# **World Food System Center**

Strategy Overview 2012 – 2014









Ecuador The Ayme Family \$31.55 per week

# 30 Families, 24 Countries, 600 Meals

The images in this document have been selected from the book Hungry Planet by Peter Menzel and Faith D'Aluisio.

This work presents a photographic study of families from around the world, revealing what people eat during the course of one week. Each family's profile includes a detailed description of their weekly food purchases; photographs of the family at home, at market, and in their community; and a portrait of the entire family surrounded by a week's worth of groceries. To assemble this remarkable comparison, Menzel and D'Aluisio traveled to twenty-four countries and visited thirty families from Bhutan and Bosnia to Mexico and Mongolia.

Cover Photo: Mexico, The Casales Family, \$189.09 per week. © All images by Peter Menzel / Hungry Planet.

Executive Summary4
Introduction6World Food System.6The World Food System Center at ETH Zurich.7Governance Structure.7
Strategic Foundation
Distinct Competency
Thematic Focus Areas 10 Foresight 10 Implementation Drivers 10
A Partnership Approach. 12 Identifying Partners 12 The Scientific Advisory Board 13 The Partnership Council 13 Collaborative Partners 13
Activity Areas
Appendix20 List of Members20



Chad The Aboubakar Family \$1.23 per week

# **Executive Summary**

The question of how to feed the world, while considering human health, the environment and social wellbeing is one of the defining challenges of our time. In order to play a key role in addressing this challenge, the ETH Zurich has recently established the World Food System Center, which works towards a vision of "a healthy world through sustainable food systems". The Center includes 32 professorial members from five different departments of the ETH Zurich and three groups from eawag. The mission of the Center is: "to be a leader in scientific research, education and outreach that contributes to sustainable food security for local and global stakeholders, through collaborative partnerships oriented along the four pillars required for food security (availability, access, use, stability) within the context of the world food system."

#### Objectives

The long-term objectives of the Center are to: (1) generate new scientific knowledge with political, industrial and societal relevance and disseminate it to key stakeholders in a manner that supports real world impact; (2) provide leadership and foresight on issues connected to food security based on innovative solutions for pressing problems of the world food system; (3) build the capacity of the next generation of decision makers who can provide leadership in all issues related to sustainable food systems; (4) build up strategic partnerships with industry, foundations, research institutions, policy makers, UN agencies, NGOs and other stakeholders that foster new ways of working together to strengthen information dissemination and impact; and (5)

act as the initial reference location for reliable and up to date information on the global food situation for key internal and external stakeholders.

### **Distinct Competency**

The distinct competency of the World Food System Center is based on the following key factors:

- housed at a world leading scientific institution that has a strategic focus on addressing global challenges of the food system and is the sole provider of research university level training in agricultural and food sciences in Switzerland. The institution is well resourced, networked and positioned to be a world leading player in defining challenges as well as developing and disseminating solutions;
- a multidisciplinary group of members that includes competencies across the food system and with solid networks, track records and projects within the field;
- a Partnership Council with committed members from foundations and leading companies from the agri-food industry as well as a Scientific Advisory Board with leaders from governmental, international and scientific organizations;
- a new professorship focused on Sustainable Agroecosystems (and anticipated new professorships in the future);
- core infrastructure and resources to provide professional project management and coordination services and to manage internal and external interfaces.

#### Thematic Focus Areas

In order to concentrate resources and frame the work of the Center, four thematic focus areas have been defined:

**Sustainable Production Systems** – is concerned with addressing the sustainable intensification and production of quality food in a manner that considers environmental, social and health implications.

**Food for Health** – is concerned with the relationships between food, diets and health across the food system and interventions that can improve human nutrition.

**Resource Efficiency** – is concerned with addressing the issues of waste and resource inefficiencies across the entire food system.

Connecting to Markets – is concerned with enhancing producer livelihoods and consumer health through production, processing, distribution and marketing innovations that improve connections to and distribution within markets.

Crosscutting through all of the work of the center will be the consideration of "Implementation Drivers", namely the linkage to policy making, industry and not for profits, as well as the consideration of economic and social feasibility.

