hospital Specialists, considering the National Health Care contingencies.

## Publication of the book called "Estarreja Património Natural - BioRia" (BioRia-Estarreja Natural Patrimony)

"Estarreja Património Natural - BioRia", focuses on the diversity of the Baixo Vouga Lagoon natural resources. The edition published in May 2010 was supported by PACOPAR, and consists of a collection of photos and information on the BioRia natural resources and scenery. The publication of this book was one of the projects contemplated in the PACOPAR donations program in 2009.



## PACOPAR Companies support 13 community projects

The PACOPAR companies supported 13 community projects with 73 thousand Euros. These funds contributed to the implementation of educational, scientific investigation, social care and environmental protection projects. "ASE - Associação de Solidariedade Estarrejense", "Associação Cultural e Recreativa - Saavedra Guedes", "Associação de Pais e Encarregados de Educação da EB1 do Agro", "EB1 de Laceiras", "EB1 de Pinheiro - Veiros", "EB1 da Póvoa de Cima", "EB1 Senhora do Monte", "EB 2,3 Prof. Dr. Egas Moniz - Avanca", "Associação de Solidariedade Social Filantrópica Veirense", "Cerciesta", "Fundação Cónego Filipe de Figueiredo", "Santa Casa da Misericórdia de Estarreja" and the "Aveiro University" were the entities supported by PACOPAR companies (Air Liquide, AQP, CIRES, CUF, Dow Portugal and TJA). This support was contemplated in the PACOPAR annual donations program.

## Information on the study of the "Degree of Contamination in time and space of the area surrounding the Estarreja Chemical Complex"

After the results on the study "Degree of Contamination in time and space of the area surrounding the Estarreja Chemical Complex" were shown by the Aveiro University (UA) to the PACOPAR members during a quarterly meeting in 2010, the non-technical report with these results are now available in the Panel's electronic website.

The goal for the first phase of the project was to study the contamination of ground, vegetation and subterranean water in the area, comparing recent analysis to older ones performed in 1993 and 1994. After the conclusion of the 1st phase of the study, PACOPAR supported the second phase, already ongoing, which is investigating whether the concentration of some chemicals has affected the population residing in the area.

## 75 politicians and the Estarreja Council at Open Doors

About 75 politicians and the Estarreja Council participated in the PACOPAR Open Doors in October 2010. The intention was to inform about the reality of the Estarreja Chemical Complex (CQE). A seminar was held to inform about the companies and Panel's activities followed by a visit to each site in order to learn the specifics of each production process. The event ended with the plantation of 50 Olay trees along PACOPAR Avenue, reflecting one of the Panel's objectives: plant trees and create natural beauty around the Estarreja Chemical Complex.

## PACOPAR reinforces PAME operation

In order to reinforce the operation of PAME (Protocol for Mutual Aid in Estarreja) - signed by the Chemical Complex industries and carrier TJA, the PACOPAR Risk Prevention Team promoted two drills in order to increase responsiveness and create synergy during emergency situations. One of the drills was led by CUF - QI with the transport of hydrochloric acid in a TJA tank truck. Another drill, a leak in the Hydrogen pipeline, followed by a fire was coordinated by Air Liquide. These actions involved technicians from the companies belonging to the Panel as well as the fire brigade, so that everyone would be apt to provide mutual help intervene in an emergency.





# breves

## PACOPAR helps schools to elaborate Emergency Plans

PACOPAR is cooperating with the Avanca, Estarreja and Pardilhó Integrated Schools as well as the Estarreja Secondary school in reviewing and elaborating their internal emergency plans, through the Risk Prevention Team. Specialized personnel work together with Civil Protection as consultants to the school Heads. The work is well advanced at the Pardilhó Kindergarten and Primary Integrated School after checking the dangers and needs on a safety level, focusing on signs and the disposition of fire extinguishers. The activities have followed the fire protection legislation.



## TJA adopts eco-efficient tyres

Conciliating less environmental pollution together with cost reduction, Transportes J. Amaral have been replacing tyres which now economize fuel and provide additional safety conditions. These innovative tyres offer an optimized surface contact resulting in a greater stabilization of mass load, increased life span, less fuel consumption and 95% added rubber durability, reducing transportation costs. Therefore, these tyres lower the consequent CO2 emissions.



## HVS - has more patients with external appointments

The "Hospital Visconde de Salreu" saw an increase in its appointments for external patients reaching its historic maximum in 2010, according to its activity report. The hospital increased the Operating Theatre working hours which resulted in additional surgeries. The consolidation of ambulatory surgery namely to eye cataracts, has contributed to a reduction of the State waiting list in this domain.

