SOCIAL LCA WORKSHOP, COLOMBIA

Catherine Benoit Norris and Gregory A. Norris

- Founded in 2003. A not-for-profit with global reach
- Provide the first comprehensive database for Social Life Cycle Assessment (www.socialhotspot.org)
- Expertise in CSR, including Social LCA, Social Auditing, Improvement opportunity identification
- Conducted Social LCAs for companies, industry associations and multi-stakeholder initiatives
- Collaborate with many organisations (eg. UN ITC, UNEP, Sustainable Purchasing Leadership Council, Quantis, Groupe Agéco)

Outline

- Social impacts context and examples
- Market requirements, incentives, demand (CSR)
- Role and history of Social LCA
- How to measure? Indicators and methods
- Making Social LCA operational
- Future outlook (research and application)

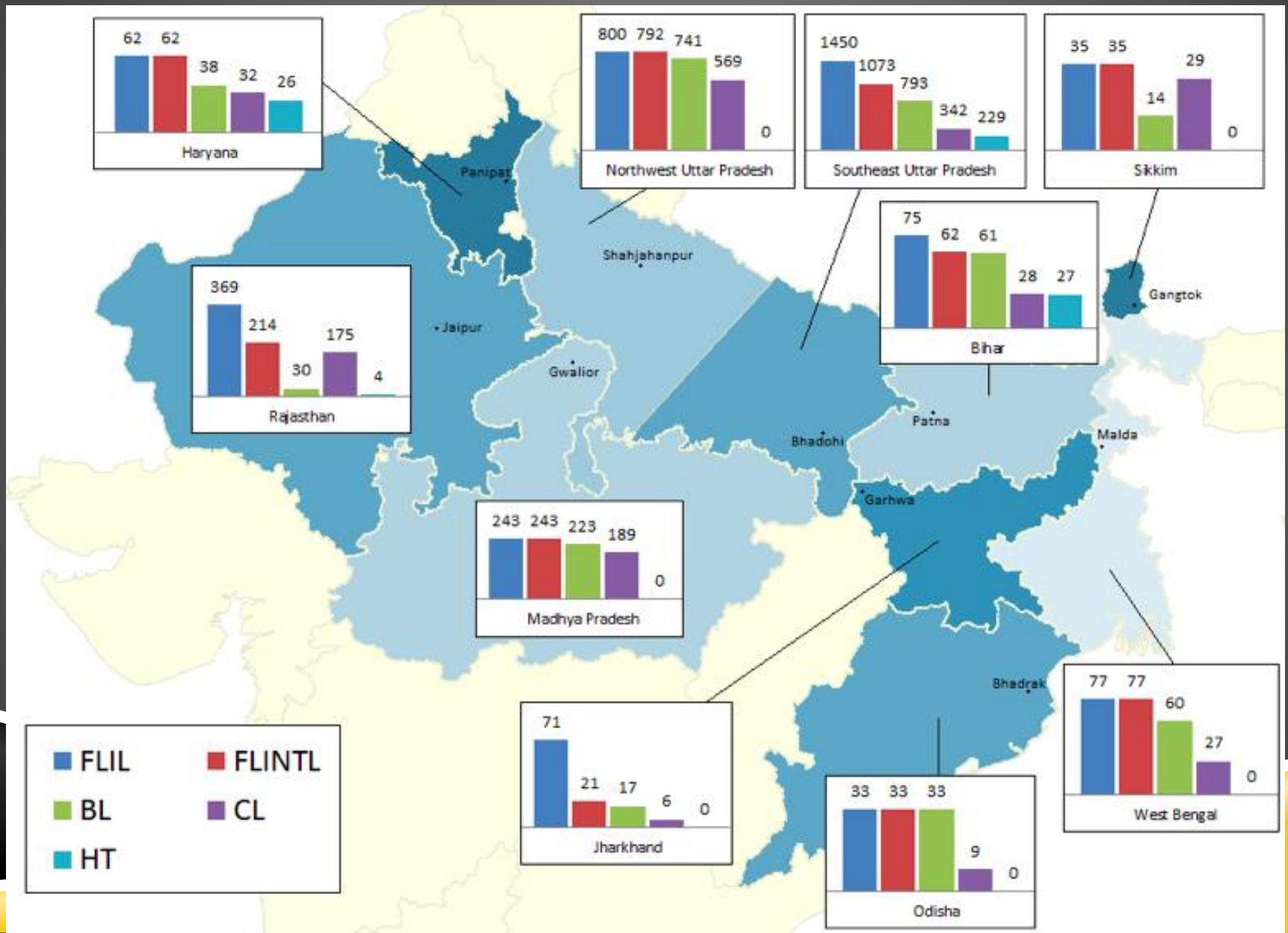
Finland Berry picking

- 3 months a year
- 4000 migrant labour comes every year
Mostly from Thailand
- No job contracts/ no protection
- Often work 15-hour days, seven days/wee
- Because the pay is often based
on the amount of berries picked,
the actual income may be significantly
lower if the fields have low yields/season.
- Foreign berry pickers are typically housed
in old schools or camping sites
- They have not been granted access to
affordable medical care
-After repaying travel, visas, housing etc.,
some workers go back with losses
(2010)

India Rug and carpet industry

- 3,215 cases of forced labor under Indian law; est. 45% industry prevalence
- 2,612 cases of forced labor under international law; est. 37% industry prevalence
- 2,010 cases of bonded labor; est. 28% industry prevalence
- 1,406 cases of child labor; est. 20% industry prevalence
- 286 cases of human trafficking; est. four percent industry prevalence
- Production sites of 172 Indian carpet exporters documented
- Average hourly wage for carpet workers of $0.211
- Chronic underpayment of minimum wages by 40% to 65%
- Women and children paid 12% to 32% less than adult males
- 99.9% of cases belong to minority ethnicities or low caste groups
- 60%/40% ratio between males and females (sharper gender divisions by geography)
- 18% of workers owned dwelling or land
- 10% of workers were migrants
- Age of workers ranged from eight to 80 years
- Average work day is 10 to 12 hours, six to seven days a week
- 2,675 cases in hand-knotted carpet production; 540 in hand-tufted
- 80% of loans in bonded labor cases were taken for basic consumption

India Rug and carpet industry



Impacts

Health and safety
Child labour
Debt bondage
Low or no wage
Excessive working time
No social benefits/security
Land ownership

Carpets sold to retailers worldwide

THE WORKING CONDITIONS UNCOVERED WERE NOTHING SHORT OF SUB-HUMAN.
Harvard School of Public Health

Colombia cut flower industry

Colombia flower industry

Exposure to pesticides, fertilizers, chemical products
Low wages
No social benefits/security
Excessive working time
Discrimination
Food security
Water access

Provide 120 000 direct jobs
Standards (Floverde) which include labour conditions
Largest employer of women in rural areas

Highly competitive sector with very high cost pressure

In common?

What can we do?

What can be done

1. Additional Research
2. Public-Private Partnership
3. Form / Respect Union
4. Increase the Minimum Wage
5. Enforce Minimum Wage Payments
6. Additional Payment for Overtime
7. Expansion of Supply Chain Inspections
8. Increase Investigations and Prosecutions
9. Support and Empower Vulnerable Communities
10. Increase Consumer Awareness
11. Building responsible sourcing capabilities

SUPPLY CHAIN RISKS

- Prevalence of issues and exploitation of workers is getting worse not better (Impactt, 2013)
- Increase in trade of intermediary inputs (WEF, 2012)
- Recent fires and building collapses in Bangladesh garment factories highlight how exposed companies are to labor and human rights risks. **Companies from all sectors have specific risks to manage based on their supply chain geography and their sourcing of inputs.**

MANAGING SUPPLY CHAIN RISKS, WHY

- Customers: access, attraction, retention, reputation, brand
- Compliance: regulation, social pressure (materiality)
- Costs: efficiency, productivity, risk management
- Competitive advantage
- Interdependency: moral obligation, values, ripple-effects
- Investment

Success in Sustainability has a direct correlation to success in Business (PWC, 2013)

PRESSURE TO MANAGE AND REPORT SUPPLY CHAIN RISKS

- **Business and Human Rights (Ruggie) Framework** – Requiring Human Rights Due Diligence
- **GRI G4** - reporting - Introducing the reporting on supply chain significant and potential negative Labour Rights and Human rights Impacts
- **DJSI** - ESG rating (Formalized process to identify supply chains sustainability Risks)
- **ISO 26000** - Management - Due diligence and promoting SR in Value Chain
- **California Transparency Act** - Disclosing efforts to prevent, stop and mitigate child and forced labour in supply chain
- **Dodd Franck Act/ Conflict minerals** - Presence of conflict minerals in products and reasonable country of origin inquiry to understand and disclose aspects of the minerals in their supply chain

FACTORS THAT ALIGN ACTORS' INCENTIVES WITH THE COLLECTIVE GOOD

1. **International norms that set the baseline for how workers are to be treated**
2. **Campaigns and international pressure threatening to imperil trading relationships by tarnishing the reputations of governments and firms that violate basic standards**
3. **Worker organizations able to raise costs of rights violations**
4. **Private regulation that transforms brand and firm behavior**
5. **Government regulation of basic rights which take cost-saving abuses out of competition**

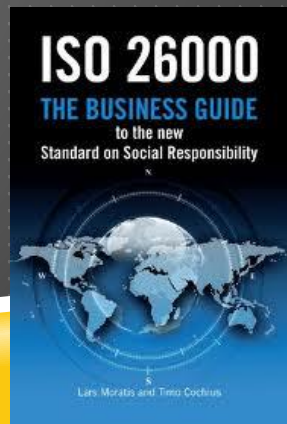
(WDR, 2013)

SUSTAINABILITY PERFORMANCE INDICATORS

- Environmental – materials, energy, water use…
- Human Rights – freedom of association, collective bargaining, child labor, indigenous rights…
- Labor Practices & Decent Work – occupational H&S, training & education, diverse & equal opportunity…
- Society – local communities, corruption, public policy…
- Product Responsibility – consumer protections, labeling…
- Economic – economic performance, market presence…

Global Reporting Initiative™

GISR™ Global Initiative for Sustainability Ratings



DECENT SOCIAL CONDITIONS

- Economic upgrading (defined as change in export market share and export unit values) does not necessarily entail social upgrading (defined as positive change in employment and in real wages) (Bernhardt, 2011)
- The message of the upcoming World Development Report (WDR) 2013, is: ***development is about jobs*** (Martin Rama, Lead Author, 2011)
- The same factors influence the quality of production around the globe (health, skills, training, motivation, input, commitment, ability to meet family basic needs) (Heymann, Barrero, 2010).
- The highest ethical compliance rates are those of suppliers producing for specialty retailers, and second highest compliance is that of those supplying for reputation-sensitive mass merchandiser (Oka, 2011).
- Long-term relationships between firms and suppliers matters (Oka, 2011, Locke and al., 2009)

OVERALL APPROACH SR

SOCIAL LCA

SOCIAL LCA:

