

Social Life Cycle Assessment in the Value Chain

A Pilot Study in the Steel Industry

Authors:

- ❑ Ms. Ambalika Gupta (Mahindra Sanyo Special Steel Pvt Ltd.; India)
- ❑ Mr. Peter Tarne (BMW Group; Germany)
- ❑ Mr. Uday Gupta (Mahindra Sanyo Special Steel Pvt Ltd.; India)
- ❑ Ms. Marzia Traverso (PhD), (Ex. BMW Group)

Introduction to Mahindra Sanyo Special Steel Pvt. Ltd. (MSSSPL)

Formerly Known as **Mahindra UGINE Steel Company (MUSCO)**

Established : 1962

Location : Khopoli (Maharashtra), India

2012 MUSCO renamed as Mahindra Sanyo Special Steel Pvt Ltd. as joined venture between Mahindra & Mahindra (51%) India, Sanyo Special Steel (29%) Japan, and Mitsui (20%) Japan

Business : Manufacturing & Sales of Special Steel Long Products

Products : As-cast Ingots, Rolled products, Forged bars, Rings

Turnover : USD 135 Million

Employee : ~1000

Introduction to Mahindra Sanyo Special Steel Pvt. Ltd. (MSSSPL)

Process Route : Electric Arc Furnace, Rolling Mills, Forge Shop, Heat Treatment

Forward integration : Rings Division for value added products in the bearing sector

Customers

❑ Auto : Suzuki, M & M, JD

❑ Bearing : Timken, SKF, NSK, FAG

❑ Oil & Gas Application : Cameron, Halliburton, Smith International, T 3 Energy, FMC technology