## School sports and ecologist champions at the Pardilhó Integrated School

Sandra Almeida from the 7th Grade and Tiago Ramos from the 9th Grade, both from the Pardilhó Integrated School won, respectively, the National cross-country School Sports for girls and the National boys Mega Sprinter Championship in 2010.

The School also stood out in Ecology. Students from the 8th D Grade created a Recycled Mascot in 2010 which became the symbol of the III Estarreja Annual Social Network in October 2010 under the theme "Recycling and Volunteer Work". The 1,5 metres mascot was made out of waste cloth.

In the environmental area, the school received another "Green Eco-School Flag" hoisted in November 2010. This award is part of the Eco-School Program, an international school project promoted by the "Fundação para a Educação Ambiental" (Foundation for Environmental Education), a non-state European organization supported by the European Commission.



## Ovar Police "GNR" alert to risks of the Internet and assaults to the elderly

The Police, "Destacamento Territorial da GNR de Ovar" (DTGO), have been giving speeches to the Primary and Secondary schools in their area about the dangers of an inadequate use of the Internet. The objective is to transmit the necessary preventive care and how to react against risks online that children and teenagers may be subject to. These initiatives are developed by the DTGO Special Nucleus Program, "Núcleo de Programas Especiais do DTGO", under the Cooperative Protocol between the Portuguese Telecom Foundation and the Police ("Fundação Portugal Telecom" and "Guarda Nacional Republicana").

DTGO has developed activities for the more isolated elderly on awareness and safety measures in case of an assault under the program "Support 65 - Safety for the Elderly", ("Apoio 65 - Idoso em Segurança"), held by the Police. The objective is not only to bring the elderly closer to the Police but also to increase a feeling of safety.

Environmental care has also been an important activity in this police force-area. In 2010, the DTGO Environmental and Nature Protection Team (EPNA) recovered 42 birds. EPNA integrates the DTGO Environmental Protection Nucleus of which the Forest Protection Team is part of. EPNA activities include checking the extraction of illegal inerts, recovering birds and reptiles as well as other species, checking abandoned waste and detection of illegal discharge of waste water, preventive measures against fires and investigation of its causes as well as validation of burnt area.



# breves

## Business and healthy meals at ESE

The Estarreja Secondary School (ESE) created the Business Club in February 2010. This Club has already held several initiatives, most of them with the support of the Estarreja Business Incubator. The first pilot competition called "Innovative Business Ideas - 2010" was an initiative implemented in an 11th Grade class who were taking the Professional Technical Management Course. The aim was to stimulate innovative ideas amongst young people in the business area.

Four business ideas were awarded cash prizes by Dow Portugal. In 1st place was a project which aimed at recycling cigarettes and turning it into cloth; in 2nd place was the idea of a health food take away and the construction of supermarket trollies for people with disabilities; the 3rd place was for the creation of a digital touch notebook. The success of these projects led the General Education Inspection Department to recognize the Business Club as an innovative project.

In terms of Health Education and for the 3rd consecutive year, ESE students demonstrated it was possible to join pleasure and health when eating. On 16th October, World Food day, a competition called "Art on your Plate" was held, which consisted of colourful meals for lunch at the school canteen. Maria José Alves and Almeida Santos, from the company PACOPAR and Almeida Santos from CUF - QI and representatives of PACOPAR, were present.

With the intention of increasing opportunities within the European labour market, ESE applied for the 2010 Leonardo da Vinci program, which gives Portuguese

students the opportunity of undergoing professional traineeship in foreign countries. Several students from Management and Socio-cultural Animation are part of "ESE in European Context - a proposal for the Future".

## Pardilhó School Centre an example the Town Hall wishes to replicate

The Estarreja Town Hall (CME) inaugurated the Pardilhó School Centre on 5th October 2010, after the requalification of two old Primary School buildings dated 1940. € 939.499,12 in construction works had a 70% support coming from the European Regional Funds for Regional Development Fund. José Eduardo de Matos, Mayor of the Estarreja Town Hall, expressed his wish to see a replicate of the model "in Avanca by joining EB 2,3 school in Avanca and the Mato EB in Estarreja" with the "growth of Padre Donaciano" resulting in "an Integrated School." In the meantime, the works at Padre Donaciano de Abreu Freire are already underway, which will integrate the Primary School with the Salreu Kindergarten, South of the District.