### Partnership Approach

One of the core values of the Center is to "work with others in strategic partnerships to achieve together what no partner could achieve on their own". This core value forms the basis for how the Center will develop and implement all projects, programs and activities. In order to facilitate greater exchange between academia and external partners and stakeholders the center will:

- manage processes where multiple stakeholders and disciplinary perspectives are involved in the framing of challenges, in the production of new knowledge and in the implementation of solutions;
- drive education that targets key stakeholders and is developed based on real world challenges and contexts;
- act as a platform that supports and participates in networks and exchange that foster communication and outreach.

The Center will ultimately forge strategic partnerships at two levels – at the organizational level and at the project level. During the establishment phase, the focus will be on building up partnerships at the project level in line with thematic focus areas and together with important stakeholders in Switzerland, and when possible, internationally. From 2013 onwards, the Center will identify

key partner organizations internationally and define how to work together at the organizational level. The governance structure of the Center includes two bodies, the Partnership Council and the Scientific Advisory Board, both of which will play a key role in the partnership building process. In addition, organizations actively engaging in projects with the Center can be formally associated as "Collaborative Partners". These three groups will interact with one another at events and meetings arranged by the Center.

# **Activity Areas**

As outlined in the mission statement, the Center is active in research, outreach and education. A summary of the initial activities in these areas that are underway or planned during the establishment phase are provided below.

Research: The partnership approach will be used to build up the research portfolio of the Center, which will in turn drive the other activity areas. This will be done through a series of "lighthouse" programs that will be set up in 2012 with a selection of key stakeholder groups. The lighthouse programs will be used to establish the model to work with these particular stakeholder groups. The programs that are currently being set up under this approach include the: Mercator Research Program, Bühler Research Program, and the COOP Research Program.

**Outreach:** Outreach activities will be developed to compliment the needs of the research programs. In addition, a number of general activities are in planning that serve to reach a broader audience. These initiatives include: the spring 2012 edition of Treffpunkt Science City "World Food Systems", the final outreach event for project "Resource Efficiency in the Service of Food Security (REDES)", "Zu Tisch" National Exhibition, Green Economy Podium Discussion. Each of these events will be held together with key partners.

**Education:** Educational activities will not be the focus of the Center during the establishment phase, but will be ramped up from 2013 onwards. However, a number of initiatives have already started or are in planning, including: the Summer School "Eating Tomorrow – Rethinking the World Food System" together with ETH Sustainability, the Seed Sustainability Food Systems Program, a Student Placement Program, and a Film and Dialogue Series.

# 1 Introduction

# The World Food System

The question of how to feed the world, while considering human health, the environment and social wellbeing is really the defining, and possibly most complex, challenge of our time. In recent years, increasing attention has been given to the question of how to provide adequate food for the world population of 9 billion people projected for 2050. And yet, as it stands today there are already over a billion undernourished people on the planet. Billions more suffer from "hidden hunger", resulting from a chronic lack of access to sufficient nutrients and vitamins. Many of these people are small-scale farmers in developing countries, a group representing nearly one third of humanity. At the same time, over a billion people in the world suffer from obesity, which also has significant impacts in terms of health and chronic disease.

The environmental basis of food production is already facing unprecedented challenges, including climate change, increasing water scarcity, decreasing soil quality, declining land and input availability, emerging plant pests and pathogens and decreasing provision of ecosystem services. At the same time, a growing global population, changing dietary habits and competing users (e.g. for fuel and feed) are placing record demands on the consumption side. All of these factors play out within a global political economy that influences prices and incentives (e.g. compensation schemes for bioenergy), further increasing complexity and volatility.

In order to address these challenges, we must work within a framework that considers the entire world food system

(WFS) – a non-linear system that includes all processes, infrastructure, inputs and outputs involved in feeding a population. Furthermore, it includes the environmental, social, political and economic contexts and conditions that set the boundaries of the system. A system approach requires inter- and trans-disciplinary methods that consider all interactions, feedbacks and effects across environmental and institutional systems. The WFS is a global system made up of local and regional systems that are interconnected through markets and trade, meaning that challenges or interventions in one part of the world, no matter how remote, can create flow on effects in other parts of the world.

Working within the context of the world food system enables us to contribute to solving the global challenges of food security, which is dependent on four components: (i) availability – through sustainable agricultural production and processing; (ii) access – physical and monetary access to appropriate and adequate (quantity and quality) food; (iii) use – food processing and safety and utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being; and (iv) stability – providing stable food supplies under changing environmental, political and socio-economic conditions.

