

UBC Social Ecological Economic Development Studies (SEEDS) Student Report

**Benchmarking transitions towards a local and sustainable UBC food system**

**Wendy Chan, Anne Fuller, Lauchlan Jankola, Monique Miles, Rebecca Obedkoff, Karen**

**Sam, Jill Wallace**

**University of British Columbia**

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**UBCFSP: Scenario 7**

**Benchmarking transitions towards a local and sustainable  
UBC food system**

**Group 18:**

Wendy Chan  
Anne Fuller  
Lauchlan Jankola  
Monique Miles  
Rebecca Obedkoff  
Karen Sam  
Jill Wallace

## **ABSTRACT**

The four years of work on the UBC Food Systems Project (UBCFSP) thus far has resulted in a need to measure the progress of the UBC Food System in reaching sustainability goals. Our groups' value assumptions, which encompass community cohesion, education, the connection between humans and the environment, and the fundamental right to food, generally support the guiding principles of the UBCFSP Vision Statement, and have guided our work on this scenario.

We used a collaborative approach with the other two groups working on scenario seven to determine the information base needed for indicators and benchmarks. Our proposed benchmarks include both short term (2010) and long term (2020) goals. Benchmarks were set with the recognition that the food system as a whole will undergo changes between now and 2020. Due to their differing roles within the UBC Community, the findings for indicators and the benchmarks set vary greatly between the key players identified in our research. Some indicators and benchmarks proved much more challenging to find information for and address than others for which data was readily available. These issues are discussed throughout our Findings and Discussion.

## **INTRODUCTION**

In 2002, the class of Agricultural Sciences 450 began to examine the state of the food system at the University of British Columbia. Each year, different components of the food system have been analyzed in order to assess the overall sustainability, and several groups have proposed recommendations designed to improve the sustainability of the UBC Food System. The result of the last four years of study is the UBCFSP, with the goal of achieving a more sustainable and food-secure campus, and to provide practical examples and leadership to the greater community and world. With four years of work on the project, students have identified

the necessity of having a system to monitor progress, a way of measuring sustainability using indicators, and the necessity of identifying benchmarks that would indicate the success of current endeavours and future aspirations.

Below, we have recorded the results of our research on indicators and benchmarks. We begin by identifying our research problem statement and how our work impacts regional, national and global sustainability. Our reflections on the UBCFSP vision statement and our value assumptions are then addressed before providing our findings for indicator values and suggesting benchmarks for these indicators. Using our sustainability model, we illustrate our current findings and benchmarks. Finally, we identify areas that require further research, and reflect on the impact our findings and the project have on the broader food system.

### **PROBLEM DEFINITION**

In our scenario problem statement, the authors state that “we still do not have benchmarks to measure how well or poorly we are doing in making steps forward or backward in these transitions, and our campus food system sustainability initiatives have yet to be documented in a *single* comprehensive model” (UBCFSP 18). The purpose of this scenario is to map the current indicators of food system sustainability, to propose benchmarks for these indicators in order to gauge our progress towards greater sustainability, and to model these indicators in order to demonstrate our position graphically. This has the potential of local, regional and national implications as the modeling is in its infancy. The City of Vancouver will likely be receptive to our work; there may eventually be some parallels between the Vancouver Food System Assessment and an opportunity to integrate benchmarking into the Vancouver assessment. In addition, UBC has a desire to move towards greater campus sustainability (Trek 2010). This scenario provides a representation of UBC’s progress towards sustainability that can be used for academic, recruiting, public relations and other purposes. The 2010 Winter Olympics

will hopefully provide an impetus for reaching sustainability benchmarks and so we have chosen 2010 as a short-term goal for most benchmarks. Finally, this scenario serves as a record of sustainability initiatives and their success, setting examples and lessons learned for other universities wanting to improve the sustainability of their food system.

The UBC Food Systems project also relates to problems in the broader food system. In some ways, UBC can be seen as a small scale example of regional, national, and international food systems, and UBC is connected to the food system at all of these levels. We recognize that UBC is a leader in campus sustainability, so it may not always reflect the problems of the food system as a whole, but many lessons can be learned from UBC that can be applied on a larger scale. The indicators in this scenario reflect key issues in the food system as a whole, and the measurements and benchmarks proposed may serve to indicate where the food system is functioning on other levels: for example, our findings about the amount of local food available for purchase certainly indicates the state of the broader food system in addition to UBC's food system. Furthermore, gaps in research were observed for some indicators providing greater understandings of which areas of food system sustainability are currently being recorded and prioritized and which are not. Finally, the challenges experienced in this scenario in terms of measuring unique but intricately connected factors certainly reflects challenges that may be experienced in planning for greater sustainability on regional, national and global scales.

### **PROJECT VISION STATEMENT**

The project proposes a "Vision Statement for a Sustainable UBC Food System," which is supported by seven guiding principles that encompass the main factors contributing to food system sustainability. Our group agrees with the spirit of all seven of the guiding principles. As a group, we would like to see changes in the wording of two of the principles: firstly, change "ethnically diverse" in principle three to "culturally appropriate"; and secondly, change "fair" in

principle seven to “equitable”. We believe that the term ethnicity is incredibly complex, and also excludes preferences that are important, such as vegetarianism, but not necessarily related to ethnicity. The word ‘fair’ is too simplistic and lacks specificity; ‘equitable’ more specifically explains what the goal of this principle is. In a broader sense, we saw the consumer missing from many components of the vision, especially principles one and six. It should be emphasized that they also hold responsibility for the sustainability of their food system.