## SEMA - celebrates 15 years with more challenges

SEMA - Business Association - commemorates its 15th anniversary in 2011 with an activity which has positioned it as an important agent for the growth of the economy in the region by supporting businesses in its area of jurisdiction namely Estarreja, Murtosa, Albergaria-a-Velha and Sever do Vouga.

# Lubélia Nogueira Penedo

Contribution of the National Responsible Care® Coordinator  
General Director of APEQ - Associação Portuguesa das Empresas Químicas



## 2010

The crisis is still here, although the European Chemical Industry has given indication of a slow and reliable recovery regarding production growth. This is the result of the European industry's long experience, the safety of their products, know-how and constant innovation, well-structured productivity and competitiveness.

Portugal was no exception and stood in a comfortable and unexpected position, exactly as it was said in the PACOPAR magazine last year, in terms of expectations. The prognosis for the near future would also be encouraging, were it not for the political crisis that suddenly swept across the southern Mediterranean countries and some Asian countries in early 2011.

We expect the World shall know how to use the needed instruments to solve this serious situation in a peaceful manner, hoping that fuel prices do not continue to grow and that we shall not have to face a shortage of raw materials.

## O REACH

The first phase of registration was done on time. Europe and the world seem to have fulfilled their obligations! The Safety Data Sheets, much larger and more complex than expected, have been updated with some difficulty, gradually overcome.

The List of Candidates is growing.

The industry is preparing the Regulation's following phases.

However, enforcement appears to be more focused in the midst of Europe than to its borders, and every day we are loaded with lists of products coming from the Eastern countries. From the side of the competent au

thorities, the answer is silence...

What is this Europe that despises its citizens and does not bother defending them?

## O PACOPAR

In late 2009, the Secretariat of the Responsible Care Community Advisory Panel held by DOW Portugal for a number of years, was handed over to Air Liquide for the biennium (2010-2011).

- The figure of a Coordinator was created for the first time
- Three of the usual quarterly meetings were held and all of them with the collaboration and presence of APEQ
- Pacopar supported the Bioria "March for Water" initiative, a gesture of great citizenship
- APEQ collaborated with the Pacopar-2009 magazine and promoted the distribution of about 350 copies amongst official and foreign entities in English and Portuguese paper and electronic versions.

## O CEFIC

During the Cefic General Assembly held in Rome on October 1st, Mr João Jorge Gonçalves Fernandes Fugas, APEQ President at the time and CEO for CUF - Industrial Chemicals SA, a company member of PACOPAR, has been elected to the CEFIC Board of Directors, the summit Board of the European Chemical Industry Council.

It is an honour for him and the recognition of Mr. Fugas' great merit, by providing a valuable contribution to this Institution of the Chemical Industry, Head of Responsible Care® in Europe in conjunction with ICCA - International Council of the Chemical Associations.

# Cires: 50 Years of Activity in Estarreja

CIRES was founded on 23rd November 1960, and contributed highly to the development of the base plastics industry in Portugal. It was a long business negotiation involving Japanese stakeholders, the Portuguese government and industry, banks and many more. CIRES have been responsible for leading a modern plastics industry in Portugal by providing high quality plastic raw materials, not always accessible in the market, to its customers. As the domestic market was relatively small at the time, the idea of exporting any excess product was, in fact, considered since the very beginning. This possibility would contribute to an increase of the country's transactions.

The plant took two years to build, a record time back then. On 23rd November 1962, the first production of experimental suspension PVC proved to be a success. The results were encouraging, especially due to the quality of the product, which rapidly led to sustainable sales as of January 1963.

Since then, CIRES has not stopped increasing its production capacity, led both by market needs as well as the firm purpose to position itself as a successful producer of PVC resins at the Iberian level. Technology has always been the key to the company's success, and Shin-Etsu's support has been an invaluable contribution. Not least important is the plant upgrade as well as a constant attention given to improving the performance and knowledge of its human resources. Such factors have provided CIRES with the capacity to face challenges posed by a global and liberalized market, especially after 1986, when Portugal and Spain joined the EEC - European Economic Community, today the EU - European Union. The Company's priority has always been to consolidate its business and integrate the value of the PVC industry,

which actually occurred with the acquisition of the PVC compounds business. Optimization of CIRES operation has been possible through a strict control of costs.

In 2009, CIRES integrated itself fully within the Shin-Etsu business structure and prepared itself to embrace new and more demanding challenges for the next 50 years. The Company shall thus be part of a stronger and vaster business environment.