A LINK TO INTEGRATE SUSTAINABILITY EFFORTS

Environmental LCA

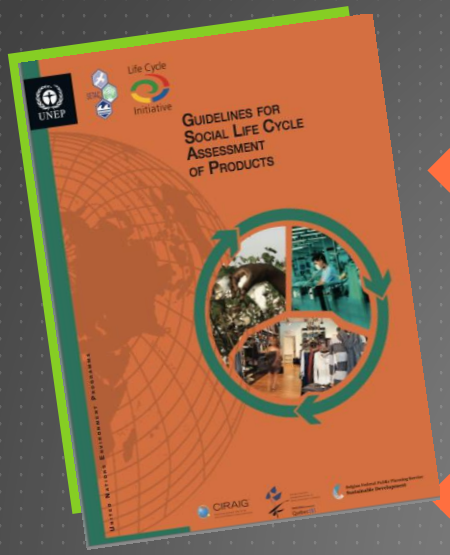
Social compliance programs

BRIEF HISTORY OF THE FIELD

- First mention SETAC Workshop 1993
- First journal article 1996
- First project group UNEP SETAC Life Cycle Initiative 2004
  - Feasibility study 2006
  - Guidelines for Social LCA 2009

- A total of app. 60 journal articles published (main journal INT JLCA, MDPI Sustainability, Journal of Cleaner Production, Journal of Industrial Ecology, Journal of Business Ethic)
- App. 200 S-LCA carried worldwide
- App. 15/20 case studies published in grey literature

SOCIAL LCA



- Social Life Cycle Assessment (S-LCA) is a technique to assess the social and socio-economic impacts over entire supply chains (positive and negative).
- Assess positive and negative impacts
- Different balance regarding the use of quantitative, qualitative and semi-quantitative indicators
- Characterization models, use of LCAA complimentarily to FU

GOALS OF SOCIAL LCA

Improved social conditions in supply chains worldwide (UNEP-SETAC, 2009)

Support decision making (Jorgensen, 2012)

Understand

Identify and prioritize

Weight

Evaluate alternatives

Communicate

Reporting & Labeling

Educate

Learning on SC SR

STAKEHOLDERS AND IMPACT CATEGORIES

Workers

Local Community

Value chain actors (suppliers)

Society

Consumers

- Labour Rights and Decent Work
- Local community
- Human Rights
- Governance
- Health and safety

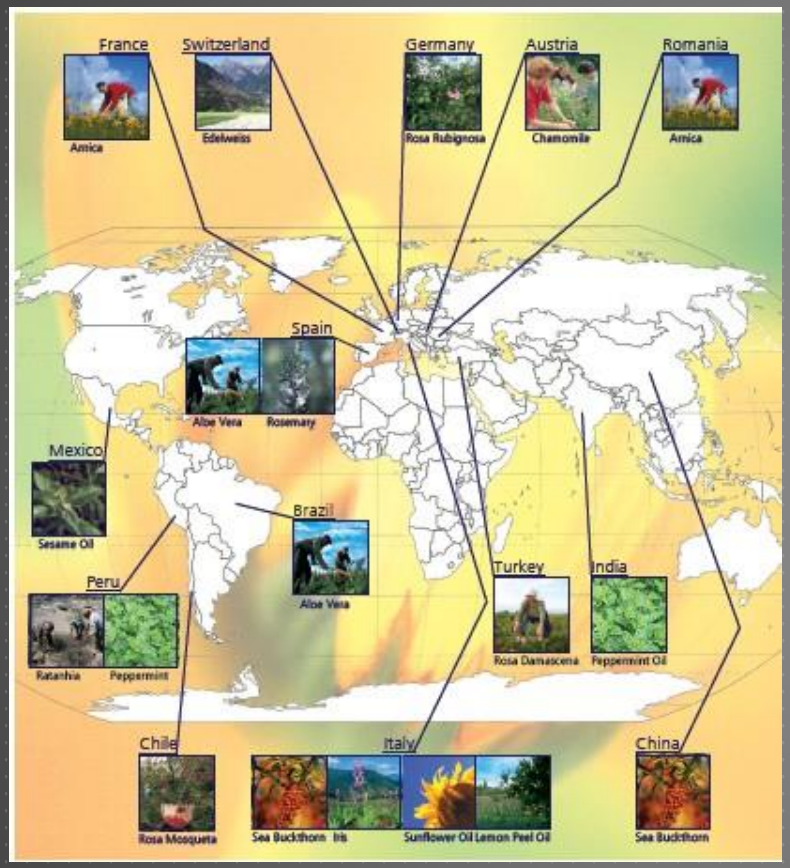
POTENTIAL GOALS

- Learn about and identify social “hotspots” and the options for reducing the potential negative impacts and risks through product development and engagement in the supply chain,
- Establishment of purchasing procedures or specifications, marketing,
- Reporting and labeling,
- Strategic planning, and
- Development of public policies.

ISSUES WITH S-LCA

- S-LCA is still in its infancy, few examples to follow, must model after E-LCA and CSR
- Quantification of data is difficult since much of social data is qualitative
- How do we collect data, and what data is most important to have?
- How can results of an S-LCA be used to initiate change?
- How do we model the system?
- Is there one Social LCA or several depending on study goals?

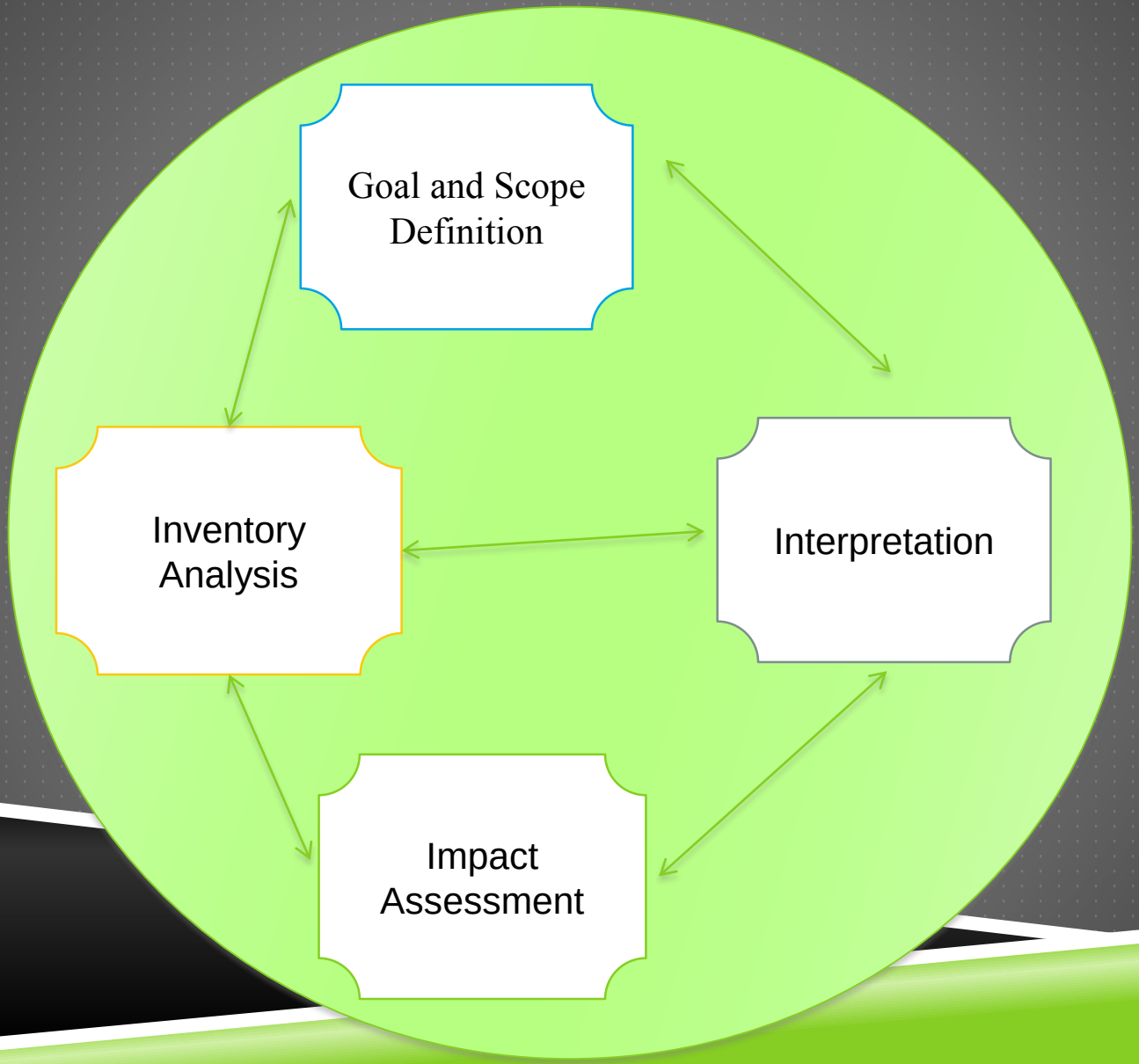
IMPORTANCE OF LOCATION



Whereas both E-LCA and S-LCA impact assessment methods may be sensitive to location, no E-LCA LCIA methods are site-specific, and E-LCA methods often define and use categories of location types that depend on physical factors such as geography type or population density. S-LCA may require site-specific LCIA in some cases, and may also need information about “political” attributes, such as the country and its laws.

TYPE OF IMPACTS

SOCIAL LIFE CYCLE ASSESSMENT



Process Operations | Charts

Supply chain

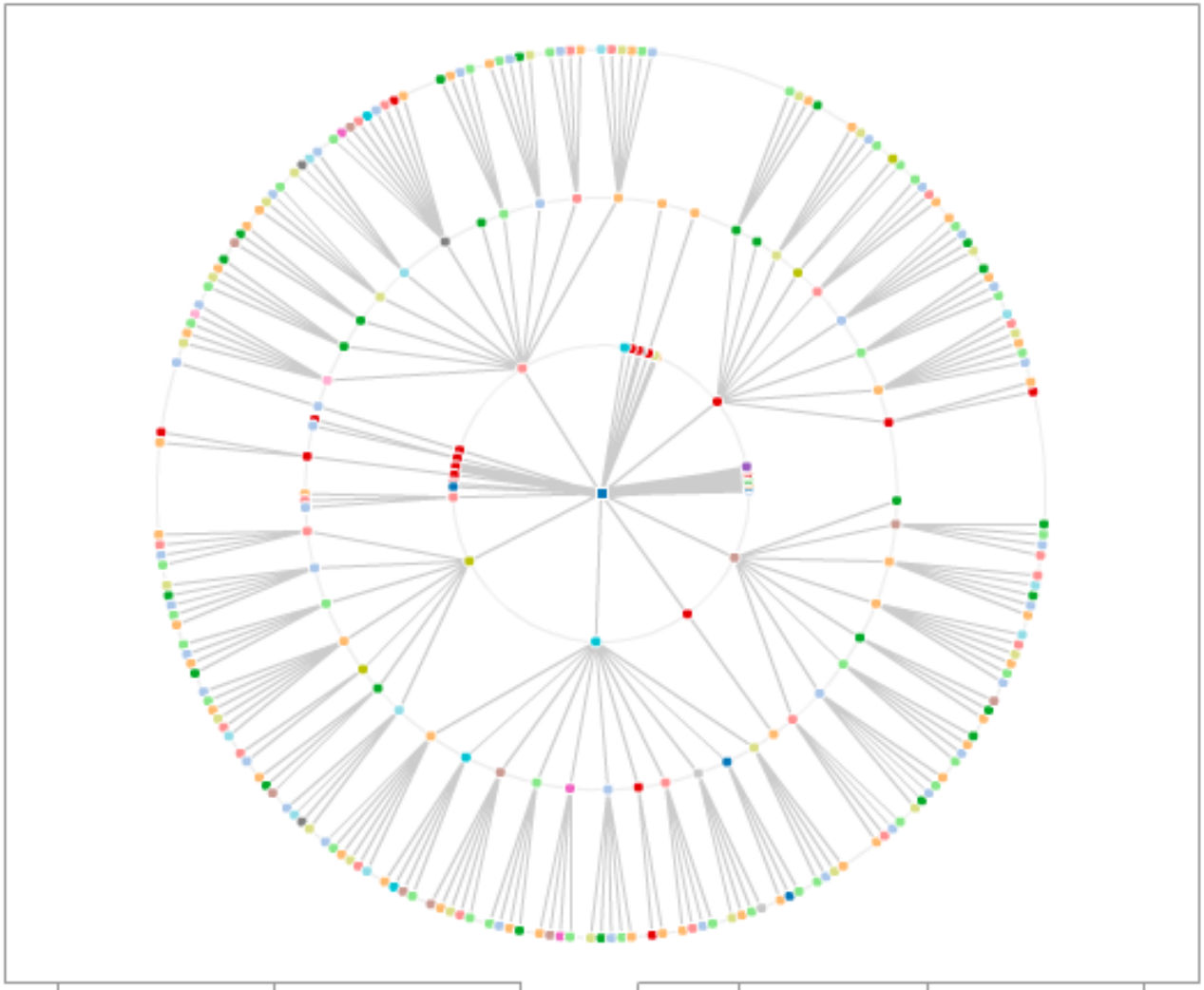
LCIA Method : Risk - Child Labor(Unskilled) | Refresh | Clear

