Sustainable development in Metropolitan Food Cluster in Aguascalientes, Mexico

Report Pre-feasibility Mission april 2011

Wageningen, 2011

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1 Objective

In the endeavour to develop a Metropolitan Food Cluster (MFC), consisting of design, development and preparation of implementation of an Integrated Agropark (AP), its intelligent Agrologistic network (IAN) and Rural Transformation Hubs, it is the intention to co-operate between the Secretario de Desarrollo Rural y de Agronegocios (SEDERAGRO), FOCIR (Fondo de Capitalización e Inversión del Sector Rural) and Alterra, Wageningen University and Research).

To realise such an ambitious project the commitment of key actors and key stakeholders, such as Mexican private entrepreneurs, government on federal & national level, knowledge institutes and stakeholder groups on local level is a basic precondition. To that end a pre-feasibility study was executed preceding the analysis of technical and financial feasibility and the design of a conceptual master plan.

This pre-feasibility consists of

- The presentation of the concept to key actors and key stakeholders
- Start of network building
- Trust building with key stakeholders
- Joint inception of feasibility and possible conceptual master plan trajectory

FOCIR and SEDERAGRO cover the costs of this Pre-feasibility mission under a “reimbursement support program”

This report covers the pre-feasibility mission and its findings (chapter 2), as well as conclusions on alignment and synergy (chapter 3) and the indication of the next steps (chapter 4).

1.1 Program of the mission

Day 1: Preparations with core team Mex-NL

Day 2: Meetings with Government and stakeholder groups

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Day 3: Meetings with Government and stakeholder groups

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## Day 5: Meetings with SAGARPA National Ministry of Agriculture and delegates of states of Morelos and State of Baya California

Por convocatoria del C. Secretario Lic. Francisco Javier Mayorga Castañeda el 15 de abril de 2011 se llevara a cabo una reunión en las oficinas de la SAGARPA para que la misión de Alterra- Universidad de Wageningen de Holanda, exponga el concepto de “Greenport Agroparque”, incluyendo su origen, su desarrollo, sus logros y su posible aplicación como modelos de desarrollo regional.

### Agenda Sugerida

1. Palabras del Antecedente. Ing. Javier Delgado M. Director General de FOCIR
   - Palabras del Sr. Wouter Lok - Ministro Consejero, Representante de la Sra. Cora Minderhoud, Embajadora Extraordinaria y Plenipotenciaria de los Países Bajos
2. Presentación del Dr. Peter Smeets, Creador del concepto de Greenport Agroparque
3. Comentarios de los asistentes
   - Palabras del C. Secretario Francisco Javier Mayorga C

### 1.2 Metropolitan Food clusters and Sustainable development

The world is urbanizing and already half of the growing world’s population lives in cities. The world’s economic growth is centered in these cities and in a few decades the urban share will approach three quarters of predicted 9 billion people. These typical large metropolitan areas, often usurp the space most suited for agricultural production with urban land use and functions linked to large urban conglomerates. Inside the metropolis there is a strong growth of the urban middle class with an increasing purchasing power, which revolutionizes food consumption patterns. First of all in the quality but also in quantity. Urban middle class workers need fewer calories from staple food as rice, wheat, potatoes. They consume much more fruit and vegetables and meat and fish and drink milk products, fruit juices, soft drinks, beer, wine and spirits. They do not accept health hazards and demand perfect freshness and excellent taste. Their food must be easy to purchase and prepare, and must be according to the latest fashion. The reverse side of this development is that the rural areas are faced with marginalization through depopulation, ageing and brain drain. Youth being attracted to the urban conglomerates, more and more rejects futures of subsistence farming. Yet these rural areas are still pre-dominant in world food production.
Within the metropolitan areas the distinction between urban and rural areas is vanishing. A rise in agricultural productivity is necessary. Reliable food-chains that provide the products demanded by the increasing urban population are becoming of strategic importance worldwide.

Feeding the world’s population of now 7 bln up to 9 bln in a few decades requires systems innovations in agriculture.

**Metropolitan Food Clusters:**

Metropolitan food clusters are intelligent agro logistic networks with consolidation centers, Agropark and supplying satellite farms, organized in rural transformation centers. They are simultaneously oriented to the nearby metropoles and to the world market to which they deliver their products and from which they receive inputs that cannot be produced locally. Metropolitan Food clusters fit into the context of the network and information society as the third development stage of humankind after the agricultural and industrial societies.

Metropolitan Food Clusters can be seen as a system innovation in present agricultural practice from sector oriented agriculture and food production located separately, towards vertical and horizontal integration of a number of value chains, spatially clustered or semi clustered. The clusters are linked with sourcing areas that provide commodities according to high standards of sustainable development in agriculture and precision farming.

Typical components of the Metropolitan food cluster network are, at one end of the chain, production regions and satellite farms, centered around ‘rural transformation centers’, at the other end ‘distribution and consolidation centers’ directly servicing metropolitan or export markets to which they deliver their products and from which they receive inputs that cannot be sourced locally and in between ‘agroparks’ forming the linking pin between the two.

From consolidation centers products, produced and processed by agroparks and other upward elements of the chain, are distributed in tailor made quantities and combinations that the city demands. A consolidation center serves a metropolitan market in a consumer responsive way throughout the whole year.

An Agropark is a spatial cluster of several value chains in an industrial set up, situated in the close vicinity of the metropolis. The clusters contain a variety of different agro-production, -processing, Agrologistic and agro and food linked services and functions. Within the cluster the principles of industrial ecology are being applied and located in the large scale central processing unit. The spatial cluster thus combines units that represent the different parts of the value chain from primary production to ready to eat food product, with added compartments of essential agro business services like R&D, education and training facilities, trade and logistics facilities, park management services. Clustering with non-agro-industries like energy production and waste management can further decrease economic costs and environmental emissions.

Rural transformation centers function in the network as collection point for raw materials supplied by local farmers, as satellite farm themselves and they offer education and training services. They can also house several secondary functions like education, health services, and rural housing.

**Process**

The spatial clustering of different agro-production chains and the spatial combination of agro-processing, logistics and non-agro- functions in metropolitan food clusters enables many prosperous scenarios. The concept is based on the principles of sustainable development (balanced development between planet-people-profit with an adequate process).

Designing metropolitan food clusters, agroparks and rural transformation centers is based on an integrated approach in a ‘creative research by design process (co-design). It is not only oriented on the’

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hardware’ of the MFC but also on the more complicated ‘orgware’ aspects (co-operation structure, business development) and on time consuming ‘software aspects” (education and training, communication).

The development approach is co-design, working together with Knowledge Institutes, Entrepreneurs, Non-Governmental and Governmental Organizations to realize the system-innovations of Metropolitan Food clusters.
2 Findings of the pre-feasibility Mission

The findings of the mission consist of the conclusions and evaluation of the mission after the consultations with all stakeholder groups on alignment and synergy of the parties involved.

2.1 Purpose Prefeasibility

The purpose of the prefeasibility study was

- To determine the feasibility of formation of metropolitan food cluster in and around Aguascalientes on the basis of expert judgement
- to prepare Mexican key stakeholders for potential development of Greenport Aguascalientes Agropark
- To start building the commitment and engagement within the network of stakeholders that would support possible development of Greenport Aguascalientes.

This is done by information gathering and sharing with key stakeholders per sector via Road show presentations to selected stakeholder groups in Aguascalientes, leading to trust building with these key stakeholders and initiating the joint inception of feasibility and possible conceptual master plan offer.

2.2 Alignment- Atmosphere

Some general findings on Synergy and alignment

- Leadership has been shown by Secretaría de Desarrollo Rural y Agroempresarial, when initiating this project.
- Practice what you preach: The prefeasibility study enrolled in an atmosphere that was transparent, open space, open source, during all meetings
- Careful political forming of opinion with balanced negotiation took place during the meetings
- The pre-feasibility consisted of well-prepared meetings with lobby, organisation of meetings, staffing-translation, information flow and full attendance per stakeholder group. The enticement on the subject went well, but there is need for management of expectations per group.

2.3 General Findings

Flow of Information and approach

The organizational staff at the department of Agriculture of Aguascalientes is well informed and well prepared on Metropolitan Agriculture. The task force of the Ministry shows a thorough willingness to realise innovative approaches in a well perceived co-design mode.

There has been no opportunity as yet for careful critical communication with the specific stakeholder groups. The focus was rather on information exchange and primary discussions, and on principal agreement with the concept and approach as one of the pathways for future developments in agriculture in Aguascalientes. There was only scarce room for in-depth discussion and thorough analysis per perspective on strengths and weaknesses. This needs to take place in Feasibility Phase.

Two prevailing ideas on MFC and Agropark development

There are two ways of approaching the development of the Greenport

1. Incremental approach as axis of development:
   - Building upon existing innovation efforts;
   - Connecting the park to the existing industrial zones”;
   - "Respect what is already there”;
   - Develop the available industrial area as a consolidation centre, with processing, storage and trade.

