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UN-FIG International Conference on Land Tenure and Cadastral Infrastructures for Sustainable Development, Melbourne, Australia 24-27 October, 1999

Land Administration and Cadastral Trends – The Impact of the Changing Human-Land Relationship and Major Global Drivers

[Part 1 of a two-part series]

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Land Administration and Cadastral Trends: in two parts

- Part 1 (this session):
  "The Impact of the Changing Human-Land Relationship and Major Global Drivers"
- Part 2 (presented by Prof Williamson):
  "A Framework for Re-Engineering"
  Session 4: Cadastre & Land Administration

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Outline of Presentation

- Dynamic humankind-land relationship
- Current drivers of change
- Impact of these forces: Case study of New Zealand

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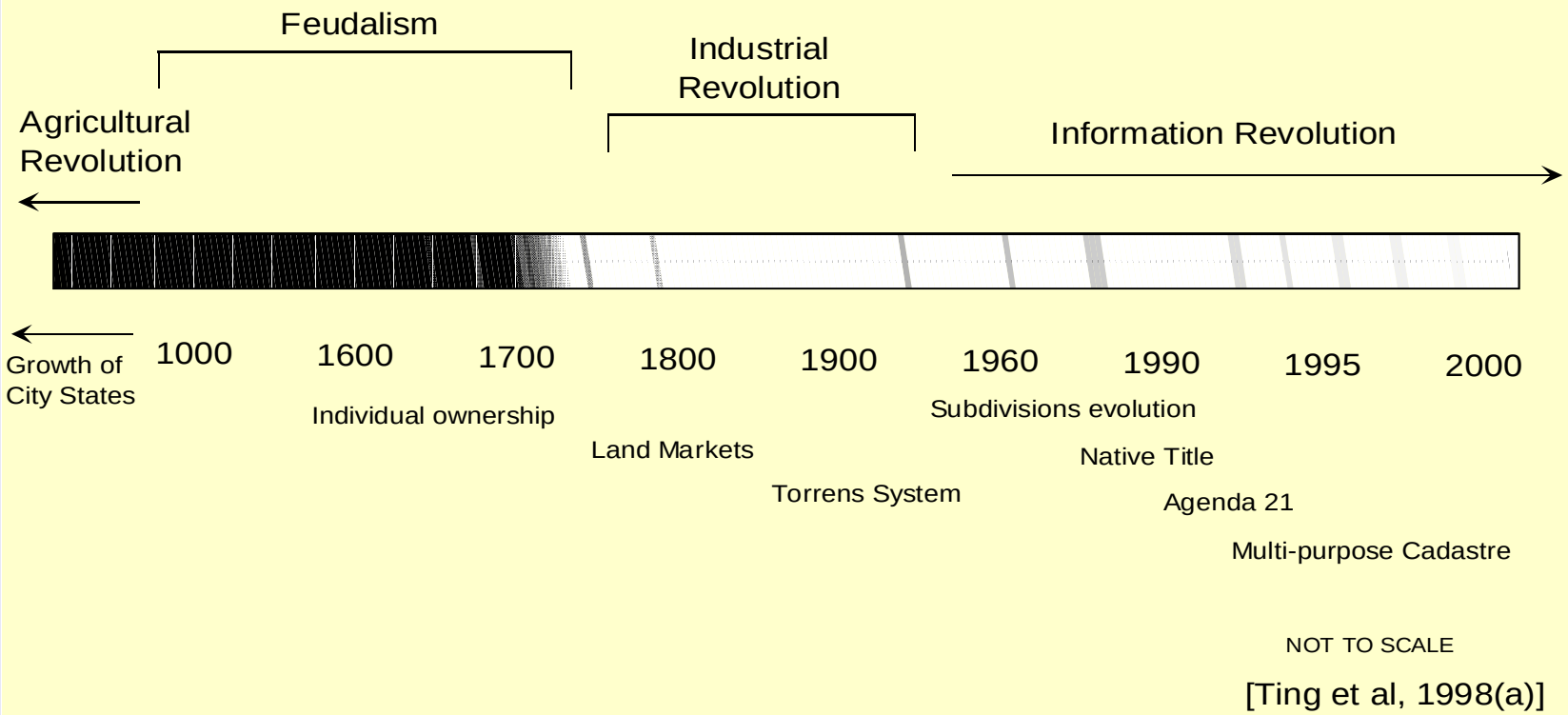
Evolution of Western Systems

Figure 1

SKETCH OF EVOLUTION OF WESTERN LAND ADMINISTRATION SYSTEMS



[Ting et al, 1998(a)]

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Cadastre and Land Administration

- Cadastre: register of land information, normally parcel-based.
- Land Administration: process of determining, recording and disseminating information about the tenure, value and use of land when implementing land management policies.