Cereal grains nec (Argentina)

7.34e-4 Hours

0.0%

High | Low | Med | Very High | n/a | no data | no evidence



Top 10 Inputs | Top 10 Hotspots | Circle | Tree | Map (Lines) | Map (Shapes)

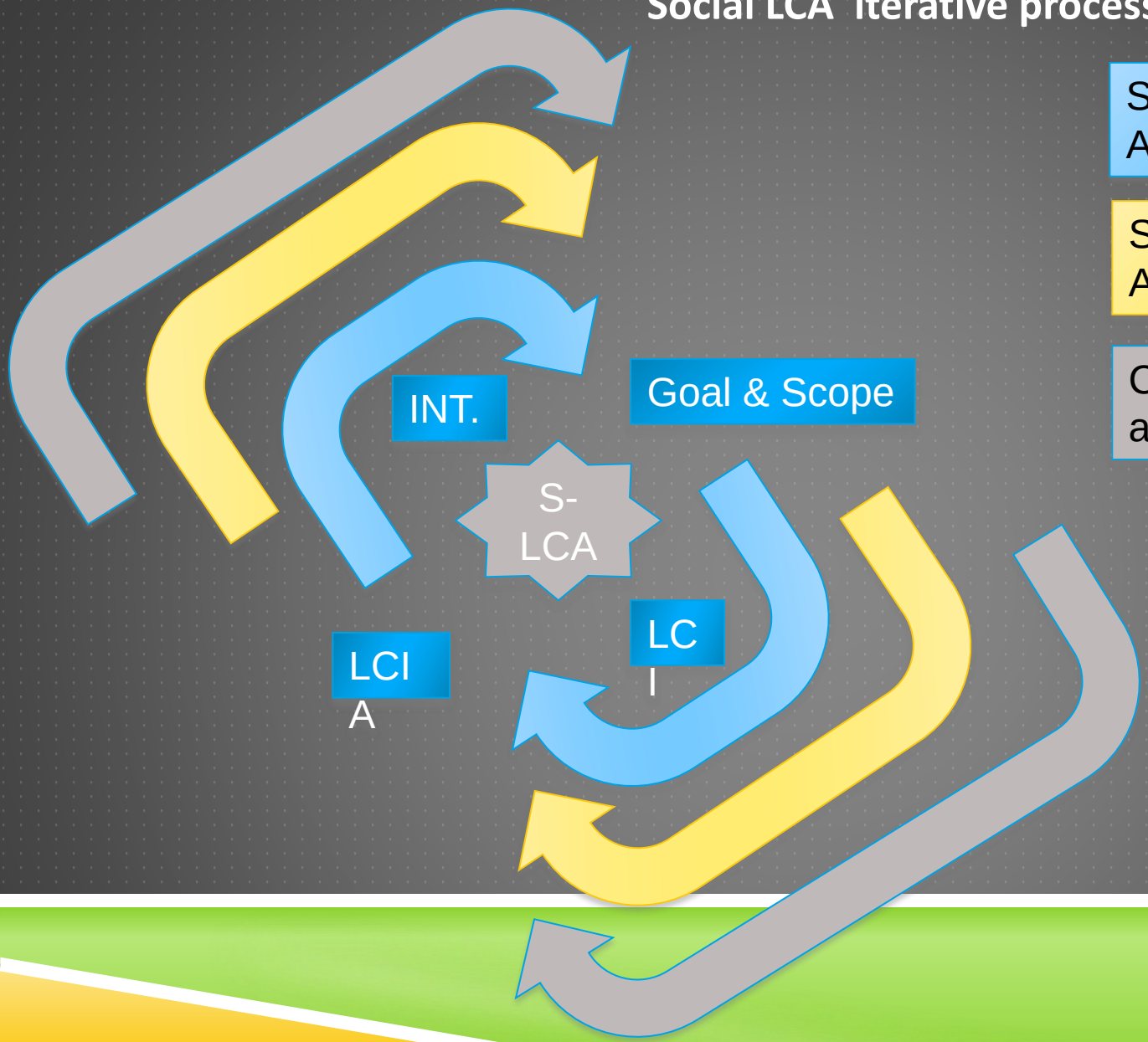
Categories (on-site totals)

- Water transport (0.0%)
- Electricity (0.0%)
- Ferrous metals (0.0%)
- Paper products, publishing (0.0%)
- Transport equipment nec (0.0%)
- Metal products (0.0%)
- Metals nec (0.0%)
- Communication (0.0%)
- Insurance (0.0%)
- Electronic equipment (0.0%)
- Mineral products nec (0.0%)

Locations (on-site totals)

- Argentina (13, 0.0%)
- Brazil (1, 0.0%)
- United States of America (1, 0.0%)
- China (1, 0.0%)
- Belgium (1, 0.0%)
- Germany (2, 0.0%)
- France (2, 0.0%)
- Taiwan (237, 0.0%)
- Paraguay (1, 0.0%)
- Switzerland (3, 0.0%)
- Japan (3, 0.0%)

Social LCA iterative process



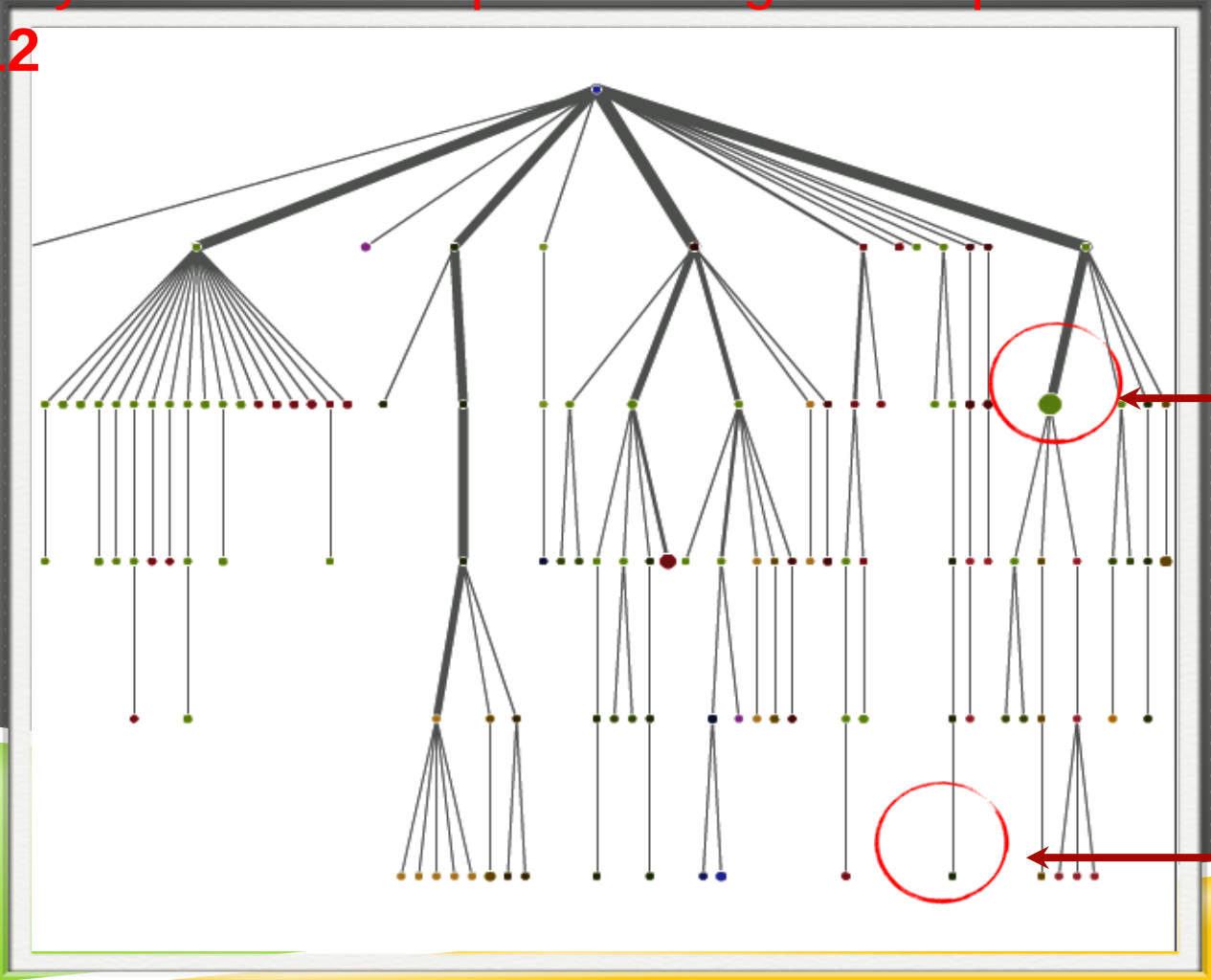
Social Hotspots Assessment

Site-Specific Assessment

Combination of both assessment results

WHAT IS A HOTSPOT?

- A hotspot is a unit process of a product life cycle that has a potentially significant social impact. A hotspot should contribute substantially to the total impact for a given impact category. **TSC, 2012**



SCOPING DECISION

- Include product use and end of life?
- Include transport, infrastructure and business services?
- Share of worker hours and level of risk for which site specific data is requested?

