

**1994 Policy and
Research
Initiatives**

Cette publication est aussi disponible en français.

Foreword

Innovative ideas, supported by solid research, have made Canada Mortgage and Housing Corporation (CMHC) a leader in the field of housing both at home and abroad.

The Corporation has spent close to 50 years improving housing and living conditions for Canadians coast to coast. But it has not worked alone. CMHC is proud of its partnerships with home builders, renovators, and salespeople; other government agencies; social housing groups; research organizations and the academic community.

Many of these clients are members of the National Housing Research Committee, created and chaired by the Corporation to provide a vehicle for collaboration in housing research. The Committee identifies common priorities, undertakes joint projects and shares findings, all to benefit the Canadian housing industry and the Canadian public.

As part of our commitment to improve housing and living conditions in Canada, our research and policy development work covers all aspects of housing. Many of our projects in 1994 will focus on making houses and the communities in which they are located healthier for people and the environment. These initiatives also include the promotion of housing choices to meet the needs of seniors, people with disabilities, and people on low or fixed incomes.

We are firmly committed to demonstrating the results of our research, sharing our findings as widely as possible and developing a vision and goals for housing policy in Canada. In doing so, we are working to ensure that the housing industry is sound and competitive, research continues to be world class, and Canadians remain among the best-housed people in the world.

E.A. Fichel
President
Canada Mortgage and Housing Corporation

Introduction

Canada Mortgage and Housing Corporation, a Crown Corporation, is the federal government's housing agency. CMHC promotes the construction of new houses, the repair and modernization of existing homes, and the improvement of housing and living conditions for all Canadians.

CMHC has been helping to house Canadians for the past 48 years.

The Corporation is responsible for administering the *National Housing Act*. Under Part IX of this Act, the Government of Canada provides funding to CMHC for research into the social, economic and technical aspects of housing. The Corporation also publishes and distributes the results of this research.

This document outlines CMHC's planned policy and research initiatives under Part IX for 1994.

The three main sections of this report reflect themes identified in CMHC's "Strategic Plan." Each theme encompasses a wide variety of topics and issues. The remaining sections describe activities common to all three themes.

Pursuing Effective Mortgage and Housing Markets

CMHC remains committed to making housing both affordable and financially accessible for all Canadians. That goal can best be achieved by ensuring that private housing and mortgage markets function as efficiently as possible. As part of that effort, CMHC's 1994 activities will focus on housing market research, housing in the national and international economy, housing affordability, housing for seniors and persons with disabilities, housing finance, rental markets, the effects of technology and settlement patterns on the environment, and urban infrastructure.

Helping Households in Need

CMHC helps to provide housing assistance to Canadians in need, including various social groups such as Canada's First Nations and the homeless. In 1994, research will continue to focus on self-help, aboriginal housing, family issues and the Global Strategy for Shelter and International Habitat Issues.

Promoting Good Living Environments

Housing will always be an important element in the quality of our living environment. In 1994, CMHC's work will continue to focus on a number of topics, including the special problems of high-rise and multiple-unit buildings, northern and remote housing, indoor and outdoor environmental contaminants, renovation, technological innovation, safety and security and construction practices.

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Pursuing Effective Mortgage and Housing Markets

CMHC's market housing objectives are to assist the development of a stable private housing market that can function effectively, and to promote security of tenure through homeownership and an adequate supply of rental accommodation.

Market Intelligence

CMHC is the key source of housing market information and analysis that enables industry and government to better understand and plan for the future. The Corporation is often called upon to provide projections of long-term potential housing demands, short-term national economic and housing forecasts, local market forecasts, and migration patterns.

CMHC's computerized Potential Housing Demand model is an important tool in forecasting the demand for new housing.

In 1994, efforts will be devoted to improving information and data, developing analytical tools and methods, and sharing knowledge with a greater number of people. CMHC will research annual household change and new household formation in local housing markets.

Activities:

- Continue supporting Statistics Canada surveys on renovation markets.
- Support a joint study with Statistics Canada and Canada Post Corporation on household and housing characteristics of migrants.
- Continue to expand information on client needs in homeowner renovation and new construction costs in different markets.
- Expand information on mortgage lending activity across the country.
- Upgrade information and forecasts on international migration.