There are several value assumptions that guide our approach to this project and its vision. The first, overarching, assumption is that we all see food system sustainability as a desirable goal, with the three components of food system sustainability (economic, ecological, and social) being equally important. More specifically, we have outlined four key value assumptions that support this goal. Firstly, we value community cohesion. We think that a closer relationship between the consumer and producer will benefit our food system, and lead to a greater sense of social responsibility and more equitable prices. Secondly, we value education as a tool in promoting our vision, and also for building community cohesion. Thirdly, we value a close relationship between humans and their environment and support a closed-loop approach to food system processes, which can lessen the negative impacts on the environment. Finally, we value a fundamental human right to sufficient food, which applies on all of the levels of production. We think that food is too important to be left purely to market forces. These values have influenced our approaches to food system sustainability, and they are evident throughout our study.

## **METHODOLOGY**

The three groups working on Scenario seven came to the consensus early in the project that the best way to approach researching the required information base would be to divide into sub-groups. Two representatives from each working group (groups 11, 18 and 25) came together to research indicators pertaining to: 1) UBC Food Services (UBCFS), 2) Alma Mater Society

Food and Beverage Department (AMSFBD) and 3) The Farm and Other (“other” was initially defined as indicators pertaining to UBC Waste Management and those that did not explicitly mention UBCFS or AMSFBD). Each of the working groups liaised with the UBSFSP partners including Nancy Toogood, Food and Beverage Manager of AMSFBD, Andrew Parr and Dorothy Yip, UBCFS General Manager of Retail Operation and Purchasing & Project Coordination, and, Mark Bomford, Program Coordinator of the UBC Farm. After spending several weeks collecting data from the project partners and other key informants via personal meetings and/or email contact, the original working groups reformed to discuss the gathered information. In addition, our group allocated a seventh person who had the task of doing background research, keeping track of information on indicators as it was posted, and beginning to outline the group paper. This was a key role in organizing the multitude of incoming information.

## **FINDINGS**

Below, we describe our general findings for the indicators researched, as well as the benchmarks we have designed based on our research, experience, and advice from our key informants<sup>1</sup>. For many of the benchmarks, where appropriate, we have set short and long-term goals; short-term goals are for 2010, to coincide with Vancouver’s Olympics goals, and long term goals are for 2020. We recognize that in the next fifteen years, there will likely be a lot of changes to our food system and we anticipate changes in available foods, technologies, and production, processing and consumption practices. Furthermore, we anticipate changes in social attitudes towards food and food systems sustainability. As a result, our recommendations for benchmarks clearly need to be re-assessed periodically to ensure that they are still relevant to the food system and to the sustainability goals of the community required to implement them.

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<sup>1</sup> For a detailed list of our indicators and benchmarks, please refer to Appendix I.

Our findings in the three key groups (AMSFBD, UBCFS, and the Farm) differed significantly, as was expected given the different roles that they serve within the UBC community. Although both AMSFBD and UBCFS are for-profit organizations, AMSFBD is student based, and therefore their profits are returned to students, while UBCFS serves as more of a traditional business, answering to the university at large. As a result, we found that AMSFBD has a great deal more flexibility when it comes to the products they carry, the prices they charge, the wages they pay, and the use of their profits. Andrew Parr indicated that UBCFS certainly appreciates the sustainability goals of the university, and desires to make changes to improve the contributions of UBCFS to food systems sustainability; however, it appears as though UBCFS faces greater constraints in terms of making big changes to their operating practices when compared with AMSFBD. As a result, our recommendations for UBCFS are a bit more conservative than those for AMSFBD. Detailed explanations of the specific findings for UBCFS and AMSFBD indicators can be found in Appendix I. Clearly, the UBC Farm also provides a different perspective on approaches to food systems sustainability. The purpose of the farm is quite different than the food services organization on campus; although the farm does provide food directly to the UBC community, it has stated goals related to the academic component of the university as well.

In addition to differences we observed between organizations, it also became clear that some indicators and benchmarks would be much easier to research, define, and explain than others. Economic indicators, such as profitability, had relatively straightforward data that could be easily represented numerically. In contrast, some ecological and social indicators used complex language that required precise definition in order to have significance, and were challenging to measure and quantify. For example, our group struggled with defining concepts



like 'fresh' in a suitable way for the purpose of identifying indicators and benchmarks. In addition, there were many areas where data limitations precluded the group from identifying indicators and creating appropriate benchmarks: in these cases we have suggested further research.

The findings of this project also demonstrate the connections between the three components of sustainability, their indicators, and the organizations that represent them. Throughout the project's research, it was evident that looking at one indicator in isolation was much less significant than taking into account the connections between the various components of food systems sustainability, and recognizing that achieving certain benchmarks requires broader changes in our approaches to the food system as a whole.

## **DISCUSSION**

Several issues arose while collecting the data pertaining to the various indicators, including: descriptions and importance of courses regarding components of sustainability, definition of the terms local and fresh, volunteer involvement, and dietary diversity of food services menus. As a group, we also discussed the problems with using percentages to measure very small values for indicators, and proposed that a new scenario be created to develop recommendations on how UBC can potentially reach our benchmarks developed.

One of our indicators required a measurement of the number of courses that include some food security and food system sustainability education. We realized early on that this would likely be a very challenging task: the course descriptions available do not necessarily contain all of the information about a course, and even if they did, we would need to look through the description of every single course. The UBC Sustainability Office maintains a list of all courses that address the issue of sustainability in general, but this is still too broad for our purposes. The indicator itself is also quite vague: what constitutes a discussion of food system sustainability?

Mentioning it in one lecture? Devoting an entire course to the subject? This is clearly a definition that needs to be clarified for future research.