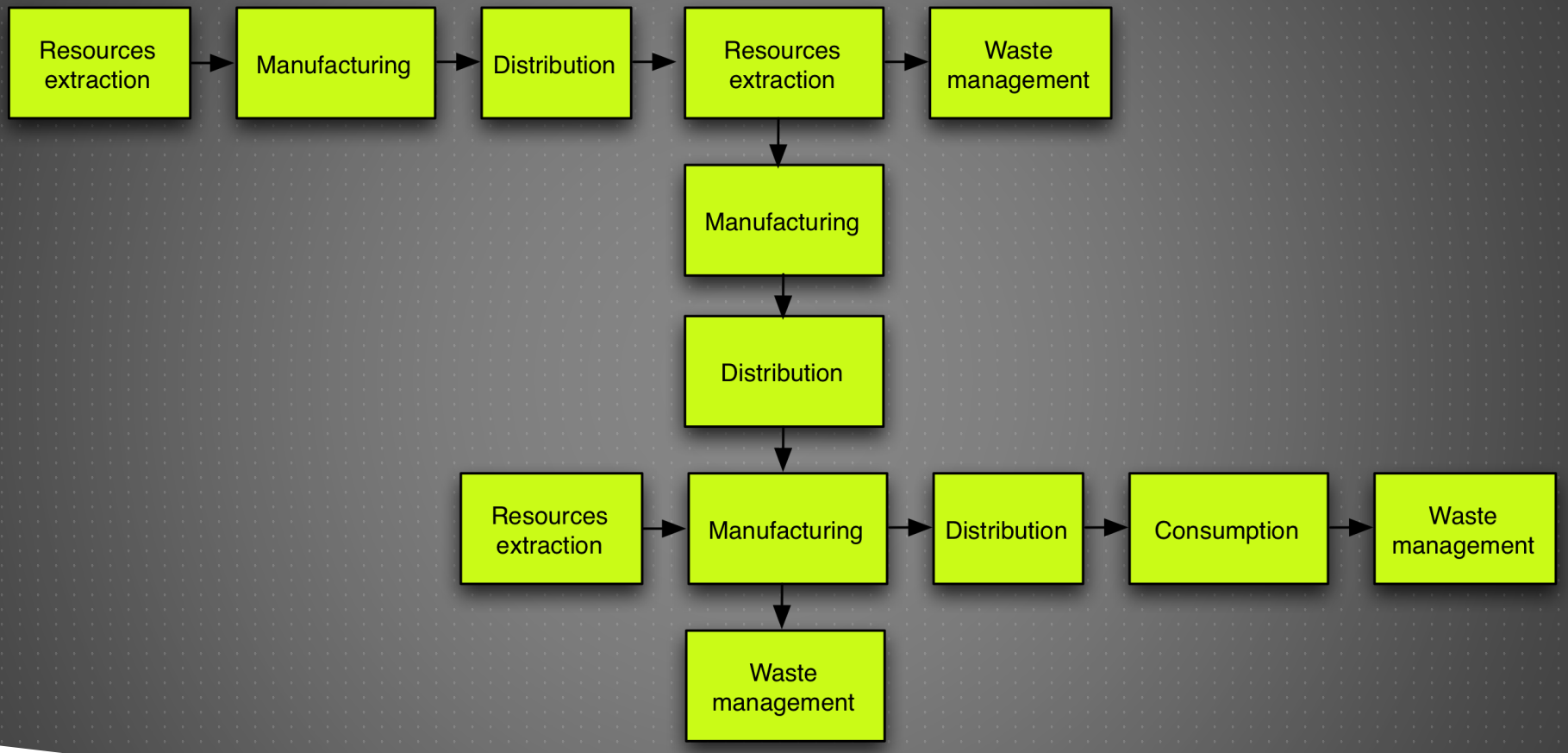
MODELING

- Modeling is used in LCA to present a reasonable estimate of a product system.
- During the goal and scope phase the boundary of the model and the type of data needed to do the modeling are determined.
- Three main types of models are used, IO models,Unit process models and hybrids.
- In Social LCA, geographical location information are necessary hence the choice of GTAP to model the product system.

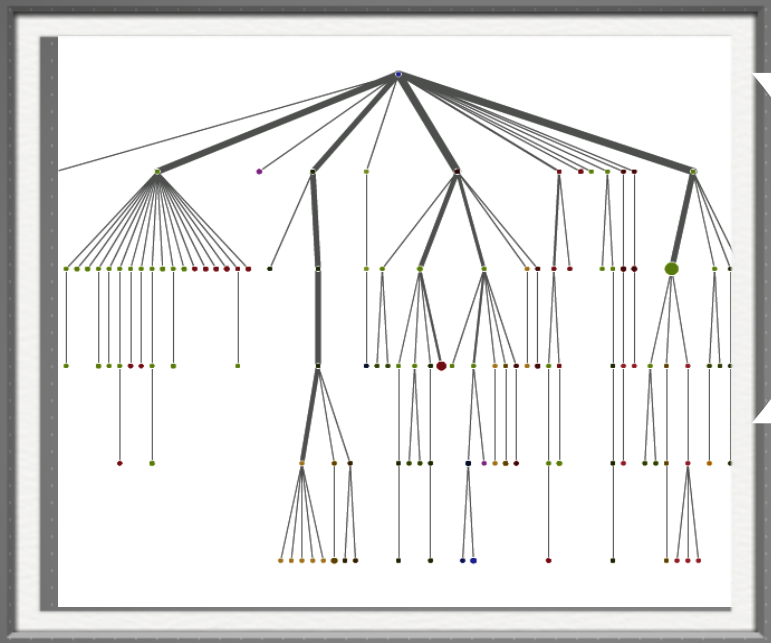
SETTING BOUNDARIES

- Not all processes in a supply chain are equally active
- Often < 100 processes contribute > 90% of env or social burden
- In S-LCA, we propose to identify “hotspots” using potential social risks by country and sector and an activity variable
- This is a good way to set boundaries for your LCA and identify places where site-specific data would be most useful.

BOUNDARIES


Resources extraction
Manufacturing
Distribution
Resources extraction
Waste management
Manufacturing
Distribution
Resources extraction
Manufacturing
Distribution
Consumption
Waste management
Waste management

LIFE CYCLE ATTRIBUTE ASSESSMENT

%()

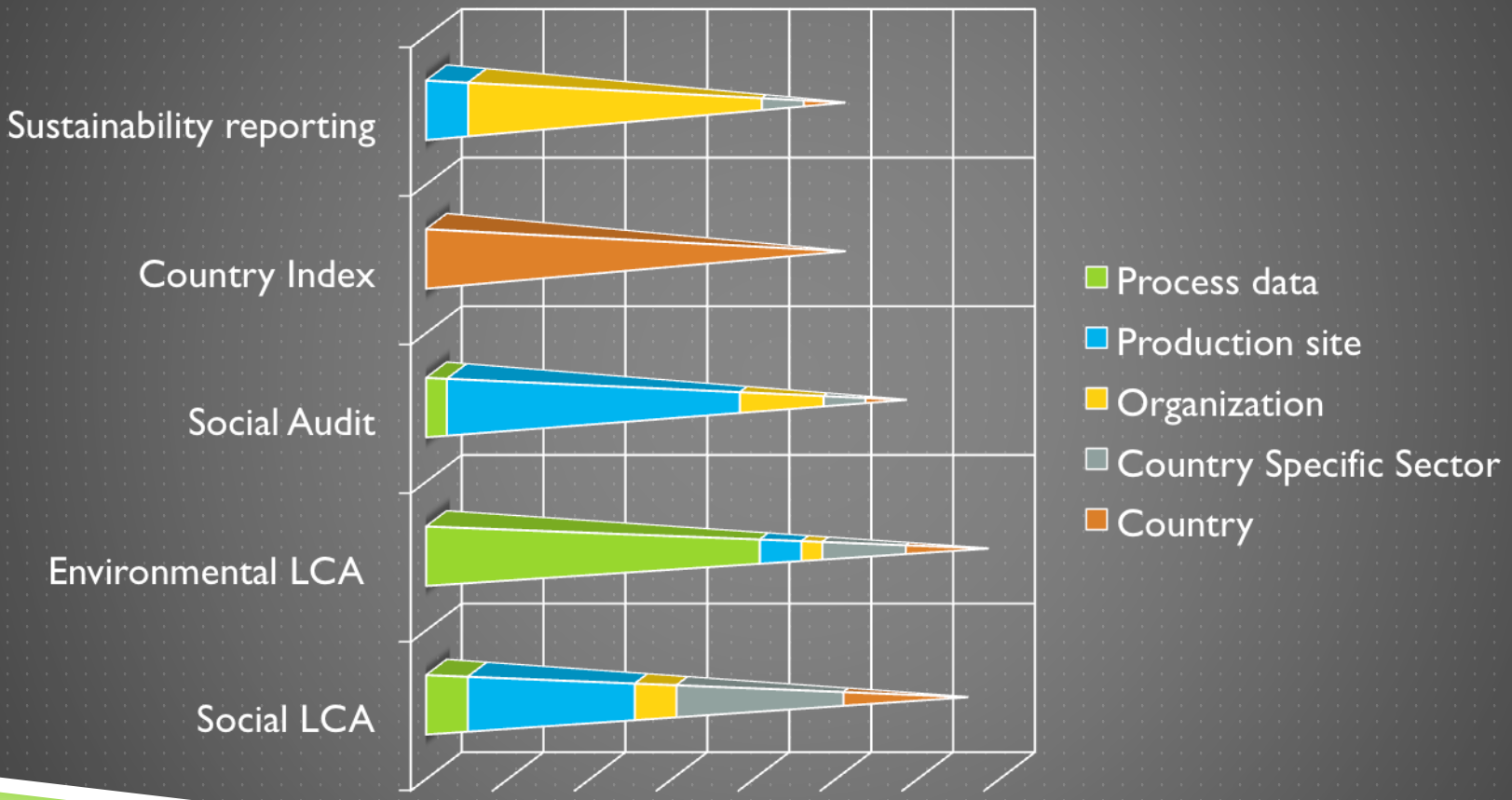
Which possesses an attribute of interest

eg. certification
is audited for
compliance
no child labour

% is calculated using an Activity variable:

eg. Value added
Worker hours
Acreage

SCOPE OF INFORMATION/ TOOL



LIFE CYCLE INVENTORY

Data collection phase

- First conduct a screening S-LCA (Social Hotspots Identification)
- Second collect site specific data
- Refine the model

