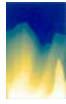


PROJECT SUSTAINABILITY MANAGEMENT PROGRAMME

The Hayes Higgins Principles

Hayes Higgins Partnership



SUSTAINABLE DEVELOPMENT

The Hayes Higgins Principles

Sustainable Development is usually defined as *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*.

National Sustainable Development Policy

The aim outlined for Ireland in our sustainable development strategy, was *"to ensure that economy and society in Ireland can develop to their full potential within a well protected environment, without compromising the quality of that environment and with responsibility towards present and future generations and the wider international community"*.

The principal goals and policies defined in the 1997 publication Sustainable Development: A Strategy for Ireland continue to inform the development and delivery of policies and programmes in the area of environmental protection and sustainable development. The integration of environmental considerations into other policy areas is a key means of securing balanced development.

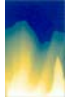
What is Sustainable Community Development?

The concept of a "sustainable community" does not describe just one type of neighbourhood, town, city or region. Activities that the environment can sustain and that citizens want and can afford may be quite different from community to community. Rather than being a fixed thing, a sustainable community is continually adjusting to meet the social and economic needs of its residents while preserving the environment's ability to support it.

A sustainable community uses its resources to meet current needs while ensuring that adequate resources are available for future generations. It seeks a better quality of life for all its residents while maintaining nature's ability to function over time by minimizing waste, preventing pollution, promoting efficiency and developing local resources to revitalize the local economy. Decision-making in a sustainable community stems from a rich civic life and shared information among community members. A sustainable community resembles a living system in which human, natural and economic elements are interdependent and draw strength from each other.

Potentially significant employment opportunities, consistent with more sustainable patterns of development, exist in many economic sectors. Redesigned and improved infrastructure, knowledge-based services, environmental technologies, improved management and use of natural resources, and tourism are all rich areas for private sector investment, supportive government policies, and expanded training. Some of the most promising employment opportunities include:

- Upgrading the efficiency of energy use in buildings, products, and transportation systems;



- Adopting and implementing sustainable agriculture, forestry, fisheries, soil, and watershed management practices;
- Expanded delivery and use of information technologies;
- Sustainable tourism activities centred around areas of environmental, cultural, and historic significance;
- Recycling and remanufacturing of solid and hazardous waste into marketable products;
- Accelerated and expanded development of marine and freshwater aquaculture;
- Adding value to fish, agricultural, and forest products;
- Developing, manufacturing, and marketing products, services, and technologies that reduce environmental burdens; and
- Designing energy-efficient and people-friendly cities.

