

## **Advancing Market Development Through Sustainable Business Practices: A Case Study of the Chilean Olive Oil Industry April 2014**

### **Overview**

In 2010, the U.S. Department of State established a cooperation agreement with the World Environment Center (WEC) to support the Chilean private sector to advance sustainable enterprise development. The agreement, implemented as part of the U.S. – Chile Environmental Cooperation Work Program, focused on providing direct technical assistance to local small and mid-sized companies to improve their performance and strengthening their competitiveness in the international market. These activities were successfully optimized by building upon existing technologies and resources, incorporating key stakeholders, leveraging access and incentivizing through industrial associations and corporate customers, and strengthening local expertise. The success of the project ultimately led to the creation and signing of a public-private agreement, in June 2013, of a National Clean Production Agreement between the Chilean olive oil industry sector and the government, expanding the original project activities to up to 50 olive companies, representing 80% of national production capacity.

Collaborating with Chile's National Clean Production Council (CPL) and the Ministries of Environment and Economy, WEC created a partnership with the industry association of the olive sector, ChileOliva, to improve the sector's environmental performance, reduce costs, and improve efficiency and competitiveness through the adoption of Cleaner Production (CP) and Energy Efficiency (EE) practices and technologies. Nine olive oil producers worked actively with WEC's technical team to identify opportunities for improvement in their production processes, create a plan to achieve measurable goals based on these opportunities, and receive consultation from WEC's team and local consultants to implement and achieve the goals specifically in:

- Conservation of water and energy;
- Reducing waste, raw material use and emissions;
- Establishing environmental management systems; and
- Accessing funding and loans to finance the adoption of advanced technologies.

Throughout the project period, the team continued providing technical expertise to the participating olive oil producers, monitoring and reporting on the progress to stakeholders.



### **Unique Project Design and Management**

WEC's international team is comprised of Regional Directors and a cadre of select consultants across the globe who specialize in manufacturing processes, energy and water efficiency, environmental management systems, and clean production practices. WEC is able to achieve each project's goals through a unique, customized approach that leverages this team's international expertise with local networks and technical knowledge to propagate sustainable business practices. These local partners are typically national industry associations, such as ChileOliva, and national ministries of Environment and Economy, all of which have the vested interest of continuously improving the financial, environmental, and trade opportunities for the private sector. These partnerships and networks of local expertise are incorporated into WEC's distinctive model that apply the following collection of activities:

**Excerpt from “Chile looks to global markets to promote premium olive oil” FreshFruitPortal.com, November 4, 2013**

*In a market dominated by large producers, Chile is currently competing to achieve premium product quality rather than large volume. Around 90% of total national olive oil production is considered extra virgin.*

*“Today ChileOliva is focused on consolidating its market position through a quality product. It is creating space for itself and setting itself apart from other places of origin where there is not so much focus on quality,” WEC project coordinator Jose Miguel Lehuédé stated.*

*Between 2008 and 2012, the main markets for Chilean olive oil were the U.S., Spain, Italy, Brazil, Venezuela and Canada. In recent years, export destinations have diversified. The product reached 42 countries in 2012, including Colombia, Mexico, England and Japan.*

*ChileOliva general manager Gabriela Moglia explained that many olive oil markets can be complicated to enter, given market saturation and dominance by well-established producers.*

*“The world olive oil industry is complex because there are five businesses that drive the global business. It is very difficult to enter,” she said.*

*“With the market as difficult and complex as it is, businesses must be efficient. There is the issue of cost, so we look for businesses that are more competitive and efficient to reduce costs.”*

<http://www.freshfruitportal.com/2013/11/04/with-a-premium-focus-chile-gives-boost-to-olive-oil/?country=others>

- 1) Providing local technical assistance to participating SMEs to establish a sector baseline assessment, develop and implement action plans;
- 2) Leveraging partnerships with industrial sector associations to mobilize resources and encourage SMEs participation;
- 3) Sharing the knowledge and lessons learned among the private sector and government ministries to promote continued best practices;
- 4) Preparing the sector for improved industrial environmental standards;
- 5) Establishing an institutional framework to promote transferring leadership of participating SMEs to further develop environmental management systems and sustainable strategies for their improved performance.

### **The Project**

WEC began working with the ChileOliva members in early 2012 by establishing baseline assessment of their operations. The participants consequently worked with the team to select optimal action plans that would address significant environmental concerns in their facilities while also achieving economic savings. During the project, 95 recommendations and action plans were made, 53 of which had been implemented by September 2013.