'Food Security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life' (FAO, 2009).

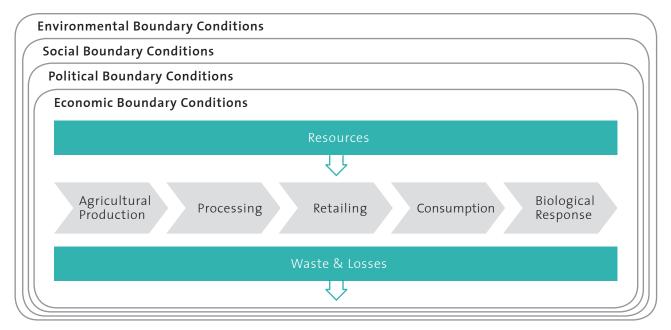


Figure 1: The key elements of the World Food System.

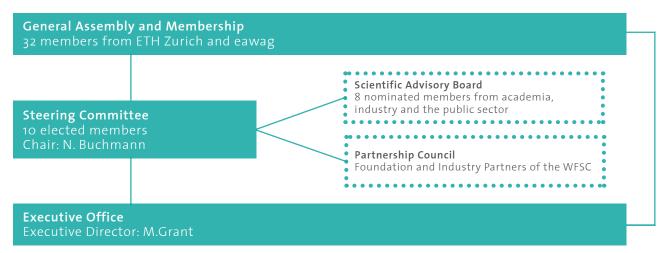


Figure 2: WFSC Organizational Structure.

#### The WFS Center at ETH Zurich

ETH Zurich has recently established the World Food System Center in order to strengthen its contribution to addressing the challenges outlined above. A variety of converging factors has led to the founding of the Center at ETH Zurich. With the departmental restructuring coming into effect in January 2012, the professors of the former Department of Agricultural and Food Sciences (D-AGRL) drove the process of turning the strategy of the D-AGRL department into a Competence Center. The aim of this move was to continue and strengthen the strong collaborations of agricultural and food scientists who are now housed in separate departments, while bringing in new disciplines and competences under the World Food System banner. Simultaneously, ETH Zurich elevated food system issues to a strategic focus area, thereby mandating the ETH Foundation to establish the World Food System Initiative to fundraise to support activities in this field. Basic infrastructure funding for the Center was secured from ETH Zurich (for four years) and funding for the initial programs was directed through the ETH Foundation. Funding was also secured for a new Chair in Sustainable Agroecosystems, which will commence in the spring of 2013. The ETH Foundation continues to seek funding for

additional new professorships relevant to the World Food System.

The Competence Center was founded in June 2011 with the inaugural general assembly and operations commenced in December 2011. The Center operates under the name of the "World Food System Center" (WFSC).

#### Governance Structure

The core of the WFSC is formed by the member group, which comprises of 33 professors from five different departments of the ETH Zurich and three different groups of eawag. The Steering Committee, formed by a group of ten elected members and led by a Chair, oversees the operational functions of the Executive Office. The Scientific Advisory Board provides strategic advice to the steering committee and connections to key organizations. The Partnership Council is formed by foundations and industry partners who make substantial donations to the programs of the Center through the ETH Foundation. An overview of the organizational structure is provided in Figure 2.

# 2 Strategic Foundation

#### **Vision**

A healthy world through sustainable food systems

#### Mission

To be a leader in scientific research, education and outreach that contributes to sustainable food security for local and global stakeholders. We do this through collaborative partnerships oriented along the four pillars required for food security (availability, access, use, stability) within the context of the world food system.

#### **Core Values**

We are fully committed to uphold the independance of university research, education and outreach.

We understand that social and environmental sustainability are key underpinning aspects of our work. We are diligent in disseminating new knowledge to relevant stakeholders and in supporting the translation of outputs into real world impact.

We offer an accessible and visible platform to cultivate discussion, debate and exchange between groups with differing viewpoints and stay open to all opinions.

We will focus We work with on integration, others in collaboration strategic and innovative partnerships ways of to achieve working together what together in no partner multi-, could achieve trans- and on their own. interdisciplinary

manners.

We orient all our work towards global challenges of high societal relevance.

Figure 3: Vision Mission and Core Values.

The strategic foundation of the World Food System Center will guide all activities and decisions and is shown in Figure 3.