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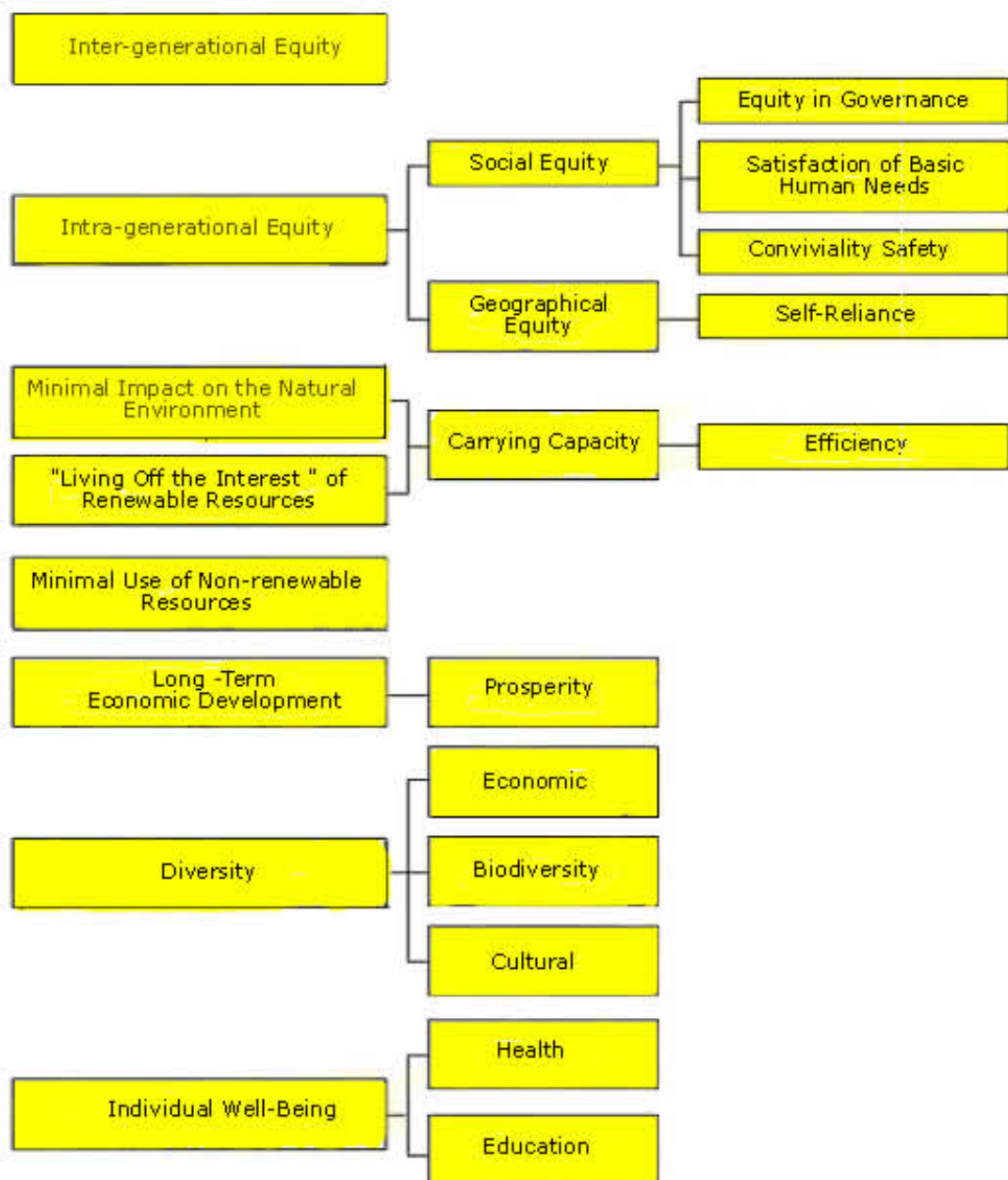
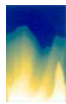
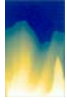


Fig. 1 Sustainable Community Model

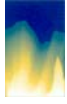
Achieving sustainable community development means emphasizing sustainable employment and economic demand management (EDM). Sustainable employment includes turning "wastes" into resources (e.g., recycling); improving efficiency with regard to energy and materials; converting to greater reliance on renewable energy sources; increasing community self-reliance (e.g., food and energy production); and sustainable management of natural resources (e.g., community forestry). EDM shifts our economic development emphasis from the traditional concern with increasing growth to instead reducing social dependence on economic growth.

Examples of sustainable community development include car cooperatives to reduce the cost and necessity of car ownership (Vancouver), sustainable employment plans to create



jobs, spur private spending, and reduce pollution through public investment in energy conservation and audits (San Jose, California), new product development to encourage manufacturers to develop environmentally-friendly products through municipal R&D assistance (Gothenberg, Sweden), increasing affordable housing supply through zoning codes that promote a variety of housing types, including smaller and multi-family homes (Portland, Oregon), experimenting with local self-reliance by establishing closed-loop, self-sustaining economic networks (St. Paul, Minnesota), community supported agriculture to preserve farmland and help farmers, while making fresh fruits and vegetables available in city neighborhoods (Vancouver; London, Ontario; New York City, Irish Farmers Markets), local currencies such as LETS: Local Employment and Trading Systems (Toronto), a local ownership development project with a revolving loan fund to encourage employee-owned businesses, considered more stable over the long term and more likely to hire, train and promote local residents (Burlington, Vermont), and a community beverage container recycling depot which employs street people – “dumpster divers” – and provides them with skills, training, and self-esteem (Vancouver). To create and enhance opportunities in Rural Settlements by working in partnership and fostering participation, thereby making possible the enjoyment of quality of life chances and economic security which at least meets the minimum expectations of society. Ballyhoura Country