2. Jump innovation from ‘scratch’, in which the cluster concept is developed on the available industrial area with support and input of existing large agro-food industries that focusses on the innovation of market driven, high tech and large scale developments. This agro production – and processing park would act as detonator of knowledge and as knowledge platform for people to join in to create innovations.
In particular with regard to the second option the (representatives of the) SME’s are concerned about exclusion of the present small farmers: They urge for a long term vision of the future in which the role of the small farmers with respect to these jump innovations is elaborated.

All stakeholder groups also own up to the shared apprehension on migration of youth from rural areas to the urban centers, leaving the rural areas empty with new labor force and commitment new economic developers. They see that Agropark development can act as a motor, a pull force towards a system change in which agriculture is ‘sexy and attractive’ again but within the metropolitan and suburban areas).

**Uncertainty is prevalent in this new dream** because of horizon for systematic change (system innovation), reframing of positions and the uncertain role of stakeholders in future economic contribution.

- There is a need for vision in the shift of the role of stakeholders on the basis of which for each of the stakeholders a specific transformation strategy should be elaborated
- Carefully designed communication is needed towards all groups of stakeholders, based on an over-all communication plan
- A definition is needed of the Knowledge institutions, Entrepreneurs, Non-governmental and Governmental organizations that together establish the system innovation (KENGi consortium) with clear descriptions of roles (e.g. of the role of “social sector” (La Huerta); or governance role (at all levels, national and state) not only facilitating, but pro-active in stimulating and leading innovation)

**The establishment of innovative networks is needed within the agriculture and food sector, but also between this and the non-agriculture sectors.** In order to be able to grasp the full potential of horizontal clustering and industrial ecology between the existing enterprises and on the site that will be developed, also the potential of connecting with non-agricultural business should be taken into account. Other examples of metropolitan food clusters around the world show great perspectives for sustainable development when these sectors are integrated with energy production (bio-energy), water management (handling different qualities of clean and waste water without spillage into the environment) and waste management.

**Education en training and extension** is seen as key element in achieving system change Main target group is the new generation, the young entrepreneurs.

There seems to be a general consensus for the ambition towards sustainable development as a central unifying concept, meaning striving to a careful balance between aspects of people, planet and profit in the Greenport Aguascalientes

### 2.4 Role of Top agribusiness Aguascalientes

The large entrepreneurs in the region (Grupo Acotado), or 'Big 7' are on an individual basis already doing incremental innovation, but could also become key-players in the necessary radical innovations (Innovation jumps).

The development of business as usual and of incremental development would probably take place on the existing sites of the several companies. The jump innovation could very well be initiated as a start with a clean slate (Gilsa-La Huerta) on a new location for which the new Agropark site should offer incentives. A shared interest to develop an organisational and spatial strategy between different present agro and food industries, taking the existing incremental strategies as starting point and elaborating jump innovation in a joint co-design process could lead to further horizontal and vertical clustering as viable option.

The Grupo Acotado have indicated that they are willing to enter in a process of more radical transformation of present production systems, subject to external trends that will influence role, position and present business model.
2.5 Risks

Considering the risks of planning, development of implementation and execution of the food cluster there is a tension between long term vision and development and quick wins. Politically desired there is the pressure to have direct results that show. However, when the objective is to realise system innovations with complex social processes, shifts in roles and responsibilities and integration with other sectors, a long term strategy is required. Spatial implementation of clusters with complex integration of industrial ecology is part of these long term system innovations.

In the process of clustering and horizontal and vertical chain integration there is the risk of patronizing by the large initiators towards SME and the "social" sector.

It will require long term charismatic leadership to steer through the process of transformation with multi stakeholder involvement.

The high ambition needs careful management of expectations throughout.
3 Conclusions of the mission

The work week in Aguascalientes had a well prepared agenda in which stakeholder meetings with all relevant stakeholder groups took place.

All KENGi parties have been informed on potentials of metropolitan agriculture, possible commitment per group has been identified and discussed and the KENGi network formation has been initiated around the subject of MFC.

Apart from commitment of the federal government on governor and cabinet level and on municipal level, there have been information rounds with the staff of the ministry of agriculture of Aguascalientes.

On governmental level commitment has been confirmed with the signing of an MOU between the government of Aguascalientes, the representative body to organise the following steps FOCIR and the indication of cooperation with Wageningen University and Research Centre.

With the farmers organisations the concept and approach of development of metropolitan agriculture has been embraced and support for development has been promised, but organisation of the fieldworkers and small scale producers is a mayor point of attention.

During the individual meetings with the larger agricultural companies and individual meetings with captains of large agricultural companies industries in Aguascalientes like Gilsa (Milk processing), Nutrypollo (Broiler chicken), La Huerta (Vegetables and fruits), the Grup Acotado empresaria’s, each of them have expressed their interest in the cluster concept of all these large companies as a future development. However it will need further combined meetings to identify the gains of joint operations apart from the present business as usual of these important entrepreneurs. The questions of these entrepreneurs will need further discussion on realistic gains of a new joint business case versus present business, on possible the governmental facilitation of vertical and horizontal chain integration and on possible approaches modular and step by step,

The knowledge partners INIFAP and Universidad Autónoma de Aguascalientes have indicated their interest for cooperation and willingness to support this initiative of MA. They will need to identify the subjects of cooperation and joint research and the linking up with the existing network of entrepreneurs and farmers organizations and also indicated possible sources for financing.

As a preliminary conclusion of the pre-feasibility study, we see good opportunities for development of a Metropolitan Foodcluster Greenport Aguascalientes. The pre-feasibility study, carried by the well prepared and professional Mexican initiators has already laid the foundation for a KENGi-network that we regard to be competent to further develop this ambition. Not to lose momentum is rather important now. We strongly advise to keep the common focus on the harder to achieve goal of the jump innovation of clustered development, without losing sight on the individual incremental innovation strategies of single KENGi-partners that also should be supported as necessary steps towards sustainable development.
4 Next Steps

4.1 Steps to be taken in engaging NL-MEX knowledge-governance team

- Need for further development for mixed KENGI approach (co design) e.g. With Mexican knowledge partners, the 'big 7' as large entrepreneurs in the region, and the SME’s.
- This needs to be done bi lateral or multilateral between Mexico and Netherlands K2K-G2G- E2E in a MEX–NL team working groups

Planning the next steps requires mixed working teams per stakeholder group and between NL and MEX In which there is the move from closed knowledge system towards open knowledge system: trans-disciplinary.

Important is the development of the kknowledge chain with linkage between fundamental and applied research; with linkage to innovations and entrepreneurial needs / demands and from knowledge driven to innovation driven (third space development).

There are high ambitions for leadership within Aguascalientes to guarantee implementation

- Charismatic leadership
- Very professional match with FOCIR
- Methodology and process architecture to be very well implemented
- Care for multi-sector involvement
- Enticing commitments from other sectors, with a claim for high profile key macro projects (not implement but strive for transformation!!)

The next steps in the sequence of development of a metropolitan food Cluster is the feasibility phase and conceptual master planning.

4.2 Feasibility phase

The feasibility phase will be executed under assignment of Nacional Financiera, S.N.C. in its character of trustee of the trust fund called Fondo de Capitalización e Inversión del Sector Rural (FOCIR), executed by Alterra, institute within the legal entity Stichting DLO, Droevendaalsesteeg 3, 6708 PB Wageningen, The Netherlands.

The Feasibility phase has been defined as follows:

4.2.1 Background:

Today Mexico is one of the potential rising stars in the world economy. The sheer size of the country, its key geographical position, combined with its fertile soils; give it huge agricultural potential, which has yet to be fully realized. Mexico’s agriculture has undergone drastic changes in the past decades and agriculture still remains an important sector in terms of its contribution to GDP and as an employer. The international competitiveness of agriculture, the development of rural areas and food security are the key declared objectives of public policy.

One of the key challenges faced by the agro-sector in Mexico today is the lack of scale leading to the decreased competitiveness of the farmers, who are as a result under-investing in technology (mechanization and scientific inputs). There is the need for an integrated channel to link the ‘farm gate to the food plate’. There is lack of transfer of the desired agricultural practices, materials, infrastructure and technology to the farmer thereby adversely affecting the availability of required processing varieties of farm produce to the industry.

The challenge is to tap into the growing market, both in the domestic as well towards the international markets, search for opportunities in the food processing sector and log in the present farmers. There are ample opportunities and challenges for Aguascalientes for agricultural developments. There is great political willingness and support for top tech agro-development and there is the recognized vital entrepreneurship. With the growth of urbanization, further opportunities develop to
implement the concept of metropolitan agriculture. The government of Aguascalientes is willing to offer assistance in improving export, supply chains and enhancing international marketing.