From our experience, we believe that community service learning provides an excellent medium for studies in food systems sustainability. Many courses require a community service learning component, and could include some aspects of food systems sustainability. We also would like to see a greater development around the conceptual components of food system sustainability: what does food mean to people? Why is food systems sustainability an important goal? The study of food requires a multi-disciplinary approach, and we certainly believe that there is a place for this at UBC.

Through research of the indicators it also became apparent that a standardized definition of the term local was required. The data collected would be unusable if each organization defined local differently. Local can encompass many meanings, for the UBC food system local may entail BC exclusively, Canada exclusively, or it may also be defined geographically, for example including Washington State. For the indicators that include local foods the percentages would be very different depending on the individual's assumption of what local means. For the purpose of uniform data collection, our group arbitrarily defined local as within BC. This definition of the term is a rather large assumption because it does not take into account the values of the UBC food system partners. For instance, Nancy Toogood explained that there are far less food miles in importing products from Washington rather than from eastern provinces. UBCFS tends to define local food as within BC, and then a second tier of within Canada. These ideas of local may not fall in line with the UBC food system's values, and collecting data may be confounding because of the discrepancy between the food system's partners and the food system's project holders.

Another difficulty our group found in determining what food is local was the requirements for what makes a food produced or sold as local. This indicator was simply impossible to measure because we had no way of determining what makes a product local. The indicator may be implying a percentage of the ingredients of the foods produced that are obtained locally, or it may be questioning the location of the customers purchasing the products. Again, a clearer definition of the indicator would have made data collection much more accurate and meaningful.

In addition, the expression ‘fresh foods’ provided some problems in terms of definition and measurement. The group needed clarification in order to measure the percent of fresh foods available on campus in the absence of a clearly defined meaning for the term “fresh”. This term could point towards a variety of degrees of food preparation: cooking, processing, or preservation by canning, freezing and drying. It is also common to consider locality in a definition of food as fresh. For example, in the UBCFSP 2005 Summary Report, the only reference to fresh food was in relation to local food. (UBCFSP, 7)

In searching for a definition of fresh, “The New California Mainstream Project” document is a good resource to consider the many variables involved. The authors of this document emphasize that there are different types of “fresh”. They refer to seasonal food, unprocessed food and regional food as being different types of fresh. They stress the need for the creation of a new language for food preparation and marketing to express the different concepts of fresh (Ecotrust 36). They also make a distinction between processed foods and their level of freshness (Ecotrust 43) suggesting the creation of a graded rating system as to exactly how fresh something is depending on its age, locality and how long its packaging is designed to last.

In addition, the group met with challenges in deciding which information base to use in determining the percentage of UBC students volunteering in activities related to food security and food system sustainability on campus. Some questions arose, such as how do the volunteer activities we have chosen to include in the indicator contribute to food security and food system sustainability? Does any volunteer position that is food-centred qualify? For example, we have included the volunteers at Agora; what is it that sets Agora apart from other food service outlets on campus, aside from being volunteer run? Agora contributes to food security by keeping their prices low, making the healthy choices they offer more affordable for students. They also use Fair Trade organic coffee and feature local, seasonal ingredients monthly, something that Agora's volunteer executive committee would like to expand on for the 2006/2007 academic year. These are examples of how volunteering at Agora promotes a sustainable UBC food system. Agora and other Faculty of Land and Food Systems food-related volunteer positions (e.g. Wednesday night dinners and the Farm) also foster a sense of community within the faculty, an important aspect of social sustainability. Just being involved in any of these activities demonstrates at least a minimum level of interest in and commitment to the issues of food security and food system sustainability.

During research on indicators specifically regarding menu items, it became evident that dietary diversity should be addressed. The UBC Food System should take steps to provide information on food ingredients for people with food allergies or intolerances and cultural restriction or preferences. Information on the food items, specifically for AMSFBD, do not have enough detail or listings of ingredients used. This can make it difficult for people with allergies or other food issues to ensure safety and appropriateness in eating at these food outlets.

One final issue that arose after completion of indicator research was the usage of percentages to measure very small values for indicators. Using percentages caused these numbers to carry little meaning. For example, even though 80% of AMSFBD outlets that carry fair trade products may sound good, upon looking into the indicator, coffee is the only fair trade product that is served. This raises concern because a potential benchmark of 100% may be reached by simply ensuring that all outlets carry only one fair trade product, which would not be a sustainable goal.

## **RECOMMENDATIONS**

As pioneers for this scenario, our group found difficulties in producing conclusive indicator research and propose that a future UBCFSP scenario could further develop our proposed benchmarks and put forth solid recommendations for how to obtain these benchmarks. This would need to be done by collaboration with other scenario research including this year's Scenarios 1, 2, and 5. For this scenario, our group acknowledged the vast amount of information needed to measure accurate indicators and produce feasible benchmarks, and hope that our work and research gives a preliminary indication of where the UBCFS currently stands.

The following recommendations are targeted towards the UBCFSP, UBCFS, and AMSFBD in the hopes of making data collection for proposed indicators more accurate and meaningful in future research.

### ***Food Systems Sustainability Courses - UBCFSP***

Future projects should precisely define their goals for education in Food Systems Sustainability in order to measure the number of courses that satisfy these goals. This could be accomplished by the group itself, but perhaps requires greater collaboration from the entire project as well as some instructors who would be responsible for implementing the courses.

Investigating the curricular contributions to food systems sustainability at UBC is a huge task, and perhaps could be encompassed by an entire scenario.