After having supported the participating companies in their olive plantations to reduce energy consumption in their irrigation systems of lands, the project team shifted its efforts to the milling process when the harvest season began again. Technical assistance then focused on the follow up and monitoring of recommendations provided during the former harvest season. As result, the participating companies continued to implement energy savings, reduction and control of water consumption and wastewater, as well as employee behavior change to improve their daily operations through best practices.

Examples of opportunities that were identified, mainly in energy and water management, include minimizing water consumption for crop irrigation—which also reduced the correlated energy necessary to pump the water into the fields; and replacing fuel boilers with biomass boilers used to incinerate the olive pits. The activities that produced the most significant results were in product recovery and wastewater pollution reduction. In fact, these indicators are interrelated because almost the entire product that was recovered (olive oil or olive paste) was extracted from the discarded water.

Energy, however, is the environmental aspect with the highest savings potential as well as the most sustained return of investment (measurements indicated that 99.9% of all investments are returned within a payback period of at least 2.5 years).

### **Lessons Learned**

After having developed and implemented these projects over a number of years, WEC has been able to determine several key success factors, many of which were exemplified through the Chilean partnership:

**Leadership:** the project must have local champions, ideally in both the private sector – to influence participation by their industry - and the

government, to provide guidance as to the direction of national regulations and standards as well as provide insight into national environmental and trade priorities, providing incentives and mechanisms to promote the implementation of these best practices and environmental performance's improvement.

Incentives: while environmental responsibility can certainly influence companies, the presence of economic benefits provides a stronger assurance that the processes and improvements will continue after the project ends. In addition, the competitive advantage that is garnered from stronger environmental standards can help to activate a collective movement toward a sector-wide approach, particularly when emerging markets are targeting the U.S. and the European Union markets.

Local, Direct Technical Assistance: WEC's team applies international methodologies with local expertise. Without this infrastructural support on the ground, the project would not only be less sustainable for the long term, but also less successful in the short term.

Understand the Business: Due to seasonal operations at the olive oil industry, the WEC technical team had to adapt its strategy, expanding its assistance beyond the industrial facilities into the actual olive plantations, in order to maintain company participation. The seasonal operations also prolonged the project by one year, at no cost, in order to continue technical guidance over more than one harvest, and to ensure successful implementation and monitoring of the recommended measures.

Measure, Monitor, Measure: As important as the results are, they are irrelevant to continued success if they aren't measured as results. Baselines must always be established not only to understand where the best opportunities for improvement can be found, but also to understand how successful the improvements were once implemented.

## **Results**

The most noteworthy result of the project is the creation of a clean production agreement with the olive oil industry sector, signed on June 26, 2013 between the CPL, ChileOliva and the Chilean Agency for Energy Efficiency (AChEE). This public-private partnership is already integrating governmental resources through the CPL, and will continue to provide environmental and economic benefits to the industry beyond the term of the project itself. The local partners, such as AChEE, the Center for Renewable Energies (CER), the Ministry of Environment, the Service for Technical Cooperation (SERCOTEC), have established the infrastructure to continue these activities and, in addition, WEC included participation from the American Chamber of Commerce of Chile (AMCHAM).

As of September 2013 when WEC finalized its assistance to the sector, environmental and energy savings reported by the participating companies as a direct result of participation in this project include:

- Reduction of 238 tons per year of materials used in production;
- Over 1.2 million gallons of water saved;
- Over 487,000 kw, 2,314 gallons of fuel, and 34 tons of biomass saved; and
- Reduction of 263 tons of CO2 emissions.

The team measured the economic impact among the companies and found that a total of \$114,800 had been invested by them in equipment and process upgrades through the project term, and \$157,000 had been garnered in savings from these improvements.

The overall results for the industry, aside from process and efficiency improvements, environmental advances, and savings, include strengthening their market position internationally (see sidebar article), as ChileOliva looks to continue its export expansion. In fact, because Chilean olive production is increasing every year, many of these companies plan on installing new production lines (6 of 9 companies confirmed that they will install new lines in the next 2 years). This national production expansion will provide opportunities for the industry to replicate the successful applications from WEC's project, particularly in irrigation and milling processes, with both the support of the national government as well as the savings incentives that were demonstrated during the project term, leveraging and increasing the results achieved through the life of the project, to a higher level.