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Cumulative Nature of Trends (western)

Land = Wealth [Pre-Industrial]

➡ Cadastre as Basic Record & Fiscal Tool

✚

Land = Commodity [Industrial Revolution]

➡ Cadastre as Land Market Tool

✚

Land = Scarce Resource [Post WWII]

➡ Cadastre as Planning Tool

✚

Land = Scarce Community Resource [Now]

➡ Cadastre as a Land Management Tool

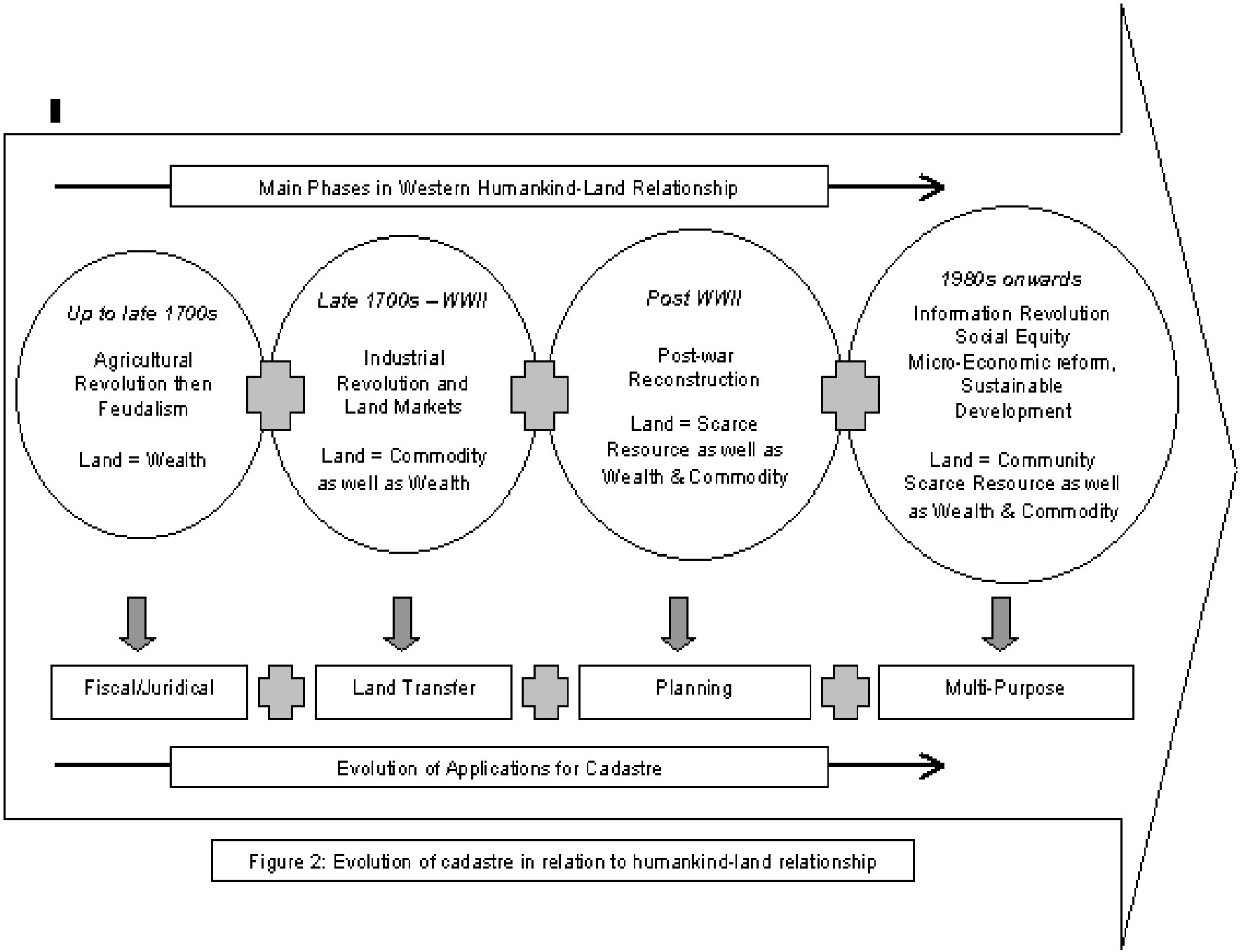

Figure 2: Evolution of cadastre in relation to humankind-land relationship

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Drivers of Change

- Sustainable Development
- Globalization
- Economic reform
- Information technology