#### Objectives

The long-term objectives of the WFSC are as follows:

- To generate new scientific knowledge with political, industrial and societal relevance and disseminate it to key stakeholders in a manner that supports real world impact;
- To provide leadership and foresight on issues connected to food security based on innovative solutions for pressing problems of the world food system;
- 3. To build the **capacity** of the next generation of decision

- makers who can provide leadership in all issues related to sustainable food systems;
- 4. To build up strategic partnerships with industry, foundations, research institutions, policy makers, UN agencies, NGOs and other stakeholders that foster new ways of working together to strengthen information dissemination and impact;
- To act as the initial reference location for reliable and up to date information on the global food situation for key internal and external stakeholders.

All objectives will be relevant across spatial scales (Switzerland, Europe and the world) and time scales (short, medium and long-term). To do this, the Center will maintain strong links and grounding in Switzerland, while developing into an internationally oriented organisation.

# 3 Distinct Competency

Based on a benchmarking and SWOT analysis conducted by the Strategy Taskforce, the following distinct competency of the WFSC could be articulated.

The World Food System Center of ETH Zurich:

- is housed at a world leading scientific institution that has a strategic focus on addressing global challenges of the food system and is the sole provider of research university level training in agricultural and food sciences in Switzerland. The institution is well resourced, networked and positioned to be a world leading player in defining challenges as well as developing and disseminating solutions;
- has a multidisciplinary group of members that includes competencies across the food system and with solid networks, track records and projects within the field;
- has a Partnership Council with committed members from foundations and leading companies from the agri-food industry and a Scientific Advisory Board with leaders from governmental, international and scientific organizations;
- is related to a new professorship focused on Sustainable Agroecosystems (and additional new professorships in the future);
- has core infrastructure and resources to provide professional project management and coordination services and manage internal and external interfaces.

#### The Member Group

The 33 members form the core asset of the Center and provide the multi- and trans-disciplinary research expertise. The members are housed in five different departments of ETH Zurich – the Department of Environmental Systems Science (D-USYS), the Department of Health Sciences and Technology (D-HEST), the Department of Biology (D-BIOL), the Department of Architecture (D-ARCH) and the Department of Civil, Environmental and Geomatic Engineering (D-BAUG). In addition, several members come from the Swiss Federal Institute of Aquatic Science and Technology (eawag). A full list of members and their research groups is provided in the Appendix.

The WFSC member group includes the following institutes and chairs:

Institute of Food, Nutrition and Health (IFNH) — represented by the following Chairs: Human Nutrition, Food Biotechnology, Physiology and Behavior, Food Microbiology, Food and Soft Materials, Food Biochemistry, Consumer Behavior, Food and Nutrition Toxicology, Food Process Engineering, and Translational Nutrition Biology.

Institute of Agricultural Sciences (IAS) – represented by the following Chairs: Grassland Sciences, Applied Entomology, Plant Nutrition, Plant Biotechnology, Forage Production and Grasslands, Animal Nutrition, Crop Science and Plant Biochemistry. From 2013 onwards, this institute will include the Chair of Sustainable Agroecosystems.

**Institute for Environmental Decisions (IED)** – represented by the following Chairs: Agri-Food and Agri-Environmental Economics, Natural and Social Science Interface.

**Institute for Integrative Biology (IBZ)** – represented by the following Chairs: Plant Ecology, Plant Pathology.

**Institute for Terrestrial Ecosystems (ITE)** – represented by the following Chairs: Soil Protection, Ecosystem Management.

**Institute for Environmental Engineering (IFU)** – represented by the Chair for Ecological Systems Design.

**Institute for Atmospheric and Climate Science (IAC)** – represented by the Chair for Land-Climate Interactions.

Members from the Department of Architecture include the Chairs of Urban Design and Information Architecture.

In addition, the member group includes experts from eawag on Water and Sanitation in Developing Countries, Environmental Chemistry and Water, Food and Environmental Studies.



Bhutan The Nomgay Family \$5.03 per week

# 4 Thematic Focus Areas

The WFSC Strategy Taskforce has defined four thematic focus areas to concentrate resources on and to frame the work of the center.

These themes:

- are of significant importance in relation to food security:
- simultaneously consider several of the food security pillars;
- reflect the core competence of the members;
- are where ETH can provide significant scientific contributions; and
- reflect opportunities for collaborations across disciplines and with external partners.

