

Best Practicable Environmental Option for Agriculture		
Sector: Agriculture	Project Value: JD10M	Location: Several
<p>Potential Opportunity</p> <p>Waste water irrigations systems and the use of biosolids have been extensively used in many countries. The industry is generally heavily regulated against international standards and is known as the Best Practicable Environmental Option (BPEO).</p> <p>In the UK, 1 million tonnes (dry solids) of sludge is produced every year, of which 62% is recycled to agricultural land. Representing less that 5% of the total organic material being applied with over 90% being animal manure, slurry, and other industrial wastes.</p> <p>Jordan imports a lot of meat and milk products due to a lack of feed stuff for livestock. Therefore the opportunity exists to use recycled waste water and biosolids for farming less sensitive fodder crops for feeding livestock; such as fodder and barley.</p>		
<p>I. Description of the Business</p> <p>There are a number of waste water treatment plants in Jordan and many more planned. The business would be subject to the location of these waste facilities and comprises development of systems and facilities to intensify agricultural production using biosolids and waste water. Investments would be spread over several farms but include agricultural equipment, stores, and drying facilities.</p>		

Wool Marketing Initiative		
Sector: Agriculture	Project Value: JD12M	Location: Mafraq, Amman, Irbid
<p>Potential Opportunity</p> <p>Currently most Jordan wool is exported without local processing. The route for export is understood to be largely via the slaughter houses.</p> <p>The process of wool sales in other countries has traditionally been organised and undertaken by a Marketing Board, but Boards are in generally being super-ceded by more commercial business models that meet requirements of international trade agreements.</p> <p>Currently Jordan lacks a strong operator to manage the purchase and marketing of wool. There is therefore an opportunity to develop a strategy for organizing the collection and marketing the national wool clip.</p>		
<p>I. Description of the Business</p> <p>Development and implementation of a Wool Marketing company, which would interact with farmers to: (i) purchase wool (and if necessary provide shearing services to the sheep farmers) and (ii) develop wool stores to centralize grading, sorting, and decision making on sales and marketing of wool.</p> <p>The company will evaluate and implement sales and distribution systems and may extend into down stream processing, starting with implementation of a wool scouring plant (the first step in wool processing).</p> <p>The initial investment will be in development of a wool store with facilities for grading and sorting wool and holding the graded wool pending onward dispatch to buyers.</p>		

Tractor Assembly Plant		
Sector: Agricultural sector	Project Value: JD20M	Location: Ma'an
<p>Potential Opportunity</p> <p>This multi purpose tractor is currently produced under license in Europe and Asia and has a proven track record.</p> <p>If feasible, there is the opportunity to source parts from HMT in India and assemble them in Jordan under license. The vehicle is based on a Land Rover pickup, many of which are sold in the Middle East - therefore service and parts are readily available.</p> <p>The opportunity will be to assemble vehicles in Jordan and export into predominately arable countries; Algeria, Morocco, Sudan, Egypt and Libya. Many of these countries are being driven into intensive farming due to significant increases in population and demand for agricultural products.</p> <p>Where possible parts will be sourced in Jordan where economic, and the assembly facility will be designed and operated using advanced manufacturing principles.</p>		
<p>I. Description of the Business</p> <p>Tractor assembly facility designed to produce (within 5 years) 3,000 tractors per annum, will include a test and demonstration site - roughly 50 acres, initial building requirements 120,000 sq ft for assembly and painting of the vehicles, plus 'cranage' of up to 5 tons capacity. Office space and infrastructure requirements plus recruitment, training of personnel, and working capital.</p>		

Seawater Greenhouse		
Sector: Agriculture	Project Value: JD2M	Location: Wadi Araba and Gulf of Aqaba, Jordan Valley
<p>Potential Opportunity</p> <p>Jordan is one of the world's driest countries and it suffers a deficit in its water supply. Even although some 60% of Jordan's current water supply is utilized in the agricultural sector, the sector's production is constrained by limited availability of water.</p> <p>The Seawater Greenhouse concept is a relatively new technology that extracts water from humid air found near the sea (or other large tracts of water) by using specially designed greenhouses. The technology has been demonstrated in Tenerife (Y2000), UAE, and Oman and operates on the basis of relative humidity and prevailing winds. The process also uses electricity, which can be supplied by solar (PV) systems if necessary.</p> <p>The conditions for using this technology to extract water from humid air appear favorable in and around the Saudi border to Aqaba coast, the Wadi Araba locations, and possibly further inland. Application of this technology in Jordan would enable an expansion of horticultural production from greenhouses that would be sited in areas where there is humid air and regular breezes.</p>		
<p>I. Description of the Business</p> <p>A market garden business based on horticultural crops grown in seawater greenhouses. The technology and 'know how' used to operate the irrigation systems will need to be acquired from the licensor.</p> <p>A full feasibility study will cost JoD140K for a 1,000m² greenhouse. The second phase is likely to be in access of 400 hectares (1 hectare = 10,000m²) and involve investment of JD 2m.</p>		