The above sketched challenges can be effectively addressed by creating an appropriate platform such as an ‘Metropolitan Food Cluster’, with its integrated Agropark (AP), its corresponding Intelligent Agrologistic Network (IAN) and its Rural Transformation Hubs (RTH) which would not only serve to provide the appropriate raw material but also integrate with the demand side of the food chain in an efficient manner. MFC development can help in lowering the costs by reducing post-harvest losses, transportation costs and energy costs. MFC also ensures higher returns due to high quality output, off season availability, better traceability and through enhanced productivity. Successful replication of such models across strategic production hubs for key agricultural commodities can lead to the transition of Aguascalientes agriculture and food processing industry and agro logistics into further organized, high-tech and safe, demand-led, and high-value orientation. This can pull the present supply-driven, lower value businesses in agriculture in Aguascalientes also into the above given scenario.

The Metropolitan Food Cluster will be designed as part of the wider ranging Intelligent Agro logistic Network (IAN) within which consolidation centers and export hubs are other important elements that serve the demand of metropolitan markets. IAN also includes the Rural Transformation Hubs (RTH) that serve as collection centers for products of local farmers to be processed in the Integrated Agropark but at the same time transforming the skills and lives of these local farmers in order to make them part of the supply side of the IAN.

By initiating establishment of an Metropolitan Food Cluster in Aguascalientes, integrative development will take place of integrated plant (fruits & vegetables, mushrooms etc.) and animal (chicken, dairy, fish, etc.) production chains. The proposed “Aguascalientes Agropark” aims at significant reduction of production costs, maximizing environmental benefits, a dramatic improvement in product quality and productivity and overall synergies through knowledge and site management.

The basic info of Agribusiness in Aguascalientes, its supply strengths, its (potential) markets, its positioning in the present agro logistic network, strengths, weaknesses, trends, rural and agro industrial potentials etc. will be detailed in the SWOT analysis, based on data and information present with FOCIR and Ministry of Agriculture Aguascalientes during the feasibility phase.

4.2.2 Consulted requirement and purpose

FOCIR has requested Alterra to develop a Metropolitan Food Cluster, consisting of the design of an Integrated Agropark, its Intelligent Agrologistic Network and Rural Transformation Hubs in the state of Aguascalientes. To that end a feasibility study will be executed and a Conceptual Master plan will be produced with preparation of the KENGi phase0 (KENGi stands for the stakeholders from Knowledge institutes, Entrepreneurs, Non-governmental and Governmental organizations that must co-operate to establish the systems-innovation that is at stake while developing an MFC). This contract refers to the first part of this endeavor, the prefeasibility and feasibility phase. It must be stressed that successful implementation of the MFC is not guaranteed by a promising conceptual master plan only. The feasibility and conceptual master plan is a necessary precondition for attracting entrepreneurs and investors, but is in itself no guarantee for their involvement.
The planning would include inputs from land dependent agriculture in the regions surrounding the Agropark site from which specific products would be processed in the Integrated Agropark (fuel, fodder, food, fruit, vegetables and mushroom, animal production in satellite farms but also other agricultural products such as horticultural products or pharmaceuticals).

Also other important elements of the agricultural chain such as research and agriculture experimental agricultural center, agricultural processing (pre-processing and processing) and intelligent agricultural logistic network, international Agri-trading center will be included in the planning.

The integrated Agropark will be designed and operated as an integrated complex zone, which is constructed with social function such as high quality residential area (green villas, housing area for expert, officer, employee in Agropark). The agricultural park project will be cultural highlight of the whole project area, and as such be a starting point for economic-tourism development, and to that end invest in special products.

The mission of the MFC would be to contribute significantly to sustainable development, meaning the harmonious arrangement of ecological, social and economic ambitions of the region by application of modern technology but with full participation of the local people and their culture.

4.2.3 Project definition:

The project entitled “development of a Metropolitan Food Cluster, consisting of the design of an Integrated Agropark, its Intelligent Agrologistic Network and Rural Transformation Hubs in the state of Aguascalientes”.

4.2.4 Scope of services & time line

The main purpose is the development of a feasibility study for MFC in Aguascalientes. After approving, the feasibility report can be used as the starting point for a Conceptual Master plan of MFC and its implementation.

- First part: Detailed process planning of the feasibility study
- Second part: Facilitating Mexican KENGi Mission to NL (in cooperation with Min of EL&I)
- Third part: Determining feasibility of the Agropark, on given location (locations), its business potentials and assessment of the total value of the park and its structural elements as a base for the design of the conceptual master planning

Definition (Identification) and decision making on anchor investor by assigner(s) and local KENGi partners

4.2.5 Activities of the Feasibility study

In the feasibility study following activities will be undertaken:

- Mission to Mexico during 5 days with a core team of top specialists with 1~2 days’ workshop with stakeholders, field visits and studies
- Site analysis.

The intended site or possibly other sites as well as the rural transformation hubs will be analyzed by

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KENGi means the stakeholders from Knowledge institutes, Entrepreneurs, Non-governmental and Governmental organizations that must co-operate to establish the systems-innovation that is at stake while developing an MFC.
a group of top specialists during field visits to the site as preliminary indicated by the assigner. This site analysis will take place based on site characteristics and will be examined by a series of criteria of spatial, location, socio-economical, organizational and financial character.

- Brainstorm with assigners on site analysis and to define the mission-vision, rationale.
- Elaborations of development perspectives of existing agro producer’s and-processors.
- SWOT analyses will be made of the metropolitan agriculture features, IAN, RTH and Agropark. This SWOT analysis will be based on a situational analysis on ecology, climate, hydrology, infrastructure, energy, occupation and present land use, business potentials, etc.
- First rough market analysis of urban centers, the IAN and Agri-supply chain infrastructure in the selected region with focus on the metropolitan areas. There will be an analysis of the potential Agro logistic Network regionally and for possible global markets.
- First agricultural analysis of sourcing areas and potential for rural transformation (200 km radius) will be made. This includes a preliminary rough location analysis on ecology, hydrology, infrastructure, occupation and present land use as well as on transformation perspective for key potential sourcing areas.
- First hardware design sketches site (concept) with basic infrastructures-water, utilities, energy utilities, R&D and Training facilities, as well as housing
- Development of the outlook on implementation in co-design with assigners
- Analysis of KENGi-Stakeholders and their mutual relations/preliminary risk analysis
- Identification of the anchor investor as part of a stakeholder analysis.
- Rough financial outlook

4.2.6 The deliverables of the feasibility phase

A: Facilitating excursion Mexican KENGi partners to the Netherlands (man hours)
B: The detailed process planning report. This will contain the subsequent steps that have to be undertaken to produce the feasibility study, and will give an outlook on the planning of the conceptual master plan and the Dutch KENGi-mission.
The detailed process planning document will be delivered 2 weeks after confirmation of payment of the first term.
C: The report on the feasibility study.
This contains the following chapters:

1. Vision and Mission of MFC Aguascalientes
2. Definition of the co-design group KENGi
3. Description of region and site: ecology, hydrology, soil, sociology, economics, policy system, stakeholders
4. Description of potential markets
5. Result of SWOT analysis
6. Draft zoning plan of Agropark
7. Identification of potential locations for RTH’s and its commodities
8. Outlook on implementation
9. Stakeholder analysis of KENGi network also resulting in an identification of the anchor investor
10. Feasibility advice
11. Management summary
12. Financial Outlook

4.2.7 Deal team

The process will be handled by a responsive, flexible and effective project team whose members between them have the relevant business experience and capabilities, to provide value added solutions and the same would be drawn from other institutes of Wageningen UR or its subcontractors, all working according to ISO 9001 standards.

During the feasibility phase, the deal team consists of:
1. A local partner in this case FOCIR, will act within its own responsibility, dealing with:
   - getting commitment from commissioner;
   - getting commitment from local stakeholders,
business development;
search for anchor investor;
exploring if this local partner should be extended.

2. Representative of the commissioner
knowledge source feasibility
creation in development of first draft designs

3. Wageningen UR International Team.
Content;
Design/co-design;
Basic studies;
Business development;
Finance, economic/financial feasibility.

Key members of the Wageningen UR International Team, supported by back offices are:
Representative of the Contractor: Drs Madeleine van Mansfeld.

