

CHAPTER 5

PLANNING FOR SUSTAINABLE LIVESTOCK DEVELOPMENT

Planning, at its best, is the process of seeking effective compromises. It should enhance the likelihood of economic success of a development proposal, ensure that natural resources are used and managed within their capacity to recover, respect human expression upon the landscape and contribute to human well-being

Early in its deliberations, before hearing from the public, the Panel was surprised at the lack of assembled information on the distribution of the livestock industry around the province. Neither the number or location of hog barns, for example, seemed to be mapped against broad geographical characteristics on a province-wide basis, nor could the Panel easily obtain a statistical impression of the density of large barn development. Location maps of current livestock operations, the number of animals and the amount of land associated with each operation rest with the municipalities. There is much to be done to co-ordinate existing geophysical and biological knowledge of Manitoba's natural systems with human development. Provincial and federal departments hold much of the data, but there are many gaps and little coordination. One exception is the geographic information system (GIS) work that the Prairie Farm Rehabilitation Administration (PFRA) is conducting with some Manitoba municipalities.

Government is hard pressed to shape policies for the future while it lacks an overview of the present. At the hearings, the Panel sensed the public's need for reassurance that the livestock industry will be guided carefully in the interest of the health and well-being of Manitobans – that the expansion would be contained within the limits of the province's environment.

Expectations have been raised. Some presenters at the hearings had participated in the Consultation on Sustainable Development Implementation (COSDI) exercise to develop an integrated

framework for large area and municipal planning, significant resource allocation, and environmental management decisions to ensure sustainable development in Manitoba. They had read the COSDI REPORT of June 1999, summarizing the recommendations of the "core group" which led the consultative process.

The COSDI Report and Planning at Local and Provincial Levels

The "Principles and Guidelines of Sustainable Development" were brought into law in 1998 to guide the behavior and decision-making of all government departments, agencies and Crown corporations. The COSDI Report recommended the means by which this can be accomplished. Some of these recommendations with relevance to the livestock industry will be addressed here.

The question of which level of government should approve the location of a new intensive livestock operation was of prime concern to many presenters at the hearings. The argument was between the advocates of uniform criteria, dispassionately applied across the province, and those who supported decision-making as close as possible to the proposed development.

Recent changes to The Planning Act prescribe review of each new intensive livestock operation by a Technical Review Committee (TRC), retaining the notion that its findings are a resource to the councilors who are responsible for the siting decision. The TRC's report must be provided to the provincial minister. These changes give some assurance that the local environment will be carefully considered, but the central theme of COSDI is that we need to look beyond the municipal boundaries to the requirements for sustainable development within the natural region. COSDI recommended the "large area plan"

as the vehicle to

provide direction and coordination to the activities of planning and conservation districts, regional and community development corporations etc. where applicable, and provide broad guidance and direction as to infrastructure, resource planning and allocation, protected areas, economic and social services, transportation and types of development to be encouraged in the planning area.

The Panel strongly endorses the notion of sustainable development planning at the large area scale, but recognizes that this is an immense task and not likely soon to catch up with the demands that the expanding industry impose on local government. However, much greater public confidence will flow from signs that this broader picture is not lost in local considerations. For example, a group of scientists encouraged the Panel to make recommendations that would lead to decreasing inputs of chemical substances, especially phosphorus, into Lake Winnipeg, not to maintaining or increasing them. As well, Manitoba Conservation is working on the development of a nutrient management strategy for surface waters in southern Manitoba. The public needs to know that such matters are being considered.

Given the absence of large area plans, it is important to move forward bearing in mind COSDI's advice that Manitoba:

- require municipalities to review existing development plans within a reasonable time period, to:
 - include criteria for acceptability of developments and specify types of development that are considered compatible and incompatible with the local area, and
 - ensure that development plans reflect the components of sustainable development;
- develop criteria, in consultation with municipal governments and the public to assist in the assessment of development plans for sustainability;
- require all municipalities/local governments,

which do not currently have development plans, to adopt development plans that reflect the components of sustainable development;

- provide support to municipalities to implement the above;
- encourage municipalities to join together to plan on a district basis;
- encourage district planning boards, conservation district boards and regional or local economic development boards to cooperate and coordinate their activities, and
- require all municipalities and district planning boards to undertake meaningful public reviews of their development plans no less than once every five years.

