

The Community Sustainable Development Action and Knowledge Inventory

Version 2

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September 2005



*Developed for the Manitoba
Climate Change Communities
Challenge (C4)*

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Preface

Climate change is an issue that knows no borders. The rapid growth of greenhouse gas (GHG) emissions through the industrial revolution to the present day is now overwhelming acknowledged to be playing havoc with the global climate system. The international community has come together through international processes like the United Nations Framework Convention on Climate Change and the Kyoto Protocol to begin to address this issue. However, the challenges related to reducing emissions in the developed world are many and developing countries, for the most part, are unwilling to commit to emission caps until the industrial world can show it is actually achieving emission reductions.

Currently those communities being most impacted by climate change are the communities least able to cope or adapt to those changes: the people in small island states witnessing their communities disappearing due to sea level rise; African nations struggling with drought and disease brought on by changing weather patterns; Arctic residents unable to hunt or fish because of unpredictable sea ice conditions.

However, no community will avoid the impacts of climate change. Climate models for all regions of Canada predict a wide range of changes in precipitation, extreme weather events, ecosystem changes and growing conditions. A community that understands how it has coped with stresses on its environment in the past will be better able to cope with future challenges.

This inventory has been created to assist communities in the task of documenting historical and current sustainable development initiatives undertaken by a wide array of community organizations. Through the exercise, the community will gain a better appreciation of the collective knowledge and expertise it has to draw upon—as well as an understanding of how past activities have influenced the types of programs and solutions which the community might view as possible and desirable in the future.

Given that the *Community SD Action and Knowledge Inventory* focuses on community-led initiatives, it is intended to serve as a complementary exercise to the *Green Municipal Funds Community Profile* established by the Federation of Canadian Municipalities. The *FCM Community Profile* focuses on programs of the local municipal government.

The *Community SD Action and Knowledge Inventory* is being piloted through the Manitoba Climate Change Community Challenge, based on earlier work undertaken by the International Institute of Sustainable Development with neighbourhoods in Winnipeg.

New versions of the tool may be released in future, based on the results of the pilot testing in 2005/2006.

How to use this Inventory

Who should complete the Community Inventory?

This exercise is best completed by a team of community members from community associations and non-governmental organizations (5-10 individuals) representing a broad spectrum of environmental issues (water/air, conservation, land use planning, agriculture/forestry, waste minimization and management, transportation and energy). Not all communities will have local expertise in all of these areas. This is not a problem. The team should also include representatives from local schools and educational institutions, as well as seniors who have lived in the community for long periods of time. Other representatives might be drawn from local business associations, chambers of commerce or faith-based organizations that are, or have been, active around environmental issues.

What preparation is needed?

It is recommended that the designated community contact circulate an introductory letter about the exercise, with a follow-up reminder to confirmed participants just before the meeting. It will be easier to progress through the exercise if everyone in the group is familiar with the structure and purpose of the tool in advance. It is highly recommended that the forms be completed “real-time” using a lap-top and projector, filling out notes from the discussion on the forms as they occur. Please ensure sufficient time is scheduled for all attendees, the meeting room, and the projector.

How long will it take?

This is meant to be a brief exercise, designed to spark initial discussions and to help identify community strengths. The team can expect to complete this exercise within a half-day session (approx. 4 hours), depending on the size of the community, the group’s familiarity with sustainability issues, and the discussions that emerge.

If it is not possible to gather all participants into a single half-day meeting, the exercise can be completed by the designated community coordinator through a series of one-on-one telephone or in-person interviews. Please note that this approach will like result in a smaller inventory, since group activities tend to trigger more memories and insights amongst the individual participants. Phone interviews also preclude the opportunity for community members to learn directly from one another and to build or reinforce social networks.

How does it work?

Communities across Canada have been taking steps to become more environmentally sustainable for decades. As new projects and programs are undertaken, it’s important to ensure that they build upon previous efforts to the greatest degree possible.

The *IISD Community Inventory* contains five sections: Section A covers introductory information; Section B focuses on general information about the community; Section C looks at the environment and climate change overall; and Section D looks at specific

environmental issues. In Section D, questions will be asked about each environmental issue with respect to:

Sustainability Orientation – To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?

Climate Change Impacts – How is this issue linked to climate change adaptation? To what degree might activities related to this issue become more or less of a concern under current climate change scenarios?

Concern – How concerned are members of the community regarding this issue in comparison to other environmental issues?

History – How has the issue evolved in the community over time? Have there been any significant events (conflicts, accidents, awards) in the last ten years related to the issue in the community?

Knowledge – How knowledgeable is the community about this issue in general?

What/who are the knowledge assets in the community? What types of additional information on this topic would be most useful in the community?

Programmes – What programs have been implemented locally by organizations other than the municipal government? What have been their activities and achievements?

Responsibility/Capacity – What is the balance of responsibility to address the issue between the local government and the community in general? How much capacity does the community have to address this issue?