### ***Definition of Local - UBCFSP***

We recommend that there be a standardized definition for the term local, and that this definition should be clearly conveyed to all participants of the food system project. This would ensure that all organizations involved have a common understanding of what local is expected to indicate. We also recommend re-writing the indicator regarding the percent of local foods sold; this cannot be found unless clarification is made regarding what is in fact being measured.

### ***Definition of Fresh Foods – UBCFSP***

For future benchmarking in the UBCFSP, the fresh and local indicators should be linked so that future groups can address and measure them concurrently. The difficulty encountered when measuring the amount of local food in a certain menu item is mirrored in the difficulty in measuring the percentage freshness of that item. Furthermore, the fresh indicator should be explicitly defined. Any future working definition should reflect the linkages between concepts of fresh and local, as well as clearly outline the roles of cooking, processing, packaging and preservation in relation to the freshness of a foodstuff.

### ***Volunteerism Research - UBCFSP***

For future years of the UBCFSP we recommend that other student volunteer run food service outlets be investigated and included in this indicator (e.g. the Commerce Faculty). As our group was responsible for setting the framework and information base for this scenario, we could not investigate each indicator as thoroughly as we would have liked in the time given. Relevant volunteer positions away from UBC campus should also be considered, as students are still learning about issues related to food systems that can be applied to the UBC food system. For example, there are a number of community service learning placements focused on food security

in the Downtown Eastside. In addition, a comprehensive survey of the student body should be conducted, to better determine how many students campus wide volunteer in activities related to food security and food system sustainability.

### ***Diet Diversity – AMSFBD and UBCFS***

To increase awareness of the ever-increasing issues of diet diversity, it would be beneficial to create signs or symbols for specific dietary concerns, as well as making these signs and symbols uniform throughout the various food outlets. Examples of these could be: vegetarian, kosher, vegan and celiac friendly or contains no dairy, egg, nuts or wheat. In addition, nutrition facts and lists of ingredients should be available for the consumer. This would allow the consumer to be more aware of which nutrients are in the foods they are consuming, and what the food is composed of. These tasks could easily be accomplished by utilizing nutrition students as volunteers to analyze and develop standardized dietary materials.

### **DISCUSSION OF THE MODEL**

In order to use the proposed “Model of Transition to Sustainability,” we feel that using a point system to grade each of the indicators would be useful to see the broader picture of the food system. We adapted the model to include only the economic, ecological and social arrangements and indicators having overlap between these arrangements are integrated into each of the scores. Scores for each indicator were awarded from zero to three and although the justifications vary according to the indicator and partner, the criteria were made the same, namely zero being the ideal benchmark our group would like to see, one being a sustainable range, two being the range where improvements could still be made and three meaning the indicator was unsustainable. Scores for each area were then added and normalized to the three-point scale and added to the sustainability model to see the broader view of the UBC food

system. The scores and justifications, as well as a diagrammatic representation of the model can be found in Appendices I and II. The scores are as follows:

**ECONOMIC SCORE: 1.9 (1.33, 1.5, and 3 out of three)**

**SOCIAL SCORE: 1.9 (2.3, 1.5 and 2 out of three)**

**ECOLOGICAL SCORE: 2.3 (2, 3 and 2 out of three)**

There are many limitations of using such a simplified model. For example, the values are set on a whole number interval scale and therefore compiling the numbers together may not be the best indication of the actual score in terms of sustainability. It does however indicate that the ecological area is in the greatest need of improvements and that all three indicators have areas in which they can be improved. An additional problem is that having one indicator that is strongly unsustainable and another that is highly sustainable can offset each other in the math. This is the case in economic sustainability; where AMSFBD was given a score of zero for profitability and UBC Farm a score of three. This illustrates the need for a more complex model, perhaps separate models for each company, to prevent the oversimplification of the UBCFSP.

## **CONCLUSION**

Throughout our research and discussion on this UBCFSP scenario, we have recognized both the challenges and the importance of addressing indicators and setting benchmarks. Overall, the given list of indicators, and any that are added for future research in the UBCFSP, must be viewed holistically rather than separately. Setting a benchmark under one area has implications for numerous other indicators and this must be given careful consideration. As a whole, working on this scenario gave us a general picture as to how the UBC Food System is performing in terms of reaching sustainability goals. Areas for future research include more explicit definitions of terms used and of the indicators themselves, tracking progress on the indicators for which there are concrete values and benchmarks, and further research on a few indicators which could



become scenarios of their own, such as the connection between volunteerism and food security and food system sustainability.

In our research, many connections between the UBCFSP and the globalized food system became apparent. While UBC can be seen in many ways as an example for the rest of the food system, the challenges we see here will likely be reflected and magnified on regional and global levels. Conflicts between prioritizing different components of sustainability (economic, social and ecological) will likely be observed between entities with different priorities. We foresee challenges in prioritizing sustainability in the economically-oriented international food market. Furthermore, there is the potential for conflict on broader scales about redistributing financial resources in order to fulfill sustainability goals. There may be economic and ‘business’ issues that will interfere with the ability to make changes: as at UBC we see problems moving out of long term food contracts, on the global scale, international trade agreements, for example, allow the fear of legal retribution to act as a hurdle in making changes towards sustainability. Finally, there will be challenges in reconciling the priorities of different organizations that must work together in order to achieve sustainability goals. Reflecting on our work we recognize that an organized system of evaluating UBC’s progress towards food system sustainability is absolutely necessary, and this scenario will hopefully contribute to positive movement towards sustainability in the future.