Housing in the National and International Economy

Housing activity is of vital importance to the Canadian economy. New residential construction, repair and maintenance represents about 13 per cent of the country's Gross Domestic Product and accounts for 1 in 10 Canadian jobs.

Although the housing sector remains largely domestically-oriented, the decrease in long-term demand, globalization, new trading relationships, new markets and technological innovations have all contributed to an increased emphasis on international markets.

Activities:

- Identify technical assistance and joint programs with Central and Eastern European countries.
- Research global market opportunities, especially with Mexico, Japan and other Asian countries, along with the evaluation of Canadian products.
- Undertake comparative study of Canadian and European Community housing standards.
- Create guide document to assist the Canadian housing sector with export opportunities.
- Identify further areas where Canada has world-class expertise in housing and human settlements that can be exported, and where other countries have expertise that can be imported.

Housing Affordability

Although lower interest rates and lower house prices have improved housing affordability for Canadians with an average income, several roadblocks remain for housing designed for households of low or modest income. These include a lack of suitable financing, exclusionary zoning and inflexible regulations.

Activities:

- Continue working on a guide to develop and market affordable forms of housing.
- Study alternate ways of public and private funding of infrastructure.
- Investigate housing affordability when building with sustainable or “healthy housing” products and technologies.
- Continuation of the Affordability and Choice Today (ACT) Program to promote regulatory reform geared to making housing more affordable.

Housing for Seniors

By the year 2031, the proportion of the Canadian population over 65 years of age will increase from approximately 11 per cent to 25 per cent. During this decade alone, the number of people over age 75 will almost double.

Recent studies on the impact of the aging global population, documented by the 12 member countries of the Organization for Economic Cooperation and Development, have illustrated various social and economic implications of this trend. These include the

strong preference of seniors to continue to live independently for as long as possible, the need to design and adapt homes and neighbourhoods to meet changing needs and to provide older people with appropriate services to help them maintain their independence, and the diminishing traditional sources of informal care for seniors.

Activities:

- Continue to work through the advisory committees on seniors' housing to raise awareness of options that could be available to seniors and to identify areas of potential cooperation between the public, private and non-profit sectors in the areas of housing and support services.
- Examine the effects of demographic change and changes in health, income, assets, living arrangements and access to informal support, on seniors' needs and demands for different types of housing, services and income support.
- Revise publication *Maintaining Seniors' Independence in Rural Areas* and complete a report to guide groups using the "Seniors Plus" computerized system.
- Complete the publication, *The Planning, Development and Management of Seniors' Housing*, that will be used to provide guidance to both the private and non-profit housing sectors. It will also deal with a wide range of topics, including emerging markets, housing types, design issues, new technology, support services for occupants, and various types of financing.
- Develop a guide on ways of delivering community- based home maintenance, repair and adaptation programs for seniors.
- Examine housing options that will address the needs of both the people suffering from dementia and their care givers. Subjects that will be considered include home adaptations, current and emerging technologies, and forms of housing that facilitate cooperative informal care.

Housing for People with Disabilities

People with disabilities wish to live as independently as possible within the community at large, rather than in institutional environments. They seek a greater choice of housing to allow them to settle in their preferred communities and neighbourhoods, and to minimize restrictions on their lifestyles. They seek barrier-free environments that do not restrict their access to housing and public places, and the development of technologies that can assist them in their daily activities.

Unfortunately, people with disabilities are generally faced with a limited choice of housing options. Few private sector options exist and many of the social housing dwellings that are specifically designed for people with disabilities are located in seniors' developments. This makes it difficult for younger people with disabilities to obtain suitable accommodation.

Recognizing the significance of these issues, the federal government is funding a wide variety of initiatives, involving several government departments and agencies, through the **National Strategy for the Integration of Persons with Disabilities**. CMHC has been allocated funding to undertake housing research and development activities.