The majority of the questions appear in boxes (see example below) with answer options ranging from 1 to 5. When answering the question, indicate the number that best reflects your situation by placing an ‘x’ below that number. In the Details box, please explain or justify your rating. You may use this area to provide a brief description of a new plan, program or project. If a plan, program, or project is being developed, but not yet in place, also indicate this in the details section.

Sample Question

To what extent are residents concerned about the environment in the community?				
No concern		Residents are very concerned		
1	2	3	4	5
←————— X —————→				
Participant comments:				
<ul style="list-style-type: none"> • In comparison to local unemployment problems, not many people seem concerned about the environment. • The local newspaper carries stories about the environment approximately once every other month. • There is one business in town (Nifty Sprocket Corporation) in the process of applying for ISO14001 status regarding environmental management. 				

- The elementary school has an environmental club which sends information home to parents.

Section E is to be completed by the community coordinator following the exercise. The numeric responses of the community are summarized into a matrix enabling comparison across topics within the community.

What Do I Do When I've completed the *Community Inventory*?

The *Community Inventory* is intended primarily to be a tool for the community's own internal reflection. The information gathered through this sort of assessment activity should be invaluable as your community moves forward in planning future climate change mitigation and adaptation activities.

It can be used to highlight strengths and areas for capacity building within the community. It will help identify key priority areas within the community as determined through an assessment process that is both a historical examination of past environmental initiatives and an assessment of what issues might be of priority in the near future.

Understanding what has worked or failed previously can provide useful insights into the design of new projects and programs. Carefully assessing the areas of environmental priority for key stakeholders in your community and the perceived relationship with the impacts of climate change should ultimately inform decisions related to climate change mitigation and adaptation work. The results of the exercise should be shared back with all participants, as well as saved by the C4 Coordinator to use as a reference tool in developing new project proposals.

As C4 is in a pilot phase, we ask that you also submit the completed inventory to Dennis Cunningham (dcunningham@iisd.ca) at the International Institute for Sustainable Development (IISD). IISD will compile the results from the 4 communities, conduct a brief comparative analysis of the communities, and submit recommendations to the Province regarding additional information or capacity-building support it might wish to provide the C4 communities.

Section A.

Introductory Information

A.1. Name of Community:

A.2. Contact Person:

A.3. Date of Exercise:

A.4. Participants in the Community Inventory:

List below all participants in the Community Inventory exercise.

Name	Organization	Position

Section B.

General Community Information

B.1 History

How long has the community been in existence? What have been some of the most important turning points in the community's history?

Details

B.2. Social Institutions

What are the most influential and involved organizations in your community providing social services or dealing with social issues (e.g. education, health, culture, recreation)?

Details

B.3. Economic Institutions

What are the most influential and involved organizations in your community dealing with economic development and livelihoods (e.g. companies, business associations, economic development agencies)?

Details

B.4. Strengths

What would you consider your communities greatest strengths?
Details

B.5. Concerns


What would you consider your communities greatest concerns?
Details

B.6. Other

Describe any other factors in your community – not directly related to the environment – which you believe may have an impact on its efforts to achieve more sustainable development.

--

C.1.3. Concern about impact

To what extent are residents concerned about the potential impacts of climate change on their community?				
Not concerned				Very concerned
1	2	3	4	5
				
Details				

C.1.4. Community Knowledge Assets

Please list organizations and/or individuals in the community who are most knowledgeable about climate change.
Details

Notes:

C.2. Ecosystem

C.2.1. Ecosystem

Prior to the development of the community, what was the dominant ecosystem type in the community (e.g. boreal forest, prairie)? What is it today (boreal forest, agriculture)?

Details

C.2.2. Features

Please list a few of the important environmental features or designations in the community (e.g. rivers, national/provincial forest lands, heritage sites).

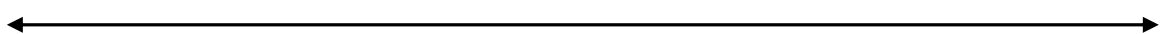
Details

C.2.3. Conditions

How would you rate the current environmental conditions in the community?


Poor Excellent

1 2 3 4 5




Details


C.2.4. Concern

To what extent are residents concerned about the condition of the environment in the community?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				


C.2.5. Impact on community perception

To what extent does the local environment affect how residents feel about the community?				
Not affected		Strongly affected		
1	2	3	4	5
				
Details				

C.2.6. Local knowledge

To what extent are community members knowledgeable about local environmental issues (e.g. problems, solutions)?				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

C.2.7. National/Global knowledge

To what extent are community members knowledgeable about the connections between local environmental issues and ones at the national or international level?				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

Notes:

Section D.

Specific Environmental Issues¹

Due to Manitoba's location in the middle and northern portion of North America, the province is expected to experience earlier and more severe climate change than many other parts of the world. Manitoba's average temperature could rise by four to six degrees Celsius by 2100. Along with this rise in temperature, it is expected that the frequency of severe weather events such as thunderstorms, hailstorms, tornados and intense summer rainfall will increase. Changes of this magnitude will have significant consequences for the province's economy, health and ecosystems.