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**Personal Contact (through e-mails and meetings)**

- Ashley Wan, Manager, Agora
- Andrew Parr, Director, Dorothy Yip, General Manager of Retail Operation, Purchasing & Project Coordination, and Juliana Campbell, Marketing Coordinator UBC Food Services (UBCFS)  
<http://www.foodserv.ubc.ca/>
- Cicie Wong, Senior Financial Manager, UBC Food Services
- David Shackleton , Instructor in AGSC 100, PhD, Associate Dean Professor, Agroecology
- Dorothy Yip, General Manager, UBC Food Services
- Matt Edgar, AgUS president, AgUS
- Nancy Toogood, Food and Beverage Manager, Nick Gregory, Procurement Manager, The Alma Mater Society Food and Beverage Department (AMSFBD)  
<http://www.ams.ubc.ca/content.cfm?ID=291>

## Appendix I: Our Findings

*(Economic – 1.33)*

- **Profitability of UBC Food Services (UBCFS):**

Indicator: Revenue \$19.1 Million for 2005-2006 fiscal year.  
Net income: 3.7% of revenue; about \$700 000

Benchmark: Generate less than \$1 million in profit  
Andrew Parr wants to maintain net income at less than four percent of revenue, compared with industry standard of 8-12%. Keeping the profit within this margin will allow for economic stability.

Score: 0 – ideal: just over 3% of revenue  
**1 – sustainable: 3% to 4% of revenue**  
2 – improve: 4% to 8% of revenue  
3 – unsustainable: over 8% or under 3% of revenue

Justification: UBCFS is an independent, for-profit company that reports finances to the UBC Board of Governors. They are expected to run for-profit at a minimum of 3%, but do not require excessive amounts of money to finance public relations, marketing or advertisements. This compares to the industry standard of about 8-12% of revenue.

- **Profitability of AMS Food and Beverage Department (AMSFBD):**

Indicator: \$5.5 million revenue; net profit of 12-15%, \$700 000 - \$800 000

Benchmark: Increase revenue by 6-8 percent by 2010. After that, year to year increases of 5 percent.  
Movement towards local, organic and fair trade products will decrease the profit margins. Increased revenue will hopefully compensate for these increased costs to maintain the amount of money going to the AMS services. They would like to avoid raising prices for students.

Score: **0 – ideal: maintain between \$0.7M and \$0.8M profitability**  
1 – sustainable: \$0.8M to \$1.0M profitability  
2 – improve: \$0.5M to \$0.7M profitability  
3 – unsustainable: under \$0.5M or over \$1.0M profitability

Justification: AMSFBD uses their profits as a redistribution mechanism to fund AMS activities such as the clubs, councillor wages and special events. The profits have a direct correlation to the mark-up prices of foods and therefore higher profits are not justifiable unless the funds are required for other activities.

- **Profitability of the UBC Farm:**

Indicator: Current revenue of UBC Farm is \$ 53 000.  
Mark Bomford did not disclose the current profitability, although we know that the farm is currently not profitable. He argued that this was not a valuable indicator, as the goal of the farm is to be more of a pedagogical tool.

Benchmark: \$250 000 revenue by 2010.  
This is the stated goal of Mark Bomford, the Program Coordinator at the Centre for Sustainable Food Systems at UBC Farm.

Score: 0 – ideal: enough profit to make substantial improvements to the farm  
1 – sustainable: enough profit to make minor improvements; self-sufficient  
2 – improve: breaking even  
**3 – unsustainable: running at a loss**

Justification: UBC Farm is currently running at a net loss and needs upgrading of buildings and equipment. Ideally, it would be able to fund these initiatives through profits or at least be self-sufficient in fixing and replacing equipment.

*(Socio-economic – 1.5)*

- **% of UBCFS revenue that gets returned to the UBC community:**

Indicator: \$400 000 are returned to UBC in the form of general revenues; taking into account all custodial, facility/maintenance, and property taxes, this value increases to about \$1 million dollars per year. This is about 20% of total revenue. Capital investments this year were \$1.9 million. About \$0.5 million go to student wages, although this is a high-end estimate. This is a total \$3.4 million; 18% of total revenue going back into UBC.

Benchmark: In the next 5 years, \$1.6 million to \$1.9 million dollars will be returned to the UBC community in the form of capital investment per year. UBCFS wants to reduce the total amount to \$2.6 million, not including student wages, or about 13.5% of their total revenue, once these capital investments are made. We think that a return of 14% to 18% of total revenue is reasonable.

Score: 0 – ideal: over 20% of revenue  
**1 – sustainable: 14% to 20% of revenue**  
2 – improve: 5% to 14% of revenue  
3 – unsustainable: under 5% of revenue

Justification: UBCFS student wages are about 5% of the revenue. Additional money is returned in the form of taxes, maintenance, upkeep, improvements and sponsorship to programs, which currently equates to about 18-20% of the revenue generated.

- **% of AMSFBD revenue that gets returned to the UBC community:**

Indicator: Almost 100% of net income from AMSFBD goes towards AMS activities and back into the UBC community – this is about 12-15% of their revenue, or \$700 000 dollars. Including wages paid to students, \$1.2 million can be added to this amount, for a total of \$1.9 million, or 35% of total revenue.

Benchmark: Considering the AMS’s mandate, the AMS should try to stay where we are.

Score: **0 – ideal: over 35% of revenue**  
1 – sustainable: 30% to 35% of revenue  
2 – improve: 20% to 30% of revenue  
3 – unsustainable: under 20% of revenue

Justification: AMSFBD student wages are about 20% of the revenue. Additionally, all profit is returned in the form of AMS activities. In line with the profitability indicator above, 10% of the revenue (or \$0.5M) would be the minimum profit margin that would be considered unsustainable.