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The Planning and Development of a Sustainable Community in line with the Irish Governments objectives are embodied in the following Principles which we describe as the Hayes Higgins Principles:

Environment

"Environmental Sustainability is achieving the minimum rate of resource consumption and waste discharge that can be sustained indefinitely in a given region to progressively enhance the functional integrity and productive activity of relevant ecosystems"

Equity

Social sustainability is achieved when individuals in a society are able to:

Achieve and maintain personal health: physical, mental and psychological;

Feed themselves adequately;

Provide adequate and appropriate shelter for themselves;

Have opportunities for gainful and meaningful employment;

Improve their knowledge and understanding of the world around them;

Find opportunities to express creativity and enjoy recreation in ways that satisfy spiritual and psychological needs;

Express a sense of identity through heritage, art and culture;

Enjoy a sense of belonging;

Be assured of mutual social support from their community;

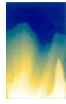
Enjoy freedom from discrimination and, for those who are physically-challenged, move about a barrier-free society;

Enjoy freedom from fear, and security of person;

Participate actively in civic affairs.

Economic

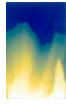
Economic sustainability implies that the local economy is both stable and diversified, that economic activities have minimal impacts on the natural environment, are efficient in their consumption of resources. *Economic stability* can be enhanced by development of a strong local or community-based sector where local resources and local jobs meet local needs). A global component to a local economy, however, is still important. *Economic stability* can also be enhanced by the development of strengths in more than one sector or area. Change is inevitable and a community is more likely to be able to adapt when there is a broad range of economic activities.



Sustainability indicators

We have adopted the following set of sustainability indicators which are selected key statistics or parameters that, tracked over time, can represent or summarize trends in social, economic, and environmental conditions.

- Social integration
- Waste minimisation
- Renewable energy sources
- Religious tolerance and diversity
- Vibrancy of community clubs
- Vibrancy of underage sports clubs
- Stock of community /club facilities
- Integration of housing categories
- Robustness of local democracy
- Local authority service provision levels
- Pride of place levels
- Quality of educational facilities
- Aesthetic quality
- Air quality/emissions
- Atmospheric change
- Culture and heritage
- Economic health
- Education
- Employment
- Energy
- Governance/participation
- Green-space/natural areas/wildlife
- Housing/shelter needs
- Human health
- Income equity/social welfare
- Land use/urban sprawl
- Material consumption
- Natural resource use/conservation
- Noise
- Population structure and change
- Public safety/crime
- Recreation and leisure
- Soil quality/contamination
- Solid and hazardous waste
- Toxics
- Transportation
- Water consumption & conservation
- Water quality & treatment



Performance Monitoring

Hayes Higgins propose to appoint an independent group to audit Sustainability compliance using both a quantitative and a qualitative approach using the following metrics;

Habitat

- Green space as percentage of total land area (green space may include protected and unprotected natural areas, parks, vacant Crown land with green space value, agricultural land, forest land)
- Total area of environmentally sensitive habitat and percentage of area protected from development (i.e. protected area or covenanted land)
- Number of species at risk
- Population trends of species at risk
- Population trends of keystone species

Urban Air Quality

- Ambient levels and exceedances for ground-level ozone, PM₁₀, CO, NO, SO₂, benzene

Water Quality and Consumption

- Municipal water consumption per capita (total, residential commercial, other)
- Phosphorus levels compared with water quality guidelines or objectives
- Percent of households with water meters
- Average annual faecal coliform level in storm water
- Average annual concentrations of substances of environmental concern in sediments at selected storm water discharges
- Sewage effluent Quality

Contaminated Sites

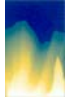
- Remediated contaminated sites as percentage of total known sites