Although focus themes have been identified, the Center will maintain a systems approach and an orientation to addressing world food system challenges across the four pillars of food security. Inter-linkages among themes will be recognized and encouraged. Furthermore, the Center aims to remain flexible and open to take on other important and emerging issues in the future. The thematic focus areas that have been identified are outlined on Page 11.

#### Foresight

The Center will conduct Foresight work across the four

focus areas that will focus on challenges and opportunities for food systems within changing economic, social, political and environmental contexts. This work can be undertaken across a variety of scales, from the level of local through to global systems. The aim of the foresight work of the Center will be to support strategic decision-making in academia, industry and policy.

This work will generally be concerned with:

- key drivers, their interactions and uncertainties;
- potential applications and impacts of emerging breakthroughs and disruptions;
- development and analysis of a variety of scenarios;
- development of recommendations and strategic actions.

This service and function of the Center is currently in its infancy and will be ramped up as the Center is established.

# Implementation Drivers

Crosscutting through all of the work of the center will be the consideration of "Implementation Drivers", namely the linkage to policy-making, industry and not for profit organizations, as well as the consideration of economic and social feasibility.

# **Sustainable Production Systems**

The focus area "Sustainable Production Systems" is concerned with the sustainable intensification and production of quality food in a manner that considers environmental, social and health implications. The topics that may be addressed under this theme include:

- Principles, design and management of agroecological systems (including nutrient cycling, management of pathogens and pests);
- Genetic resources for improved food systems;
- Climate change mitigation and adaptation;
- Role and use of marginal land for food production;
- Opportunities at the interface of hightechnology; and low-technology approaches; and
- Role and impact of biodiversity and ecosystem; services on the food system.

#### **Food for Health**

The focus area "Food for Health" is concerned with the relationships between food, diets and health across the food system and interventions that can improve human nutrition. The topics that may be addressed under this theme include:

- Linkages between food, diet management and chronic disease prevention;
- Food quality and safety:
- Food production technology;
- Biofortification and functional foods;
- Personalized foods;
- Linkages between agriculture, diet and nutrition:
- Consumer decision making and behavior for healthy diets; and
- Clean water for food.

# **Resource Efficiency**

The focus area "Resource Efficiency" is concerned with addressing the issues of waste and resource inefficiencies across the entire food system. The topics that may be addressed under this theme include:

- Reducing pre- and post-harvest losses
- Reducing consumption losses:
- Improving water use and efficiency in agriculture and food processing:
- Improving efficiency and sustainable use of land, nutrients, soil and energy;
- Addressing food, feed, and fuel competition and conversion inefficiencies;
- Application of Life Cycle Analysis principles to food products and food systems;
- Recycling of food and feed waste, recycling wastes for food production; and
- Sustainable approaches to food processing.

# **Connecting to Markets\***

The focus area "Connecting to Markets" is concerned with enhancing producer livelihoods and consumer health through production, processing, distribution and marketing innovations that improve connections to markets. The topics that may be addressed under this theme include:

- Small scale storage, processing and entrepreneurship to move value adding steps of the supply chain closer to producers in developing countries:
- Improving access to market information and infrastructure;
- Transfer of technology to household, village and city wide scales;
- Value chain management;
- Quality assurance, certification, standards and trade;
- Role of urban and peri-urban agriculture; and
- Consumer preferences and behavior.
- \* Note: Activities under this theme are currently limited and will be ramped up from 2013 onwards.

# 5 A Partnership Approach

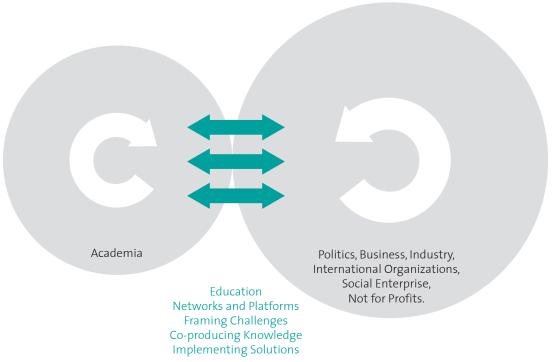


Figure 4: The Partnership Approach.