- **% of UBCFS units offering Fair Trade products:**

Indicator: In 2001, 0% of units offered fair trade products. 20% of units offered a fair trade product.

Benchmark: 100% of UBCFS units will offer fair trade products. We assume that this value will be gradually increased, and doubled by 2010.

- **% of AMSFBD units offering Fair Trade products:**

Indicator: 50% of AMSFBD outlets offer a fair trade product. At this point the only Fair trade products sold by AMSFBD is coffee.

Benchmark: 100% of AMSFBD outlets offer fair trade products.

Scores: UBCFS units offering fair trade products  
0 – ideal: 100%  
1 – sustainable: 80% to 100% of revenue  
2 – improve: 50% to 80% of revenue  
**3 – unsustainable: under 50% of revenue**

AMSFBD units offering fair trade products  
0 – ideal: 100%  
1 – sustainable: 80% to 100% of revenue  
**2 – improve: 50% to 80% of revenue**

3 – unsustainable: under 50% of revenue

**Justification:** Fair trade products offered on campus are mostly coffee. Other fair trade products that could be incorporated include sugar and clothing. We recognize that not all food outlets serve coffee or sugar, making 80% are sustainable target. Currently, about 50% of AMSFBD units and 20% of UBCFS units offer fair trade coffee. Some of these units are limited by contract to serve certain brands of coffee and therefore it may take a couple of years to reach this target.

- **% of Fair Trade products sold at AMSFBD outlets**

**Indicator:** 100% of coffee sold at AMSFBD is fair trade. There are no other fair trade products sold at AMSFBD.

**Benchmark:** 100% fair trade sugar by 2010; by 2020, 100 % fair trade bananas, mangos, tea and other available fair trade products at AMSFBD that use these products. Other items besides food should be taken into consideration, such as clothing, in order to ensure that all products possible are ethically purchased.

- **% of Fair Trade products sold at UBCFS outlets:**

**Indicator:** 100% of coffee at Reboot, Edibles, 99 Chairs, Arts, Vanier, Totem.

**Benchmark:** 100% of all coffee sold at UBCFS that are not franchises sell fair trade coffee by 2010. UBCFS are bound by length of contract time – they must wait for the current contracts to expire before they can purchase products (ex. Fair trade) from a new producer/vendor.

- **% of UBC students employed at UBCFS:**

**Indicator:** 200 students seasonally; (v. 340 unionized) – 6% of all employees

**Benchmark:** As a result of union regulations, there is not a lot of flexibility on the part of UBCFS in terms of how many students they can hire. If they were to increase the number of UBC student employees, there would necessarily be conflict with the union which has a whole host of other social implications.

**Score:** 0 – ideal: over 10% of labour cost  
1 – sustainable: 7% to 10% of labour cost  
2 – **improve: 5-7% of labour cost**  
3 – unsustainable: under 5% of labour cost

**Justification:** UBCFS is a highly unionized environment and contracts bind the company to hiring full-time staff over part-time students. Although there are over 200 students employed by UBCFS, many of them are only able to work part-time and there is a need for specialized full-time employees.

- **% of UBC students employed at AMSFBD:**

**Indicator:** 250-290 students in FBD; 87-89% of total employees at AMSFBD are students.

**Benchmark:** Maintain student employment at this level. We cannot increase this to 100%; we need some more specialized employees, or employees with different skills. Also, students are inherently impermanent employees, so some long-term employees are needed at AMSFBD.

**Score:** 0 – ideal: 90% of employees  
1 – **sustainable: 85% to 90% of employees**  
2 – improve: 80% to 85% of employees  
3 – unsustainable: under 80% of employees

**Justification:** AMSFBD currently employs about 250 to 290 students, or 87-89% of the employees. A requirement exists for the continuity of service to employ full-time personnel, but ideally about 90% of the employees could be in the form of students. A more accurate depiction of this may be to use labour cost rather than number of employees in future years.

- **Average wage of UBC students employed at UBCFS**

**Indicator:** Wage is currently \$8.00 per hour, and is increasing to \$8.50 for the next fiscal year.

**Benchmark:** UBCFS should match the AMSFBD wage; the food services jobs at UBCFS are similar to the AMSFBD jobs, and should therefore have the same wage. Wage should be raised to \$9.00 as soon as possible. For

future recommendations, we suggest considering taking into account increases in cost of living and/or tuition. Increases in student wages at UBCFS need to come from somewhere: either from increases in prices, decreasing the number of employees, etc.

**Score:** 0 – ideal: matching union employee wages (\$18.50 per hour)  
1 – sustainable: matching AMSFBD wages (\$9.00 per hour)  
**2 – improve: \$8.00 to \$9.00 per hour**  
3 – unsustainable: minimum wage (\$6.50 to \$8.00 per hour)

**Justification:** We feel that UBCFS should be able to competitively match the wages provided by AMSFBD, being \$9.00 per hour for students. However, we recognize that in increasing student wages, either profits or number of employees will be adversely effected and that there is a direct relationship between wages, profits and services provided by the company.

- **Average wage of UBC students employed at AMSFBD:**

**Indicator:** \$9.00 per hour

**Benchmark:** Maintain student wages at this level, and in the future, consider taking into account increases in the cost of living/tuition increases. AMSFBD should also consider implementing some form of wage differentiation based on skill and seniority.

**Score:** 0 – ideal: matching UBCFS union employees (\$18.50 per hour)  
**1 – sustainable: \$9.00 per hour**  
2 – improve: \$8.00 to \$9.00 per hour  
3 – unsustainable: minimum wage (\$6.50 to \$8.00 per hour)

**Justification:** AMSFBD currently pays students at \$9.00 per hour. Although students are not able to live comfortably at this wage, we feel that this is a reasonable wage given the difficulty of work.