[Dynamic Synergy]

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1. Sustainable Development: International concern

- International aspirations e.g.:
  - Stockholm Declaration (Habitat) 1972
  - Brundtland Report 1987
  - Agenda 21 1992
  - Habitat II, Istanbul 1996
- Fallen short of expectations

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Some UNEP Statistics

- At present consumption patterns, 2/3 of world population will live in water-stressed conditions by 2025;
- Human-induced soil degradation of drylands is putting livelihood of 1 billion at risk;
- Global emissions of CO_2 in 1996 were 4x 1950 levels.

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Some UNEP Statistics

- Half of world population lives in cities (will reach 2/3's in next 30 years);
- Global economy up 9x since 1950 - 25% of world population in severe poverty;
- In developing countries especially, rapid population growth + poverty = widespread degradation of renewable resources.

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Sustainable Development

Development that effectively incorporates economic, social, and environmental factors

within a framework of institutional, political, legal and technological systems conducive to appropriate decision-making.

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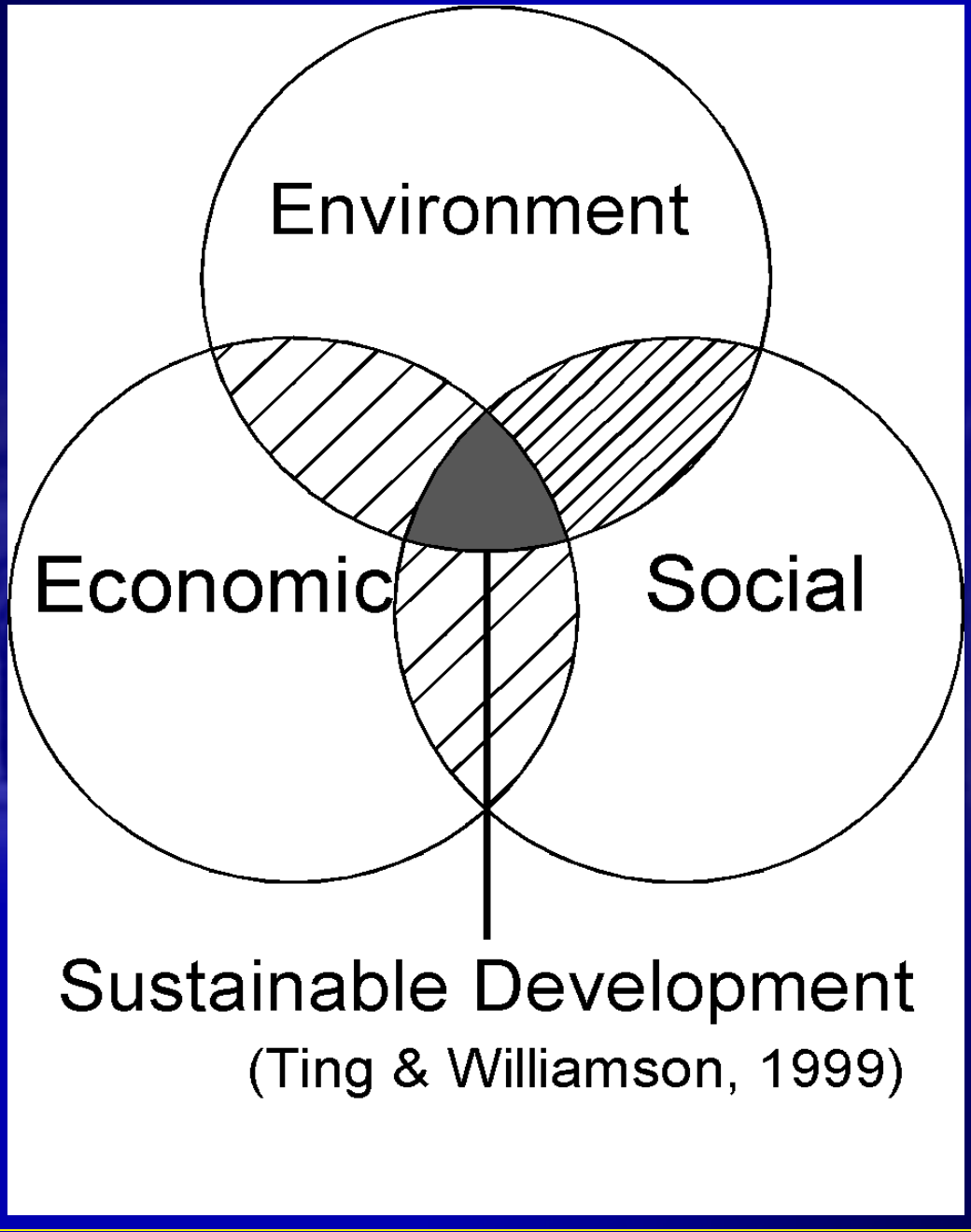