Activities:

- Develop a guide to barrier-free and adaptable housing.
- Issue a report on the most effective types of home adaptations to help seniors and people with disabilities maintain their independence.
- Continue working with the National Research Council to determine the best emergency evacuation procedure for residential buildings housing people with disabilities.
- Examine ways of meeting the housing needs of aboriginal people with disabilities.
- Study the housing needs of people with mental disabilities in conjunction with Health and Welfare Canada and the Coalition of Mental Patients.
- Identify opportunities with the housing industry to develop demonstration projects that will raise awareness about new forms of housing, cost-effective barrier-free and adaptable design features, and emerging technologies.
- Evaluate the expertise of individuals who inspect and evaluate "sick homes."
- Establish guidelines on prefabricated housing for people who are environmentally hypersensitive.
- Study the relationship of indoor lighting to the quality of living for people who are environmentally hypersensitive.
- Survey pesticide use in housing to determine the possibility of a link to environmental hypersensitivity.

Housing Finance

The financing of housing is an important business component of Canada's financial institutions, accounting for about 75 per cent of total household credit and approximately 30 per cent of the total credit issued by financial institutions.

Canada's current system of housing finance is well integrated into the larger capital markets and based almost entirely on deposits of private-sector funds. These range from Guaranteed Investment Certificates to holdings in trust and loan companies, credit unions, caisses populaires, and government and private savings banks. They also include premiums paid by life insurance companies and pension funds, as well as non-institutional funds.

Past and present successes of the system are attributed to its ability to anticipate and adapt to change. However, fundamental changes are occurring in the external environment that could influence the way the current housing finance system operates.

In 1994, the Corporation's research will challenge prevailing perceptions of how the mortgage market is functioning and will continue to function in the future.

Activities:

- Publish a series of papers on how the global marketplace and the domestic business environment influence the housing market. The first set will look at how the system of housing finance will emerge in the future. The second set will look at which factors could affect the mortgage market.

Rental Markets

The environment in which rental markets operate is considerably different than it was 20 years ago.

Today, about one-third of Canadian households rely on private rental housing. Rental households tend to have lower incomes and more special needs, compared to those of homeowners.

Activities:

- Develop a model to analyze the factors that affect rental market trends.

Helping Households in Need

One of CMHC's most important tasks is to assist in the development of housing for people who are unable to adequately house themselves. In 1994, the Corporation will concentrate on issues of housing needs and housing assistance, life-cycle costing, self-help housing, immigration, family issues, aboriginal housing and the Global Strategy for Shelter.

Housing Assistance

There are four areas of concern within the broad area of housing assistance. They are: alternative forms of assistance, assistance in rural and northern areas, social housing improvements and financial alternatives.

Alternative Forms of Housing Assistance

Since 1985, a number of changes have occurred that have created a different context for housing in the mid-1990s. New fiscal realities require CMHC to re-evaluate its social housing programs.

Activities:

- Research alternative forms of social housing program delivery.
- Study housing assistance for Canada's First Nations in the context of self-government.

Housing Assistance in Rural and Northern Areas

Housing assistance in Canada has traditionally focused on urban solutions. However, the incidence of need is greater in rural and remote areas, especially among certain populations of Canada's aboriginal community.

Activities:

- Determine the effectiveness of community benefits derived from housing programs in remote communities.

Social Housing Improvements

CMHC administers programs to help low-income Canadians. Both the programs themselves and features of individual programs are constantly being reviewed in order to find ways to make them more effective and efficient.

Activities:

- Monitor safety and security initiatives in social housing projects.

- Research environmental and energy conservation programs for social housing.

Financial Alternatives

Financial tools exist that may be more cost-effective or flexible than the current financing mechanism. These could be used more widely for social housing.

Activities:

- Study alternative rent-to-income methods to develop incentives for socially-assisted households to become more independent.

Life-Cycle Costing

There is increasing concern that the emphasis now placed upon controlling the initial capital costs of housing is having a detrimental effect on ongoing costs. There is interest in having the principles of life-cycle costing — the combination of capital and ongoing costs over the life of a project — reflected in the development process.

The analytical model developed by CMHC uses life-cycle costing to evaluate materials and systems to determine which have better viability over the life expectancy of a building or mortgage.

Activities:

- Evaluate the Life Cycle Costing model.
- Continue analyzing the operating cost performance of private sector rental housing and social housing projects.

Self-Help

Self-help housing involves the use of people's time and expertise, on a voluntary non-remunerated basis, to improve their own shelter. Self-help covers a wide range of activities and levels of involvement, including new construction, renovation and tenant management, in both social and market housing. It has been shown to be cost-effective in producing new housing and in redeveloping older housing. In some areas of the country, especially rural portions of the Atlantic region, self-help construction and renovation represents a significant proportion of overall activity.

