NOUVELLE AVEIRO MAROC

Morocco

Consultation on development of climate change adaptation strategies for companies

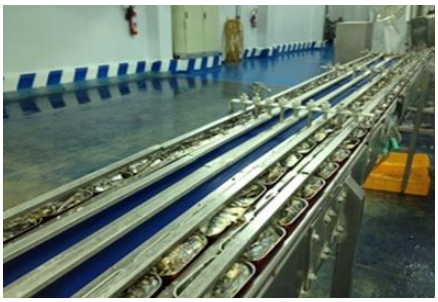
Facing the impacts of climate change is a key challenge of this century - not only for governments and communities, but also for businesses. Rising prices for raw material, energy and water, damages of transport routes, or more frequent gaps in the supply of goods - businesses and in particular SMEs are now facing increased climate-related risks. At the same time climate change offers them a range of business opportunities.

This case study was developed under the GIZ global programme "Private Sector Adaptation to Climate Change (PSACC)" which aims at building the capacities of SMEs and the private sector in the field of Climate Change Adaptation. PSACC developed the climate risk management tool "Climate Expert" (www.climate-expert.org). Climate risk management tools provide information for SMEs to build adaptation capacity and to develop individual adaptation strategies. In addition to assessing vulnerabilities, the tool includes guidance on assessing the costs and benefits of the different climate risk management options.

About the company

AVEIRO is a fish processing company founded in 1946 and based in Agadir in the semi-arid region of Souss Massa. The cannery factory is located 20 km away from the Atlantic coast in Ait Melloul industrial zone and most of the fish stocks come from the ports of Dahkla and Laayoune, located on the southern cost of Morocco. Around 600 000 cans are produced every day and commercialized under three different labels and client labels.

Location	Locality of Agadir Industrial Zone Ait Melloul
Sector **Products**	Agro and Fish processing company Canned Fish (sardines, mackerels, and tuna fishes) for export
Company size	Turnover : 35 mio EUR Employees : 300 full time; 700 seasonal



Picture credit: adelphi, AVEIRO's production site

How is the company affected by climate change?

Given the geographic location as well as the vulnerability of the fishery sector, the exposure of the company to climate change is high. Rising temperatures, erratic and heavy rainfalls, as well as more frequent heat waves and severe droughts belong to the most pressing climate phenomena which have negative effects on the business operations. The company has already experienced floods within its premises and stockage stores, delays and product damages in its supply chain because of unpractical transport roads, or a reduction of 5 % of the productivity of its employees during high temperatures. Given that fish processing is a very water intensive production process, the increasing scarcity of water resources in the Souss Massa Region is also putting business operations at risk, all the more since an increase of water prices is expected. At the same time, the core of the business of the company is threatened in the long term, given that climate change - with the acidification of oceans, rise of sea temperatures etc. - is also accelerating the migration and decline of specific fish stocks, e.g. sardines, which represent more than half of the company's production

Key climate phenomena

The effects of climate change are more and more present in Morocco, which has been identified as very vulnerable country to climate change by the 4th IPCC Assessment Report. Morocco and particularly the Souss-Massa as semi-arid coastal region are affected by increase of average temperatures, changing rainfall patterns and the sea level rise. Extreme climate events e.g. droughts, floodings and heat waves have become more and more frequent and intense. These changes have an important impact on the country's water resources, agricultural production and fishery and marine ecosystems. The company activities and the Souss-Massa´s economy based on fishing and agriculture are particularly sensible to those changes.

Picture Credit: adelphi/ Aveiro

Climate risks and adaptation measures

Climate Phenomenon and Impacts	Climate Risks	Identified adaptation measures
Heavy and more frequent rains	• Facilities and premises flooded • Stocks of finished products under water • Disruption in logistics & supply chain (blocked roads during floodings)	• Adapting parts of the company infrastructures to avoid floodings (e.g. pavement) • Integrating flood barriers • Alternative supply routes and weather alert system to inform fishers on extreme events • Strategic inventorial management
Increase temperatures and more frequent heat waves	• Power cuts & overheating of fridges during heatwaves • Deterioration of working conditions & decrease in productivity during heat waves • Degradation of fish quality	• New insulation materials for fridges • Renewable energies to reduce the company's dependence to the grid • Include green spaces at the company premises • Optimise indoor ventilation
Water stress	• Disruption in water supply because of decreasing groundwater levels • Increased water prices	• Integrating water efficient measures in the production processes (e.g. filter for gutting machines, water recycling etc,) • Sustainable water management system • Awareness raising/training of employees on sustainable water usage • Collective rain water collection system in the industrial zone
Changing physical – chemical patterns of oceans (e.g. increased temperatures of oceans, acidification)	• Decrease in available fish stocks and quality • Less variety of fish species	• Construction of a congelation factory close to the fish suppliers • Increase imports and supplier diversification • Investment in R&D for product diversification for canned food • Engagement in marine ecosystem preservation
Other cross-cutting and climate change related risks		**Identified adaptation measures**
• Stricter regulations on environmental/climate related issues • Higher constraints and requirements from international clients and banks on climate and environmental issues		• Better monitoring of environmental regulations • Development of a CSR strategy • Engagement in further Eco-friendly labels

Business opportunities

- Decrease production costs through the investment in water and energy efficient measures
- Innovate with new products (new types of cans from different fish species or vegetable/fruit)

For more information on this case study and PSACC, contact us

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