4.2.8 Team members
Drs. Madeleine van Mansfeld project management, process management design process, landscape ecology, rural development,
Mrs. Annelies Bruins organizational and administrative support
Dr. Peter Smeets agro sciences, entrepreneurial involvement, process planning
Dr. Jan Broeze industrial ecology
Ir. Steef Buijs urban designer and Agropark designer
Ellen Zwartkruis Junior urban design and Agropark design
Drs. Nico de Groot market analysis, business planning and financial aspects
Ir. Koen Roest hydrology, soil sciences, irrigation
Ir. Arjen Simons market analysis, fresh logistic networks,
Ir. Jim Groot market analysis, fresh logistic networks, rural development
Ir. Olga van der Valk market analysis, fresh logistic networks
Ir. Silke Hemming Horticulture/greenhouses
Ir. Paul Vriesekoop Animal Husbandry

During design of the conceptual master plan and dependent on the outcome of the feasibility study, this team will be expanded with experts on arable farming, livestock farming, fruit- and vegetable production, greenhouse farming, food processing, marketing, business development etc. (NB not all members of the international team will participate in the field work and design workshop during the feasibility and further in Mexico. Some will support from the back-office).
5 Reportings of the mission and next steps in Mexico Aguascalientes

5.1 Signing of agreement for Master planning

EVENTOS RELATIVOS A LA FIRMA DEL ACUERDO PARA LLEVAR A CABO EL ESTUDIO DEL PLAN MAESTRO DEL AGROPARQUE: 26 DE JULIO DE 2011

En el marco de su gira de trabajo por el estado, el Secretario Franceso Mayorga Castañeda y el Gobernador, Carlos Lozano de la Torre, se reúnen con agroindustriales para afinar el plan de desarrollo agroalimentario de la zona.

El nuevo esquema del gobierno de Aguascalientes hizo énfasis en el cuidado y conservación de los recursos naturales, la inversión en sostenibilidad y la innovación y transferencia de tecnología para abrir nuevas oportunidades a los productores en el mercado internacional.

Planeación de segunda generación en Aguascalientes, factor indiscutible para el progreso del campo: FIMC

5.2 Agreement with Sagarpa

EVENTOS RELATIVOS A LA FIRMA DEL ACUERDO PARA LLEVAR A CABO EL ESTUDIO DEL PLAN MAESTRO DEL AGROPARQUE: 27 DE JULIO DE 2011

Presentación del Acuerdo de Aportación del Gobierno del estado, SAGARPA, FIRA y Financiera Rural para el Master Plan del Proyecto de la Red Agrologística y Agroparque de Aguascalientes, los cuales promoverán la investigación e innovación tecnológica para el desarrollo del sector agropecuario y acuícola de la entidad.

El Gobernador Carlos Lozano de la Torre sostuvo por su parte que el Gobierno Federal, a través de SAGARPA, FOCIR, Financiera Rural y FIRA, y los especialistas, académicos, los agroproductores y el Gobierno del Estado, han dejado constancia de que los acuerdos a favor de quienes trabajan la tierra aguascalentense prevalecerán por encima de cualquier interés particular.
5.3 Agreement with financing bodies

Firma del acuerdo de participación para la instrumentación del Plan Maestro del Agroparque y el establecimiento de las bases para la conformación de una Red Agrologística
5.4 Communications and public relation

ENTREVISTA EN TELEVISION DEL CP JORGE NARVAEZ EL 29 DE JULIO EN LA TELEVISION DE AGUASCALIENTES

- En entrevista Jorge Narváez Narváez, titular de la Secretario de Desarrollo Rural y Agroempresarial del Estado, dio a conocer el proyecto del agroparque en Aguascalientes, mismo que será el primero en su tipo en toda América Latina.

- Dicho proyecto, albergará a productores de Aguascalientes, y a más de 10 mil personas en una ciudad ecológica, para así impulsar el producto aguascalentense y convertirse en punta de lanza en producción a nivel nacional.

- Hasta el momento dijo, no tener ni el presupuesto definido ni el lugar; están trabajando ya en el proyecto maestro y ya se le ha dado el visto bueno por parte de la SAGARPA.

5.5 Role of the participants in Aguascalientes

ROL EJECUTIVO DE LOS PARTICIPANTES EN EL MODELO DE DESARROLLO REGIONAL
CASO: AGUASCALIENTES-RED AGROLOGÍSTICA Y AGROPARQUE

- POLÍTICOS
- LÍDERES AGROEMPRESARIALES (CEO’S)

ENCARGO POR MANDATO
CO-DISEÑO
IMPLEMENTACIÓN
OPERACIÓN

INNOVADORES
CREATIVOS
- CIENTÍFICOS
- DISEÑADORES
- INNOVADORES

BÁSICOS DE ALEJANDRO USADO:
- ADMINISTRADORES DE PROYECTOS
- EMPRESARIOS REPRESENTATIVOS

- DIRECTIVOS
- TRABAJADORES
- ESTRUCTURA POLÍTICA

PLAN MAESTRO CONCEPTUAL
FORMULACIÓN DE PROYECTOS ESPECÍFICOS
EJECUCIÓN DE PROYECTOS ESPECÍFICOS

TIEMPO
14 de abril de 2011
6 meses
5.6 Central coordinating role of FOCIR

Captación de recursos para las etapas de Factibilidad, Marco conceptual del Plan Maestro y KENGI
6 Appendices

6.1 Appendix 1: FINDINGS PER STAKEHOLDER GROUP KENGI DURING PREFEASIBILITY MISSION

1. Government
   - Session with State Government: Gobernador del Estado, Ing. Carlos Lozano de la Torre
   - Reunión de trabajo. Presentación de Información del Estado de Aguascalientes. Lugar: Secretaría de Desarrollo Rural y Agroempresarial
   - Reunión con Diputados de la Comisión de Desarrollo Agropecuario del Congreso del Estado
   - Reunión con Presidentes Municipales y Consejos de Desarrollo
   - Consejo Estatal Agropecuario de Aguascalientes
   - Sesión Plenaria con el Gobernador y Secretarías del Estado de Aguascalientes
   - SAGARPA/Morelos and Baja

2. Knowledge institutes
   - INIFAP Aguascalientes
   - INIFAP National
   - con Universidades y Centros de Investigación
   - Tecnomec Agrícola

3. Entrepreneurs (Large Companies and SME)
   - Reunión con Grupo Acotado (big 7)
   - Grupo Agroindustrial La Huerta
   - Gilsa
   - Reunión con Asociación de Avicultores

4. Non or semi-Governmental organisations and interest groups
   - con Sistemas producto y organizaciones campesinas
   - Reunión con Delegaciones Federales e Instituciones implicadas en el Sector

Meeting with the governor

Jorge: “The vision is there, now we have to see how to tropicalize and adjust the concept of Agroparks to the Mexican context; the objective of this mission is to have us all speak the same language.”

Carlos: “The last 10 years the agribusiness in Aguascalientes has grown in spite of adverse circumstances (lack of water, lot of desert): it depicts the talent potential the state has, and the entrepreneurial spirit of the private sector here. I am more a man for economic development than for politics; have been in social development for 30 years. We want to address the problem of migration to the cities. Aguascalientes to be the green state of Mexico. Need for applied research proximate to the campesinos”

Meeting with team Jorge

Market chain integration: with technological packages, improved seed and water use, to generate social and ecological benefits.

Green pepper: processed (dried).

Garlic: good international prices; long production cycle of 6-7 months

Guave: producer organizations, now more open and with interest, let defences down; big export potential and for pharmaceutical ends. We need help.

Beans: Procure that small producers not only grow maize and beans with traditional technology. Need more accompaniment, technology transfer; changes in mentality and organizational capacity.
Nopal tunero: in zones with little water availability: we need to define areas to grow nopal, not only wild nopal, work with integrated chain and irrigation to obtain added value and export.

Alfalfa: fodder produced in state for last 40-50 years. Consumes more water, but is needed for animal diet. Make water use more efficient; new technologies to produce proteins.

Hydrologic erosion: drilled wells are 180-200 m deep. Generate legislation / norms: there is no vision where we are going. Need to be re-equipped and an agricultural network created plus groups that can manage them, plus adequate grid so wells will function.

Precipitation: information flow important, towards farmers and towards Greenports. Opportune decision making through public policies.

Madera: also native tree varieties are marketable.

Systemic conception:

- Look at water, soil, climate, plan, man etc. Change ancestral production methods not suitable for soil conservation. Good water management
- Look at ecosystems and subsystems
- Look at macro level and micro level, e.g. cattle farming
- Process: at individual level. It is a key factor to look at ways of how to organize people. Look at where the gaps are: we now have confrontations with scientists (INIFAP), but we are NOT hallucinating.
- Jorge: INIFAP is inwards oriented, not present in the farms, they need more alliances with Universities and Chapingo.

There is a lot happening in each of the supply chains with added value, but these are not yet integrated. Each one has a different concept on rural development.

Theory is taking shape in practice: emphasis on knowledge sharing and learning communities. The major conclusion is that we need integration among all participants of the KENGi network.

Felix: INIFAP is against the Agropark, they have other concept of rural development. They do not want to sell their land where the Agropark is to be established. FOCIR negotiated with director INIFAP, who was acting superior ("I am head of 1000 researchers") during a breakfast, to incorporate INIFAP as the knowledge institute in the park.

Meeting with municipality presidents (mayors)

Explanation Jorge Narvaez:

- Our main focus is how to add value; how to achieve that our producers join in the market chains that have added value?
- Rural transformation centres: how to create room, opportunities, structure and infrastructure for development.