Activities:

- Study self-help approaches in developing, adapting, renovating, maintaining and managing medium- and high-density housing for low-income people in other countries.
- Explore the ways tenants can use social housing amenity space.

- Support the development and assessment of new tenant participation and management models, including the development of cost-effective methods of meeting tenant needs.
- Research ways in which residents of social housing projects can become both independent and self-sufficient.
- Publish a booklet on self-help approaches to renovation, conversions and the construction of multiple units.

Housing Needs

Comprehensive and timely information on housing needs is essential if government resources are to be used effectively. Housing needs data are required for policy development, strategic planning, program evaluation and program planning purposes. Current estimates of core housing need are used to ensure that each province is allocated a fair share of social housing funds based on need.

Activities:

- Complete quantitative studies on the housing needs of people with disabilities and aboriginal peoples.
- Develop housing needs information for a general housing monograph in conjunction with Statistics Canada.
- Develop estimates of housing needs in metropolitan areas from 1991 census data.
- Investigate the housing needs of immigrants.
- Initiate a study to examine provincial differences in what is included in property taxes and treated as basic shelter costs.
- Further study the extent of homelessness in Canada.

Global Strategy for Shelter and International Habitat Issues

As a follow-up to the 1987 International Year of Shelter for the Homeless, the United Nations Assembly adopted a "Global Strategy for Shelter to the Year 2000" (GSS) in 1988. Its main objective is to facilitate the provision of shelter for all by the year 2000. The U.N. has also urged each member country to observe the first Monday of October as World Habitat Day.

At the U.N. Conference on Environment and Development in June 1992, Agenda 21, one of the main documents arising from the conference, included a chapter on human settlements that made specific recommendations related to the GSS. These include strengthening national shelter strategies and supporting the shelter efforts of, and financing schemes from, the urban and rural poor. CMHC is responsible for coordinating

Canada's activities related to the GSS and the recommendations from Agenda 21 as they relate to housing.

Habitat II, a U.N. Conference on Human Settlements, will be held in Turkey in June 1996, marking the 20th anniversary of the Habitat Conference held in Vancouver. Canada both promoted and sponsored that conference, and will serve as Chair of the Bureau for the Preparatory Process for the 1996 meeting. Canadian Elizabeth Dowdeswell, who serves as head of the U.N. Environmental Program and the U.N. Centre for Human Settlements (UNCHS), will serve as Secretary-General for Habitat II. CMHC will be the lead federal agency in preparations for Habitat II.

The World Bank and the United Nations Centre for Human Settlements (UNCHS) have been working on the development of a set of housing indicators that can measure progress from country to country. Canada will continue to strongly support such housing and urban indicators in international fora such as UNCHS, OECD, and UN-ECE.

Activities:

- Monitor developments in Canada that contribute to the implementation of all aspects of the GSS and its related recommendations. Partnerships will continue to be encouraged among the public, private and community sectors in the development of specific activities, including those to mark World Habitat Day.
- Support research initiatives that encourage community participation in identifying specific needs, and in the development and implementation of relevant housing initiatives.
- Prepare Canada's report on the GSS and Human Settlements to the 1994 session of the Commission on Sustainable Development.
- Establish closer links with the Canadian International Development Agency, Environment Canada, External Affairs and other agencies to support projects related to the GSS.
- Support the international use of Canadian expertise concerning sustainable cities and municipal administration.
- Assist with the development and use of housing and urban indicators.
- Establish planning committees for Habitat II, including the coordination of the first Preparatory Committee for Habitat II meeting to be held in Geneva in April 1994.
- Continue to support domestic and international research initiatives, workshops and seminars that support GSS and Habitat II preparations.

Immigration

Immigration has an impact on housing that has not been fully explored. For instance, the benefits and problems of close cultural groupings, whether in social or private housing, are not well understood. Some information is available, including the fact that the number of immigrants in social housing is increasing.

Information is required to determine whether the support that newcomers and visible minorities receive from living within their own communities outweighs the negative effects of ghettoization and possible isolation.