Systematic Assessment system

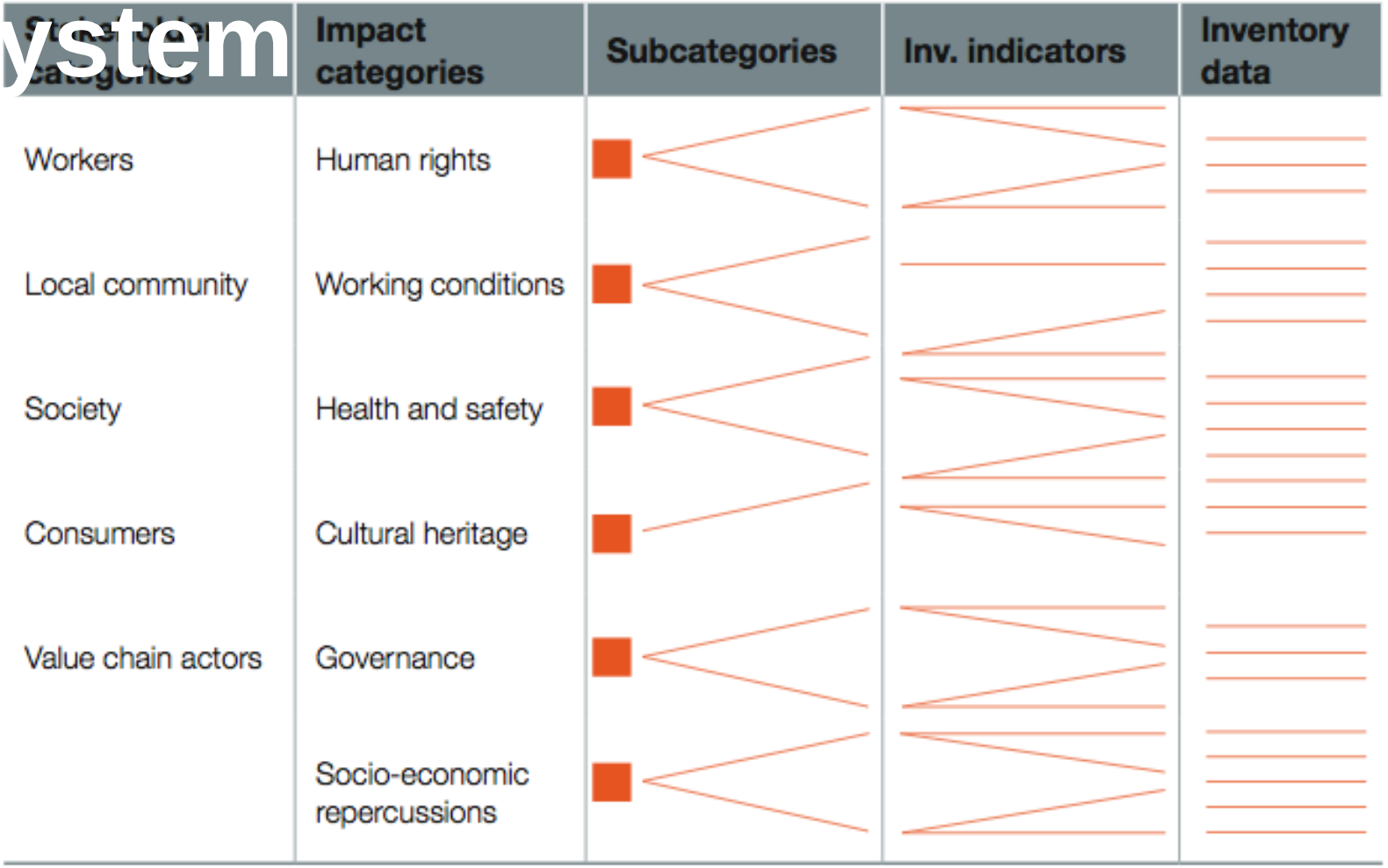


Figure 5 – Assessment system from categories to unit of measurement. Adapted from Benoit et al., 2007

SUBCATEGORIES OF IMPACT

Stakeholder categories	Subcategories
Stakeholder "worker"	Freedom of Association and Collective Bargaining Child Labour Fair Salary Working Hours Forced Labour Equal opportunities/Discrimination Health and Safety Social Benefits/Social Security
Stakeholder "consumer"	Health & Safety Feedback Mechanism Consumer Privacy Transparency End of life responsibility
Stakeholder "local community"	Access to material resources Access to immaterial resources Delocalization and Migration Cultural Heritage Safe & healthy living conditions Respect of indigenous rights Community engagement Local employment Secure living conditions
Stakeholder "society"	Public commitments to sustainability issues Contribution to economic development Prevention & mitigation of armed conflicts Technology development Corruption
Value chain actors* not including consumers	Fair competition Promoting social responsibility Supplier relationships Respect of intellectual property rights

METHODOLOGICAL SHEETS:

- Work began in 2005 - completed in 2010 (prior to peer review)
- Sheets available for download on Life Cycle Initiative web site
- Include: definition of the subcategory, policy relevance, policy instruments, site specific and generic metrics examples and data sources, references
- Peer review organized by UNEP in 2011
- Final version to be published Winter 2012/2013

METHODOLOGICAL SHEETS

The resource aims at :

- Documenting everyone of the subcategories presented in the Guidelines and for which it is advised that a statement be made when presenting results of a S-LCA study
- Guiding towards relevant sources and proposing a few metrics that can be valuable to consider
- *The methodological sheets do not present example of characterization models in the current version.*

PEER REVIEW

- Lead by UNEP
- Group of professionals which, had expertise regarding the subcategories grouped under the five stakeholder categories (workers, local community, society, value chain actors, consumers) or regarding specific issues such as health and safety.
- Received 145 comments of three types: General, Editorial, Technical

FAIR SALARY

Fair Salary

Definition

Fair wage means a wage fairly and reasonably commensurate with the value of a particular service or class of service rendered, and, in establishing a minimum fair wage for such service or class of service.

Codes of conduct which deal with wages and benefits have focused on three standards when assessing level of wages:

- the minimum wage required by law;
- the local "prevailing industry wage";
- the "living wage" (also sometimes designated as a "floor wage" or "non-poverty wage").

The first is obviously the easiest to accurately measure, but has been deemed inadequate in many instance because legal minimum wage has been kept artificially low in many countries to attract investment. Market-basket studies have found that, without working excessive overtime hours, the minimum wage in many countries is not sufficient to meet a worker's basic needs.

The "prevailing industry wage" is an ambiguous premise. It may be higher than the required minimum or may simply meet legal requirements, but in either case this language provides no measurable guarantee that the prevailing wage is sufficient to meet a worker's basic needs.

For this reason "living wage" is promoted and implemented by precursor organizations. It is a wage that enables workers and their families to meet their needs for nutritious food, water, shelter, clothing, education, healthcare and transport as well as providing for a discretionary income. It is generally higher than the minimum wage in many locations.

Aim and approach of indicator assessment

This subcategory aims to assess whether practices concerning wages are in compliance with established standards and if the wage provided is meeting legal requirements, whether it is above, meeting or below industry average and whether it can be considered as a living wage

FAIR SALARY

STAKEHOLDER: Worker **Fair Salary**

Policy Definition

Relevance to Sustainable Development

Fair wages are undoubtedly one of the most important criteria for corporate social responsibility because without fair wages the workers are not even being capable to provide for their own needs and the one of their families. For people to live an adequate life, a "fair salary" is necessary.

To meet the Universal Declaration of Human Rights, a "fair salary" is necessary. Universal Declaration of Human Rights, Article 25 (1): "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.".

Focus on a living rather than a minimum wage can contribute to stability and prosperity in communities and attract more skilled, productive and loyal employees. Furthermore, a living wage for all workers in the organization is a meaningful condition for a sustainable life of the workers and a criterion for identifying an organization that works towards sustainable development improving the local society and economy in a long term view.

International Conventions and Agreements

- ILO Convention (n° 26) Minimum Wage-Fixing Machinery Convention
- ILO Conventions (n° 102) Social Security (Minimum Standards) Convention
- ILO Convention (n° 131) Minimum Wage Fixing Convention
- ILO Convention (n° 132) Holidays with Pay Convention (Revised)
- ILO Convention (n°100 and n°111) Equal Remuneration for Men and Women Workers for Work of Equal Value
- United Nations convention on Equal Remuneration.

International Targets/Recommended Standards

- SA 8000
- Fair Labour Association
- Non poverty wage

FAIR SALARY

Assessment of Data

Data Needed to Compile the Subcategory

There are three forms of Social LCA data: quantitative, semi-quantitative (yes/no or rating scale responses) and qualitative (descriptive text). For this subcategory, quantitative data are preferable such as the wage paid to the workers at each step in the supply chain.

National and International Data Availability and Sources

Generic data source examples

- Minimum Wage Fixing Convention, 1970 (No. 131). http://webfusion.ilo.org/public/db/standards/normes/appl/appl-displayConv.cfm?conv=C131&hdroff=1&lang=EN
- Global Wage Report 2008/09 Towards policy coherence: Minimum wages and collective bargaining http://www.ilo.org/global/What_we_do/Publications/ILOBookstore/Orderonline/Books/lang--en/docName--WCMS_097013/index.htm

Site-specific data source examples

- Interviews with human resource department of the organizations
- Interviews with workers
- Interviews with governmental agencies
- Interviews with non-governmental organizations
- Organization-specific reports, such as GRI reports

Examples of Inventory Indicators, Unit of Measurement and Data Sources

Note: These tables contain example indicators meant to inspire S-LCA case studies. Tables should not be viewed as extensive lists; appropriate indicators depend on study goal and scope.

Generic analysis (Hotspots)

Inventory Indicator	Unit of Measurement	Data Sources
Living Wages in the US by state, county, community (*)	quantitative	Living wage calculator www.livingwage.geog.psu.edu/
Minimum wage by country	quantitative	Comprehensive resource http://en.wikipedia.org/wiki/List_of_minimum_wages_by_country
Non poverty wage by country	quantitative	Non poverty wages

FAIR SALARY

STAKEHOLDER: Worker **Fair Salary**

Specific analysis

Inventory Indicator	Unit of Measurement	Data Sources
Lowest paid worker, compared to the minimum wage	Quantitative/Semi-quantitativ	▪ Country minimum wage ▪ Interview with directors or Human resources officer ▪ Verification of organization documents: e.g. wage records ▪ Review of organization-specific reports, such as GRI reports or audits
The lowest paid workers are considering their wages meets their needs.	qualitative/semi-quantitative	▪ Interviews with workers ▪ Interview with local NGO's
Presence of suspicious deductions on wages	Qualitative/Semi-Quantitative	▪ Interviews with employees, management and human resources ▪ Review of organization-specific reports, such as GRI reports or audits agreement or contracts between organizations and employees ▪ Review of wage records
Regular and documented payment of workers (weekly, bi-weekly)	Qualitative / Semi-Quantitative	▪ Interviews with employees, governmental agencies, management and NGOs ▪ Review of organization-specific reports, such as GRI reports or

Limitations of the Subcategory

In many countries even minimum wages are not paid to workers. Effective implementation of living wages in supply chains brings a wide set of challenge. For more information please consult "Wages Along the Supply Chain: Assessment and Prospects" October 26, 2009, Washington, D.C. (Fair Labor Association).

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Reading

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Anker, Richard. 2005. A new methodology for estimating internationally comparable poverty lines and living wage rates. ILO, Statistical Development and Analysis Unit, Policy Integration Department, Policy Integration, working paper no 72.

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Kenworthy, L. (2001). Wage-setting measures: a survey and assessment World Politics v. 54 n. 1 p. 57-98

Fair Labor Association. 2009."Wages Along the Supply Chain: Assessment and Prospects" workshop report, October 26, 2009, Washington, D.C. www.fairlabor.org/current_topics_wages.html

McCall, L. (2001). Sources of racial wage inequality in metropolitan labor markets: racial, ethnic, and gender differences American Sociological Review v. 66 n. 4 p. 520-41

Robertson, Brown, Pierre and Sanchez-Puerta. Globalization, wages, and the Quality of jobs, Five Country Studies. 2009. The World Bank

Internet Sites

Asian floor wage
www.asiafloorwage.org/

CREA: Center for Reflection, Education and Action
http://www.crea-inc.org/sustainablelivingwage.htm

Fair Labour Association
www.fairlabor.org/

IMPACT ASSESSMENT

- Impact Assessment (sLCIA) is the third phase of a S-LCA. The purpose of sLCIA is to provide a combination of:
- (a) aggregating some inventory data within subcategories and categories; and
- (b) making use of additional information, such as internationally accepted levels of minimum performance, to help understand the magnitude and the significance of the data collected in the Inventory phase.

IMPACT ASSESSMENT

Kloepffer (2008) identifies several relevant issues concerning social life cycle impact assessment:

1. How to relate quantitatively existing indicators to the functional unit?
2. How to quantify all impacts?
3. How to interpret indicators results (eg. low payment)?