A factor in the call for a moratorium on expansion of the hog industry by some presenters was a sense of the unpreparedness of governments to deal with the rush of applications. A development plan gives an indication to the public of what would take place in what part of a municipality. It guides a council from one term to another. Completion of such plans for all municipalities should be expedited. Priority should be given to local governments experiencing or likely to experience heavy growth in intensive livestock operations. Development plans should evolve, as COSDI notes, in an interactive process in a community, and the power of The Municipal Act to allow by-laws to be enacted is protective (as in stopping nuisance) and is thus less suited to sound land use planning.

Recommendation:

- **New and expanding ILOs should not be permitted in municipalities lacking land use zoning by-laws until such by-laws have been formally adopted.**

Saskatchewan's approach to ILOs is instructive. Saskatchewan Agriculture and Food shepherds the process through the provincial system, at the same time applying its own tests of the proponent's intentions for manure storage and management. Any project is subject to the province's

environmental assessment. This evaluation asks if the project is likely to:

- have an affect on any unique, rare, or endangered feature of the environment;
- substantially utilize any provincial resource and in doing so pre-empt the use, or potential use, of that resource for any other purpose;
- cause the emission of any pollutants or create by-products, residual or waste products that require handling and disposal in a manner not regulated by any other Act or regulation;
- cause widespread public concern because of potential environmental changes;
- involve a new technology that is concerned with resource utilization and that may induce significant environmental change, or
- have a significant impact on the environment or necessitate a further development that is likely to have a significant impact on the environment.

In effect, each proposal for an ILO in Saskatchewan requires formal approval from both municipal and provincial governments, whereas Manitoba relies upon the TRC to advise the municipal council on the compatibility of the project with the environment, and the municipal council alone makes the final decision.

Proposed New Approval Process for Manitoba

The Panel endorses the need to preserve local involvement and local understanding in all matters of land use. Having devised its zoning by-laws from careful examination of local resources and the testing of public opinion, a municipal council should not be easily dissuaded from its decision. On the other hand, a municipality is part of an area or region that, COSDI hoped, would be covered by a large area plan to guide the management of its resources and environmental needs. In particular, cumulative impacts and the varying capacity of resources are major

considerations at this broader scale.

In recommendations for the *White Paper on The Sustainable Development Act, 1997*, the Manitoba Round Table believed a “two – approval” process would be agreeable to municipal representatives when they considered land use decisions. The Panel subscribes to this opinion as a result of its discussions and review, subject to working out the details by which the provincial approval is managed, and that reasons for a decision will always be made available in writing.

Recommendation:

- **New and expanding ILOs should require formal approval by both the host municipality for compliance with its land use by-laws, and the province for environmental impact before construction is allowed to begin.**

In summary, the site location options that a proposed intensive livestock operation would face would be:

- municipal approval and provincial approval – proceed with construction.
- municipal rejection – project stopped, or
- municipal approval and provincial rejection – project stopped.

As noted earlier, provincial approval could not be obtained unless the municipality had land use zoning by-laws in place.

Appeals of Location Decisions

Some presenters wanted the assurance that location decisions could be appealed to an independent authority, at arm’s length from government. The Panel concluded that local autonomy would best be preserved if the land use decision of a municipality, when it has appropriate by-laws, could not be altered. The provincial decision, however, could be appealed on grounds that environmental factors require further consideration.

Generally, any process in an Act or Regulation, and perhaps in a Guideline, can be challenged in common law as to the adherence of the responsible authority to the procedural requirements of the relevant document. In the two options where the province is making a decision, the Panel believes that any stakeholder with a direct interest in the proposed project should have the right to appeal the provincial decision, but in none of the three options should the municipal decision be appealable, except on procedural grounds.

Recommendation:

- **The provincial government should designate or appoint an appropriate Board or Panel empowered to investigate and rule on an appeal of a provincial decision to allow or disallow the establishment of any new or expanding ILO in Manitoba, and that the decision of that Board or Panel be final.**

In recommending an appeal procedure, the Panel believes strongly that the initial siting decision by municipal councils and the province should be as sound as possible. Furthermore, every effort should be made to keep the appeal process from becoming a long drawn-out legal process.

Public Participation

The COSDI recommendations on public participation set out, in some detail, a range of desirable interactions between a proponent of a development and the public, between the public and the governing body with permitting or licensing authority, and between the public and the agency charged with assembling relevant information. These recommendations are pertinent to the planning needs as outlined and to any significant allocation of a resource such as water supply. They can be used to guide the sharing of knowledge and investigations undertaken by a TRC advising a municipal council. The requirement is to involve interested people as early as possible in the planning process, making intentions well known and well understood, soliciting comment and criticisms, and generating

a general atmosphere of consultation in which little is discarded without apparent reason.

