



Parallels in Government and Corporate Sustainability Reporting



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Presentation

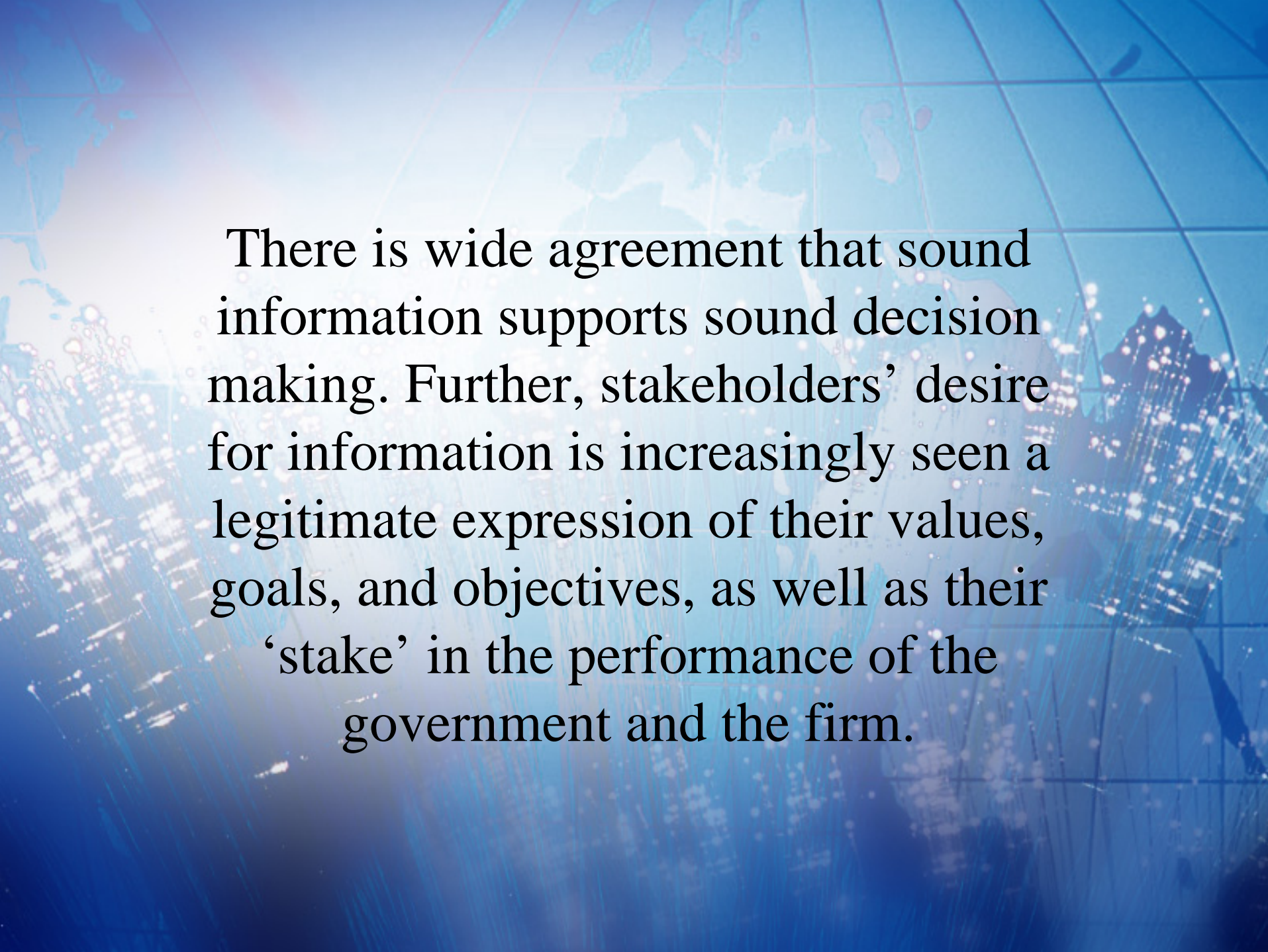
- Introduction
- Governmental reporting
- Corporate reporting
- How much is enough?
- Conclusion

Why reporting?