As stated in the core values, the WFSC "works with others in strategic partnerships to achieve together what no partner could achieve on their own". This core value forms the basis for how the Center will develop and implement all projects, programs and activities. The WFS is complex and includes a wide variety of stakeholders and interests. Successful interventions within the WFS will only be possible through interdisciplinary approaches that consider not only the generation of new knowledge but also the pathways for dissemination and implementation and involvement of key stakeholders. In order to facilitate greater exchange between academia and external partners and stakeholders, the center will:

- manage processes where multiple stakeholders and disciplinary perspectives are involved in the framing of challenges, in the production of new knowledge and in the implementation of solutions;
- drive education that targets key stakeholders and is developed based on real world challenges and contexts;
- act as a platform that supports and participates in networks and exchange that foster communication and outreach.

# **Identifying Partners**

The Center will ultimately forge strategic partnerships at two levels – at the organizational level and at the project level. During the establishment phase, the focus will be on building up partnerships at the project level in line with thematic focus areas and together with important stakeholders in Switzerland, and when possible, internationally. From 2013 onwards, the Center will identify key partner organizations internationally and define how to work together at the organizational level.

The governance structure of the Center includes two bodies, the Partnership Council and the Scientific Advisory Board, both of which will play a key role in the partnership building process. In addition, organizations actively engaging in projects with the Center can be formally associated as "Collaborative Partners". These three groups will interact with one another at events and meetings arranged by the Center. A more detailed explanation of the function of the three different groups is provided in the following Sections.

### The Scientific Advisory Board

The Scientific Advisory Board (SAB) is currently being created and will:

- facilitate dialogue between the Steering Committee and representatives from Government, Scientific and International Organizations and decision making bodies;
- support the formation of partnerships and strategic alliances to important organizations internationally; and
- advise the Steering Committee on strategic issues.

The SAB will consist of up to eight members who meet annually. The period of service for a member is four years, with reelection allowed. The SAB nominates its own President to serve for a two year term. Nominations for the SAB have now been received and the board will be formed in mid-2012.

### The Partnership Council

The ETH Foundation and the WFSC have established a "Partnership Council" for industry and foundation partners. Membership is open to organizations who have provided significant financial support for projects and who are interested in playing an active role in establishing and expanding the WFSC.

The Partnership Council will support the Center by facilitating better access to:

- networks and contacts:
- real world data and cases;
- industry specific and applied knowledge; and
- infrastructure, financial and human resources.

The Partnership Council meets bi-annually and will be a platform for exchange, collaboration and for implementing concrete projects. Current members are: the Mercator Foundation Switzerland, Syngenta, Bühler, Coop and Nestlé.

#### Collaborative Partners

Collaborative Partners include organizations that are working closely with the Center on projects or programs, however, are not suitable for membership in the SAB or the Partnership Council. This relationship will be formalized through the signing of a Memorandum of Understanding between the Center and the potential Collaborative Partner. Members of this group will have the opportunity to interact with each other and with the SAB and Partnership Council members at events hosted by the Center.



USA North Carolina The Revis Family \$341 per week



Japan The Ukita Family \$317 per week

# 6 Activity Areas

The Mission of the Center is to "be a leader in scientific research, outreach and education that contributes to sustainable food security for local and global stakeholders". The goals and approach under each of these three activity areas are as follows:

#### Research

- Contribute new knowledge that plays a role in addressing the global challenges of food security;
- Develop new research models based on partnerships;
- Facilitate inter-disciplinary research within ETH Zurich;
- Manage the boundary between science and decision making, ensuring prominence, credibility and legitimacy.

#### **Outreach and Communication**

- Disseminate new knowledge to key stakeholders;
- Improve understanding of the media and the informed public;
- Develop and expand new and more efficient forms of networking and information exchange.

#### Education

- Develop the skills needed at the policy-science and management-science interfaces;
- Develop and support new teaching models emphasizing real world problems, working together with stakeholders;
- Build up both the knowledge and skills of the next generation of leader.

The Center is already in operation and several programs and initiatives have already been launched under the three activity areas. These have been developed both through strategic planning and partnership building and through taking on relevant opportunities when they arose. The sections below outline the strategic approach to building up new activities as well as details of the activities that are currently underway or in planning.

#### Research

The partnership approach will be used to build up the research portfolio of the Center, which will in turn drive the other activity areas. This will be done through a series of "lighthouse" programs that will be set up in 2012 with a selection of key stakeholder groups (mostly Swiss based). The lighthouse programs are used to establish the model to work with these particular stakeholder groups. The

initial groups, the elements of the working model and the lighthouse research programs are outlined in Table 1.