Activities:

- Continue to investigate the extent and impact of ethnic segregation in social housing.
- Study the links between immigration policy and the demand for social housing.
- Explore issues affecting racial and ethnic minorities in the housing sector.

Family Issues

CMHC's social housing tenants and mortgage insurance clients are mainly families. The Corporation will support the 1994 International Year of the Family through family-related research and policy development.

Activities:

- Publish a guide on creating additional units for families by converting single to multiple housing units.
- Further examine the extent of discrimination against families in rental housing markets and explore ways of addressing the problem.
- With Statistics Canada, develop a research monograph describing families and their housing needs and affordability, and how they have changed between 1981 and 1991.
- Update advisory documents developed by the Children's Environments Advisory Service.
- Develop educational materials for primary schools on housing and community issues.

Aboriginal Housing

The incidence of poor housing conditions is high among aboriginal people relative to the entire population. The unique on-reserve situation creates certain challenges to housing improvement in these areas.

CMHC will continue to contribute to the development of aboriginally based housing delivery and to improve the housing conditions for all aboriginal people.

Activities:

- Study new approaches to improve housing in aboriginal communities.
- Examine how land claims settlements and self-government will affect on-reserve housing and explore alternate methods of providing security for housing loan financing.
- Organize workshops for aboriginal housing groups and housing specialists to explore ways of increasing aboriginal involvement for their own housing needs.
- Discover alternative housing designs consistent with aboriginal preferences, culture and lifestyles.
- Complete study looking at Canadian and Australian housing.
- Investigate the housing preferences of aboriginal people living in urban areas. Other research will look at the supply of rental housing available to aboriginal people, especially those in Prairie cities.
- Seek out examples of innovative Native housing and share this information through the National Housing Awards.

Promoting Good Living Environments

CMHC's role in advocating housing quality and good living environments includes a prominent housing-technology component: identifying flaws in materials and practices, conducting diagnostic investigations, finding and demonstrating remedies, upgrading standards, examining safety and security issues, and disseminating this information.

High-Rise and Multiple Residential Buildings

Over the past few years, CMHC has invested significant resources in the improved design and construction of high-rise residential buildings. Some issues that have been researched include: a building's airtightness and cladding, noise control, renovation, and heating and ventilation systems.

Building Envelope

Air leakage is probably the most important source of energy loss in high-rise buildings. It is also the major cause of premature degradation of the building envelope.

The building envelope is less likely to break down if warm moist air from inside, and rain and moisture from outside, are unable to penetrate the walls. The National Building Code of Canada requires the use of an air barrier in outside walls to prevent air penetration and moisture problems.

Cladding, or the outer surface of a structure, is also a major source of problems in high-rise buildings. A recent study by CMHC and the Ontario New Home Warranty Program found that 95 per cent of the 52 problem buildings surveyed had difficulties related to water penetration because of rain or air leakage.

Activities:

- Test ways to neutralize stack forces that cause air movement and how this could affect ventilation systems.
- Study ways of preventing the wetting of large portions of buildings.
- Investigate factors causing energy loss and to identify ways to improve problem-prone cladding systems.

Noise

Poor sound control between dwellings in multiple-unit buildings tends to reduce both the value of the units and the demand for this type of housing.

Activities:

- Examine ways of adapting technologies that allow sound separation in renovation.

Renovation

Many high-rise buildings are likely to need major renovations in the near future. Older buildings will have to be made more energy efficient. Utility companies, such as Ontario Hydro, are planning programs to reduce the energy consumption of buildings through subsidy programs.

Activities:

- Assess the cost-efficiency and effectiveness of current tests used by the industry.

Heating and Ventilation

Progress and innovation in mechanical heating, ventilation and air conditioning (HVAC) systems in high-rise residential buildings has often lagged behind developments in low-rise housing or in commercial buildings. For instance, cogeneration units, which provide simultaneous heating and electrical energy, are becoming common in some commercial buildings but are not used extensively in high-rise residential buildings.

Alterations to mechanical systems in high-rise residential buildings have a major effect on the amount of energy consumed, the carbon dioxide generated and the indoor air quality levels achieved.

Activities:

- Publish document outlining proper maintenance procedures for high-rise ventilation systems.
- Develop and monitor new ventilation systems for mid-rise wood frame apartment buildings.
- Review the performance of cogeneration units in multi-family dwellings.
- Survey recently designed high-rise buildings to determine the degree of compliance of the ventilation system to new requirements in the 1995 National Building Code.