- Governments needed information on which to base policy, design regulations, and track compliance with the law.
- Firms needed information for decision making and to track business operations.

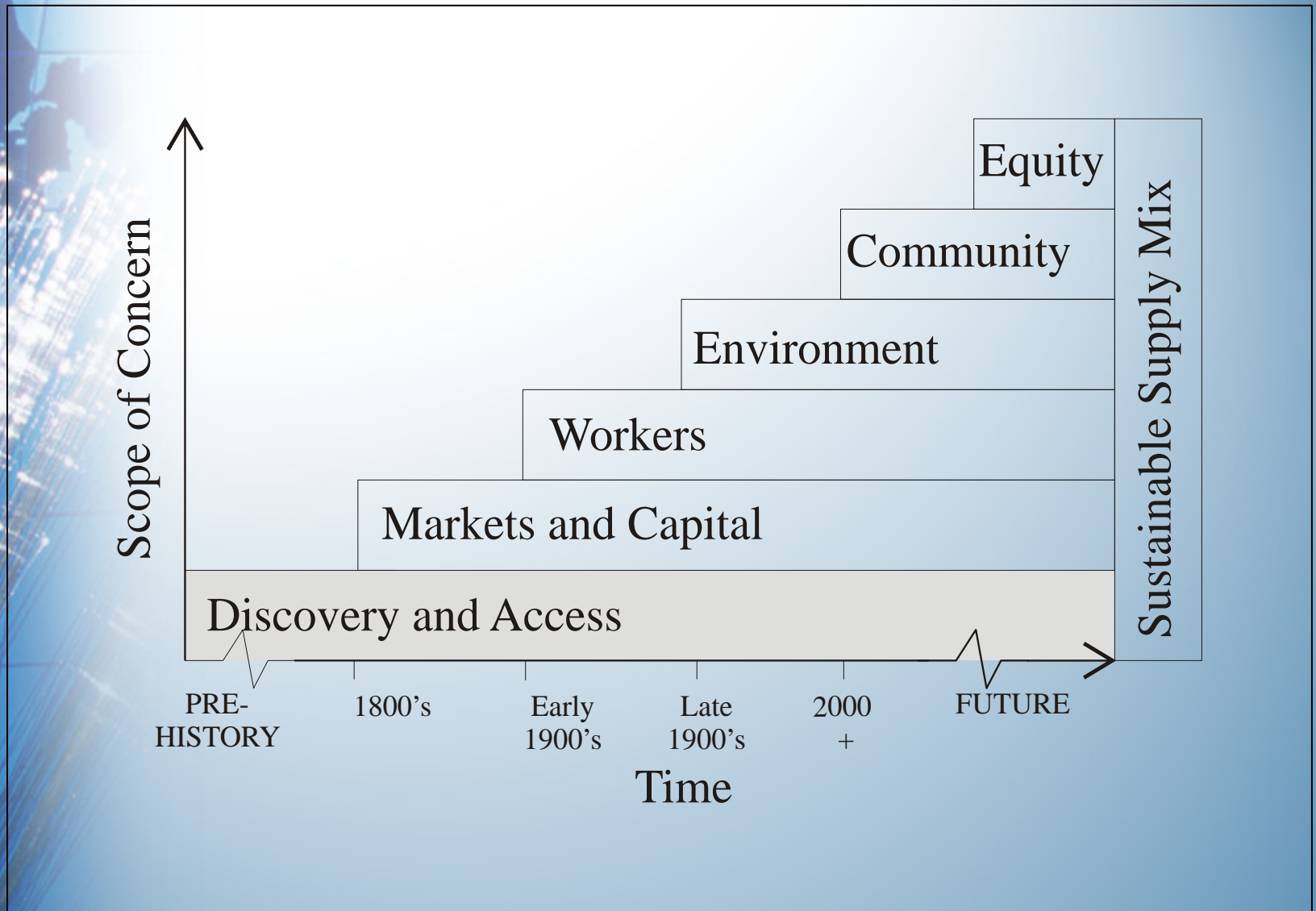
Why sustainability reporting?