Sustainable Development

(Ting & Williamson, 1999)

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2. Globalization

"Globalization, privatization and liberalization have become dominant forces shaping societies and economics the world over. ... these processes have accelerated in the 1990s"

(Rao, 1998)

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Globalization: The Challenge

"... the broader challenge for the 21st century is to engineer a new balance between market and society..."

(Rodrik 1997)

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3. Economic Reform

"The move to the market is beyond doubt a truly global phenomenon... the extraordinarily fast flow of information... has helped reinforce the sense of common momentum."

(Yergin & Stanislaw, *The Commanding Heights*, 1998)

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4. Information Technology

"...
centralized, authoritarian states have failed: they cannot deal with the informational requirements of the increasingly complex world they inhabit."

(Francis Fukuyama, *The Great Disruption*)

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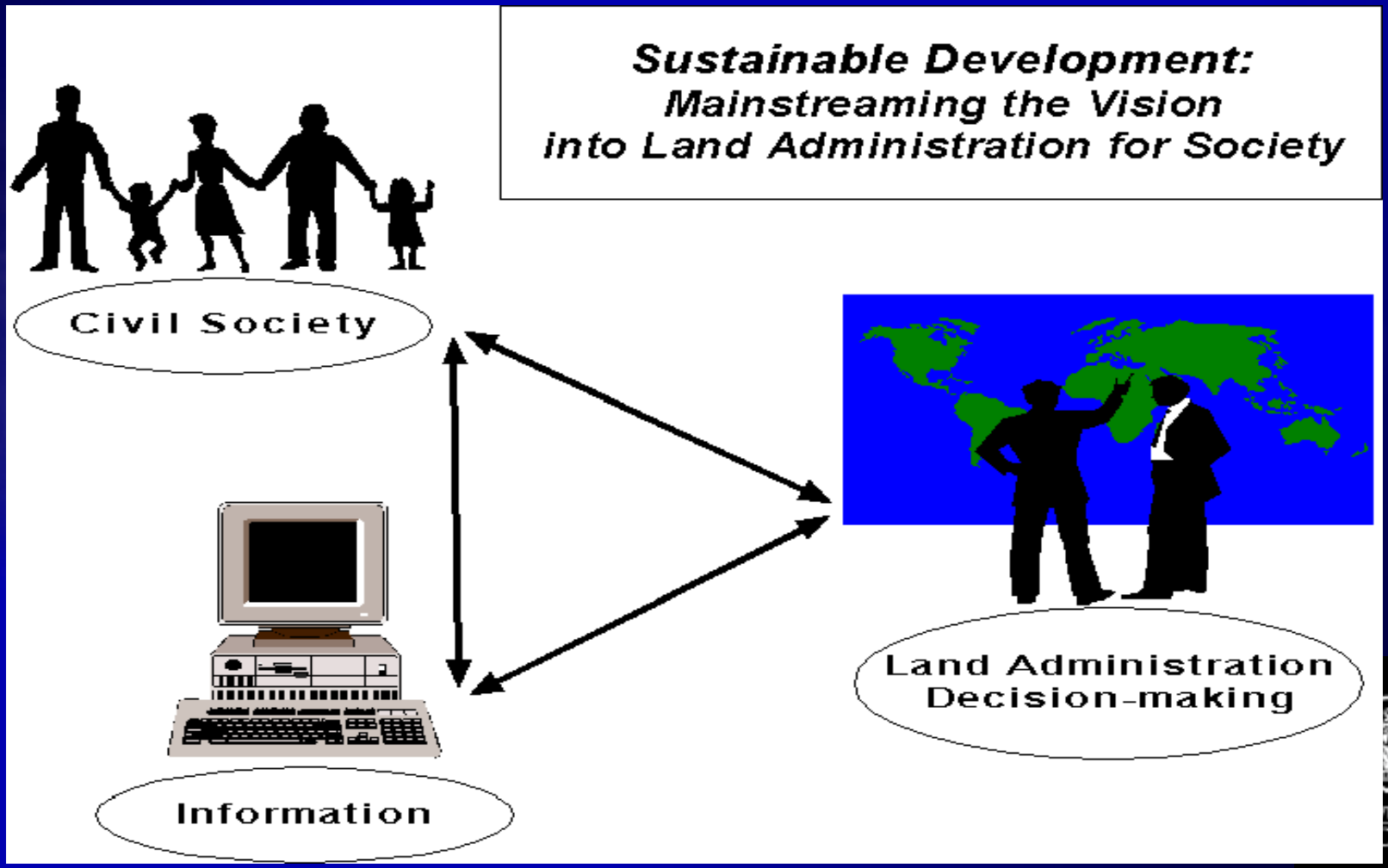
Technology and Civil Society