On a seasonal basis, scientists predict that Manitoba will experience above normal spring temperatures and a five to 20 per cent increase in springtime precipitation. This combination of higher spring temperatures and precipitation could result in a rise in the number and severity of flood events. In the summer, temperatures and evaporation rates are expected to increase while precipitation levels could decrease by 10 to 20 per cent, leading to a greater incidence of drought conditions. Changes in Manitoba's fall climate are not expected to be too significant, although there could be an increase in the number of frost-free days, allowing for a lengthening of the growing season. The most significant temperature increases are expected to take place during the winter. During this season, temperatures are predicted to increase by an average of five to eight degrees Celsius above current conditions.

The North

The most dramatic changes resulting from climate change are predicted to take place in Manitoba's north, where average temperature increases may be greater than in the south. This warming could lead to the melting of the permafrost layer--a zone with a permanent layer of frozen ground--that underlies much of northern Manitoba, creating drainage problems and seriously impacting infrastructure such as roads and buildings. A shortening of the winter road season is already having a significant economic impact on northern communities dependent on these transportation lines for the delivery of supplies. Changes in the natural landscape will also alter the distribution of plants and animals, which could significantly impact communities that continue to engage in hunting and gathering activities. At the same time, though, rising temperatures may create new opportunities for northern development. For instance, the shipping season from the Port of Churchill could expand as the ice-free season increases.

Agriculture

In the south, the agricultural sector will be heavily impacted by changes in local weather conditions brought about by climate change. Coping with the greater risk of spring flooding and summer droughts will require adjusting water management and irrigation

¹ Introductory text on climate change excerpted from <http://www.iisd.org/climate/canada/ccm.asp>.

practices. Warmer winters could result in less winter kill of fall-seeded crops but could also lead to the survival of some weeds, pests and diseases currently controlled by the winter cold. At the same time, farmers may be able to plant a wider range of crops and take advantage of earlier seeding times and an increase in the number of frost-free days. Livestock operators may need to address increased heat stress in their animals, and may find it advantageous to raise indigenous species such as bison.

Forestry

The distribution of Manitoba's forests may alter as the southern edge of the boreal forest moves northward and is replaced by grasslands and temperate forests. These changes in the composition and distribution of Manitoba's forests will impact the forestry sector, as well as wildlife habitat and migration patterns. Manitoba's forests are expected to become more susceptible to wildfires, disease outbreaks and insects due to drier summers and warmer winters.

Water

The quality of Manitoba's water resources could decline due to higher temperatures and lower volumes in our lakes and rivers, which would increase the concentration of pollution and could affect the province's hydro production capabilities. The amount of pollution in the province's waterways may also increase as a result of heavier spring runoff. Changes in water levels and flow also may reduce the number of cool and cold freshwater fish in the lakes and streams of the Canadian Shield.

Health

Higher temperatures resulting from climate change could lead to greater incidence of heat-related health concerns in the summer and the spread of infectious diseases such as Lyme disease. People with asthma or other respiratory problems could be impacted by a rise in the number of air-borne allergens such as pollen and moulds.

Conclusion


Meeting the challenge of climate change requires a holistic approach reflecting Manitoba's commitment to sustainable development—to policies and actions that cut across the full range of economic and development activities. All Manitobans from all sectors of our economy and society will need to participate in efforts to reduce greenhouse gas emissions and initiate adaptation strategies. This includes efforts such as reducing the use of personal vehicles, increasing the energy efficiency of buildings, enhancing flood protection infrastructure and developing new technologies and products suitable for the emerging economy - one that will be based on clean, renewable energy.

D.1 Water

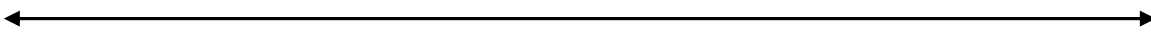
D.1.1. Potable water

The availability of a reliable supply of clean fresh water is one of the most important determinants of our health. All communities put in place systems to ensure the quality and quantity of water available for human consumption and domestic use. Sustainable communities engage in long-term planning and programmes to reduce water use and to manage the community's watersheds in a holistic manner.