- Gaining trust in the eyes of the public,
- Supporting:
 - social learning and,
 - effective public participation in decision making.
- Implementing corporate social responsibility, and
- Earning and keeping the social license to operate.



There is wide agreement that sound information supports sound decision making. Further, stakeholders' desire for information is increasingly seen a legitimate expression of their values, goals, and objectives, as well as their 'stake' in the performance of the government and the firm.

Scope of reporting



Government reporting

- Democracy
- Relevance to sustainability
- Data / Information Management

- *Types of reporting:*
 - *Indicators of Sustainability*
 - *Material Flow Accounts*
 - *Resource and Environmental Accounts*

Relationship among types

- Each uses a different methodology and serves a different purpose.
- All use some information already collected for other purposes, but require the collection and interpretation of additional data.
- Some information is common to all three forms; some is unique to each.

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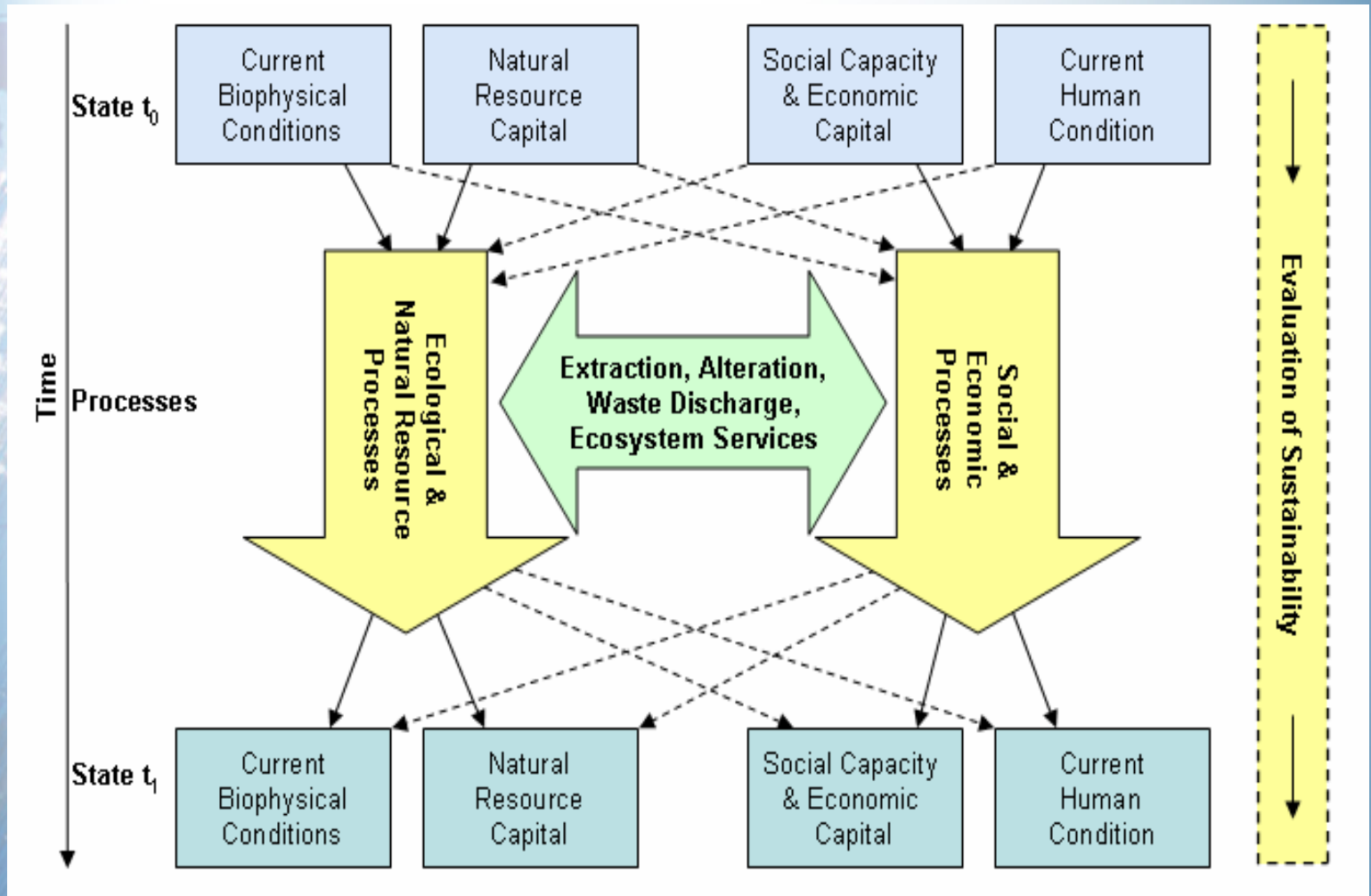
Indicators of sustainability