INTERPRETATION

Life Cycle interpretation is the process of assessing results in order to draw conclusions

1)Identification of the significant issues;

2)Evaluation of the study (which includes considerations of completeness and consistency);

3)Conclusions, recommendations and reporting. To which is added:

4)Level of engagement with stakeholders

SHDB PROJECT HISTORY

- The project was conceived during the elaboration of the S-LCA Guidelines to respond to needs identified during that period.
- The development was launched in 2009 with seed funding from Wal Mart.
- It was continued with funding and in-kind support from a number of organizations including: The Sustainability Consortium and the United Nations Environment Program (UNEP) .
- In 4 years, we developed tables of information on 22 social themes, harnessing 134 indicators and using over 200 sources of information.

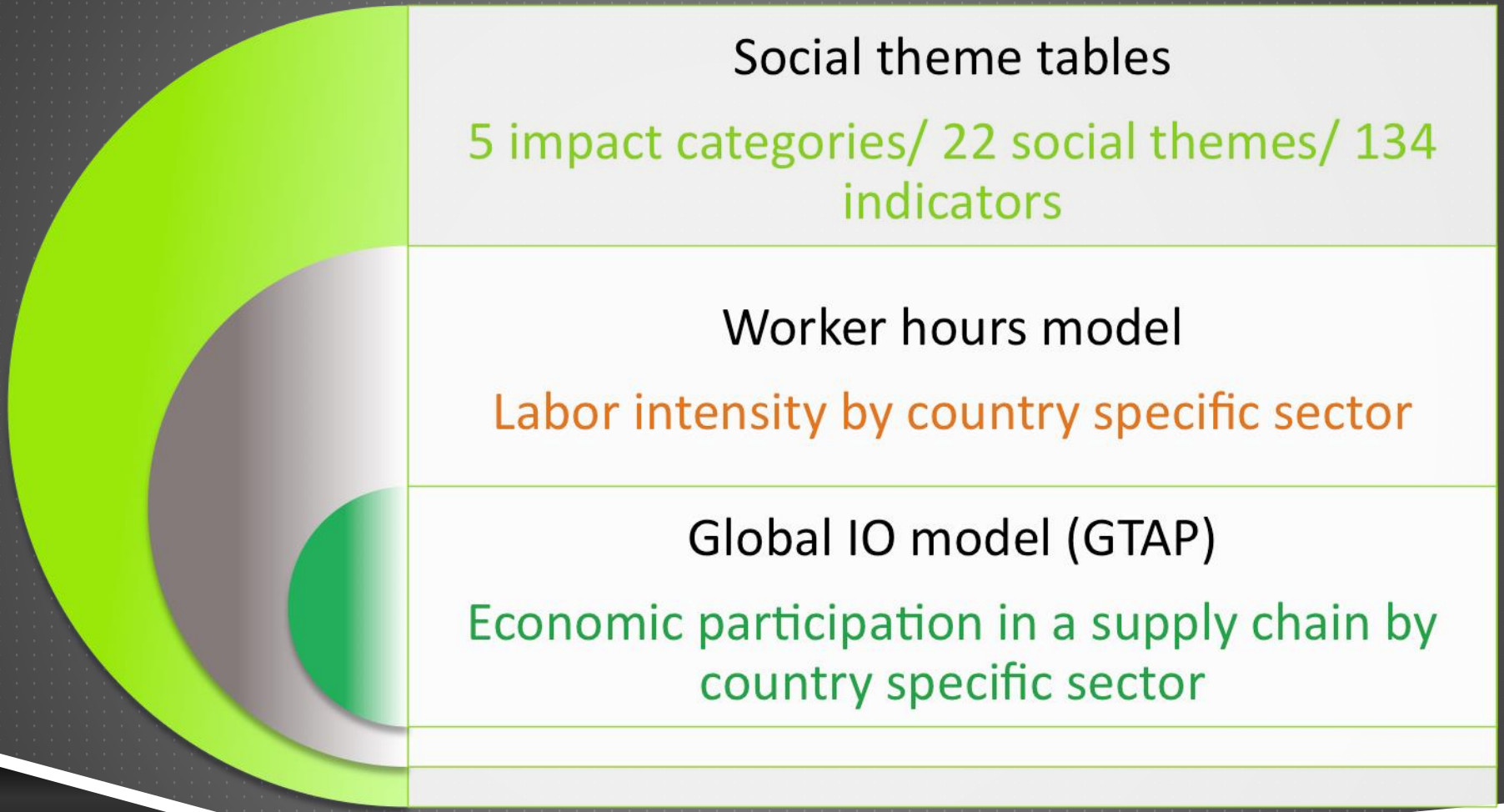
Irin News

SOCIAL HOTSPOT DATABASE

- Generic Inventory of data by country and sector arranged into tables by social issue.
- Uses publicly available, international, secondary sources of data on human and worker rights, investment in people & community, and positive business practices.
- Ranks the severity of social indicators – characterization factors for level of risk

social hotspots database

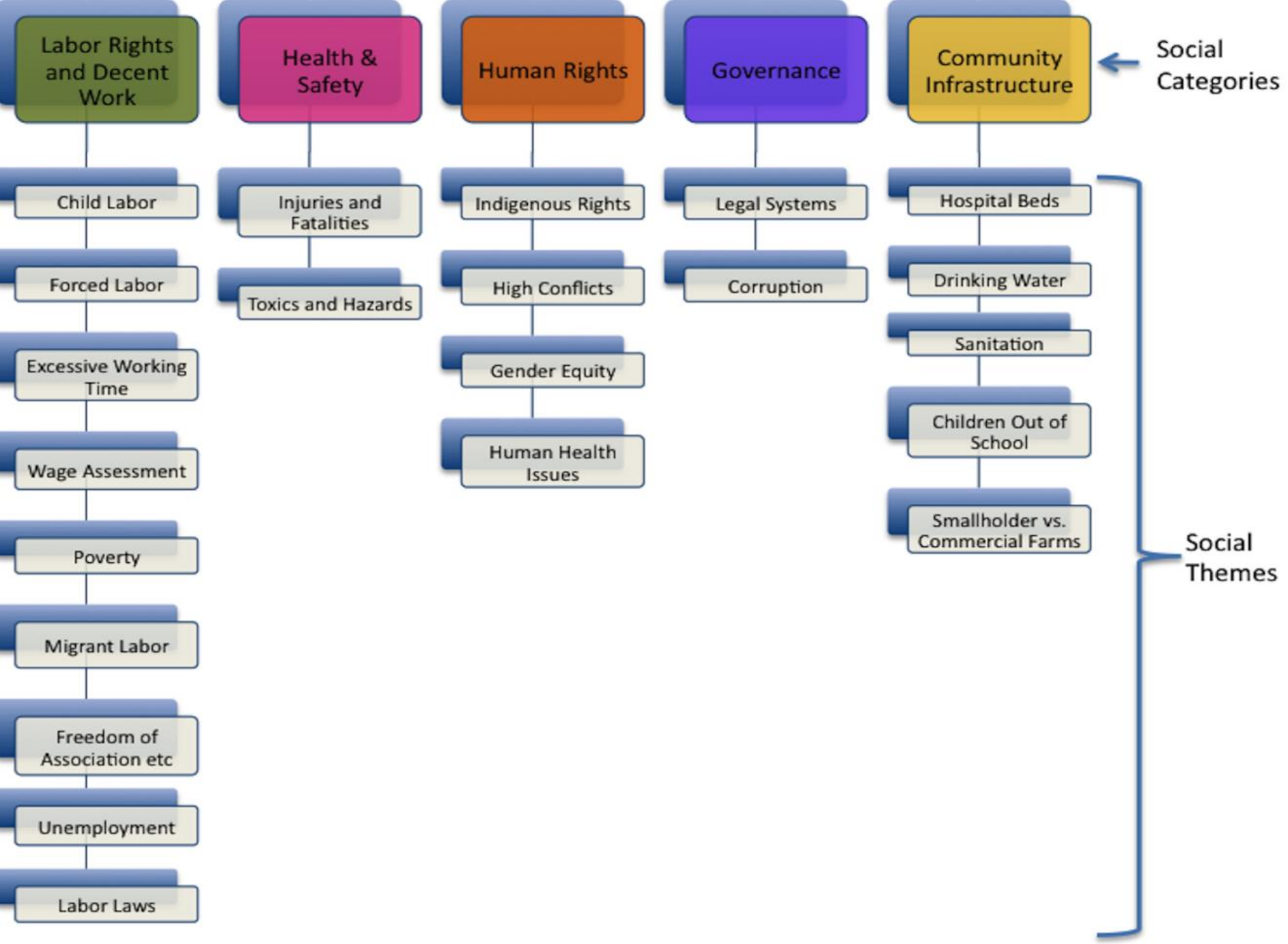
Structure of the SHDB System



LANDSCAPE AND ALTERNATIVES

Complementary approaches

- Desktop research including literature review.
- Surveys and Stakeholder interviews.
- Other modeling approaches (value chain analysis, unit process LCA etc.)


Labor Rights and Decent Work
Health & Safety
Human Rights
Governance
Community Infrastructure
Social Categories
Child Labor
Forced Labor
Excessive Working Time
Wage Assessment
Poverty
Migrant Labor
Freedom of Association etc
Unemployment
Labor Laws
Injuries and Fatalities
Toxics and Hazards
Indigenous Rights
High Conflicts
Gender Equity
Human Health Issues
Legal Systems
Corruption
Hospital Beds
Drinking Water
Sanitation
Children Out of School
Smallholder vs. Commercial Farms
Social Themes

CRITERIA FOR USING DATA IN SHDB

- Comprehensiveness (# country and sectors for which data is available)
- Legitimacy of the data source
- Reliability of method(s) used to collect data by the source
- Quantitative indicators
- Data capture well the theme investigated

WHERE THE DATA COMES FROM…

- World Health Organization (WHO)
- International Labor Organization (ILO)
- U.S. Dept of State
- U.S. Dept of Labor's International Labor Bureau
- World Bank Development Indicators
- CIA World Factbook
- UNICEF
- UNDP Human Development Report
- Organization for Economic Co-operation and Development (OECD)