❑ Engineering : Cummins, Siemens, Ferromatik, Kabra

❑ Mining Tools : Sandvik, Atlas Copco, Mitsubishi Materials

❑ Indian Railways

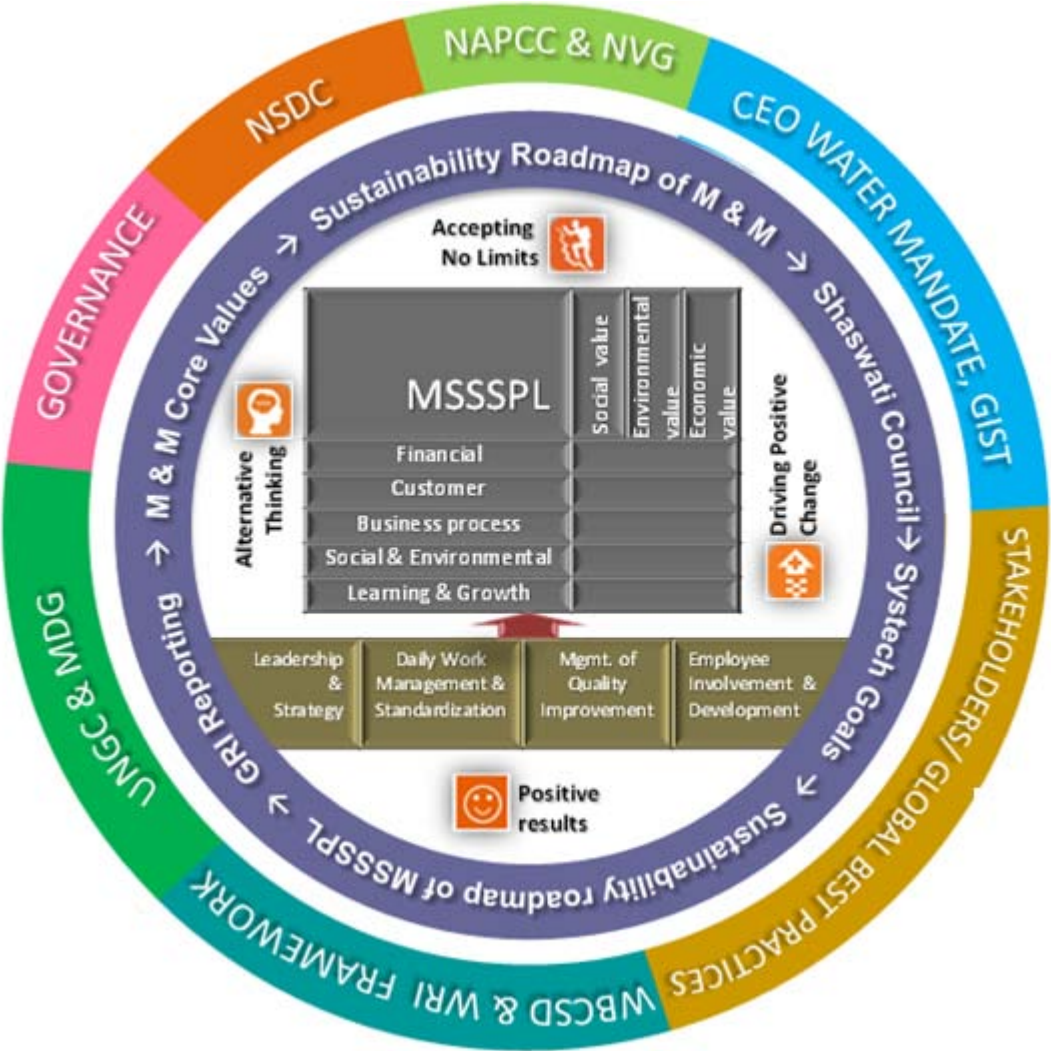






Our Vision



MSSSPL's Vision is to be the most **Admired, Successful and Socially Responsible Special steel Manufacturer** in
India by 2019

Our Sustainability Framework



-  Guidelines
-  Feedback Mechanism
-  Balanced Score Card
-  Enablers (MQW Framework of Management Processes)

Motivation for establishing round table

INTERNATIONAL BUSINESS

INTERNATIONAL BUSINESS; Nike Pledges to End Child Labor And Apply U.S. Rules Abroad

By JOHN H. CUSHMAN Jr.

Published: May 13, 1998

The New York Times

We assess the environmental impacts,
What about the social ones?