Indicators and indices package complex mineral information into understandable forms for stakeholders', decision-makers', and the public's use.

Mineral indicators

- A single mineral indicator provides specific information about an aspect of a nation's environmental, economic or social system.
- A set of mineral indicators can increase understanding of the interconnectedness of physical, social, economic and environmental systems,
- Typically, many of the mineral indicators within a national set are correlated, e.g., income is a function of production levels and prices.
- There is no formal linkage among individual indicators in an accounting or systems model sense, although they can be placed in an organizing framework.

Indicator Framework

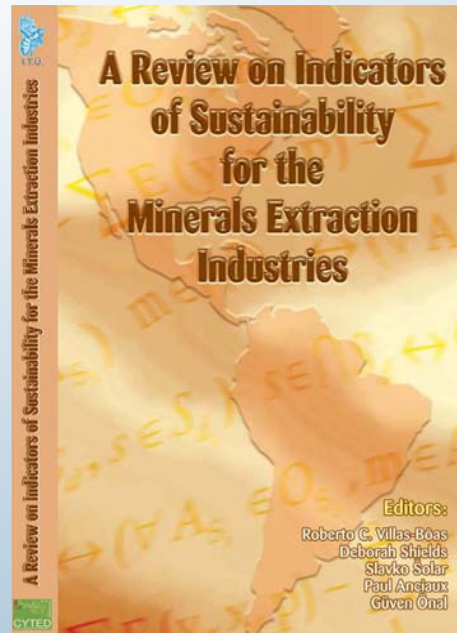




Mineral indicators increase transparency and provide information on how minerals are contributing to or detracting from a nation's sustainability.