Municipal councils customarily arrange a hearing to help the public understand a development. Land use implications, the proponent's intentions, designs, manure plan etc., and the report of the TRC are aired. This is a difficult process to manage, one inevitably beset by accusations of inclination to bias. It might best be conducted by an individual or agency disinterested in the outcome.

The Panel has two **suggestions** to improve the climate of interaction with the interested public and to enhance consistency across the province on matters of site selection.

- Based on COSDI, a guide could be prepared for use by proponents, government, and the public-at-large. It would outline a procedure to ensure that all interests are considered in the discussion of each proposal. Holding a consultation to prepare such a guide would be a useful participatory exercise in itself.
- There are a number of individuals and organizations in Manitoba that have the mandate and experience to facilitate public consultation. On the request of a municipal council, such an individual or organization could conduct a hearing and ensure all views are placed on the table through dialogue and questioning. The councilors would have the chance to contribute to the discussion and absorb its content. The provincial reviewers could be reminded of unexplored technical issues of investigation before a provincial decision is added to that of the council. Dissatisfaction with the selection process should be reduced. The municipal council decision would remain a separate process.

Assessing Environmental Effects

COSDI recommends a broadening of the concept of environmental impact assessment to include all the sustainability factors of a development. Intensive livestock operations are exempt from any full process under *The Environment Act*. Rather,

there is reliance upon the Livestock Manure and Mortalities Regulation to minimize the highest risk of environmental damage. Some presenters felt that all such intensive operations should be fully examined for their environmental, economic, social, cultural and human health impacts, and formally licensed.

Our view is that the Manitoba hog industry at the ILO level is evolving in a responsible fashion with respect to environmental awareness. There is an attitude among large operators, researchers and the industry in general that clearly includes an awareness of environmental risk. Safeguards can be sufficient if planning is careful, the technical review embraces all environmental factors, and existing regulations are applied and effectively monitored.

There are two possible scenarios that might require further assessment. The density of operations and their cumulative effect lurk, in our minds, as matters requiring study within an effects assessment process. We also believe that there are special ecological reserves, and provincial and national parks where the risk of disturbance and pollution, threats to biodiversity, and the possible diminishment of aesthetic and other cultural values should be illuminated and examined under a full COSDI style effects assessment when large scale livestock development is contemplated. Some suggestions follow.

Farm Practices Guidelines Review

Currently, the land base required to apply manure for a proposed hog operation is calculated on crop nitrogen requirements. As noted later in this report, phosphorus in excess of crop requirement is a consequence for most Manitoba soils, although a manure handling system consisting of an air-impermeable cover on the storage and field application by injection conserves nitrogen and as a result greatly reduces excessive phosphorus application. The Guidelines appeal strongly to the fact that these soils bind extra phosphorus, but to ensure their long-term sustainability, planning should anticipate a change in application rates, as has occurred in Quebec, which substantially

increases the acreage needed for nutrient spreading. This can make a difference both to the task of assembling sufficient land - the operator's ownership, acquisition or contractual arrangements - and the number of operations the municipality will permit in a particular zone.

We also note that setbacks are calculated from the manure storage lagoon as center, yet a major source of odor (and subsequent complaints) is from fields during manure application. Reducing the density of future hog barns upon the landscape by regulating on phosphorus may be accompanied by more odor complaints.

Too little is said in the Guidelines to anticipate large area plans, nor do they discuss the ecosystems of the province and the need for protection of special places. The Guidelines can be a kind of forewarning to a proponent that some apparent locational opportunities should not be taken, or at least warrant enquiry and preliminary investigation to avoid future difficulties in an approval process.

These are but several examples that lead the Panel to **suggest** that the Farm Practices Guidelines need frequent updating and revision. It was clear to the Panel that this was a heavily used reference document that can, and should, reflect the practical implications of new research findings.

Technical Review Committees

The purpose of a technical review, as stated in the *Farm Practices Guidelines for Hog Producers in Manitoba*, is to provide support to local governments, when asked, to review an application for an ILO and to assist with the exchange of information between the proponent, the municipal council(s) and rural residents. It should be noted that TRCs are mandated as advisory to municipal councils and to this point have no authority or decision-making powers.

Clearly, such advice is of great assistance to any municipality investigating an ILO proposal. The TRC assesses the "fit" of the proposal in local zoning and for consistency with Provincial Land

Use Policies. It compares the proponent's intentions for setback, land for spreading manure, water supply etc., against both the recommendations in the Guidelines and information on soils, geology and well logs.