Agropark in two concepts (Jorge Narvaez):

1. As detonator of knowledge: create a knowledge platform for people to join to create innovation. The challenge / vision is to generate a revolution in the mind of riches that consist not only of money in the pocket but of new ideas. So the young people will see the spectrum of opportunities and return to the rural areas with new knowledge.
2. As a physical space to revaluate current experiences towards future modules of alternative production in the region with new concepts on ecological, water and waste management, green energy; themes that have already been approved in Mexico to work on.

Comments:

- People are organized, but we need to change mentality
- Successful projects already exist.
Meeting with INIFAP

- We would like to know the planning by the government of the State of Aguascalientes.
- We are worried: will this project really contribute to what the producers of Aguascalientes need? Will it really generate a jump forward, create riches?
- The case of the Agropark in Querétaro: what happened to its economic and educational objectives, were these achieved?

Dinner with big seven

Comments: Instead of making macroparks: why not associate to the industrial zones and make these into poles of development? It is important to contemplate the legislative framework. In the cattle industry it is not permitting us to realize our full potential. Is this contemplated? How will it be included?

Javier: we need to consider these themes profoundly; push the federal legislators to do this, inform them and attend to them, so they will not only be there to negotiate support. The Agropark is a good opportunity to channel them to do their work, so benefits will reach the agricultural sector that they are representing. The other thing however is to act.

Comments: It is an emotional theme, sustainability and management of waste and resources. It has caught our attention, the technology that you are transmitting are the foundations of our work. It will not meet solid ground though, the levels are too disparate. Technologies from different parts will need to be conjugated: How will the design management be done? How to generate design management?

It is a great extra-ordinary project in which Entrepreneurs will be taking risks, government that supports them and research institutes that deliver studies...

Meeting with Consejo Estatal de Agropecuarios de Aguascalientes

Two types of Agropark (Miguel Angel Álvarez, CoEAA / GILSA):

- Incorporated into actual industrial parks to take advantage of new energy technologies. This is short term, with quick wins and return on investment;
- A new park outside the city, to be realized in 5 to 10 years. Relocation may be attractive with the right incentives, e.g. taxes.

Supply chain (Miguel Angel Álvarez):

- Integrate producers for certain products in the market: contract farming.
- The so called social sector has no solution for market integration: the solution lays in education
- The government facilitating with risk insurance and legality of contracts
- Now is the time to act because international prices are high and will remain high

General comments:

- Think of how my activity may benefit the whole society
- Now we have extensive production; now move towards intensive production
- We all have need of each other
- We are asked to stop thinking of “me” and to start thinking of “us”
- This is an excellent opportunity to make a big leap

Meeting with Huerta

- We manage everything ourselves except for seed:
  - CTRAT / GLOBALGAP / Profepa Clean Industry / SQF
  - Pest monitoring etc. (biological: Koppert)
Prefeasibility study Metropolitan Food Cluster Aguascalientes

- Production incentives (loans to farmers; input supplies with 9% discount; technical advice; GAP sharing)
- Standardized management model in process

- We cannot fulfil our vision if we do not have agribusiness farmers.
- Selection of farmers (now more than 100 supplying to Huerta):
  - Location (following the weather to get a year round supply). Farmers in Autlán, Zamora, Celaya (3-4 hours by car from Aguascalientes)
- On-farm facilities
  - Characteristics of farmer him/herself (=most important selection criteria); sharing of GAP is critical point of our success.
  - We share risks and benefits: critical factor in relation is trust
- Problem is not only the rowing gap between agricultural growth and economic growth, but logistics: how to get the produce to the cities (e.g. China)
- Software will determine the speed of our progress in the project
- A cluster can raise consumer value and lower costs. Share with Gilsa / chicken industry / San Marcos. We are close, good human relations. We work together, have the same technical problems, e.g. we all work with water.

Meeting with GILSA
Capacity of 1 million litres per day; 70 members in a circle of 50-60 km around the processing plant; farms with 100 up to 3000 cows, average production 28 litres per cow per day (= more than 8,000 litres per year, up to 10,000 litres per year)

Own distribution network with 500 routes in 11 states of the republic.

Biogas plant, treatment of residual water.

Challenge for future: consolidate market position in Central Mexico by consumer segmentation and consumer research

Agropark: fix dates and tasks; and who is responsible for concretizing. What is the next step?

Meeting with Sistemas productivo

Jorge Narvaez: the governor does not want two subsectors: one successful and one of subsistence agriculture.

Comment by Jorge Berni on meeting: different competing groups were present, one organization controlling the cattle supply chain not liking the fact that Jorge Narvaez was talking about forming an association from the social sector. The problem is not commercial, it is organizational: only with organization can technologies be taken advantage of.

Meeting with Chicken industry

Comments:
- There is much to do: we lack the methodology on how to do it
- Brazil has already taken over the EWU market from the Netherlands, but still is state of the art regarding new and innovative technologies
Jorge Narvaez: Integrate inputs for chicken industry and other supply chains. What can government do to facilitate such integration? Financial instruments?

Comments:
- Cages at different levels represent an opportunity: share the technology
- Government giving us advice; plots of land so not to break the sanitary circle: support sanitary infrastructure

**Meeting with SAGAPRA in Mexico City**

Program:
Por convocatoria del C. Secretario Lic. Francisco Javier Mayorga Castañeda el 15 de abril de 2011 se llevara a cabo una reunión en las oficinas de la SAGARPA para que la misión de Alterra- Universidad de Wageningen de Holanda, exponga el concepto de “Greenport Agroparque”, incluyendo su origen, su desarrollo, sus logros y su posible aplicación como modelos de desarrollo regional.

**Agenda Sugerida**
Bienvenida y Presentación de los asistentes
1. Palabras del Antecedente. Ing. Javier Delgado M. Director General de FOCIR
2. Palabras del Sr. Wouter Lok - Ministro Consejero, Representante de la Sra. Cora Minderhoud, Embajadora Extraordinaria y Plenipotenciaria de los Países Bajos
3. Presentación del Dr. Peter Smeets, Creador del concepto de Greenport Agroparque
4. Comentarios de los asistentes
5. Palabras del C. Secretario Francisco Javier Mayorga C.

List of participants meeting with Subsecretaría de fomento a los agronegocios:
Dirección general de apoyo al financiamiento rural; reunión 15 de abril de 2011

<table>
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Reactions

Guadalupe Guerrero, delegate SAGARPA Morelos:
- We have dispersed production models: ornamentals (protected agricultura), pig industry
- We need a new culture of producing: talk it over with producers
- We would like to advance in developing the model: make an appointment for a working meeting

Genero López, delegate SAGARPA Baja California:
- This is a new paradigm, intangible
- How to make agriculture more competitive, towards exportation
- Revise consequences for the producers of new ways of working
- Forms of sustainability

INIFAP director:
- Idea of agropark and clusters is an alternative, but not for all producers
- That a new culture is created, working towards a certain level
- I feel sad when seeing abandoned infrastructure in the rural areas

Carlos Orozco: there is agreement that we have to abandon non sustainable schemes.
- It must be business
- Tropicalize the concept: how will it work in an arid region
- Subsidies are a bad drug

Sagarpa Aguascalientes:
- Orgware is important
- Use the concept where Sedesol is not active (Sedesol is program for social sector)
- This is not meant to move the marginalized out of poverty. It is a sample case.

General observations

Jorge: two concepts: the Aproparks and the rural transformation centers. Have the young generation incorporate into high level agriculture.

We need to stratify and identify market chains and producers and consumers:
- Identify which producers can be integrated into the Agropark (both in commercial and in organizational aspect)
- Have vision / public policy for those who will not be incorporated
- Consumers: analysis of who this consumer is in the case of market chain to be incorporated in the Agropark; consequences for marketing strategies of current large agribusiness.

Innovation strategies for human resource development: how as government generate innovative climate to incorporate the new generation. Integration of the new highly educated generation that is target group, not current producers (Jorge Berni). Rural hubs: incubators, finance etc (model in Jalisco).

PYME is concerned about exclusion, has been involved in process of exclusion: give them a vision of the future in which they have a place. They are strong political force that can block progress of transformation. Network concept: create knowledge network and new working groups at different levels.

Congress delegates and SME wanting to incorporate current projects: how to deal with that. Process management: respect different levels of current efforts, both the high tech businesses, as the producer
groups. Award SME working according to markets, not politics. Clear politics involved in concept of Agroparks (political change is part of systemic change: between the ears! Promote culture of hard work: government not ceding to political pressures “polluting” the Agropark concept).

Two tracks: showcases (not part of Agropark concepts) showing use of renewable energy and efficiency of integrating different supply chains: maybe pilot projects in rural transformation centres. We need showcases for SME to have political backing of producer / gremial groups. Those showcases prepare people for system changes. So different function for Agropark (systemic change) and rural transformation centres (preparation of human resources in mental maps)

Main problem of SME is developing new innovative markets.