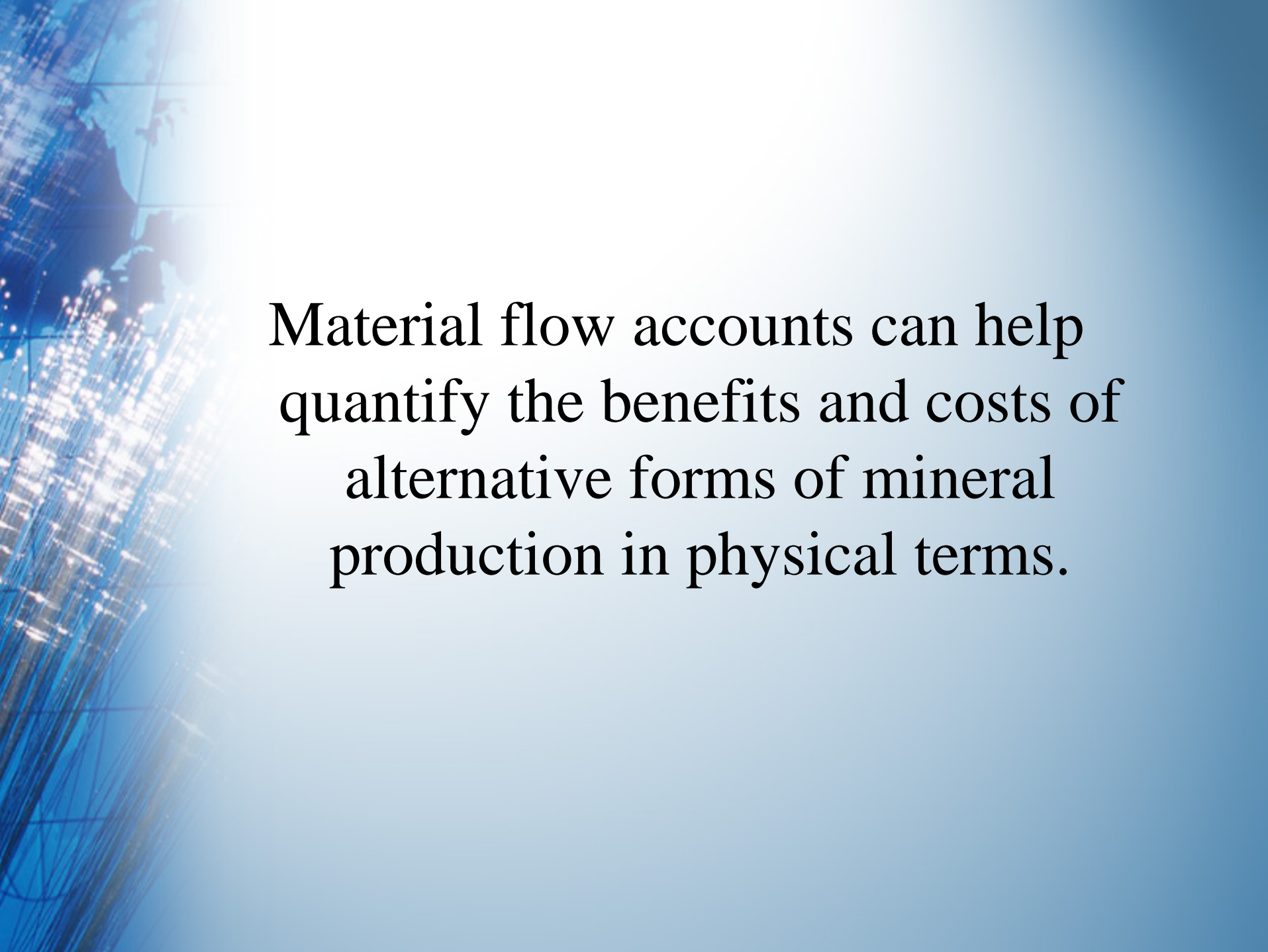
Mineral indicator efforts

- Governments and Intergovernmental Organizations
- Overviews



Material flow accounts - MFA

- Material flow accounting focuses on the physical economy of a nation.
- Material flow indicators are the products of a comprehensive, integrated, and balanced set of accounts that utilize a standardized format.
- EUROSTAT, USA



Material flow accounts can help quantify the benefits and costs of alternative forms of mineral production in physical terms.

National accounts

- National income and product accounts measure the overall economic activity of a nation.
- National accounts have traditionally focused on activities in markets and have omitted activities that take place outside of markets, including non-market work, services of the environment, and changes to human capital.
- NNP, rather than GNP, is relevant to SD because its calculation accounts for depreciation and the use of capital.

Resource and environmental accounts

- The purpose of Integrated Economic and Environmental Satellite Accounts (IEESA's) is to show the interactions of the economy and the environment.
- Current NIPA report flows. IEESA's will report additions to and removals of stocks, as well as the contribution of resources to current production.