## CIRES 50th Anniversary

Cires held several different activities to celebrate its 50th anniversary. In the morning of November 23rd, its anniversary, five trees were planted in front of the administrations building, each representing a decade in the life of the Company. The ceremony was held with the presence of Estarreja's Mayor, José Eduardo de Matos, the President of the Business Council, Ricardo Bayão Horta, the Vice President, Fumio Arai and the Shin-Etsu's Spokesman, Toshiaki Maruyama. Luís Montelobo, CIRES' General Manager, and the representatives of companies



From left to right: Eng. Luís Montelobo, Eng. Toshiaki Maruyama, Dr. Fumio Arai, Professor Ricardo Bayão Horta and Dr. José Eduardo de Matos.

owned by CIRES, António Cruz for PREVINIL, Javier Sampedro for CYGSA and António Marrafa for BAMISO, were also present along with the company's Workers' Associa-

tion represented by Helena Oliveira and Albino Ferreira. The trees also symbolize just as many other realities which include Shin-Etsu, CIRES, the companies within the CIRES group, the Estarreja local community and employees. Lunch was held with all of the employees and at 4 p.m., a retrospective photo exhibition position of the company's 50 years opened under its registered name (till 22nd December 2010), was shown atin the Estarreja Municipal Library.

The Mayor, José Eduardo de Matos, thanked CIRES contribution towards the development of the community along all these years and highlighted the impact it has had on the local economy both as a direct and indirect employer, giving it the status of a socially responsible enterprise. The "Open-Door-Day" was held for former

employees who wished to visit the site during the morning of 27th November. A musical event was held in the afternoon at the Estarreja Cine-Theatre with the participation of the "a par d'Ilhós ensemble" and the Orchestra, "Orquestra do Clube Cultural e Desportivo de Veiros"; this event was open to the whole community. The population was extremely receptive to these initiatives, especially the photograph exposition which attracted a great number of visitors. In fact, the Company received many requests for photos and additional information regarding some of the events.

Along with the reason for the commemoration in itself, such initiatives allowed everyone to have a better knowledge of CIRES' reality, looking upon the Company as one of transparency and openness.

## Main events over its 50 years

1962 - Startup of PVC production

1972 - Start of the Aveiro terminal infrastructure in order to receive VCM from the petrochemical industry by ocean freight.

1976 - Celebration of the technological agreement with Shin-Etsu to produce suspension PVC, which would avoid the formation of residue in the reactor walls.

1982 - Production of emulsion PVC.

1989 - Startup of the new PVC factory in Estarreja equipped with greater capacity reactors.

1989 - CIRES Lab was certified by IPQ- Instituto Português da Qualidade (Portuguese Quality Institute) to perform quality control of its PVC for the very first time.

1991/1992 - CIRES positions itself within the added value chain by managing the production of PVC compositions both in Portugal and Spain.

1993 - Shipment of VCM by pipeline from the Aveiro terminal to the factory in Estarreja, putting an end to the transport of this raw material by road, consequently reducing environmental impact, less

wear-and-tear of roads, and an increased safety to the population.

1993 - Certification of the Company's Quality System for production and sale of PVC according to NP EN 29002.

1994 - Startup of the electricity and vapor co-generation unit. These utilities are of vital importance for CIRES' production.

1999 - Certification of the Company's Quality System for research, development, production and sale of PVC according to NP EN ISO 9001.

2001 - CIRES reaches an annual production capacity over 200 thousand tons.

2002 - Certification of the Company's environmental management system according to NP EN ISO 14001.

2008 - Certification of the Health and Safety management system according to OHSAS 18001.

# From the Traditional "Entrudo" in Estarreja to a "civilized" Carnival

**Dina Sebastião**

Today's Carnival parades in Estarreja still hold some heritages from the traditional Portuguese "Entrudo" (see explanation in box "Entrudo"). Some groups still maintain the original joking and caricature characters along with everyday-life situations. These characteristics date back to the XVIII century, and are still found in Estarreja at the beginning of the XX century. However, this is strongly fought back in an effort to introduce a "civilized" Carnival as a result of the Republican ideas brought into Portugal. The introduction of the "Flower Battle" in Estarreja is an example of this.