D.1.1.1 Sustainability Orientation

How would you rate the sustainability orientation of the potable water management systems in your community? (To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?)				
Very Poor			Excellent	
1	2	3	4	5
				
Details				


D.1.1.2 Climate Change Impacts

To what extent do you believe that climate change may impact potable water in your community?				
No impact			Strong impact	
1	2	3	4	5
				
Details				


D.1.1.3 Concern

Among environmental issues, to what degree are residents in your community concerned about potable water?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.1.1.4 Knowledge Assets

To what extent are community members knowledgeable about potable water problems and solutions? Please list organizations and/or individuals in the community who are most knowledgeable about potable water.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				


D.1.1.5 Knowledge Demands

To what extent is there a demand in the community for additional knowledge about potable water problems and solutions? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.1.1.6. Community Programmes

Other than the local government, what institutions and individuals have introduced potable water programmes in your community? ² What have been their achievements?
Details

D.1.1.7. Community Capacity for Implementation of Programmes


To what extent do you think that the community has the capacity to implement potable water programmes?				
No capacity				Strong capacity
1	2	3	4	5
				
Details				

² Examples of potable water programmes might include: introducing new technology or procedures to minimize the environmental impact of the treatment and delivery of potable water in the community (e.g. minimizing use of chemicals); minimizing leakage in the potable water system through close monitoring and maintenance; installation of grey-water systems; conservation programmes; rain barrel supply for garden use; promotion of or rebates on low-water use appliances, toilets, shower heads; landscaping using native species; and protecting the community's watershed.

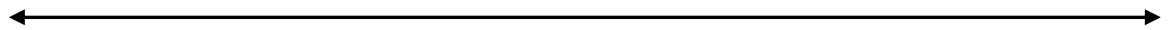
D.1.2. Wastewater

The management and treatment of wastewater may vary from direct discharge into rivers/lakes, filtration through household-level septic fields, or community treatment at sewage plants. Sustainable communities engage in long-term planning and programmes to reduce water use and minimize the environmental impact of the wastewater system.


D.1.2.1 Sustainability Orientation

How would you rate the sustainability orientation of the wastewater management systems in your community? (To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?)				
Very Poor			Excellent	
1	2	3	4	5
				
Details				


D.1.2.2 Climate Change Impacts

To what extent do you believe that climate change may impact wastewater management in your community?				
No impact			Strong impact	
1	2	3	4	5
				
Details				


D.1.2.3 Concern

Among environmental issues, to what degree are residents in your community concerned about wastewater management?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.1.2.4 Knowledge Assets


To what extent are community members knowledgeable about wastewater problems and solutions? Please list organizations and/or individuals in the community who are most knowledgeable about wastewater.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

D.1.2.5 Knowledge Demands


To what extent is there a demand in the community for additional knowledge about wastewater problems and solutions? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.1.2.6. Community Programmes


D.2.1.3 Concern

Among environmental issues, to what degree are residents in your community concerned about waste reduction?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.2.1.4 Knowledge Assets

To what extent are community members knowledgeable about waste reduction? Please list organizations and/or individuals in the community who are most knowledgeable about waste prevention.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

D.2.1.5 Knowledge Demands

To what extent is there a demand in the community for additional information about waste reduction? Please list types of information/knowledge most in demand.				
No demand for additional information		Strong demand for additional information		
1	2	3	4	5
				
Details				

D.2.1.6 Community Programmes

Other than the local government, what institutions and individuals have introduced waste reduction programmes in your community ⁴ ? What have been their achievements?
Details

D.2.1.7 Community Capacity for Implementation of Programmes


To what extent do you think that the community has the capacity to implement waste reduction programmes?				
No capacity			Strong capacity	
1	2	3	4	5
←—————→				
Details				

⁴ Examples of solid waste reduction programmes might include: adopting Green Procurement policies; buying in bulk to minimize packaging waste; source-reduction programmes in local industries; lean manufacturing; composting and grass-cycling programmes.


D.2.2. Waste Diversion

Waste diversion seeks to prevent materials from entering the waste stream of a community. The most popular methods of waste diversion are *reusing* or *recycling* materials in order to prevent them from becoming “waste”. This may happen within all sectors in a community: Residential; Industrial, Commercial and Institutional (ICI); Construction, Renovation and Demolition (CRD). Sustainable Communities engage in long-term planning and programmes to maximize the effectiveness of possible multi-stream collection and to improve waste diversion rates from all sectors.


D.2.2.1 Sustainability Orientation

How would you rate the availability and use of waste diversion systems in your community? (To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?)				
Very Poor				Excellent
1	2	3	4	5
				
Details				


D.2.2.2 Climate Change Impacts

To what extent do you believe that climate change may impact solid waste diversion in your community?				
No impact				Strong impact
1	2	3	4	5
				
Details				


D.2.2.3 Concern

Among environmental issues, to what degree are residents in your community concerned about waste diversion?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.2.2.4 Knowledge Assets

To what extent are community members knowledgeable about solid waste diversion? Please list organizations and/or individuals in the community who are most knowledgeable about solid waste diversion.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

D.2.2.5 Knowledge Demands

To what extent is there a demand in the community for additional knowledge about solid waste diversion? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.2.2.6 Community Programmes

Other than the local government, what institutions and individuals have introduced solid waste diversion programmes in your community⁵? What have been their achievements?