Role of legislation:
- Creates monopolies (case of using milk formulas instead of the real thing)
- To make it attractive to reallocate business into the Agropark (through subsidies; tax regimes)

Use of renewable energy (some legislation blocking this, e.g. use of water)

The mission has been a good example of carrying out the philosophy around the concept of the Agropark: to have knowledge and information flow in a transparent way; to create platforms to address the gaps between rural reality and the objectives for its development; to invite people to joint these platforms to start generating shared concepts and speak the same language. Compliment to Jorge Armando.

6.2 Appendix 2: Phases in implementation of Metropolitan Food Clusters

<table>
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<tr>
<th>Phasing Metropolitan Food Cluster Development Aguascalientes</th>
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<tbody>
<tr>
<td>Phase 1: Feasibility and design</td>
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<tr>
<td>1.1: Acquaintance and acquisition</td>
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<tr>
<td>- Identification of commissioner</td>
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<tr>
<td>- Orientation and acquaintance (first visit of two team members, to establish orientation)</td>
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<tr>
<td>- Identification of local partner(s) assigned by commissioner</td>
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<tr>
<td>Assignment: PM</td>
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<tr>
<td>1.2 Pre-feasibility</td>
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<tr>
<td>- Network building and Road shows</td>
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<tr>
<td>- Trust building with key stakeholders (Road shows)</td>
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<tr>
<td>- Joint inception of feasibility and possible conceptual master plan offer.</td>
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<td>Assignment: Retainer fee</td>
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<tr>
<td>1.3 Feasibility</td>
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<tr>
<td>- Detailed process planning of the feasibility study and design of the conceptual master plan</td>
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<tr>
<td>- Determining feasibility of the Agropark, on given location (locations), its business potentials and assessment of the total value of the park and its structural elements as a base for Conceptual master planning</td>
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<td>- Definition and decision on Anchor investor by assigner(s) and local partners</td>
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<td>Assignment: Initiation Fee Retainer fee</td>
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<td>- First meeting with Mexican KENGI Partners in the Netherlands with focus on entrepreneurial participation (with captains of agricultural-food companies and SME) from Aguascalientes organization possibly in combination with ministry of EA&amp;I</td>
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<tr>
<td>Assignment:</td>
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<tr>
<td>1.5 Conceptual master plan and</td>
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<tr>
<td>- Design and report on business case Agropark Aguascalientes</td>
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<td>Assignment: Retainer Fee</td>
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<tr>
<td>preparation of the KENGi² mission</td>
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<tr>
<td><strong>Go no go</strong></td>
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<tr>
<td>1.5 KENGi-mission</td>
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<tr>
<td><strong>Phase 2: Implementation</strong></td>
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</tbody>
</table>
| 2.1 Master plan and detailed project reports | • Park management-Detailed project reports on structural elements  
• Business plans and detailed project reports on optional elements (dependent on Entrepreneurial activities) | Retainer fee and success fee on milestone basis |
| 2.2 Implementation               | • Handholding Integrative implementation and business development | Retainer fee and success fee on milestone basis |
|                                  |                                  |                                  |
| **Phase 3: Operation and Innovation** |                                  |                                  |
| 3.1 Operation                    | • Handholding Integrative management and business development during operations | Retainer fee and success fee on milestone basis |
| 3.2 Innovation                   | • Handholding of park management in innovation of structural elements  
• Handholding of individual entrepreneurs in innovation of optional elements |                                  |

² KENGi means the stakeholders from Knowledge institutes, Entrepreneurs, Non-governmental and Governmental organizations that must co-operate to establish the systems-innovation that is at stake while developing an MFC
6.3 Appendix 3  MEMORANDUM OF UNDERSTANDING ON COLLABORATION BETWEEN
FOCIR, GOVERNMENT OF AGUASCALIENTES (CABINET OF STATE) ON DEVELOPMENT
OF “A GREENPORT OF AGRICULTURA METROPOLITANA EN EL ESTADO DE
AGUASCALIENTES.

CONVENIO DE COLABORACIÓN ENTRE NACIONAL FINANCIERA, S.N.C., EN SU CARÁCTER
DE FIDUCIARIA EN EL FIDEICOMISO DENOMINADO “FONDO DE CAPITALIZACIÓN E
INVERSIÓN DEL SECTOR RURAL”, Y EL GOBIERNO DEL ESTADO LIBRE Y SOBERANO DE
AGUASCALIENTES

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CONVENIO DE COLABORACIÓN QUE CELEBRAN, POR UNA PARTE, NACIONAL
FINANCIERA, S.N.C., EN SU CARÁCTER DE FIDUCIARIA EN EL FIDEICOMISO
DENOMINADO “FONDO DE CAPITALIZACIÓN E INVERSIÓN DEL SECTOR RURAL”,
REPRESENTADO POR SU DIRECTOR GENERAL Y DELEGADO FIDUCIARIO
ESPECIAL, ING. FRANCISCO JAVIER DELGADO MENDOZA, EN LO SUCESIVO
“FOCIR”, Y POR OTRA, EL GOBIERNO DEL ESTADO LIBRE Y SOBERANO DE
AGUASCALIENTES, A TRAVÉS DEL GOBERNADOR CONSTITUCIONAL DEL ESTADO,
ING. CARLOS LOZANO DE LA TORRE, ASISTIDO POR EL LIC. ANTONIO JAVIER
AGUILERA GARCÍA, JEFE DE GABINETE, LIC. ALEJANDRO DÍAZ LOZANO,
SUBSECRETARIO DE EGRESOS DE LA SECRETARÍA DE FINANZAS EN SUCESIÓN
POR MINISTERIO DE LEY, DEL SECRETARIO DE FINANZAS, CON FUNDAMENTO EN
EL ARTÍCULO 24 DEL REGLAMENTO INTERIOR DE LA MENCIONADA DEPENDENCIA,
Y L.C.P. JORGE ARMANDO NARVÁEZ NARVÁEZ, SECRETARIO DE DESARROLLO
RURAL Y AGROEMPRESARIAL, EN LO SUCESIVO “EL ESTADO”, DE CONFORMIDAD
CON LOS ANTECEDENTES, DECLARACIONES Y CLÁUSULAS SIGUIENTES:

ANTECEDENTES
El Gobierno del Estado de Aguascalientes, a través de la Secretaría de Desarrollo Rural y
Agroempresarial, ha revisado el concepto de la “Producción de Alimentos” con una nueva
visión que, tomando las experiencias históricas de la producción agrícola exitosa y algunos
temas del sector industrial, se presenta como un modelo de tercera generación para la
producción intensiva de alimentos que se conoce como la Agricultura Metropolitana, en
dónde uno de sus componentes centrales y base para la alineación de los productos a los
mercados, es el contar con un GREENPORT, que se define como una zona o región
altamente especializada vinculada a las necesidades de los mercados, para llevar a cabo
actividades intensivas de producción de alimentos con uso óptimo de la energía y de agua
con cero contaminación.

De acuerdo a la experiencia internacional, el concepto de GREENPORT se ha convertido
en la forma más avanzada y responsable de producir alimentos para satisfacer la demanda
de los consumidores; es una red de agro producción, procesamiento, comercialización y
logística para satisfacer la demanda de alimentos de un mercado determinado, lo cual
incluye componentes de demostración, investigación, desarrollo de capacidades y funciones
sociales a lo largo de un ejercicio, tan eficientemente como sea posible e
independientemente de la estación del año.

CONVENIO DE COLABORACIÓN ENTRE NACIONAL FINANCIERA, S.N.C., EN SU CARÁCTER
DE FIDUCIARIA EN EL FIDEICOMISO DENOMINADO “FONDO DE CAPITALIZACIÓN E
INVERSIÓN DEL SECTOR RURAL”, Y EL GOBIERNO DEL ESTADO LIBRE Y SOBERANO DE
AGUASCALIENTES

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Bajo este contexto, el Gobierno del Estado de Aguascalientes ha manifestado su intención
en que el Fondo de Capitalización e Inversión del Sector Rural (FOCIR) actúe como agente
técnico para llevar a cabo las actividades de seguimiento, administración y supervisión
derivadas de la contratación por parte del “ESTADO”, de la empresa Alterra Wagienigen
University (ALTEERRA), del Reino de los Países Bajos, en relación a la elaboración de un
proyecto de establecimiento de un GREENPORT de Agricultura Metropolitana en el Estado
de Aguascalientes.
El proyecto antes referido, consiste en realizar las actividades que se requieran para llevar a cabo el diseño e implementación del proyecto de Agricultura Metropolitana que incluye un GREENPORT Integrado, su Red Agro Logística Inteligente y los Centros de Transformación pertinentes en el Estado de Aguascalientes. Dichas actividades contemplan las siguientes etapas:
1) Estudio de Prefactibilidad,
2) Estudio de Factibilidad y
3) Elaboración del Plan Maestro del GREENPORT
El Gobierno del Estado de Aguascalientes ha manifestado que es su deseo que FOCIR participe como agente técnico para efectos de la Etapa 1), sin perjuicio de solicitar posteriormente su colaboración en las otras dos etapas, previa formalización de los convenios respectivos.