Labor Rights and Decent Work	**Wage Assessments**	Average Unskilled Wages by sector	Compared to Minimum Wage and Non-poverty Guideline	x
		Minimum Wage	Risk of Sector Average wage being < Minimum Wage	
		Non-poverty Guideline	Risk of Sector Average wage being < Non-poverty Guideline	
	Poverty	Percent of Population living on <$2/day	Risk of Population living on <$2/day	
	Child Labor	Child Labor % in country - male	Risk of Child Labor in country	
		Child Labor % in country - female		
		Child Labor % in country - total		
		Child Labor % by sector - male	Risk of Child Labor by Sector	x
		Child Labor % by sector - female		x
		Child Labor % by sector - total		x
	Forced Labor	ILO		
		US DOL Trafficking		
		Qualitative	Risk of Forced Labor in country	
		Qualitative	Risk of Forced Labor by Sector	x
	Excessive Working Time	Percent working >48 hours/week in country	Risk of Population working >48 hours/week in country	
		Qualitative	Risk of Population working >48 hours/week by Sector	x
	Freedom of Association, Collective Bargaining, Right to Strike	Qualitative	Risk of not having Freedom of Association Rights	
		Qualitative	Risk of not having Collective Bargaining Rights	
		Qualitative	Risk of not having the Right to Strike	
	Migrant Labor	Net Migration Rate (NMR) per 1,000 Population	Risk that NMR is very high or very low	
		Total Emigrants from Origin Country, according to 2000 census	Characterization of total Emigrants (not a risk)	
		Total Immigrants to Destination Country, according to 2000 census	Characterization of total Immigrants (not a risk)	
		Immigrants as a Percentage of the Population, 2010	Characterization of the percentage of immigrants (not a risk)	
		Women as a Percentage of All Immigrants	Risk that women are not accepted into country as immigrants	
		Workers' Remittances and Compensation Received per Emigrant	Risk that a country's remittances from its emigrants is low	
		Workers' Remittances and Compensation Paid per Immigrant	Risk that a country does not pay immigrants enough for remittances	
		Policy regarding integration of non-citizens	Risk that a country has not adopted policies and conventions for the protection of immigrants	
		Ratification of ILO convention No. 97 on Migration for Employment, 1949		
		Ratification of ILO Convention No. 143 on Migrant Workers, 1975		
		Ratification of the Intl Convention on the Protection of Rights of Migrant Workers & their Families NY, 18 Dec 1990		
		Qualitative	Risk that migrant workers are not treated fairly	
	Labor Laws/Conventions	Number of Labor Laws	Risk of Country not passing Labor Laws	
		Number of labor laws by sector	Risk of Country not passing Labor Laws by Sector	x
		Number of Labor Conventions ratified	Risk of Country not adopting Labor Conventions	
		Number of Labor conventions ratified by sector	Risk of Country not adopting Labor Conventions by Sector	x
		Year of last Minimum Wage Update	Risk of Minimum Wage not being updated	
	Unemployment	Unemployment Average % from 2000-2009	Risk of High Unemployment in country	
		Unemployment % by sector	Risk of High Unemployment in sector	x

Health & Safety	**Occupational Toxics & Hazards**	Occupational Noise Exposure to Males (85-90 dBA and >90 dBA)	Risk of Toxic Noise Levels	
		Occupational Noise Exposure to Females (85-90 dBA and >90 dBA)		
		Deaths due to occupational-related Lung Cancer	Risk of Occupatonal Carcinogens	
		Deaths due to occupational-related Leukemia		
		Deaths due to occupational-related Mesothelioma		
		Disability-adjusted life years due to occupational-related Lung Cancer		
		Disability-adjusted life years due to occupational-related Leukemia		
		Disability-adjusted life years due to occupational-related Mesothelioma		
		Disability-adjusted life years due to occupational-related Asthma	Risk of Occupational Airborne Particulates	
		Disability-adjusted life years due to occupational-related Chronic Obstructive Pulmonary Disease		
		Disability-adjusted life years due to occupational-related Asbestosis		
		Disability-adjusted life years due to occupational-related Silicosis		
		Disability-adjusted life years due to airborne particulates in the coal mining sector	Risk of loss of life in the coal mining sector due to airborne particulates	x
		Percentage of the healthcare workforce infected with Hepatitis B, C and HIV	Risk of contracting Hepatitis B, C or HIV in the healthcare sector	x
	Occupational Injuries & Deaths	Accident Rate of insured/covered workers (per 100,000)	Risk of occupational injury	
		Fatality Rate of insured/covered workers (per 100,000)	Risk of occupational fatality	
		Fatal Work Related diseases (estimate)	Risk of occupational disease causing death	
		Fatal injuries by sector	Risk of a fatal injury by sector	x
		Non-fatal injuries by sector	Risk of a non-fatal injury by sector	x
Community Infrastructure	**Children Out of School**	Children out of School – male	Risk of Children not attending School – male	
		Children out of School – female	Risk of Children not attending School – female	
		Children out of School – total	Risk of Children not attending School – total	
	Access to Improved Drinking Water	Access to Improved Drinking Water, % - rural	Risk of not having access to Improved Drinking Water – rural	
		Access to Improved Drinking Water, % - urban	Risk of not having access to Improved Drinking Water –urban	
		Access to Improved Drinking Water, % - total	Risk of not having access to Improved Drinking Water – total	
	Access to Improved Sanitation	Access to Improved Sanitation, % – rural	Risk of not having access to Improved Sanitation – rural	
		Access to Improved Sanitation, % – urban	Risk of not having access to Improved Sanitation – urban	
		Access to Improved Sanitation, % – total	Risk of not having access to Improved Sanitation – total	
	Access to Hospital Beds	Access to Hospital Beds - # beds/1000 pop	Risk of not having Access to Hospital Beds	
	Smallholder v. Commercial Farms (only Agriculture sectors)	Percentage of Family Labor	Characterization of Family Labor (not a risk)	x
		Percentage of Commercial Labor	Characterization of Commercial Labor (not a risk)	x
		Percentage of small Land-holdings	Characterization of Small Land-holdings (not a risk)	x
		Percentage of Large Land-holdings	Characterization of Large Land-holdings (not a risk)	x

Human Rights	**Indigenous Rights**	Presence of indigenous population, X	Not characterized	
		Indigenous Population, %	Characterization of % of indigenous population (not a risk)	
		ILO Convention adopted for Indigenous	Risk of country not adopting Indigenous ILO convention and UN Declaration	
		UN Declaration for Indigenous		
		Number of Laws enacted to protect indigenous	Risk of country not passing Laws to protect indigenous	
		Qualitative	Risk for Indigenous Rights Infringements by Sector	x
	Gender Equity	Social Institutions and Gender Index	Risk of of Gender Inequity	
		Global Gender Gap		
		World Bank Gender Development Indicator		
		CIRI Human Rights Index - Economic		
		CIRI Human Rights Index - Political		
		CIRI Human Rights Index - Social		
		Adolescent fertility rate (births per 1,000 women ages 15-19)	Not characterized	
		Fertility rate, total (births per woman)	Not characterized	
		Share of women employed in the nonagricultural sector (% of total nonagricultural employment)	Not characterized	
		% Unemployment, (% of female labor force unemployed/% of male labor force unemployed)	Not characterized	
		% of women workers vs. men by sector	Risk of Gender Inequity by sector	x
	High Conflict Zones	Heidelberg Conflict Barometer - # of conflicts	Risk for High Conflict	
		Heidelberg Conflict Barometer - maximum intensity of conflicts (1-5)		
		Heidelberg Conflict Barometer - change in conflicts (positive=worsening)		
		Number of Refugees - UN Refugee Agency (000's)		
		Center for Systemic Peace Indicator		
		Minority Rights Group Indicator		
		Top Risers from last year in Minority Rights Group Indicator, X		
		Qualitative	Risk for High Conflict specific to sectors	x
	Human Health Issues I - Communicable Diseases	Cases of HIV (per 1000 adults 15-49 years)	Risk of HIV	
		Cases of Tuberculosis (per 100 000 population)	Risk of Tuberculosis	
		Cases of Malaria (per 100 000 population)	Risk of Malaria	
		Cases of Dengue Fever (per 100 000 population)	Risk of Dengue Fever	
		Cases of Cholera	Risk of Cholera	
		Diphtheria number of reported cases 2008	Risk of Diphtheria 2008	
		Japanese encephalitis number of reported cases 2008	Risk of Japanese encephalitis 2008	
		Leprosy number of reported cases 2008	Risk of Leprosy 2008	
		Measles number of reported cases 2008	Risk of Measles 2008	
		Meningitis number of reported cases 2009	Risk of Meningitis 2009	
		Mumps number of reported cases 2008	Risk of Mumps 2008	
		Pertussis number of reported cases 2008	Risk of Pertussis 2008	
		Poliomyelitis number of reported cases 2009	Risk of Poliomyelitis 2009	
		Rubella number of reported cases 2008	Risk of Rubella 2008	
		Total tetanus number of reported cases 2008	Risk of tetanus 2008	

Human Rights	**Human Health Issues I - Communicable Diseases**	Mortality rates from communicable diseases (per 100 000 population)	Risk of mortality from communicable diseases	
	Human Health Issues II - Non-communicable Diseases and other health risks	Life expectancy at birth (years)	Risk of low life expectancy	
		Under-five mortality rate (probability of dying by age 5 per 1000 live births)	Risk of a high Under-five mortality rate	
		Proportion of undernourished % of total population	Risk of undernourishment	
		Digestive diseases, Estimated Age Standardized Death Rate (per 100,000)	Risk of contracting Digestive diseases	
		Diabetes (mellitus) Estimated Age Standardized Death Rate (per 100,000)	Risk of Diabetes (mellitus)	
		Cardiovascular diseases, Estimated Age Standardized Death Rate (per 100,000)	Risk of Cardiovascular diseases	
		Cerebrovascular disease, Estimated Age Standardized Death Rate (per 100,000)	Risk of Cerebrovascular disease	
		Neuropsychiatric conditions, Estimated Age Standardized Death Rate (per 100,000)	Risk of Neuropsychiatric conditions	
		Malignant neoplasms, Estimated Age Standardized Death Rate (per 100,000)	Risk of Malignant neoplasms	
		Respiratory diseases, Estimated Age Standardized Death Rate (per 100,000)	Risk of Respiratory diseases	
		Mortality rates for non-communicable diseases (per 100 000 population)	Risk of mortality from non-communicable diseases	
		Estimated Obesity (BMI ≥ 30 kg/m²) Prevalence, Aged 15+, Males	Risk of Obesity (BMI ≥ 30 kg/m²), Aged 15+, Males	
		Estimated Obesity (BMI ≥ 30 kg/m²) Prevalence, Aged 15+, Females	Risk of Obesity (BMI ≥ 30 kg/m²), Aged 15+,Females	
		Mortality rates for injuries (per 100 000 population)	Risk of high mortality rates due to injury	
		Deaths due to indoor and outdoor air and water pollution	Risk of death due to air and water pollution	
		Population affected by natural disasters, ave per year	Risk of death due to natural disasters	
Governance	**Legal System**	World Bank Worldwide Governance Indicator - Rule of Law	Risk of Fragility in Legal System	
		Bertelsmann Transformational Index - Rule of Law, independent judiciary		
		CIRI Human Rights Index - Independent Judiciary		
		Global Integrity Index - Judicial Accountability		
		Global Integrity Index - Rule of Law		
		Global Integrity Index - Law Enforcement		
		World Justice Project Average		
	Corruption	Worldwide Governance Indicators - Control of Corruption Index	Risk of Corruption	
		World Economic Fund - Global Competitiveness Survey - Percent of respondents that say Corruption is the most problematic factor affecting business.		
		Transparency International's Corruption Perception Index		

EXAMPLES OF TABLES

- Community Infrastructure – Access to Improved Sanitation
- Labor Rights & Decent Work – Child Labor

COMMUNITY INFRASTRUCTURE - ACCESS TO IMPROVED SANITATION

GTAP		Access to Improved Sanitation Facilities WHO UNICEF Report (2012) - www.unicef.org/media/files/JMPreport2012.pdf						
Code	**Country/Region**	***% of Urban Population***	***Characterization Factor***	***% of Rural Population***	***Characterization Factor***	***% of Total Population***	***Characterization Factor***	***Data Year***
ALB	Albania	95	Medium	93	Medium	94	Medium	2010
ARG	Argentina	91	Medium	77	Medium	90	Medium	2008
ARM	Armenia	95	Medium	80	Medium	90	Medium	2010
AUS	Australia	100	Low	100	Low	100	Low	2010
AUT	Austria	100	Low	100	Low	100	Low	2010
AZE	Azerbaijan	86	Medium	78	Medium			
BGD	Bangladesh	57	High	55	Medium			
BLR	Belarus	91	Medium	97	Low			
BEL	Belgium	100	Low	100	Low			
BOL	Bolivia	35	Very High	10	Very High			
BWA	Botswana	75	High	41	High			
BRA	Brazil	85	Medium	44	High			
BGR	Bulgaria	100	Low	100	Low			
KHM	Cambodia	73	High	20	Very High			
CAN	Canada	100	Low	99	Low			
CHL	Chile	98	Low	83	Medium			
CHN	China	74	High	56	Medium			
COL	Colombia	82	Medium	63	Medium			

CHARACTERIZATION CRITERIA:

Charcterization of Access to Improved Sanitation Table

Level	Urban ≥	Rural ≥	Total ≥
Low	95	93	95
Medium	79	47	75
High	43	23	30
Very High	0	0	0

Based on the following:

MDG Target	75%
Current Total	63%
Urban World	79%
Rural World	47%
Urban Africa	43%
Rural Africa	23%
Total Africa	30%
Rural Developing	43%
Urban Developing	73%
Developed world	95%
Developed urban	95%
Developed rural	93%

- Used only one source, one indicator
- Not applicable to have sector data
- Used global statistics to develop characterization
- model

LABOR RIGHTS & DECENT WORK
CHILD LABOR – COUNTRY LEVEL

This table shows % of child labor by country. When country level data is not available, a regional % is used. Where a country does not have data and is industrialized, no evidence is assumed for child labor. This could also be considered low risk.