Rural areas from an early XX century Portugal, still commemorate a traditional "Entrudo" (see box) with spontaneous popular parades, joking rituals, madness, fun, criticism and the caricature of the traditional society of the time. Uniforms and masks were improvised with what was found "at hand". When we research old newspaper editions from Estarreja, such as "O Jornal de Estarreja" and "O Concelho de Estarreja," we verify, in the early 1900's, remnants of this type of Carnival remains dating back to the early 1990's, still persist. We find descriptions of parades in the old Estarreja periodicals, with characters such as "Zé Pereira" dressed as a religious "Je-

suite", and the "Piorra" who "played berimbu"; we find people who "came from Murtosa", and the caricature made by jokers about "Priest Vigario", who "wore an ugly mask, showing bad humour."

The "Entrudo", which emerges from almost spontaneous manifestations, faces enormous criticism in Estarreja coming from those fighting for a modern Portugal, similar to that in European Cities. Signs of a new urban middle-class Carnival reach rural areas, and Estarreja is no exception. Newspapers show opinion texts which appeal to more modern customs such as those seen in countries "heading civilization". European winds start blowing, especially from Paris. The difference between foreign and Estarreja Carnivals stand out, in favour of foreign customs with "fun phrases recitatives" or the "Flower Battles."

The "Flower Battles", a parade of decorated cars with people wearing masks and throwing flowers, reaches Lisbon and Oporto, imported from the Nice Carnival. The 20thXX century Estarreja, publishes a reports this happening for the first time in 1903 which, speaks speaking of a "Flower Battle animating the country county". In 1911, there is once again news of a Carnival organized by the "Pardilhoense Club". The newspapers wrote this was an initiative which made the people happy, since they were only "used to watching some rude people

**"Entrudo"**  
Originally, the word used to designate the three days before Ash-Wednesday was, "Entrudo" (from the Latin word "entroitu" – enter; in other words, enter the Easter period). The word is no longer used now, since the adoption of the popular Carnival habits.

with masks, who were not at all funny." Despite the sporadic manifestations, the Flower Battle does not root itself to the point of having continuity in the Estarreja tradition. But the strong criticism does away with the "Entrudo", bringing in one which privileges a closed space with organized "balls", "dances" and "recitals". These customs seem to dominate the Carnival festivals during the 20's. On the other hand, there seem to have been people who were sorry to see a modern Carnival taking over a Portuguese custom. In the "O Jornal de Estarreja", in 1922, we read "Old King Carnival has exiled itself to doubtful regions of civilization, and its soul was killed at the place where it had lived happily in its simple, human and laughing explosiveness".



According to the history found in the Estarreja Carnival Association (ACE) site, it is in the 60's that the first spontaneous groups animating the streets appear, attracting "a few hundreds of people" to the Francisco Barbosa Square. In 1973, we see the first efforts to have a more organized Carnival. Political instability in 1975 "threw Carnival into forgetfulness", only broken by some groups who made a point of not letting tradition die. Thanks to much persistence, the organizing association asked for support from the Town Hall in 1978 in order to have a Parade within a closed circuit, for the very first time. Tickets were paid, and the money was used to form the institution of the Estarreja Carnival with organized groups. In 1983, "The Pimpões" are the first group to appear, and the first samba group, "Os Carrecas", appear in 1986. In 1985, the first Children's Car-

nival is organized, and the ACE (Estarreja Carnival Association) is established in 1988 "with the aim to organize and promote Carnival parades in the town", a city today. Since then, Carnival has been innovating and growing to its actual size, with four samba schools and 11 groups including a catwalk group.



**The Origins of the Carnival**  
The origins of the Carnival "Entrudo" are associated with the Christian calendar and the "Roman Saturnais". The "Entrudo" represents a kind of freedom, a preparation for a time of contention over the Easter period. The origin of the word comes from the Latin word "Carna", meaning meat, and "val", meaning good-bye. In other words, fasting during the time just prior to Easter, a principal of the Christian theory, which connoted connotes to the pagans to the "flesh", was the link to the with terrestrial things, as opposed to Christian spirituality. Mythological explanations take the Carnival "Entrudo" festival back to the Baco and Saturn rituals, holding cult to the dead with fire to free Man from evil spirits. A doll was burnt, which symbolized the evil spirits. Portuguese tradition also has the burning of the "Entrudo", symbolized by a doll.

Article based on the project "Carnival in Estarreja - The Battle for Civilization", produced by Dina Sebastião during the Seminar "Socializing and Daily Life", from the Contemporanean Economic and Social History, at the Language University in Coimbra, 2006/2007 school year. e Letras da Universidade de Coimbra, no ano lectivo 2006/2007.