DECLARACIONES
I.- Declara “FOCIR”, que:
1.- Es un Fideicomiso Público conforme a los términos a que se refieren los Artículos 3º fracción III, 47 y demás relativos de la Ley Orgánica de la Administración Pública Federal, así como los artículos 40 y demás relativos de la Ley Federal de Entidades Paraestatales, constituido mediante contrato de fecha 25 de marzo de 1994, entre la Secretaría de Hacienda y Crédito Público, como fideicomitente único del Gobierno Federal, y Nacional Financiera, S.N.C., Institución de Banca de Desarrollo, como fiduciaria, con facultades para promover e instrumentar los mecanismos que permitan la capacitación y el otorgamiento de asistencia técnica dentro del Sector Rural, así como para celebrar convenios a efecto de llevar a cabo las actividades antes mencionadas.
2.- Conforme a lo previsto en el numeral 185 de sus Reglas de Operación, está facultado para proporcionar el servicio de agente financiero, administrador de recursos y supervisión de proyectos.

CONVENIO DE COLABORACIÓN ENTRE NACIONAL FINANCIERA, S.N.C., EN SU CARÁCTER DE FIDUCIARIA EN EL FIDEICOMISO DENOMINADO “FONDO DE CAPITALIZACIÓN E INVERSIÓN DEL SECTOR RURAL”, Y EL GOBIERNO DEL ESTADO LIBRE Y SOBERANO DE AGUASCALIENTES

II.- Declara el “ESTADO” que:
1.- Es un Estado Libre y Soberano que forma parte de la Federación, cuyo Poder Ejecutivo lo ejerce el Gobernador del Estado, de conformidad con lo dispuesto en los artículos 40, 41 primer párrafo, 42 fracción I, 43 y 116 de la Constitución Política de los Estados Unidos Mexicanos, así como el artículo 1º de la Constitución Política del Estado de Aguascalientes.
2.- El Ing. Carlos Lozano de la Torre, Gobernador Constitucional del Estado, está facultado para celebrar el presente convenio, de conformidad con lo dispuesto en los artículos 36 y 46 fracción VII inciso a) de la Constitución Política del Estado de Aguascalientes, y 2º y 9º de la Ley Orgánica de la Administración Pública del Estado de Aguascalientes.
3.- El Lic. Antonio Javier Aguilera García, en su carácter de Jefe de Gabinete, se encuentra facultado para suscribir el presente instrumento, de conformidad con los
artículos 48 y 49 de la Constitución Política del Estado de Aguascalientes, así como con los artículos 3, 12 y 13 fracción VII, de la Ley Orgánica de la Administración Pública del Estado de Aguascalientes.

4.- El Subsecretario de Egresos de la Secretaría de Finanzas, Lic. José Alejandro Díaz Lozano, se encuentra facultado para ello, de conformidad con lo establecido en el artículo 63 de la Constitución Política del Estado de Aguascalientes; 9º, 24 fracción X, 27 fracción VIII y 31 fracción XXI, de la Ley Orgánica de la Administración Pública del Estado de Aguascalientes, y 24 del Reglamento Interior de la Secretaría de Finanzas del Estado de Aguascalientes.

CONVENIO DE COLABORACIÓN ENTRE NACIONAL FINANCIERA, S.N.C., EN SU CARÁCTER DE FIDUCIARIA EN EL FIDEICOMISO DENOMINADO "FONDO DE CAPITALIZACIÓN E INversión del Sector Rural", Y EL GOBIERNO DEL ESTADO LIBRE y SOBERANO DE AGUASCALIENTES

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4.- El LCP. Jorge Armando Narváez Narváez en su calidad de Secretario de Desarrollo Rural y Agroempresarial, está facultado para ello, de conformidad con lo establecido en los artículos 9º, 24 fracciones II y X y 39 de la Ley Orgánica de la Administración Pública del Estado de Aguascalientes.

5.- Tiene la intención de que FOCIR actúe como su agente técnico para llevar a cabo las actividades de seguimiento, administración y supervisión relativas a la contratación de la empresa Alterra Wagenigen University (ALterra), del Reino de los Países Bajos, para la elaboración y desarrollo de un proyecto de Agricultura Metropolitana en el Estado de Aguascalientes bajo el concepto de generación de un GREENPORT AGUASCALIENTES.

6.- Para los efectos del presente Convenio, señala como su domicilio legal el ubicado en Av. Adolfo López Mateos Número 1502 Oriente, Fraccionamiento Los Volcanes, C.P. 20255, Aguascalientes, Ags.

Expuesto lo anterior, las partes otorgan las siguientes:

CLÁUSULAS

PRIMERA.- El objeto del presente Convenio consiste en establecer las bases que faciliten la colaboración entre el "ESTADO" y "FOCIR", conforme a las cuales este último llevará a cabo las actividades de seguimiento, administración y supervisión, que se deriven de la contratación por parte del "ESTADO", de la empresa Alterra Wagenigen University (ALterra), del Reino de los Países Bajos, para la elaboración de un estudio de prefactibilidad del Proyecto de Agricultura Metropolitana en el Estado de Aguascalientes, en adelante el "PROYECTO", relativo al diseño e implementación de un GREENPORT Integrado, su Red Agrologística Inteligente y los Centros de Transformación pertinentes en el Estado de Aguascalientes.

SEGUNDA.- Para tal efecto, con la información que le proporcione el "ESTADO", "FOCIR" se compromete a preparar y someter a la consideración del primero, el contrato a celebrarse con la empresa Alterra Wagenigen University (ALterra), del Reino de los Países Bajos, para la elaboración del "PROYECTO", así como a realizar las actividades de seguimiento, administración y supervisión, relativas al desarrollo y entrega de dicho estudio.

TERCERA.- La colaboración a que se refiere el presente Convenio, comprenderá también el intercambio de información acerca del establecimiento y operación de GREENPORTS, tanto en México, como a nivel internacional, mediante la exposición de experiencias de ambas partes en el ámbito de su competencia, cuyos elementos determinantes de éxito o fracaso sean necesarios difundir.

CONVENIO DE COLABORACIÓN ENTRE NACIONAL FINANCIERA, S.N.C., EN SU CARÁCTER DE FIDUCIARIA EN EL FIDEICOMISO DENOMINADO "FONDO DE CAPITALIZACIÓN E INVERSIÓN DEL SECTOR RURAL", Y EL GOBIERNO DEL ESTADO LIBRE y SOBERANO DE AGUASCALIENTES

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CUARTA.- El personal que designe cada una de las partes para la realización de las actividades previstas en este Convenio, continuará bajo la dirección, subordinación y dependencia de cada una de ellas, manteniendo su relación laboral con la entidad a la
que pertenezcan, por tal motivo, en ningún caso se considerará a cualquiera de ellas como patrón solidario o sustituto.

**QUINTA.**- Ambas partes se obligan a que los servidores públicos y el personal que designe cada una de ellas, para la realización de las actividades previstas en este Convenio, guarden la debida confidencialidad respecto a la información que manejen, en el entendido de que deberán abstenerse de divulgar o usar, directa o indirectamente, la información a la que tengan acceso, en provecho propio o de un tercero, o con un fin diferente a los señalados en el presente instrumento.

**SEXTA.**- Las partes manifiestan que el presente Convenio se celebra de buena fe, por lo que realizarán todas las acciones que estén a su alcance para su cabal cumplimiento, pero en caso de que exista alguna duda o controversia respecto a la interpretación, ejecución y cumplimiento del mismo, lo resolverán de mutuo acuerdo y por escrito.

**SÉPTIMA.**- El presente Convenio surtirá efectos a partir de la fecha de su firma y tendrá una vigencia hasta que, en caso de que el "ESTADO" optase por la contratación de la empresa Alterra Wageningen University (ALTEGRA), del Reino de los Países Bajos, para la elaboración del "PROYECTO", ésta lo entregue debidamente concluido a satisfacción de "FOCIR".

Leído el presente Convenio de Colaboración, de acuerdo las partes con su contenido y alcances, lo firman por duplicado en la Ciudad de Aguascalientes, Ags., a los 14 días del mes de abril del 2011.