23. September 2013, 19:10 Uhr Miserable Arbeitsbedingungen in China

Aufstand gegen Foxconn



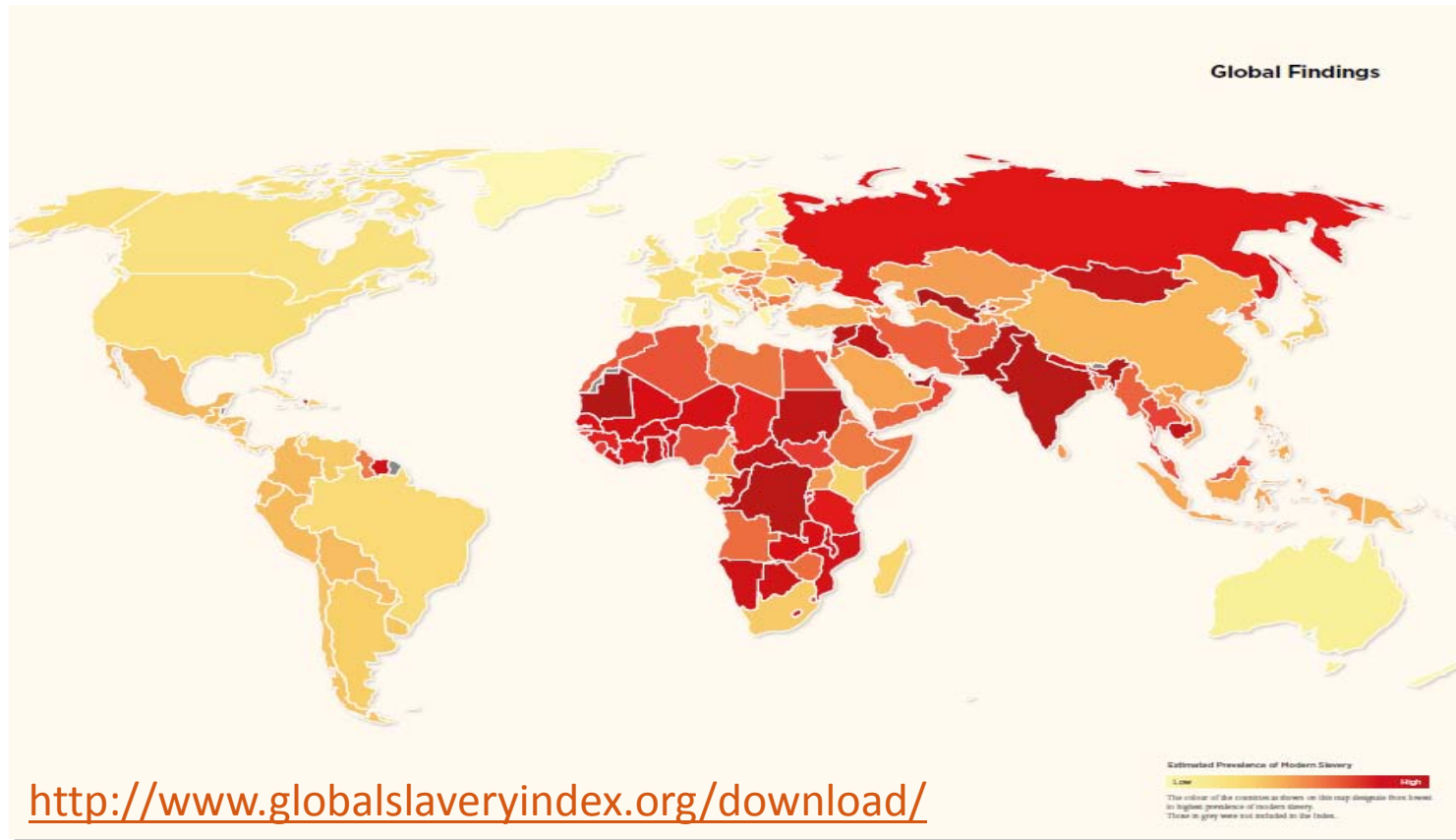
INTERNATIONAL BUSINESS

Groups Accuse Apple Supplier in China of Labor Violations

By NEIL GOUGH and BRIAN X. CHEN SEPT. 4, 2014

India's Perception

Meaning of modern slavery, includes the term slavery itself, but also other concepts such as human trafficking, forced labor, debt bondage, forced or servile marriage, and the sale and exploitation of children.



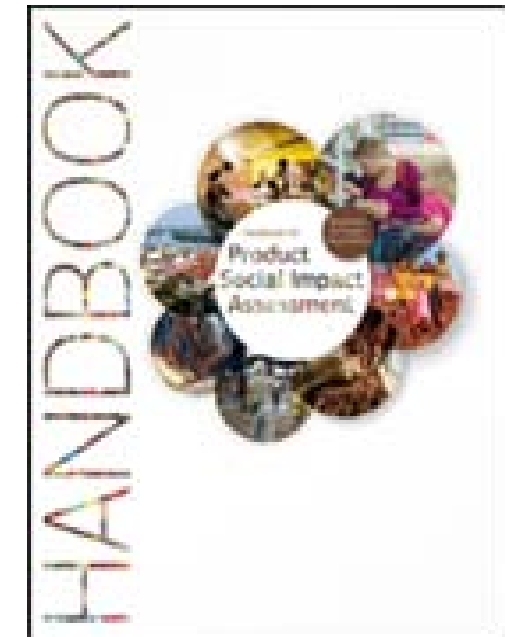
In absolute terms, the countries with the highest number of people in modern slavery are:

- India
- China
- Pakistan
- Uzbekistan
- Russia
- Nigeria
- Democratic Republic of the Congo
- Indonesia
- Bangladesh
- Thailand

The Roundtable for Product Social Metrics



Triggered by these practical shortcomings, a group of experts from large companies decided to join forces, initiating the Roundtable for Product Social Metrics.