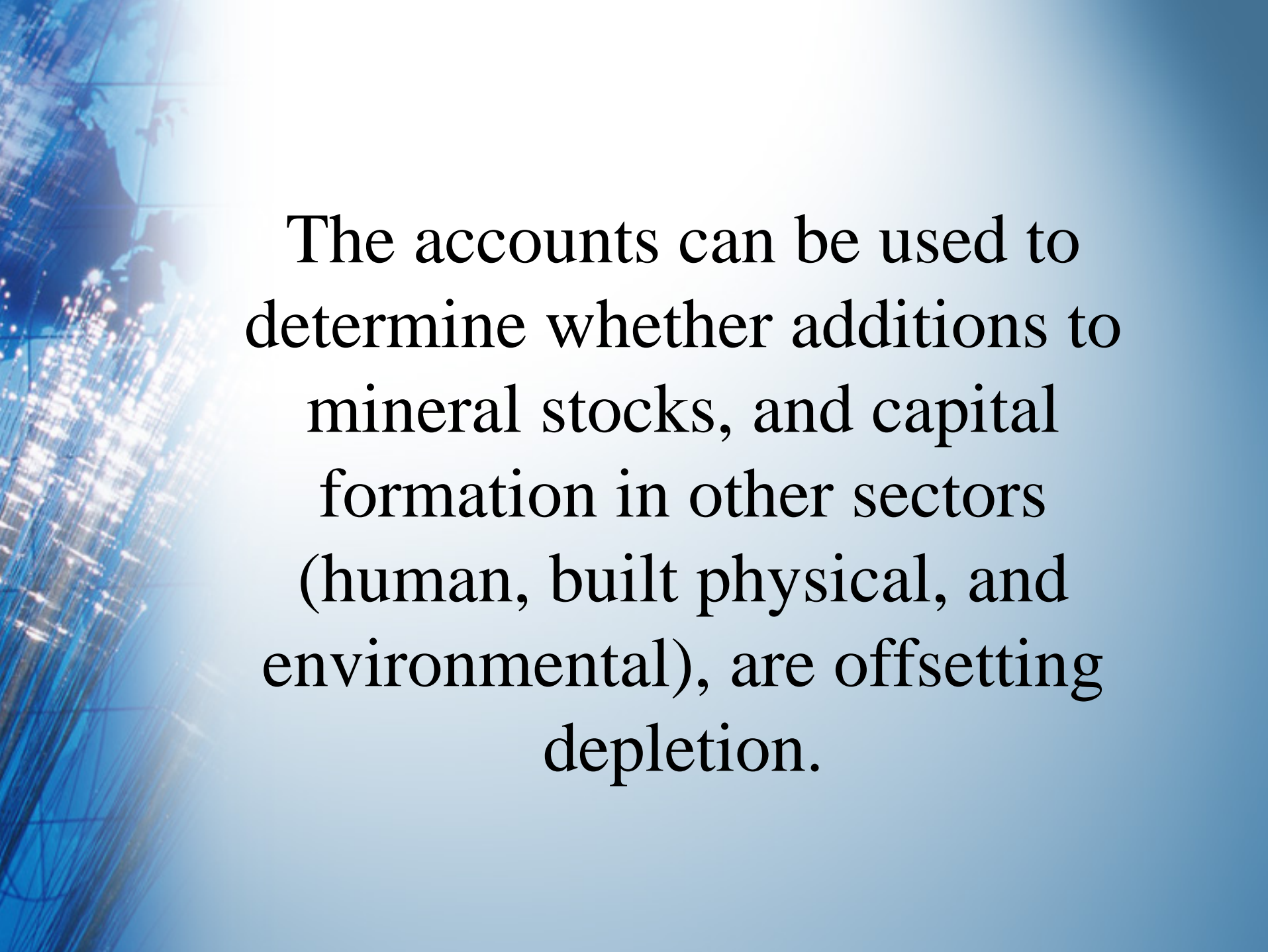
Difficulties in quantification:

- Valuation of mineral resources that are not proven reserves;
- The impact of ore (deposit) heterogeneity on valuation, as well as the impact of co- and by-products;
- The volatility of short run mineral prices;
- The distortions introduced to the calculation by the valuation and depreciation of capital; and
- The differences between market valuation and social valuation of minerals and other resources.