When the initial programs are established, new topics will be elaborated with existing partners and new partnerships will be explored, in line with the thematic focus areas.

Table 1: Applying the Partnership Approach to Research.

Partner	Model Elements	Lighthouse Program	Thematic Focus Area
Foundations	<ul> <li>Collaborative Platform for various disciplines</li> <li>Strong ties to education and outreach</li> </ul>		Sustainable Production Systems
Industry	<ul> <li>Precompetitive &amp; Integrative Platform</li> <li>Bringing together diverse disciplines and industry partners</li> <li>Technical Boards with multiple industry and stakeholder representatives</li> </ul>	COOP Program	Sustainable Production Systems / Food for Health / Connecting to Markets
Not for Profits	WFSC and NfP Partners work together to frame research based on real world challenges of high relevance     NfP Partner provides links to challenges on the ground, implementation networks and donor networks     WFSC – provides the research capacity, new knowledge and recommendations     Donor – provides funding, outreach networks		Food for Health
• Topics of policy relevance for CH     • Connect national to international networks and issues     • Multi-stakeholder outreach		Bundesamt für Landwirtschaft BLW Project	Resource Efficiency
International Organizations	• Being defined		
University and Research Centers	Being defined		

Based on the partnership approach, a number of lighthouse research programs have already been established by the Center. These programs, along with additional programs currently in discussion, are outlined in Table 2 below.

Table 2: Current Research Activities at the WFSC.

Program Description	Thematic Focus Area(s)	Partners	
Mercator Research Program Research program with an annual call, funding 3 yr PhD projects and associated education and outreach activities. Projects will focus on: organic/low input agriculture, sustainable land use, sustainable use of natural resources, climate change and agroecosystems/food systems.	Sustainable Production Systems	Mercator Foundation Switzerland	
Bühler Research Program Integrative projects (post-doc level) that address challenges of the food system and bring together diverse academic and industry partners on a precompetitive platform. Proj. 1: Perspectives of the Grain Value Chain Proj. 2: Novel Structuring Processes for the generation of consumer function-tailored properties of plant protein based composite foods (PRO3)	Foresight, Sustainable Production Systems, Food for Health	Bühler	
COOP Research Program  Research program with an annual call funding Post Doc projects focussing on sustainability in food value chains.	Sustainable Production Systems, Resource Efficiency, Food for Health, Connecting to Markets	COOP	

# Outreach

A detailed outreach strategy will be developed for each research program as it develops and based on the specific focus. In addition to these programs, the center will deliver a number of broader outreach programs, as outlined in Table 3 below.

#### Table 3: Current Outreach Activities at the WFSC.

Program Description	Thematic Focus Area(s)	Partners
Treffpunkt Science City WFSC was a partner to host the spring 2012 program on the "World Food System".	World Food System	Treffpunkt Science City
Forum for Sustainable Food Systems  "Forum for Sustainable Food Systems" – Concept under development for an international series of workshops that brings together key stakeholders and has a focus on creating tangible impact.	World Food System	Partnership Council
Resource Efficiency in the Service of Food Security (REDES)  Multi-package project involving systems modeling, a literature review and an outreach event. WFSC is participating in project design and partnering to host the final event which is targeted to high level Swiss stakeholders.	Resource Efficiency	Bundesamt für Landwirtschaft
Public Lecture Series  Creation of a public lecture series targeting informed public and showcasing ETH knowledge and talent.	World Food System	SVIAL

# Education

The Strategy Taskforce made the decision that Education activities will not be the prime focus of the Center during the establishment phase, however will start to ramp up from 2013 onwards. The Center will focus mainly on extracurricular activities; however important synergies with existing ETH teaching will be explored. An overview of the current education initiatives of the Center are provided in Table 4 below.

Table 4: Current Education Activities at the WFSC.