- **% of the student’s income used to afford nutritious, safe and appropriate foods sold at UBC:**

This indicator requires a survey to answer. We believe that this indicator requires a great deal more research, perhaps even an entire scenario to answer.

*(Ecological – 2)*

- **% of food used by AMSFBD that can be obtained locally:**

**Indicator:** 54% As indicated in past research by we got that number from averaging out seasonal availability of foods presented from Group 2 summer 2004 AGSCI 450. This takes into account meats, fruits, vegetables, and dairy. In some months availability is as high as 95%, in other months its as low as 30%, after averaging it out, we got a number of 54%. The current amount of produce that IS purchased locally is 23%

**Benchmark:** Aspire to purchase local foods wherever possible; buy local foods in season. It is difficult to make a benchmark for this particular indicator, as it is, in many ways, out of the hands of the AMS. Scenario one is investigating new suppliers for the AMS that will hopefully increase the local foods available.

**Score:** 0 – ideal: 30 to 95% of foods, depending on the season (average of 54%)  
1 – sustainable: at least 30% of foods  
**2 – improve: 20% to 30% of foods**  
3 – unsustainable: under 20% of foods

**Justification:** Currently, about 23% of foods are obtained locally; however, in the lowest months, a minimum of 30% could be obtained locally and so this is set as the sustainable level.

- **% of food used by UBCFS that can be obtained locally:**

**Indicator:** This data is not currently available.

**Benchmark:** As described above, scenario one is investigating opportunities to increase suppliers of locally available foods.

- **% of organic waste that gets composted on campus:**

**Indicator:** 70% of UBC’s waste stream is compostable; 100% of AMS pre-consumption compostable waste is composted – composting program at AMS is run by volunteers.

**Benchmark:** 100% of pre- and post- consumption (post-sale) should be composted. All outlets have compost receptacles!

**Score:** 0 – ideal: 100% of pre and post consumption material  
1 – sustainable: 90% to 100% of material  
**2 – improve: 70% to 90% of material**  
3 – unsustainable: under 70% of material

**Justification:** Currently, about 70% of the waste generated can be composted. Ideally, this would be 100%, but we recognize that some items would not be practical as compost-able material.

- **% of disposable products consumers use at campus residencies and outlets:**

**Indicator:** 40% of waste generated from campus food outlets is in the form of disposable containers.

**Benchmark:** Reduce this to 30% by 2010, and to 20% by 2020. This can be accomplished by encouraging the use of reusable containers, and charging students for the use of disposable containers. Furthermore, using the compostable and more recyclable containers should be considered as an option for reducing waste.

**Score:** 0 – ideal: 0% of waste  
1 – sustainable: no more than 20% of waste  
**2 – improve: 20% to 30% of waste**  
3 – unsustainable: over 30% of waste

**Justification:** 40% of waste generated is from disposable containers.

- **Distance that UBC consumer waste travels to end disposal/composting:**

**Indicator:**

- 1900 tonnes of compostable waste each year including: food waste, residual paper products, animal bedding, animal waste, wood, yard waste and sawdust.
- Vancouver Transfer Station.: Collected garbage and non-recyclable wastes (8.84km)
- Metro Materials Recovery Inc.: Cans, bottles, cardboard, paper, plastic product (14.05 km)
- Richmond Steel Recycling Ltd : Metal scraps
- Urban Wood Waste Recyclers Ltd : clean wood and mattresses
- Nu-life Industries Inc: fluorescent bulbs

**Benchmark:** All compostable waste should be composted at our in-vessel facility until it reaches capacity.

*(Ecological-Economic – 3/3)*

- **% of local food bought by AMSFBD:**

**Indicator:** 23% of food is purchased local; this includes sources within BC. Less than one percent of purchases come from UBC farm.

**Benchmark:** Considering that, at the present moment, 54% of food can be purchased locally, and the current amount that is purchased locally is 23%, we recommend that, by 2010, 30% of foods be purchased locally, and that by 2020, a minimum of 54% of food be purchased locally.

**Score:** 0 – ideal: 54% of foods  
1 – sustainable: 45% to 54% of foods  
2 – improve: 27% to 45% of foods  
**3 – unsustainable: under 27% of foods**

**Justification:** 54% of the foods used by AMSFBD can be purchased locally, making this the benchmark ideal for AMSFBD. We set the unsustainable level at half this value, or 27%.

- **% of local food sold by AMSFBD:**

**Indicator:** No data for this indicator. This would be incredibly difficult to measure; it is likely, however, that this resembles significantly the percent of local foods purchased by the AMS. It is not clear if this includes local ingredients in the food products being sold – what makes a food sold local?

**Benchmark:** No benchmark for this indicator.



- **% of local food bought by UBCFS:**

Indicator: Major products are dairy, poultry, eggs, seasonal produce. We do not have a percentage value for this indicator.

Benchmark: We do not have a benchmark for this indicator.

- **% of local food sold by UBCFS:**

Indicator: There is no data for this indicator.

- **% of UBC Farm products that are sold to UBCFS and AMSFBD:**

Indicator: 95% of farm products go to UBC residents; \$3500 is spent by UBCFS on Farm products (mostly by Sage Bistro). Less than 1% of foods purchased by AMSFBD are from the farm, and currently only the catering menu has the flexibility to incorporate farm produce.