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Questions IEESA's can help answer include:

- At what rate are resources being used?
- How much of the use of natural resources in production has been offset by additions to proven stocks?
- What share of return is attributable to the mineral and what to capital?
- How is economic rent is generated and how is it distributed?



The accounts can be used to determine whether additions to mineral stocks, and capital formation in other sectors (human, built physical, and environmental), are offsetting depletion.

CORPORATE REPORTING

- Firms report information:
 - in response to legal mandates,
 - in response to financial demands,
 - for decision making, and
 - to maintain or acquire a social license to mine.
- Reporting can take many different forms, also in:
 - *Indicators of Sustainability*
 - *Life Cycle Assessment*
 - *Enhanced Corporate Balance Sheets*

Indicators of sustainability

- Sustainability reporting is detailed reporting of financial, environmental and social performance indicators.
- One of the important merits of indicators sets is that they include social impacts.
- Global Reporting Initiative (GRI),
 - Mining and Metals Sector Supplement
 - ICMM chartered sustainable development principles and published a guide on reporting against those principles and the GRI.

Life cycle assessment (LCA)

- LCA is a tool that allows the total environmental impact of a design or a product to be analyzed.
- It covers all phases of product life / mine cycle.

LCA and sustainability

- Analysis of current operations can identify inefficiencies, points where process redesign will lead to lower costs and fewer emissions.
- The results of LCA conducted prior to mine development can clarify the environmental cost of specified engineering design and allow for comparison across alternative designs.
- LCA on proposed products identifies environmental consequences over the life of the product.
- To the degree that LCA information on products is made available to the public, individuals have the opportunity to make consumption choices that minimize their personal environmental footprint.

Corporate balance sheets

- In developed nations, it is mandatory that companies report all financial incomes and expenditures on their balance sheets.
- Environmental liabilities, such as environmental taxes or money provisions for land reclamation, and benefits, such as income tax relief for environmental friendly investments, are also reported within balance sheets.
- Mineral reserves and resources are typically reported as assets, or in some cases noted under good will (potential reserves).

Enhanced balance sheets

- Traditional accounting systems allocate non-value-added costs such as environmental liabilities and overhead to all units of output of all products produced, based on direct labor costs.
- Activity-based accounting (ABC) assigns these costs to specific products based on actual activities.
- Thus, a social or environmental liability at one mine would affect costs only at that mine and not spread across the output from all the firm's operations.

Balance sheets and sustainability

- Balance sheets contribute to a sustainability assessment of a firm.
- Positive profits indicate the firm is more likely to be able to pay for environmental reclamation and social actions.
- Reserves are an indicator of corporate viability.
- ABC can assist firms in choosing a product mix that minimizes their corporate social and environmental footprint while maximizing profits.

How much is enough?

- Collecting, analyzing, storing and reporting information is not a costless activity.
- Lack of information or too costly information
- Enough information
- Too much information
- The actual amount of information that needs to be shared decreases as trust increases, and vice versa.



Information alone is not enough

- Constant communication process.
- Equal responsibility for the government, or the firm, and stakeholders to build and strengthen mutual understanding and trust.

Credibility and trust are enhanced when:

- The right (relevant, accurate) data are being collected;
- Data analysis is scientifically sound and unbiased;
- The form of reporting appropriate;
- Reporting is reaching stakeholders;
- Information is being understood; and
- Feedback is reaching the government, or the firm, *and is being acted upon.*

Conclusions

- Each reporting type provides important and unique information.
- Only indicator sets include measures of social sustainability.
- Only material flow accounting (MFA) and LCA track and link production activities to units of inert waste and pollutants.
- Only enhanced national accounts and balance sheets link resources and the environment directly to economic activity.
- Sustainability decisions should be based on the information contained in all three.