Access vs Privacy

Access

- Public access to technology and data
  - 18% of minority households and up to 80% of native American households, do not have a telephone. (Bereano, 1995)

Privacy

- Public good vs individual right
  - In Australia, existing privacy laws failed to cover government organisations with access to personal information.

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Information for Sustainable Development

- Relevance of data for complex decision-making.
- Sustainable Development = Economic vs Environmental aims
- Digitizing existing data only a first step.
  - ➤ Ecological economics: new "market" values and rates e.g. carbon trading.

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NEW ZEALAND Environment: This?

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… and/or this?

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Inspired by Sustainable Development: Legal Coherence

- Resource Management Act 1991
  - no need to prove a stake in the land
  - integration philosophy: air, water, soil...
  - consolidated over 50 statutes
  - statutory consultation esp. with Maori
- Reserves Act 1977; Biosecurity Act 1993; Hazardous Substances & New Organisms Act 1996.

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Grounded in Reality: "Sustainable Management"

- RMA: "Sustainable Management" = To manage use & development of resources for social, economic and cultural well-being.
- 1998 review of RMA suggests social and economic inequities beyond RMA's scope.

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Economic/Political Framework

- Mid-'80s Crisis: Economic reform
- New Right + the Greens = phenomenon
- Globalization of markets and environment: redefining power
  - Environmentalists: new cbut
  - Business: old cbut
  - Farmers: bstcbut
  - Maori: finding cbut

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Environment vs Development
Public Good vs Private Cost
E.g: Significant Natural Landscapes:
"spot the difference"

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Economic reform : Institutional Framework

- Decentralization and privatization
- RMA "dove-tailed" with local government consolidation of 1989
  - from 700 local groups to 86 authorities.
- The price of consultation:
  - 86 RMA plans for 3.8 million people
  - few million $ per plan; still in progress

Central/Local/Community Longing for Relationship

Survey Results: roles in sustainable development

- Local government only: 4.5%
- Ministry for Environment (MfE) only: 0%
- MfE + central/local government: 95.5%
- MfE, central/local governments and community: 100%

Technological Framework

- Information technology for sustainable development
- OECD Review of NZ (1996)
  Inadequate data = Top barrier to RMA implementation
  - Effects-based approach: science-hungry
  - Consultation requires Information
  - Equity = access to knowledge, technology and democracy

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Conclusion

- **Land Administration:** needs to respond to changing bundle of rights, restrictions and responsibilities: Public interest vs Private rights.
- **Information:** crucial for sustainable development.
- **Good Governance:**
  - Dialogue between government & civil society.
  - Legislative, institutional, technological frameworks need to be integrated to serve complex decision-making for sustainable development.

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