**POR EL “ESTADO” POR “FOCIR”**

ING. CARLOS LOZANO DE LA TORRE
GOBERNADOR CONSTITUCIONAL DEL
ESTADO

ING. FRANCISCO JAVIER DELGADO
MÉNDOZA
DIRECTOR GENERAL

CONVENIO DE COLABORACIÓN ENTRE NACIONAL FINANCIERA, S.N.C., EN SU CARÁCTER
DE FIDUCIARIA EN EL FIDEICOMISCO DENOMINADO "FONDO DE CAPITALIZACIÓN E
INVERSIÓN DEL SECTOR RURAL", Y EL GOBIERNO DEL ESTADO LIBRE Y SOBERANO DE
AGUASCALIENTES

LIC. ANTONIO JAVIER AGUILERA GARCÍA
JEFE DE GABINETE

LIC. JOSÉ ALEJANDRO DÍAZ LOZANO
SUBSECRETARIO DE EGRESOS DE LA SECRETARÍA DE FINANZAS
EN SUPLENCIA POR MINISTERIO DE LEY, DEL SECRETARIO DE FINANZAS,
CON FUNDAMENTO EN EL ARTÍCULO 24 DEL REGLAMENTO INTERIOR DE LA
SECRETARÍA DE FINANZAS

L.C.P. JORGE ARMANDO NARVÁEZ NARVÁEZ
SECRETARIO DE DESARROLLO RURAL Y AGROEMPRESARIAL

TESTIGOS
MADELEINE VAN MANSFEID
INVESTIGADORA EN ECOLOGÍA DEL PAISAJE Y GERENTE DE PROCESOS DE
AGRICULTURA

PETER SMEETS
INVESTIGADOR EN ECOLOGÍA DEL PAISAJE
ANTECEDENTES

Uno de los principales desafíos que enfrenta el sector agrícola en México hoy es la falta de escala que les otorgue una mayor hacia la mayor competitividad de los agricultores, y que surge de proceso de inversión en tecnología (mecanización y aportaciones científicas). También existe la necesidad de un canal integrado que vincule la cadena de la puerta de la parcela a la mesa de los consumidores.

El desafío es aprovechar el creciente mercado, tanto en el doméstico también hacia los mercados internacionales, buscar oportunidades en el sector de procesamiento de alimentos para que los agricultores se conecten a dichos mercados.

El Fondo de Capitalización e Inversión del Sector Rural (FOCIR), dentro de su estrategia, ha identificado amplias oportunidades y desafíos en Aguascalientes para el desarrollo de los agro negocios en este estado con una visión de mercado y de vinculación a través de la agroindustria, concepto que es compartido por la SAGARPA.

Por otro lado, el Gobierno de Aguascalientes está dispuesto a ofrecer apoyo para el mismo fin de vincular a los productores con los mercados nacionales e internacionales a través de cadenas eficientes de abasto con respeto al medio ambiente.

Los desafíos esbozados anteriormente pueden abordarse de manera eficaz mediante la creación de una plataforma de producción de alimentos para el crecimiento urbano conocida como “Agropark integrado” que no sólo sirve para proporcionar la materia prima adecuada sino también integrar con la demanda de la cadena alimentaria de manera eficiente. El Agropark puede ayudar a reducir los costos al reducir las pérdidas de cosecha de correos, los costos de transporte y los costos de energía. El Agropark también garantizar mayores ganancias debido a la alta calidad de salida, en la disponibilidad de la temporada, mejor trazabilidad y a través de mayor productividad. La replicación correcta de esos modelos a través de centros estratégicos de producción de materias primas es clave para llevar a la transición de la agricultura de Aguascalientes y la industria de procesamiento de alimentos y el agro logística en una orientación más organizada, alta tecnología y segura, demanda y alto valor.

El Agropark tendría por objeto como parte de una más amplia gama de servicios a la creación de una Red de Agronegocios Logística Inteligente (RALI), como elemento importante para atender la demanda de mercados metropolitanos. La RALI también incluye los Centros de Transformación Rural (RTC) que sirven como centros de acopio de productos de los agricultores locales para ser procesado en el Agropark, para al mismo tiempo transformar los conocimientos y las vidas de estos agricultores locales a fin de hacerlos parte de la oferta de la RALI. La creación de un Agropark integrado en Aguascalientes, incluiría hortalizas y verduras (frutas & verduras, setas, etc.) y productos animales (pollo, leche, pescado, etc.) en las cadenas de producción. La propuesta Agropark de Aguascalientes pretende una reducción significativa de los costes de producción, maximizar los beneficios ambientales, una mejora espectacular en calidad y productividad y sinergias globales a través de la gestión del conocimiento. Para llevar a cabo dicha propuesta es necesario llevar a cabo un “ESTUDIO SOBRE FACTIBILIDAD Y MARCO CONCEPTUAL DEL PLAN MAESTRO DEL AGROPARK AGUASCALIENTES”, sobre el cual se definen a continuación los TÉRMINOS DE REFERENCIA para su contratación:

OBJETIVO
• Preparación y presentación del estudio de factibilidad y del marco conceptual del Plan Maestro del Aeroparque Aguascalientes.

OBJETIVOS ESPECÍFICOS:
• El Agropark puede ayudar a reducir los costos al reducir las pérdidas de cosecha de correos, los costos de transporte y los costos de energía.
• Agropark también garantizar mayores ganancias debido a la alta calidad de salida, en la disponibilidad de la temporada, mejor trazabilidad y a través de mayor productividad.
• Replicación correcta de esos modelos a través de centros estratégicos de producción de materias primas agrícolas clave puede llevar a la transición de la agricultura de Aguascalientes y la industria de procesamiento de alimentos y el agro logística en una orientación más organizada, alta tecnología y segura, demanda y alto valor.

ETAPAS
A. Preparación y presentación de estudio de factibilidad
1. Planificación del proceso detallado del estudio de factibilidad y diseño del Plan Maestro conceptual
2. Determinación de la factibilidad del Agropark, en una ubicación dada su potencial de negocios y evaluación del valor total del parque y sus elementos estructurales como base para la planeación del Plan Maestro Conceptual
3. Definición y decisión sobre los inversionistas anclados

B. Plan maestro conceptual y la preparación de la KENGi misión
1. Diseño y reporte del Plan de Negocios del Aeroparque
2. Plan de acción para definir la misión KENGi

ENTREGABLES:

I. Informe detallado sobre el Proceso de Planeación el cual contendrá los pasos posteriores que han de llevarse a cabo para producir el estudio de factibilidad, plan maestro conceptual y a preparar a la misión de KENGi. El proceso detallado documento de planificación se deberá entregar dos semanas después de la firma del contrato.

II. Estudio de Factibilidad deberá contener los siguientes capítulos:
1. Visión y misión de Agropark Aguascalientes
2. Descripción de la región y sitio: ecología, hidrología, suelo, sociología, economía, sistema de política,
3. Descripción de los mercados potenciales
4. Borrador del proyecto de zonificación de Agropark
5. Identificación de posibles ubicaciones de productos básicos y de los Centros de Transformación Rural
6. Perspectiva de implementación
7. Asesoramiento sobre el análisis sobre inversionistas-socios
8. Propuesta de esquema de Administración del Agropark

III. Plan Maestro Conceptual que deberá contener los siguientes capítulos.
1. Análisis de los mercados potenciales y su logística
2. Zonificación de Agropark, distribución espacial por etapas
   a) Elementos estructurales
   i. Infraestructura de caminos, recursos hidráulicos y ecología
   ii. Ecología industrial
   iii. Áreas residenciales
   iv. Áreas de educación e investigación
   b) Elementos opcionales
   i. Infraestructura de producción y procesamiento
   ii. Infraestructura de logística
3. Plan de Desarrollo Regional, distribución espacial y etapas
   a) Localización de los Centros de Transformación Rural y empresas satélites
   b) Conexión de la infraestructura social
   c) Conexión de la infraestructura física
   d) Cultivos potenciales en tiempo y lugar
4. Diseño Organizacional (ORGWARE)
   a) Análisis KENGi de los socios y participantes y su interrelación con análisis preliminar de riesgos
   b) Estructura organizacional del Agropark
   c) Interdependencia y obligaciones relacionadas a la ecología industrial del Agropark
5. Diseño de SOFTWARE
   a) Capacitación y Educación
   b) Investigación y Desarrollo
   c) Comunicación y definición de marca
   d) Calidad de control
6. Escenarios e Implementación
7. Resumen Ejecutivo

IV. Planeación detallada de la Misión KENGi conteniendo:
a) Un folleto de divulgación basado en el Plan Maestro
b) Una lista de socios KENGi nacionales e internacional

DURACION Y COSTO ESTIMADOS:

Se estima un costo máximo de 8 millones de pesos M.N. con un duración máxima de 18 semanas, de acuerdo al siguiente calendario de entregas y pagos:

Entregable I. Dos semanas después de firma de contrato y primer pago (20% costo total)
Entregable II. Ocho semanas después del segundo pago el cual se hará a la entrega del Entregable I. (30% del costo total)
Entregable III y IV. Ocho semanas después del tercer pago el cual se dará a la entrega del Entregable II (30% costo total)
Pago final (20%) a la entrega de Entregables III y IV