Stakeholder Categories & Topics of Social Impact Assessment

Workers

- Occupational Health & Safety
- Wages
- Social Benefits
- Forced Labor
- Discrimination
- Freedom of Association & Collective bargaining
- Employment relationship
- Training & Education
- Work-life balance
- Job Satisfaction & Engagement

Consumers

- Health & Safety
- Experienced well-being

Community

- Community Health & Safety
- Access to tangible resources
- Local capacity building
- Community engagement
- Employment

Assessment Methodology: Referencing Quantitative

Referencing

Example: measuring Workers' Training and Education

Quantitative approach:

Performance indicator

1. Numbers of hours of training per employee during the reporting period.

Answer format: whole number

Reference value

Performance indicator 1: 1 hour

Scale-based approach:

Performance indicator

1. Percentage of workers who received training or have participated periodically in programmes aimed at capacity and skill development.

Answer format: percentage

Reference scale

- +2** All workers are trained periodically
- +1** >75% workers are trained occasionally
- 0** Between 50% and 75% of workers are trained occasionally
- 1** <50% of workers are trained occasionally
- 2** Workers do not receive training

The Roundtable for Product Social Metrics

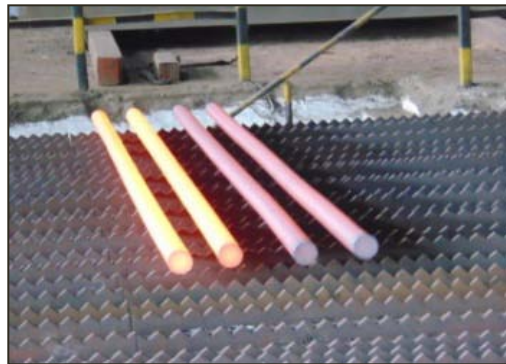
OBJECTIVE :

The main target of this project was to develop a feasible methodology for a quantitative and qualitative assessment of positive and negative SOCIAL IMPACT of a product along its life cycle.

Challenges such as data availability and necessity to involve companies along the product life cycle have to be faced for further case studies!



Scrap (import & domestic)



MSSPL



Mahindra Rings India



QSM Hungary



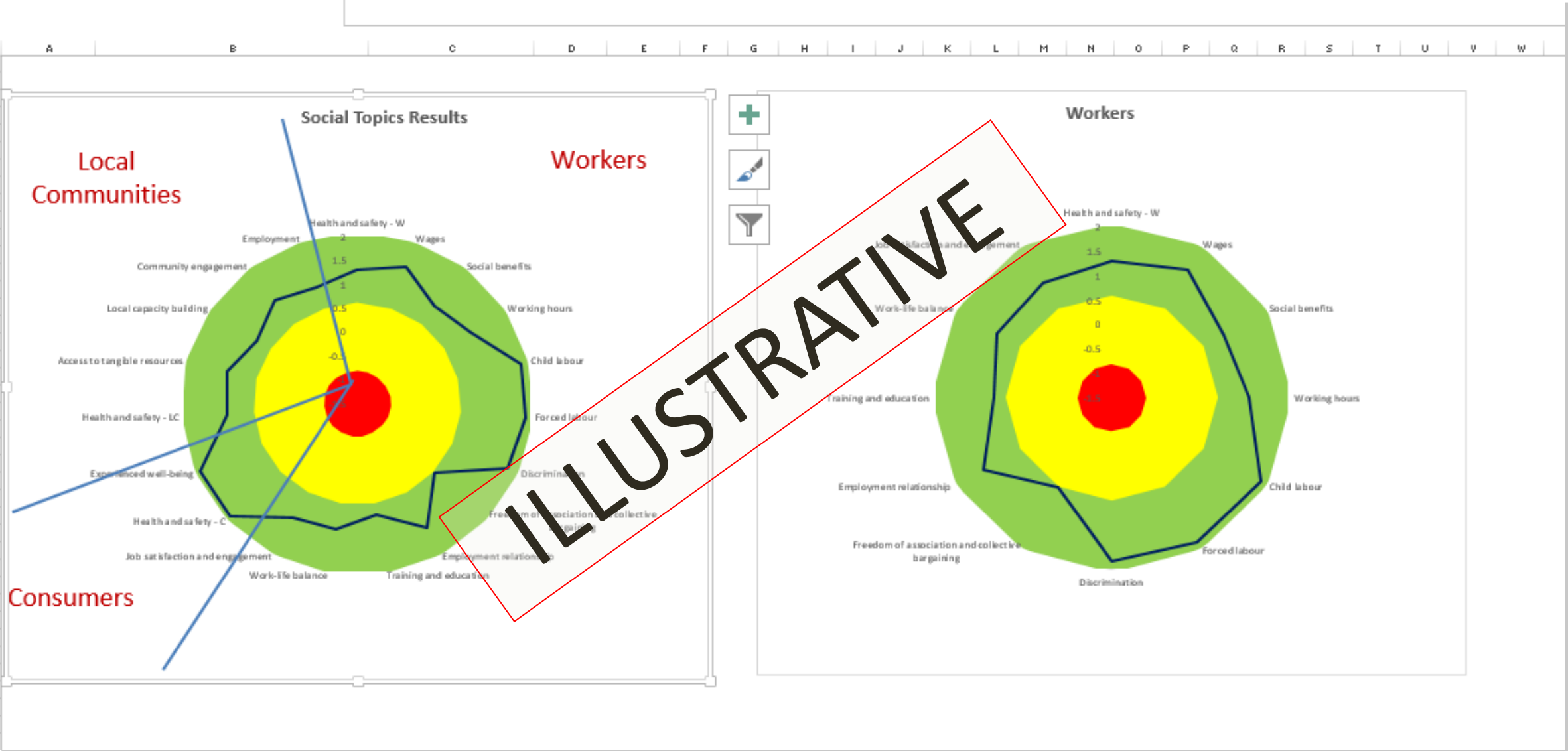
Examples of Snapshot summary of the Scales Based Approach