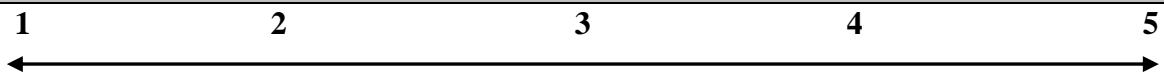
Details

D.2.2.7 Community Capacity for Implementation of Programmes

To what extent do you think that the community has the capacity to implement solid waste diversion programmes?

No capacity

Strong capacity



Details

⁵ Examples of solid waste diversion programmes might include: magnetic separation at landfill sites to maximize capture of recyclable materials; establishing and promoting recycling programmes and depots; establishing community re-use facilities (e.g. second-hand goods stores); seeking by-product synergies in local industries; establishing and promoting community-level composting programmes; working with other agencies to implement Extended Producer Responsibility [EPR] to divert electronics and packaging waste; ensuring that diversion programmes target ICI, CRD, and multi-residential facilities as well as individual households.

D.2.3. Hazardous Waste

Hazardous wastes are materials that, given their quantity, concentration and composition or their corrosive, inflammable, reactive, toxic, infectious or radioactive characteristics, present a real or potential danger to human health, safety and public well-being or pose a danger to the environment if they are not stored, treated, transported, eliminated, used or otherwise managed. Sustainable communities are engaged in long-term planning and programmes to reduce generation and improve handling of hazardous waste.


D.2.3.1 Sustainability Orientation

How would you rate the availability and use of hazardous waste management systems in your community? (To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?)				
Very Poor			Excellent	
1	2	3	4	5
←-----→				
Details				


D.2.3.2 Climate Change Impacts

To what extent do you believe that climate change may impact hazardous waste in your community?				
No impact			Strong impact	
1	2	3	4	5
←-----→				
Details				


D.2.3.3 Concern

Among environmental issues, to what degree are residents in your community concerned about hazardous waste?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.2.3.4 Knowledge Assets

To what extent are community members knowledgeable about hazardous waste problems and solutions? Please list organizations and/or individuals in the community who are most knowledgeable about hazardous waste.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

D.2.3.5 Knowledge Demands

To what extent is there a demand in the community for additional knowledge about hazardous waste? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.2.3.6 Community Programmes

Other than the local government, what institutions and individuals have introduced hazardous waste programmes in your community⁶? What have been their achievements?

Details

D.2.3.7 Community Capacity for Implementation of Programmes

To what extent do you think that the community has the capacity to implement hazardous waste programmes?

No capacity Strong capacity

1 2 3 4 5



Details

⁶ Examples of hazardous waste programmes might include: reducing use of hazardous products in operations; proper handling and recycling of used materials (e.g. oil, road salt, batteries, light bulbs); pollution prevention programmes; and recovering electronic waste.

D.3. Energy

D.3.1. Energy Production/Supply

Energy production/supply is concerned with the production and supply of power (primarily electricity) and heating fuels to residential, industrial, commercial, and other properties in a community. Sustainable communities are engaged in long-term planning and programmes to reduce demand for non-renewable energy sources and to improve the efficiency of their energy distribution systems.


D.3.1.1 Sustainability Orientation

How would you rate the sustainability orientation of the energy production/supply systems in your community? (To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?)				
Very Poor		Excellent		
1	2	3	4	5
←————→				
Details				


D.3.1.2 Climate Change Impacts

To what extent do you believe that climate change may impact energy production/supply in your community?				
No impact		Strong impact		
1	2	3	4	5
←————→				
Details				


D.3.1.3 Concern

Among environmental issues, to what degree are residents in your community concerned about energy production/supply?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.3.1.4 Knowledge Assets

To what extent are community members knowledgeable about energy production/supply? Please list organizations and/or individuals in the community who are most knowledgeable about energy production/supply.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				


D.3.1.5 Knowledge Demands

To what extent is there a demand in the community for additional information about energy production/supply? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.3.1.6 Community Programmes


Other than the local government, what institutions and individuals have introduced energy production/supply programmes in your community ⁷ ? What have been their achievements?
Details

D.3.1.7 Community Capacity for Implementation of Programmes


To what extent do you think that the community has the capacity to implement energy production/supply programmes?				
No capacity				Strong capacity
1	2	3	4	5
				
Details				

⁷ Examples of energy production/supply programmes might include: introduction and promotion of renewable and/or distributed energy generation systems (e.g. wind, solar, biomass, micro-hydro, co-generation); purchase of green energy; increasing housing density to reduce transmission losses; education programmes on impact of non-renewable energy production/supply.