Restoration of Structural Concrete

Canada has experienced its share of failures related to steel-reinforced structural concrete. CMHC has played a leading role in determining some of the causes behind these failures. Alleviating these problems can be expensive, with commercial activity on concrete restoration estimated at about \$100 million a year.

Activities:

- Continue to research uses of non- corroding, fibre-reinforced plastic in concrete in buildings.

Northern and Remote Housing

Building methods, systems and construction techniques used in southern and urban areas of Canada do not necessarily perform well in Arctic and remote locations. The severe environmental conditions in the North can result in rapid degradation of building components. Costs of labour, building materials, operation, maintenance and repair are higher in northern and remote areas as a consequence of having to import construction materials, fuel and labour from the South.

Activities:

- Evaluate how standards are applied to northern products and assess the level of compliance to these standards.
- Conduct research on northern technology and host technical seminars through CMHC offices to share the information.
- Study ways to enhance the information flow between Canada and other circumpolar nations with expertise in cold weather technology.

Moisture

Moisture in all homes needs to be controlled. High levels of indoor air moisture can lead to discomfort, material degradation, increased material emissions and health problems. Excessive moisture in the structure of the house can lead to increased energy use, deterioration of finishes, rot and loss of structural strength.

CMHC's research and expertise concentrates on maintaining a proper moisture balance within house air and on preventing structural damage to the house.

Activities:

- Complete study on what contributes to clean and healthy housing environments.
- Demonstrate a way to avoid moisture problems in both attics and basements, while recommending improved industry codes and practices.
- Study the transportation of heat, air and moisture in housing.

- Offer construction moisture seminars to builders and renovators in the Atlantic region to improve construction practices.

Toxic Lands

The term “toxic lands” refers to sites where there has been soil or groundwater contamination. In response to public concerns, federal and provincial environmental law in many jurisdictions has extended liability for the clean-up of contaminated property from the polluter to those who own, occupy and manage a contaminated property.

Activities:

- Continue to investigate the way sites and houses are assessed for potential contamination and integrate these findings in CMHC publications.
- Investigate the types of control measures used to keep soil gasses from infiltrating high-rise buildings.

The Indoor Environment

The indoor environment is now being recognized as a potentially greater threat to human health than the outdoor environment. This is in part due to the variety and toxicity of materials found in houses, and in part due to the greater amount of time that most people spend indoors.

People who are environmentally hypersensitive are especially at risk for symptoms, which can be either generalized or specific, and for health problems, which can range from mild discomfort to complete debilitation.

Activities:

- Demonstrate new ventilation technologies in regions using mainly electric baseboard heating.
- Establish guidelines for energy, airflow, noise and comfort performance for ventilation systems.
- Apply current research on ventilation to renovation.
- Revise methods of controlling ventilation for both new and existing housing.
- Promote specialized ventilation systems to areas of high humidity such as Atlantic Canada.
- Update consumer information on ventilation, air quality and combustion spillage.

- Initiate a joint study with other agencies to determine which materials are most likely to introduce toxic products to indoor air.

Housing Renovation

In Canada, there are about one million housing units in need of repair. CMHC has realized for years that the country's housing stock is a national asset that is of major importance to Canada's welfare. The energy efficiency, air quality, comfort and durability of a house can all be affected by the way in which it is operated and maintained. This in turn can affect the affordability and sustainability of housing.

Activities:

- Launch a demonstration project that promotes cost-effective and environmentally responsible renovation.
- With the National Research Council, develop a model renovation code for the private home inspection industry.
- Prepare training materials on lead-based paint removal for the trades and renovation contractors. Other publications to come include a report on the incidence of lead in housing and on clean-up techniques for the renovation of older houses.
- Examine the sustainability of renovation for generic house types.
- Study the viability of introducing an environmental rating system for existing houses.
- Develop a model "Homeowner's Manual" that builders could provide to home purchasers, offering instruction on the efficient operation of all mechanical equipment and the proper maintenance of materials used in the home.

Safety and Security

CMHC continues to promote safety and security in such areas as burglary prevention, fire safety and earthquake preparedness. In 1994, the Corporation will concentrate its research efforts on fire safety and home security.