Program Description	Thematic Focus Area(s)	Partners
Summer / Winter Schools  Programs for bachelor, masters and PhD students.  Involving multidisciplinary and multicultural student	World Food System	ETH Sustainability
groups who work on lectures, case studies, field trips and workshops in collaborative and multidisciplinary settings.	Sustainable Production Systems	Mercator Foundation Switzerland
Seed Program Establishing a "food system sustainability" program on	World Food System	Seed Sustainability
the Seed Sustainability platform to allow students to carry out their Masters thesis with an industry partner.  Provides an opportunity to engage and work with industry partners and to slowly build up larger/ongoing research programs.	Resource Efficiency, Connecting to Markets, Food for Health	Industry Partners
Student Placement Program Establish network of industry and international organization partners to accept ETH students for internships and work experience placements. The WFSC runs the selection and matching process.	World Food System	Member Departments
Film Series Series of film screenings followed by critical discussion and dialogue with WFSC faculty members.	World Food System	IFNH
Food Systems Opportunity Portal Build up a student portal for opportunities related to the food system including courses, education programs, science café's and thesis, job and internship opportunities.	World Food System	In discussion



Egypt
The Ahmed Family
\$68.53 per week



India Anonymous Family \$39 per week

# Appendix

# List of Members

The Competence Center includes a total of 32 members from five different departments (D-ARCH, D-BAUG, D-BIOL, D-HEST, D-USYS) and eawag.

Table 5: List of Members.

Title	First Name	Last Name	Department	Group
Dr.	Raushan	Bokusheva	D-USYS	Agri-Food-Environmental Economics
Prof.	Nina	Buchmann	D-USYS	Grassland Sciences
Prof.	Alfredo	Brillembourg	D-ARCH	Urban Design
Prof.	Silvia	Dorn	D-USYS	Applied Entomology
Prof.	Peter	Edwards	D-USYS	Plant Ecology
Prof.	Emmanuel	Frossard	D-USYS	Plant Nutrition
Prof.	Jaboury	Ghazoul	D-USYS	Ecosystem Management
Prof.	Wilhelm	Gruissem	D-BIOL	Plant Biotechnology
Prof.	Isabel	Günther	D-GESS	Developmemt Economics
Prof.	Stefanie	Hellweg	D-BAUG	Environmental Engineering
Prof.	Hubert	Klumpner	D-ARCH	Urban Design
Prof.	Michael	Kreuzer	D-USYS	Animal Nutrition
Dr.	Pius	Krütli	D-USYS	Natural and Social Science Interface
Prof.	Christophe	Lacroix	D-HEST	Physiology and Behavior
Prof.	Martin	Loessner	D-HEST	Food Microbiology
Prof.	Andreas	Lüscher	D-USYS	Forage Production and Grasslands
Prof.	Bruce	McDonald	D-USYS	Plant Pathology
Prof.	Raffaele	Mezzenga	D-HEST	Food and Soft Materials
Prof.	Laura	Nyström	D-HEST	Food Biochemistry
Prof.	Gerhard	Schmitt	D-ARCH	Information Architecture
Prof.	Rainer	Schulin	D-USYS	Soil Protection
Prof.	Sonia	Seneviratne	D-USYS	Land-Climate Interactions
Prof.	Michael	Siegrist	D-HEST	Consumer Behavior
Prof.	Jo	Six	D-USYS	Sustainable Agroecosystems
Prof.	Bruno	Studer	D-USYS	Forage Crop Genetics
Dr.	Christian	Stamm	eawag	Environmental Chemistry
Prof.	Shana	Sturla	D-HEST	Food and Nutrition Toxicology
Prof.	Achim	Walter	D-USYS	Crop Science
Prof.	Erich	Windhab	D-HEST	Food Process Engineering
Dr.	Hong	Yang	eawag	Water, Food, Environment Studies
Prof.	Sam	Zeeman	D-BIOL	Plant Biochemistry
Prof.	Michael	Zimmerman	D-HEST	Human Nutrition
	Chris	Zurbrügg	eawag	Water and Sanitation

# Members of the Strategy Taskforce

Nina Buchmann, Emmanuel Frossard, Wilhelm Gruissem, Michael Kreuzer, Christophe Lacroix, Bruce McDonald, Rainer Schulin, Michael Siegrist, Christian Stamm, Achim Walter, Michael Weber, Hong Yang, Michael Zimmerman.

#### Main Author

Michelle Grant.

# Design and Layout

Lex Schaul

# April 2013

ETH Zurich World Food System Center

Auf der Mauer 2 | ADM 8092 Zurich, Switzerland

www.worldfoodsystem.ethz.ch