D.3.2.3 Concern

Among environmental issues, to what degree are residents in your community concerned about energy consumption?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.3.2.4 Knowledge Assets

To what extent are community members knowledgeable about energy consumption? Please list organizations and/or individuals in the community who are most knowledgeable about energy consumption.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

D.3.2.5 Knowledge Demands

To what extent is there a demand in the community for additional information about energy consumption? Please list types of information/knowledge most in demand.				
No demand for additional information		Strong demand for additional information		
1	2	3	4	5
				
Details				

D.3.2.6 Community Programmes


Other than the local government, what institutions and individuals have introduced energy consumption programmes in your community ⁸ ? What have been their achievements?
Details

D.3.2.7 Community Capacity for Implementation of Programmes


To what extent do you think that the community has the capacity to implement energy consumption programmes?				
No capacity		Strong capacity		
1	2	3	4	5
←—————→				
Details				

⁸ Examples of energy consumption programmes might include: retrofitting facilities with energy-efficient bulbs or LEDs; educational programmes regarding energy efficiency and conservation; replacement of machinery or appliances with more energy efficient models; improving insulation of new and existing buildings.


D.4.1.3 Concern

Among environmental issues, to what degree are residents in your community concerned about greening buildings?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.4.1.4 Knowledge Assets

To what extent are community members knowledgeable about greening buildings? Please list organizations and/or individuals in the community who are most knowledgeable about greening buildings.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

D.4.1.5 Knowledge Demands

To what extent is there a demand in the community for additional information about greening buildings? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				


D.4.1.6 Community Programmes

D.5. Transportation


D.5.1 Vehicle Management

Transportation activities are a significant source of air emissions, contributing to climate change, smog and pollution from airborne toxins. One strategy for reducing these negative impacts is to enhance the efficiency of vehicles, fuels and fuelling infrastructure. Sustainable communities are engaged in long-term planning and programmes to reduce the environmental impact of public and private vehicles in the community.


D.5.1.1 Sustainability Orientation

How would you rate the availability and use of improved sustainable vehicle management systems in your community? (To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?)				
Very Poor			Excellent	
1	2	3	4	5
				
Details				


D.5.1.2 Climate Change Impacts

To what extent do you believe that climate change may impact vehicle management in your community?				
No impact			Strong impact	
1	2	3	4	5
				
Details				


D.5.1.3 Concern

Among environmental issues, to what degree are residents in your community concerned about vehicle management?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.5.1.4 Knowledge Assets

To what extent are community members knowledgeable about vehicle management? Please list organizations and/or individuals in the community who are most knowledgeable about vehicle management.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

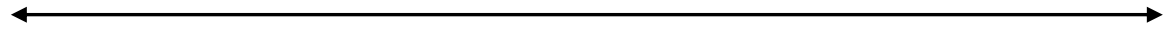
D.5.1.5 Knowledge Demands

To what extent is there a demand in the community for additional information about vehicle management? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.5.1.6 Community Programmes

Other than the local government, what institutions and individuals have introduced vehicle management programmes in your community ¹⁰ ? What have been their achievements?
Details

D.5.1.7 Community Capacity for Implementation of Programmes


To what extent do you think that the community has the capacity to implement vehicle programmes?				
No capacity		Strong capacity		
1	2	3	4	5
				
Details				

¹⁰ Examples of vehicle management programmes might include: improving efficiency by ensuring that vehicles suit the jobs they are used for; good maintenance of vehicles; use of alternative fuels, such as natural gas or ethanol blends; hybrid vehicles; catalytic converters; proper waste-fluids management for used oil, solvents, coolants, vehicle water wash; reuse/recycling of used parts; anti-idling and anti-speeding campaigns.


D.5.2. Transportation Demand Management

Transportation Demand Management (TDM) is a general term for strategies that result in more efficient use of transportation resources. TDM prioritizes travel based on the value and cost of each trip, emphasizing the movement of people and goods rather than motor vehicles, giving priority to public transit, ridesharing and non-motorized travel, and improving the overall efficiency of the system. Sustainable communities are engaged in long-term planning and programmes to reduce the demand for automobile use and to improve the effectiveness of the public transportation system.


D.5.2.1 Sustainability Orientation

How would you rate the availability and use of transportation demand management systems in your community? (To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?)					
Very Poor					Excellent
1	2	3	4	5	
					
Details					


D.5.2.2 Climate Change Impacts

To what extent do you believe that climate change may impact transportation demand management in your community?					
No impact					Strong impact
1	2	3	4	5	
					
Details					


D.5.2.3 Concern

Among environmental issues, to what degree are residents in your community concerned about transportation demand management?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.5.2.4 Knowledge Assets

To what extent are community members knowledgeable about transportation demand management? Please list organizations and/or individuals in the community who are most knowledgeable about transportation demand management.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

D.5.2.5 Knowledge Demands

To what extent is there a demand in the community for additional information about transportation demand management? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.5.2.6 Community Programmes

Other than the local government, what institutions and individuals have introduced transportation demand management programmes in your community¹¹? What have been their achievements?

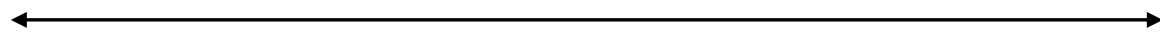
Details

D.5.2.7 Community Capacity for Implementation of Programmes

To what extent do you think that the community has the capacity to implement transportation demand management programmes?