Post Harvest Activities – Fruit and Vegetables		
Sector: Agriculture	Project Value: JD8M	Location: Jordan Valley
<p>Potential Opportunity</p> <p>Industries in Jordan face a number of similar cross cutting issues: branding, promotion, packaging, storage, transport etc. The agriculture sector is a prime example – Jordan Valley farmers can produce all year round, but face major difficulties getting produce from the farm to the market. A major reason for these difficulties is the small size of individual land holdings, which means that few farmers can generate the sort of surpluses that would support investment in post harvest facilities for sorting, grading, packaging, labelling, and marketing of their produce.</p> <p>The National Agricultural Strategy recognizes the problems in marketing agricultural produce and the Ministry of Agriculture is endeavouring to promote formation of an agricultural marketing company to help address them. The risk is that a top down led approach may prove unsustainable.</p> <p>The challenge is to enrol farmers in the development of post harvest marketing initiatives, and ensure that they have a stake in the success of the outcomes. The opportunity is the formulation of a strategic orchard to market approach that enables the industry to aggregate production and take up the challenges of packing and processing with the aim of obtaining optimum prices.</p>		
I. Description of the Business		
<p>Fruit packing and marketing business that is fully integrated with on farm (orchard) activities of participating farmers. The business will manage and own the necessary post harvest facilities needed to process, store, package and market produce internationally.</p>		

Leather Tanning Facility		
Sector: Agriculture	Project Value: JD3M	Location: Amman, Mafrq
<p>Potential Opportunity</p> <p>A significant proportion of Jordan’s hides, skins and derivatives are exported raw to Turkey, Lebanon, China, and Syria and earn some US\$10M worth of revenue for Jordan. However, Jordan has only one tanning facility, which was established in 1960 and modified to include shoe production in 1980. The potential returns by further processing hides and skins within Jordan could be substantially improved. For instance, Turkey has 1,300 tanning facilities employing some 20,000 people and exports from leather and leather products represents 16% of Turkey’s total exports. Potentially there is an opportunity for new entrants to take advantage of the local supply and start tanning hides and skins for supply of leather either for export or to the local apparel industry for manufacture into final products.</p>		
<p>I. Description of the Business</p> <p>Development of a leather tannery as a joint venture with an established tanning company looking to capitalize on the Middle Eastern market, with know how and ability to produce base leather materials and develop niche markets, or even manufacture products from tanned leather in Jordan – could possibly be a spin off of operation by one of the established companies in the textile and apparel industry.</p>		

Irrigation Consultants and Certification Body.		
Sector: Agriculture	Project Value: JD0.75M	Location: Mafraq, Amman
<p>Potential Opportunity</p> <p>There are many issues associated with water in the region, and the agricultural sector will soon be very much reliant on using reclaimed water. In 1995, Saudi Arabia banned all agricultural fruit and vegetables as it claimed they had been grown using waste water.</p> <p>Europe's Eurepgap standards require certification that not only refer to quality but also processing, so a perfectly satisfactory product tested free of contaminants may be rejected. Ten exporters had received Eurepgap certification (this time last year); one had avoided the issue by using well water.</p> <p>There are large irrigation projects in the upper lands and Jordan Valley where expertise is needed, and progress monitored.</p> <p>Irrigation technology is a promising approach to making a significant contribution to the agriculture sector. Low pressure irrigation (distinct from drip irrigation), in which plants are cultivated in a hydroponics (aquaponic) environment.</p> <p>Irrigation systems can be installed by farmers themselves, equipment is readily available. However, irrigation is a science and involves knowledge of the plant needs in conjunction with the appropriate equipment to satisfy those requirements.</p> <p>The low pressure irrigation process uses less energy and water. This isn't a high investment concept project however, with the support of government legislation for agricultural properties to be certified in terms of water efficiency, this will be a worthwhile investment.</p>		
<p>I. Description of the Business</p> <p>Knowledgeable irrigation consultant with the necessary facilities to, store, operate, test equipment. Part of the premises will be an office, suitable infrastructure, design facilities and training for users.</p>		