Percentage of Child Labor see Metadata for sources

Characterized Risk for Child Labor by Country (also used for sector if no sector data available)

Metadata

Sources were prioritized. First the UNICEF Global Database provided estimates of c
specific percentages were available for most countries, but in some cases the reg
Labor's worst forms of child labor rep

GTAP	*Country/Region*	Regions base on The State of the World's Children Report (UNICEF, 2012)	Region Value Used	Male	Female	Total (male and female)	no evidence = ne*, <4 = low, >4-10 = med, >10-20 = high, >20 = very high			*Original Source*	*Citation*	
Code	Name	Region*	Yes = x	%	%	%	Male	Female	Total			
XSA	Afghanistan	South Asia		17	9	13	high	medium	high	NRVA 2007/08	UNICEF, 2012	UNICEF. (2012). State of the Wo
ALB	Albania	CEE/CIS		14	9	12	high	medium	high	MICS 2005	UNICEF, 2012	UNICEF. (2012). State of the Wo
XNF	Algeria	Middle East/N.Africa		6	4	5	medium	medium	medium	MICS 2006	UNICEF, 2012	UNICEF. (2012). State of the Wo
XOC	American Samoa	-		nd	nd	nd	nd	nd	nd	nd	nd	nd
XER	Andorra	-		nd	nd	nd	nd	nd	nd	nd	nd	nd
XAC	Angola	Sub-Saharan Africa		22	25	24	very high	very high	very high	MICS 2001	UNICEF, 2012	UNICEF. (2012). State of the Wo
XCB	Anguilla	Latin Amer/Carib	x	9	7	8	medium	medium	medium	Regional data	UNICEF, 2012	UNICEF. (2012). State of the Wo
XCB	Antigua & Barbuda	Latin Amer/Carib	x	9	7	8	medium	medium	medium	Regional data	UNICEF, 2012	UNICEF. (2012). State of the Wo
ARG	Argentina	Latin Amer/Carib		8	5	7	medium	medium	medium	EANNA 2003	UNICEF, 2012	UNICEF. (2012). State of the Wo
ARM	Armenia	CEE/CIS	x	5	4	5	medium	medium	medium	Regional data	UNICEF, 2012	UNICEF. (2012). State of the Wo
XCB	Aruba	-		nd	nd	nd	nd	nd	nd	nd	nd	nd
AUS	Australia	Industrialized		nd	nd	7	nd	nd	medium	The first	International	International Trade Confederati
AUT	Austria	Industrialized		ne	ne	ne	ne	ne	ne	If no data found,	ne	If no data found, and country is
AZE	Azerbaijan	CEE/CIS		8	5	7	medium	medium	medium	Dayioglu,	UNICEF, 2012	UNICEF. (2012). State of the Wo
XCB	Bahamas	Latin Amer/Carib	x	9	7	8	medium	medium	medium	Regional data	UNICEF, 2012	UNICEF. (2012). State of the Wo
XWS	Bahrain	Middle East/N.Africa		6	3	5	medium	low	medium	MICS 2000	UNICEF, 2012	UNICEF. (2012). State of the Wo
BGD	Bangladesh	South Asia		18	8	13	high	medium	high	MICS 2006	UNICEF, 2012	UNICEF. (2012). State of the Wo
XCB	Barbados	Latin Amer/Carib	x	9	7	8	medium	medium	medium	Regional data	UNICEF, 2012	UNICEF. (2012). State of the Wo

CHARACTERIZATION OF QUANTITATIVE DATA BY COUNTRY AND SECTOR
Raw data is mapped to sectors in table below.
See rules for characterization in notes below tables.

Risk of Child Labor in a Sector, MALE

Using percentage of children in economic activity, data below
Scroll right to see Female and Total Risks.

GTAP	Country/Region	UCW Survey Sector Data Available?	Agriculture											Forestry	Fishing	Mining				Food Manufacturing		
Code	Name	Yes = x	PDR	WHT	GRO	V_F	OSD	C_B	PFB	OCR	CTL	OAP	RMK	WOL	FRS	FSH	COA	OIL	GAS	OMN	CMT	OMT	VOL
BLR	Belarus	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
BEL	Belgium	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
XCA	Belize	x	59.86	59.86	59.86	59.86	59.86	59.86	59.86	59.86	59.86	59.86	59.86	59.86	59.86	59.86	0	0	0	0	4.27	4.27	4.27
XWF	Benin	x	54	54	54	54	54	54	54	54	54	54	54	54	54	54	0	0	0	0	0	0	0
XNA	Bermuda	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
XSA	Bhutan	x	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	0	0	0	0	0.1	0.1	0.1
BOL	Bolivia	x	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	0.2	0.2	0.2	0.2	5.7	5.7	5.7
XER	Bosnia and Herzegovina	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
BWA	Botswana	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
BRA	Brazil	x	59.56	59.56	59.56	59.56	59.56	59.56	59.56	59.56	59.56	59.56	59.56	59.56	59.56	59.56	0	0	0	0	5.47	5.47	5.47
XSE	Brunei Darassalam	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
BGR	Bulgaria	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
XWF	Burkina Faso	x	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	1.3	1.3	1.3	1.3	1.4	1.4	1.4
XEC	Burundi	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
KHM	Cambodia	x	78.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9	0.5	0.5	0.5	0.5	4.5	4.5	4.5
XCF	Cameroon	x	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	0.1	0.1	0.1	0.1	2.1	2.1	2.1
CAN	Canada	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
XWF	Cape Verde	x	86.37	86.37	86.37	86.37	86.37	86.37	86.37	86.37	86.37	86.37	86.37	86.37	86.37	86.37	1.61	1.61	1.61	1.61	1.61	1.61	1.61
XCB	Cayman Islands	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
XCF	Central African Republic	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
XCF	Chad	-	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
CHL	Chile	x	11.89	11.89	11.89	11.89	11.89	11.89	11.89	11.89	11.89	11.89	11.89	11.89	11.89	11.89	0	0	0	0	7.58	7.58	7.58

This part of the table uses three qualitative sources to determine if there is an issue of child labor in particular sectors. A formula is used to determine if key words for each sector are found in the three sources. Where a sector is called out for a country, the risk is prioritized as very high in the Sector Final Table. See notes on mapping below table for more info on methods.

STEP 1: Read through qualitative sources and mark sectors with 1 if issue exists (scroll right to see step 2

Paddy Rice: rice, husked and unhusked	Wheat: wheat and meslin	maize (corn), barley, rye, oats, other cereals	vegetables, fruitvegetables, fruit and nuts,	seeds and oleaginous fruit; soy beans, copra	Cane & Beet: sugar cane and sugar beet	cotton, flax, hemp, sisal and other raw vegetable	live plants; flowers and flower buds; flower seeds

GTAP	Country/Region	U.S. Department of Labor. (2012). http://www.dol.gov/ilab/programs/ocft/2012TVPRA.pdf	U.S. Department of Labor (2011). Findings on the Worst Forms of Child Labor	International Trade Confederation http://www.ituc-csi.org/documents.html	Agriculture							
Code	Name	Goods Produced by Child Labor	If yellow, from older DOL Report (2005).		PDR	WHT	GRO	V_F	OSD	C_B	PFB	OCR
XWS	Syrian Arab Republic				0	0	0	0	0	0	0	0
TWN	Taiwan				0	0	0	0	0	0	0	0
XSU	Tajikistan	cotton			0	0	0	0	0	0	1	0
TZA	Tanzania, United Republic of	cloves, coffee, gold, nile perch, sisal, gems, tea, tobacco	coffee, sisal, lumber, tea, tobacco, cloves, rice, seaweed, sugarcane, livestock, fishing, mines, stone quarries, tanzanite, domestic servants, street work, tourism, hotels, sex work		1	0	0	0	0	1	1	1
THA	Thailand	garments, pornography, shrimp, sugarcane	sugarcane, cassava - vegetable, corn, rice, rubber, roses, oranges, seeds, fishing, shrimp, entertainment, restaurants, gas stations, domestic service, garments, street work		1	0	1	1	0	1	0	0
XSE	Timor Leste		coffee, fishing, street work, domestic work, construction, sex work		0	0	0	0	0	0	0	1
XWF	Togo		cotton, cocoa, coffee, cattle, beans - vegetable, corn, domestic servants, rock quarries, metal cutting, harvesting crabs, fishing, construction, street work, domestic work		0	0	1	1	0	0	1	1

S-LCA RESULTING IN CHANGES

- French study - BIO BASED MATERIAL IN BRAZIL
  - Motivated firm to source from certified sugarcane
  - Motivated a comparative study S-LCA about initial solution: petro-based plastic
- Canadian Dairy Producer
  - Identified most important issues for Dairy producers and their stakeholders
  - Identified key KPIS
  - Started to report to stakeholders using the indicators

S-LCA RESULTING IN CHANGES

- New Earth TSC study
  - Results brought together with additional research to identify hotspots (through a decision tree)
  - Output used by TSC stakeholder groups to prioritize hotspots and determine KPIs
- New Earth Pepsi study
  - Results used to prioritize engagement efforts with suppliers of fruits.

S-LCA RESULTING IN CHANGES

- Greendelta study on Laptop
  - European Eco-label postponed the expansion of certification to social issues

EFFECTIVE WAYS TO GO FROM DATA TO DECISIONS

S-LCA

- Embedded in company/government activities and process
- Iterative

Decision making process

- Leadership is on board
- Involve the right persons

CHALLENGES WITH SOCIAL HOTSPOTS

HOW TO MAKE THINGS BETTER?

- Buying practices
- Getting to know better (Site-specific data collection) – not all data is equal
- Engagement
- Certifications
- Multi stakeholder collaboration
- Governments
- Reporting/ Shareholder advocacy

THANK YOU!

New Earth – Social Hotspots Database project

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