No capacity Strong capacity

1 **2** **3** **4** **5**



Details

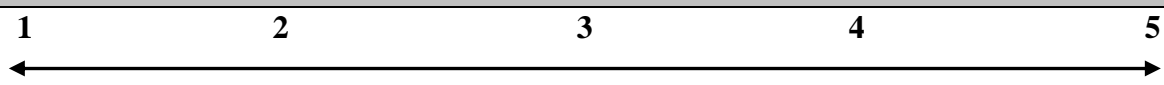
¹¹ Examples of transportation demand management programmes might include: using life cycle cost-benefit analysis for investment in transportation infrastructure; promoting and improving walking and cycling; implementing walking schoolbus programmes; promoting carpooling or carsharing; introducing reduced transit fares or regional transit passes; educational programmes about the health and environmental benefits of active transportation.

D.6. Biodiversity

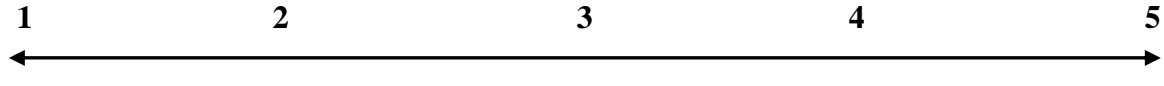
D.6.1. Native Habitat

Native habitats are the environments within which plants and animals find what they need to survive. Habitat degradation and destruction are among the leading causes of the loss of biodiversity. Sustainable communities are engaged in long-term planning and programmes to conserve existing native habitat and to restore degraded lands. These programmes may take place in parks, private lands, and/or other greenspaces in the community.


D.6.1.1 Sustainability Orientation

How would you rate the availability and use of systems to conserve and restore native habitat in your community? (To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?)				
Very Poor			Excellent	
1	2	3	4	5
				
Details				


D.6.1.2 Climate Change Impacts

To what extent do you believe that climate change may impact native habitat in your community?				
No impact			Strong impact	
1	2	3	4	5
				
Details				


D.6.1.3 Concern

Among environmental issues, to what degree are residents in your community concerned about native habitat?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.6.1.4 Knowledge Assets

To what extent are community members knowledgeable about native habitat problems and solutions? Please list organizations and/or individuals in the community who are most knowledgeable about native habitat.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

D.6.1.5 Knowledge Demands

To what extent is there a demand in the community for additional information about native habitat conservation and restoration? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.6.1.6 Community Programmes

Other than the local government, what institutions and individuals have introduced native habitat conservation and restoration programmes in your community ¹² ? What have been their achievements?
Details

D.6.1.7 Community Capacity for Implementation of Programmes


To what extent do you think that the community has the capacity to implement native habitat conservation and restoration programmes?				
No capacity		Strong capacity		
1	2	3	4	5
Details				

¹² Examples of native habitat conservation and restoration programmes might include: setting aside agricultural lands along waterways for native habitat; establishing parks or other protected categories of land use; encouraging the use of native plants in landscaping; removing invasive or non-native plant species from lands and waterways; monitoring local habitats; improving public education regarding the native habitat.


D.6.2. Wildlife

As urban development encroaches on previously untamed areas, more human-wildlife conflicts result. People are frequently confronted with many wildlife species, including deer, raccoons, woodchucks, squirrels, beavers, and a variety of birds. Sustainable communities engage in long-term planning and programmes to develop effective, lasting, and humane solutions to occasional conflicts with wildlife as well as to enhance urban habitat for desired wildlife.


D.6.2.1 Sustainability Orientation

How would you rate the availability, use and sustainability orientation of wildlife management systems in your community? (To what degree are there current systems in place in your community which are/have moved it towards greater sustainability?)				
Very Poor				Excellent
1	2	3	4	5
				
Details				


D.6.2.2 Climate Change Impacts

To what extent do you believe that climate change may impact wildlife management in your community?				
No impact				Strong impact
1	2	3	4	5
				
Details				


D.6.2.3 Concern

Among environmental issues, to what degree are residents in your community concerned about wildlife management?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.6.2.4 Knowledge Assets

To what extent are community members knowledgeable about wildlife management? Please list organizations and/or individuals in the community who are most knowledgeable about wildlife management.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				


D.6.2.5 Knowledge Demands

To what extent is there a demand in the community for additional information about wildlife management? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.6.2.6 Community Programmes


Other than the local government, what institutions and individuals have introduced wildlife management programmes in your community ¹³ ? What have been their achievements?
Details

D.6.2.7 Community Capacity for Implementation of Programmes


To what extent do you think that the community has the capacity to implement wildlife management programmes?				
No capacity		Strong capacity		
1	2	3	4	5
				
Details				

¹³ Examples of wildlife management programmes might include: maintaining sufficient habitat for native wildlife around the community; managing solid waste so as to minimize it as a food source for wildlife in the community; encouraging landscaping with native plants (e.g. butterfly and hummingbird gardens); construction of nests/houses for desirable wildlife (e.g. birds, bats); public education regarding native wildlife; managing against invasive species (e.g. zebra mussels).