It is our perception that members of TRCs have performed their tasks with dedication and professionalism. However, in order to encompass wider responsibilities inherent in the COSDI principles, the Panel **suggests** the mandate and terms of reference of TRCs should be reviewed and revised, perhaps even strengthened. The task of the TRC should be to make wise decisions for the province on matters of location, and committee members should lead regional monitoring and enforcement. It may be assumed that the regional organization of TRCs will remain at the core of the review, monitoring and enforcement effort related to intensive livestock operations. The Panel believes the membership of TRCs should be broadened to include representatives from the Departments of Health and Labor, as well as other departments depending on the revised mandate. The chair of a TRC should be chosen to reflect the responsibilities envisioned under the revised mandate.

The point was made often at the hearings that Manitoba has a very low livestock population per acre as compared with other provinces and the United States. Yet there are pockets of considerable concentration of hogs in some areas of Manitoba. It is ironic that advantage is not always taken of Manitoba's geography to disperse operations. On the face of the matter, expansion can be accommodated easily, neither threatening our natural resources nor disturbing the neighbors. Without speculating on this situation, our view is that a broader and longer term perspective can be stimulated by TRCs to approach the requirements of The Sustainable Development Act of 1998, and to test the potential impacts of a proposal against these principles.

All departments and agencies of government were committed to using the "Principles and Guidelines of Sustainable Development," as set out in schedules to the Act, in their policies and operations. In moving implementation forward

along COSDI lines, reviewers might look at the regional implications of their recommendations, broaden their notions of cumulative impact, draw in expert opinions on the possible effects of the project on human well-being and human health, look more tightly at the requirements for preserving biodiversity, and, in general, step beyond a check-off approach to their advice to the municipality. Above all, the Act's version of the "precautionary principle" should be kept in mind:

Manitobans should anticipate, and prevent or mitigate, significant adverse economic, environmental, human health and social effects of decisions and actions, having particular careful regard to decisions whose impacts are not entirely certain but which, on reasonable and well-informed grounds, appear to pose threats to the economy, the environment, human health and social well-being.

The Panel **suggests** (tentatively because the operation and membership of TRCs have not been examined closely by the Panel) that TRCs require more orientation and training to their task, particularly in broad environmental issues such as COSDI recommends. Their task is extremely important for the sustainability of the province's resources, more so as expansion of Manitoba's livestock sector continues.

Geographic Information Systems (GIS) as a Planning Tool

Planning at any scale can be greatly facilitated by the digital recording and spatial depiction of attributes which characterize the landscapes of the province, from those within a region or a drainage basin to those of a municipality or even the surroundings of a specific ILO. GIS enables data on soils, water, land use, geology and other natural resources and features to be combined with data on roads, utilities, towns, villages, residences, agricultural operations and so on. By linking such data with regulations and by-laws in a graphical format, decision-makers can assess alternatives and better understand the impacts of development proposals.

There are a number of municipalities where GIS has been used very effectively through the cooperation of PFRA and provincial agencies. The Panel's impression is that municipalities are eager to use the GIS tool for screening purposes, albeit ground proofing is necessary. There seem to be two impediments. One is that a considerable amount of "digging" for information input is necessary – from the municipal files for the location, type and scale of development and from provincial government sources for most resource information. This might best be handled by a central service which can collect, interpret and update information and act as a consultant to RMs, TRCs and producers.

The second impediment is one of financing. Who pays for the service to the RMs for planning purposes? Should a proponent of a development share in the cost of the investigation of a specific site? These are policy questions beyond the scope of the Panel's terms of reference. They touch upon the broader issue of the availability to the public of information often already collected at public expense. Further costs to cash-strapped municipalities will inhibit GIS use.

The Panel **urges** a swift examination of the means by which municipal use of GIS can be expanded for better planning and the reduction of risks. This is not only a site-specific issue. There is a need throughout the province for information from GIS in the process of planning or development and seeking to apply sustainable development principles to a regional situation. We also urge policy makers to find an approach that improves the availability of such information to any bona fide user.

Recommendation:

- **The province should recognize the value of GIS and act promptly to find the means to facilitate its use as a planning tool in municipal government as well as in provincial government departments and agencies that need alternative approaches to the exercise of their mandates.**

Location, Location, Location

In summary, from the points-of-view of minimizing local discord, protecting the local environment, maintaining our health and sustaining the resources and landscape of Manitoba, carefully selecting the location of an ILO is of primary importance.