Benchmark: Mark Bomford believes that this is not a valuable indicator, because these bodies are unable to pay the premium price for farm produce and products. Nancy Toogood has also indicated that more UBC farm produce would be welcomed, but at this time is not economically or practically feasible due to costs and availability of produce.

- **% of food produced at UBC:**

We defined foods produced at UBC as products for which ingredients are brought in raw and are processed on campus into final goods (as opposed to pre-package, ready-to-consume items). Although many of the outlets produce their own food, many of the input ingredients are not grown/produced at UBC.

Indicator: 80% of food at AMSFBD is produced at UBC.

Benchmark: Maintain 80% level. We feel that it would be quite difficult to increase this number; increasing food produced at UBC would require a great deal more labour and may prove to be economically unsustainable. Furthermore, there will always be demand for certain pre-packaged foods such as bottled soft drinks.

*(Social – 2.3/3)*

- **% of UBC students who volunteer in activities related to food security and food system sustainability on campus:**

Indicator: At AMSFBD there are currently no volunteers that involved with food system sustainability or security. The only volunteer programs that exist are the Composting program and the AMS Foodbank, as indicated by Nancy Toogood, the composting program is not efficiently run, and we do not know how many students participate in either of the programs. There are currently 170 students volunteering on UBC Farm (Mark Bomford). There are currently 55 volunteers at Agora and about 7-10 usually at the Wednesday night dinners. We believe that Agora volunteers contribute to food systems sustainability because it is a community run organization, which contributes to social sustainability within the Faculty of Land and Food Systems. Furthermore, they have potential to promote economic and ecological sustainability as well, but encouraging the consumption of healthy, local foods. There are 22 volunteer positions at Sprouts, the student food co-op, including Board of Directors. Each AGSC 100 student is required to do a three-hour volunteer activity related to food system sustainability – more than 300 students per year. This provides students with an introduction to volunteer opportunities available in this field.

Benchmark: Increase AMS volunteers to 0.0005% of the student population, this would mean about 20 students. As indicated by Nancy Toogood, the volunteer help in creating a more sustainable division without creating extra costs would be welcomed and encouraged. Mark Bomford would like to see an increase farm volunteers by 10-25% by 2010.

Score: 0 – ideal: 10% of students  
1 – sustainable: 5% to 10% of students  
**2 – improve: 0% to 5% of students**  
3 – unsustainable: 0% of students

Justification: Currently, there are about 600 students involved in some form of volunteering related to food security and food systems, which equates to about 1.5% of the student population. These benchmarks are highly conservative, as ideally everyone should be involved in the food they eat.

- **% of fresh foods available on campus at AMSFBD outlets:**

For our purpose for this indicator, we define fresh foods as fresh produce that has not been manipulated into a different product (ie. Apples, bananas, and fresh salads). These values are not available for UBCFSB.

Indicator: 5%

Benchmark: Increase to 13% for 2010, and to 25% by 2020. By increasing the amount of fresh foods available, this would increase people's fruit and vegetable consumption; this may help students reach their target goal of 5-10 fruit/vegetable servings per day as suggested by Canada's Food Guide.

Score: 0 – ideal: 25% of foods  
1 – sustainable: 20% to 25% of foods  
2 – improve: 10% to 20% of foods  
**3 – unsustainable: under 10% of foods**

Justification: Currently about 5% of the foods available from AMSFBD are fresh. However, more variety and availability of fresh produce may help students reach the Canada's Food Guide target of 5-10 servings of fruits and vegetables daily.

- **% of vegetarian and vegan options at AMSFBD food outlets:**

Indicator: 40% of menu items are vegetarian options and 10% are vegan options.

Benchmark: Increase to 50% for vegetarian and to 13% for vegan options. This would ensure that people who are vegan have adequate choices at AMS venues and with more vegetarian options this would encourage students to consume more plant-based foods. This would also help students meet their requirements for fruit/vegetables.

Score: 0 – ideal: 50% of options  
1 – sustainable: 45% to 50% of options  
**2 – improve: 40% to 45% of options**  
3 – unsustainable: under 40% of options

Justification: More vegetarian options would encourage consumers to eat more plant-based foods. Currently, 40% of options are vegetarian and 10% of options are vegan. Ideally, we would like to see at least half of the options as vegetarian and 13% of options as vegan.

*(Socio-ecological – 2)*

- **% of UBC courses offered about food security and food system sustainability:**

Indicator: 37 courses and around 1100 students this year involved in UBC Farm (Mark Bomford)

According to the UBC sustainability office 24% of courses at UBC offer some component of sustainability. It is important to note that these components are not necessarily regarding food system sustainability and clarification in course content would be required. The Learning Exchange also offers some volunteer opportunities that involve food security, such as Community Service Learning through food-related classes (Community).

Benchmark: The Learning exchange would like to have 10% of the student body involved in Community Service learning. We believe that more research is necessary before an appropriate benchmark can be made.

Score: 0 – ideal: 10% of students  
1 – sustainable: 5% to 10% of students  
**2 – improve: 0% to 5% of students**  
3 – unsustainable: 0% of students

Justification: About 1100 students (about 3%) are involved with UBC Farm and 24% of courses offer some component of sustainability. However, similar to volunteerism we feel that community service learning may be more of an appropriate indicator and that 10% of the total student body would be an ideal starting value.

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**Appendix II: UBC's Food System Sustainability Modeled**

**ECONOMIC SCORE: 1.9 (1.33, 1.5, and 3 out of three)**

**SOCIAL SCORE: 1.9 (2.3, 1.5 and 2 out of three)**

**ECOLOGICAL SCORE: 2.3 (2, 3 and 2 out of three)**