D.6.3.3 Concern

Among environmental issues, to what degree are residents in your community concerned about integrated pest management?				
Not concerned		Very concerned		
1	2	3	4	5
				
Details				

D.6.3.4 Knowledge Assets

To what extent are community members knowledgeable about integrated pest management? Please list organizations and/or individuals in the community who are most knowledgeable about integrated pest management.				
Not knowledgeable		Very knowledgeable		
1	2	3	4	5
				
Details				

D.6.3.5 Knowledge Demands

To what extent is there a demand in the community for additional information about integrated pest management? Please list types of information/knowledge most in demand.				
No demand		Strong demand		
1	2	3	4	5
				
Details				

D.6.3.6 Community Programmes

Other than the local government, what institutions and individuals have introduced integrated pest management programmes in your community¹⁴? What have been their achievements?

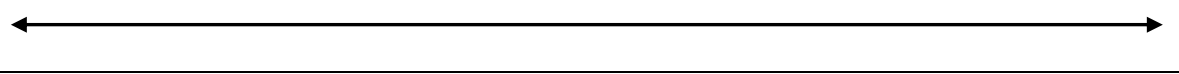
Details

D.6.3.7 Community Capacity for Implementation of Programmes

To what extent do you think that the community has the capacity to implement integrated pest management programmes?

No capacity Strong capacity

1 **2** **3** **4** **5**



Details

¹⁴ Examples of integrated pest management programmes might include: improving soils; attracting beneficial plants, animals, and insects; improving monitoring of pest levels; focusing IPM activities around areas frequented by children [who are at greater risk from pesticide exposure].

Section E.

Summary Matrices

Once the participants have completed Sections C and D, the community coordinator should transcribe the results into the Summary Matrix below.

Please note:

- Fractions must be represented as a decimal point (e.g. 3.5)
- Where there is no answer for a particular question, mark cells with a grey shade (electronic version) or fill in N/A (paper version)
- Mark missing scores with red (electronic version) or an asterix * (paper version) so that they can be followed up on appropriately
- The completed templates should have no blank cells (without either a number value or grey shade indicating N/A).

Section D Summary:

Complete the summary matrix by replacing the question number with the corresponding score for each cell. N/A boxes will be shaded grey. Missing scores will be highlighted in red (will appear black in greyscale printouts).

Category	Sub-category	Sustainability Orientation	Concern	Knowledge Assets	Knowledge Demands	Community Responsibility	Community Capacity	Climate Change Impacts	Total	Average Score
Water	Potable Water	D.1.1.1	D.1.1.2	D.1.1.4	D.1.1.5	D.1.1.7	D.1.1.8	D.1.1.9		
	Wastewater	D.1.2.1	D.1.2.2	D.1.2.4	D.1.2.5	D.1.2.7	D.1.2.8	D.1.2.9		
Solid Waste	Minimization	D.2.1.1	D.2.1.2	D.2.1.4	D.2.1.5	D.2.1.7	D.2.1.8	D.2.1.9		
	Waste Diversion	D.2.2.1	D.2.2.2	D.2.2.4	D.2.2.5	D.2.2.7	D.2.2.8	D.2.2.9		
	Hazardous Waste	D.2.3.1	D.2.3.2	D.2.3.4	D.2.3.5	D.2.3.7	D.2.3.8	D.2.3.9		
Energy	Production	D.3.1.1	D.3.1.2	D.3.1.4	D.3.1.5	D.3.1.7	D.3.1.8	D.3.1.9		
	Consumption	D.3.2.1	D.3.2.2	D.3.2.4	D.3.2.5	D.3.2.7	D.3.2.8	D.3.2.9		
Buildings	Buildings	D.4.1.1	D.4.1.2	D.4.1.4	D.4.1.5	D.4.1.7	D.4.1.8	D.4.1.9		
Transportation	Vehicle Fleet	D.5.1.1	D.5.1.2	D.5.1.4	D.5.1.5	D.5.1.7	D.5.1.8	D.5.1.9		
	Transportation Demand Management	D.5.2.1	D.5.2.2	D.5.2.4	D.5.2.5	D.5.2.7	D.5.2.8	D.5.2.9		
Biodiversity	Habitat	D.6.1.1	D.6.1.2	D.6.1.4	D.6.1.5	D.6.1.7	D.6.1.8	D.6.1.9		
	Wildlife	D.6.2.1	D.6.2.2	D.6.2.4	D.6.2.5	D.6.2.7	D.6.2.8	D.6.2.9		
	Pest Management	D.6.3.1	D.6.3.2	D.6.3.4	D.6.3.5	D.6.3.7	D.6.3.8	D.6.3.9		
Total										
AVERAGE SCORE										