Stakeholder category	Social Topic	Reference value	Approach	Performance indicator	MSSSPL
Workers	Worker's training and education	1 hour	Qt1	Number of hours of training during the reporting period.	724
		(+) 2	Qlt 1	All workers are trained periodically.	
		(+) 1		>75% workers are trained occasionally.	
		0		Between 50% and 75% of workers are trained occasionally.	
		(-) 1		<50% of workers are trained occasionally.	
		(-) 2		Workers do not receive training.	

ILLUSTRATIVE

Stakeholders	Social Indicators	Score	Total Score	Weighted Score
Workers	Health and safety - W	1.31	1.35	1.49
	Wages	1.54		
	Social benefits	1.08		
	Working hours	1.23		
	Child labour	1.92		
	Forced labour	1.92		
	Discrimination	1.85		
	Freedom of association and collective bargaining	0.62		
	Employment relationship	1.46		
	Training and education	0.85		
	Work-life balance	1.15		
	Job satisfaction and engagement	1.23		
Consumers	Health and safety - C	2.00	2.00	
	Experienced well-being	2.00		
Local communities	Health and safety - LC	1.15	1.12	
	Access to tangible resources	1.23		
	Local capacity building	0.92		
	Community engagement	1.23		
	Employment	1.08		

PSIA : Dashboard Snapshot



Hurdles & Insight

Data gathered

	Steel Scrap	Steel manufacture	Bearing manufacture	Assembly to car
Country	Various	India	Hungary	Germany
Quantitative Data	+/-	+	+	+
Qualitative Data	+/-	+	+/-	+

Hurdles :

- Time consuming
- Reaching to the relevant point of contact
- Skeptical about social data sharing from the suppliers
- So, no complete information according to PSIA could be gathered.
- Impacts on local community undeterminable

Benefits

- ❑ **Quantitative approach could be easily integrated with the E-LCA for reaching a comprehensive life cycle sustainability assessment.**
- ❑ **Understanding the risk and improvement opportunities before decisions are made to start a pilot project .**
- ❑ **Assess the impacts of a product for internal assessment and optimization, helping companies to identify and take up joint projects that address the concerns highlighted in the study.**

Thank you..!!

Handbook: <http://product-social-impact-assessment.com/>

Contacts:

- ❑ Ms. Ambalika Gupta (Gupta.Ambalika@mahindra.Com)
- ❑ Mr. Peter Tarne (Peter.Tarne@bmw.De)
- ❑ Mr. Uday Gupta (Gupta.Uday@mahindra.Com)
- ❑ Ms. Marzia Traverso (PhD), (Marziatraverso@gmail.Com)