CMHC has already produced two publications, a security video and an exhibit related to home security. The Corporation has also used its expertise in trying to reduce fire fatality rates by promoting the proper use of smoke detectors and by sponsoring the Canada Safety Council's National Fire Safety Week Campaign.

Activities:

- Strengthen partnerships with police and fire associations.

- Determine further consumer needs for safety and security information.
- Prepare further information on fire safety for such high risk groups as children, seniors and aboriginal people. In Saskatoon, a review will be conducted on a new neighbourhood fire and health inspection service. A training handbook based on this study will follow.

Construction Practices

In association with the Canadian Home Builders' Association, CMHC will continue to develop a series of builder and renovator training workshops to improve the standards of Canadian construction practice.

Activities:

- Develop training materials on common defects associated with Canadian housing.
- Conduct workshops in rural and on-reserve locations.

The Centre for Future Studies in Housing and Living Environments

The objective of the Centre for Future Studies is to identify factors that will influence housing and living conditions over the long term, to develop a deeper and broader understanding of these factors and influences, and to monitor their evolution.

By identifying, tracking and evaluating key influences, the Centre attempts to develop an assessment of possible future conditions and challenges.

Since its inception three years ago, the Centre has focused this work under four major research themes: socio-economic and demographic changes, housing and social policy, changing urban and rural living conditions, and technological changes.

Activities:

- Study the dynamics of urban decay and how those causes are manifested in Canadian cities.
- Publish information on the planning and development of the communities that form cities.
- Conduct studies on the future of aboriginal urbanization.
- Examine the future of rental housing in Canada.
- Study the social and economic viability of high-rise rental housing units to provide adequate and affordable housing in the future.
- Look at the potential to introduce housing in suburban shopping malls.
- Organize a panel study to monitor groups of residents of different housing environments to measure the role played by housing in the improvement of a person's quality of life.
- Conduct further research into the use of social housing and make this available in the form of a database.
- Continue studying the impact of globalization of financial markets on the Canadian housing and mortgage markets.
- With various partners, sponsor a symposium on telework and home-based employment, examining the potential implications for housing and living environments.

Responsive Programs

In addition to its directed policy and research program, CMHC supports a number of activities that are aimed at developing housing expertise and knowledge in Canada, through responsive programs. In 1994, those activities will include:

External Research Program

CMHC's External Research Program provides grants to help individuals undertake innovative and high-quality research investigations into a broad range of housing topics. A committee with representatives from industry, academia, government and the professions chooses the best applications through an annual national competition.

Scholarships Program

CMHC scholarships are available to assist Master's-level students who specialize in studies related to housing and community planning. Fields of study can range from engineering to law, and include multidisciplinary programs. Candidates are selected by committee in an annual competition.

Housing Technology Incentives Program

HTIP provides grants to encourage research and development of new products and systems in housing technology.

Experts in Residence Program

This program offers people in housing-related fields the opportunity to work at the Centre for Future Studies for six months to a year. Appointees develop and undertake projects of their own design, exploring issues that will affect housing and living environments in the future.

Affordability and Choice Today (ACT) Program

ACT is in partnership with the Federation of Canadian Municipalities, the Canadian Home Builders' Association and the Canadian Housing Renewal Association. Through ACT, grants are available to defray the costs of undertaking and documenting initiatives that involve regulatory reform. ACT projects are demonstrating the potential for new forms of affordable housing, better utilization of the existing housing stock and more streamlined approval processes.

Institutional Support

Intergovernmental Committee on Urban and Regional Research (ICURR)

ICURR facilitates the exchange of information, opinions and views on urban and regional issues, and provides a focus for the development of policies on settlement change in Canada. ICURR achieves its mandate by providing information services to all levels of government, undertaking research programs on issues of national importance and organizing workshops and conferences.

Housing Research Institutes

The Rural and Small Town Research and Studies Program (RSTRSP) at Mount Allison University, and the Institute of Urban Studies (IUS) at the University of Winnipeg, conduct programs, research, academic courses and outreach within their respective regions. RSTRSP specializes in rural housing and community development issues in the Atlantic region, while IUS focuses on urban and northern issues on the Prairies.