Energy

- Energy consumption per household
- Energy consumption by sector

Transportation

- Modal split (percentage of trips by bikes, cars, passengers, transit, and walking)
- Motor vehicle ownership per capita (or per household)
- Annual amount of fossil fuel consumed for transportation per household
- Annual costs of roads and road maintenance per household
- Transit ridership (total, and per capita per year)



- Amount of land used for automobile-related uses (roads, car parking , service stations, etc.)
- Length of bikeways as a percentage of total length of major vehicle lanes.
- Average number of people per car per trip
- Length of pedestrian walk ways per 100 households

Solid Waste

- Waste generation and disposal (total and per capita)
- Recycling and composting participation rates
- Percent of households covered by recycling program

Land Use

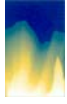
- New housing starts by type (percentage of detached, attached ground, attached non-ground of total new starts)
- Percent of households within 400 m of schools hospitals, bus stops, natural parks
- Residential densities
- Percent mixed-use zoning (e.g. commercial-residential)
- Average residential plot sizes (new plots and total inventory)
- Average length of journey to work
- Percent of labour force working within 400 m of home

Income Equity

- Percentage of households with incomes below Average Industrial Wage
- Annual average (or median) household (or individual) income by group (i.e. women, men, native, immigrants)
- Middle income earners as a percentage of total population
- Real average weekly earnings
- Percentage of children, elderly, and disabled with low incomes
- Ratio of income earned by richest 20% of population to poorest 20% of population
- Total annual number of meals provided (or annual number of people served) by Charitable Orgs.

Housing

- Integration of housing types
- Average waiting time for those in need of subsidized housing
- Number and percentage of households in core housing need, by tenure
- Affordability (percent of households spending 30% or more of income on housing (principal, interest, taxes and utilities), by tenure)
- Suitability (percent of households below national occupancy standard for number of people per bedroom)
- Average price of serviced residential lots (total and as a percent of average price of house)
- % of total housing stock made up of social and affordable housing units
- Vacancy rates, by price and housing type



- Supply of serviced residential land coming on stream to meet future demand

Human Health

- Percentage of population (or households) within 400 meters of recreational or natural parks
- Park area per capita (e.g. protected natural and recreational green space)
- Area of green space per capita (green space may include protected and unprotected natural areas, recreational parks, golf courses, vacant Crown land with green space value, etc.)
- Hospital admission rate for asthma
- Low birth weight babies (<2500 g) per 100 live births
- Suicide rate (suicides per 1 000 population)
- Life expectancy
- Drinking water quality: exceedances of Irish or European standards for selected parameters
- Teenage mothers (less than 20 years of age) per 1 000 live births
- Infant mortality rate

Education

- Education levels (as a percent of population over 15 years of age)
- Literacy rate
- Percentage of youths aged 15-18 attending school

Public Safety

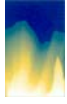
- Accident rates (by type)
- Crimes against persons (offences per 1 000 population)
- Crimes against property (offences per 1 000 population)
- Number of charges laid (by victim and by police) in domestic violence incidents reported to police (also as percentage of all incidents)

Governance and Community Focus

- Percent of population voting in municipal elections
- Percent of population participating in voluntary community service organizations
- Quality of Community Infrastructure eg. Club facilities
- Involvement of Youth in Sporting and Community activities
- Strength of local club structures and coordination
- Social Integration of and attitude towards less privileged

Economic Activity

- Bankruptcies and incorporations (per 1 000 population)
- Annual number of new business licences issued
- Number and value of Planning permissions granted annually



Employment

- Percent of labour force employed by sector (manufacturing, industry, agriculture, service, etc.)
- Population dependency ratio
- Percentage of Employment Insurance beneficiaries as percentage of total population aged 19-64
- Large, (> 100 employees) and small (< 20 employees) as percentages of total number of businesses
- Average number of person weeks unemployed per year by age group

Feedback and Review

Ongoing planning and development will be informed and by the sustainability performance and review process.

This feedback loop is an essential ingredient in the development of the Hayes Higgins sustainability management process

It is intended that the sustainability performance Management system of the the Hayes Higgins development will set a benchmark for others to follow.

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ISSUE REGISTRATION:

This report takes into account the particular instructions and requirements of our Client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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