# House-Museum Marieta Solheiro Madeira

by **Delfim Bismarck Ferreira**

**Conservador da Casa-Museu Marieta Solheiro Madeira**

António Madeira's decorative art collection may be visited at the house he once lived in and later transformed into a House-Museum in Estarreja in 1988. The exposition is spread over fifteen rooms where foreign and Portuguese art of very fine quality may be seen. This collection shows art from a period between the XIV and XX century, and includes paintings, sacred art, furniture, ceramics, etc.

## The building

The Marieta Solheiro Madeira House Museum was ordered by Dr. António Madeira to the "ARS - architects", in Porto, and was built in 1949 for the home of the founders of this museum.

"It is a finished example of a reinterpretation of architecture, which was to have been the proposal of a "regional" style from the ARS - architects, though showing traces of an experimental non-conformance".

After D. Marieta's death in 1985, Dr. António Madeira decided to change his home into a House-Museum dedicating it to the person who had always been his great love and companion, "in sweet memory of she who was the greatest worker, the most diligent and obscure person".

This dream made it possible to have the House-Museum open its doors officially to the public in May 1988.



## The Foundation

The wish to perpetuate D. Marieta's name, made Dr. António Madeira write a Will in April 1922, where he left almost all his property to the Solheiro Madeira Foundation. He created the Foundation in December that year, and made it a point that it should be called the Marieta Solheiro Madeira House-Museum.



The Foundation became his heir, and was officially recognized in 1997, having been attributed the status of Public Institution on 22nd October 1999.

As a consequence, the House-Museum began its works in July 1999 in order to adapt the space into a Museum, which would guarantee the safety of its contents. The works were finished in April 2001, time when the House-Museum opened its doors to the public.

## The Museum

The collection is characterized by a very eclectic taste, with a total of about 1.400 pieces of art. Several collections may be found, with special reference to paintings which integrate pieces of art from: Rivera, Didacus Calvert, Diogo Teixeira, Gregório Lopes, Josefa de Óbidos, Columbano Bordalo Pinheiro, Carlos Reis, Martinez Rúbio, João Carlos, José de Guimarães and Jorge Barradas,



among many others; sacred art is composed mostly by the imaginary from the XVI to the XVIII century; Portuguese furniture from the XVIII to the XIX century and ceramics, mostly Portuguese, from the XVII and XIX century. Gold and silver pieces are also found as well as tapestry, European and Oriental ceramics, textiles and traditional art.

The house is quite marked by the long presence of two of the couple's artist friends:

The Madrid painter Fernando Martinez Rúbio and painter and writer João Carlos Celestino Gomes; dozens of their works may be found throughout the whole house. Along the decades, the couple collected a vast number of pieces of art "acquired according to fashion during the last decades of throwing out everything old, and from the end of the Spanish and II World War, which allowed lovers of art and good taste rare opportunities to acquire under very good condition, many pieces of art worthy of being seen, that is, worthy of being defended and loved".

## The Collector

António Mota Godinho Madeira (1912 Silves - 1996 Estarreja), married D. Marieta Adelaide da Mota Solheiro (1912 Melgaço - 1985 Estarreja).

In 1936, he was named Municipal Veterinary Doctor and later Municipal Health Inspector for the Estarreja and Murtosa Towns, reason for coming to live in Estarreja that very same year, the town where they stayed until the end of their lives. He was Consultant for Nestlé and for the Favorita chocolate factory. Since the 50's, he worked for the wood industry as partner of the Inflora, E.M.A. and Madeiper factories, these last as sole suppliers of wood to the "Companhia de Celulosa de Cacia". He was author of several works, participated in many conferences related to his professional activity, giving special attention to the veterinary and milk area.

With an uncommon sensitivity, he met with renowned individuals from Science, Literature, Arts and Politics, such as the Noble Prize for Medicine, Egas Moniz, among many others.

### House-Museum

#### Marieta Solheiro Madeira

Rua Prof. Egas Moniz, 300

3860-387 ESTARREJA

Telf. 234 842 241

[www.fundacaomadureira.com](http://www.fundacaomadureira.com)

[info@fundacaomadureira.com](mailto:info@fundacaomadureira.com)

#### Opening Hours:

Monday to Friday: 9h30 to 12h30 and 14h00 to 17h00

Saturday: 9h30 to 12h30

Closes on Sundays

Free Entry

#### Library:

Around 1.800 works (Literature, History, History of Art and Veterinary Medicine)

#### Educational Service:

School visits, general and thematic visits, depending on previous appointment

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