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“Indicators and Metrics for Socially Inclusive Waste Management and Resource Efficiency in Supply Chains: Measuring and Reporting to Embed Sustainability in Policy and Practice”, Florianopolis: UFSC, May, 2017.

My background

Bachelor in Pedagogy (IEMG)

Bachelor in Business Administration (PUC-Minas)

Master in Management (FEA-USP)

PhD in Management (EAESP –FGV)

PhD in Environmental Science (PROCAM-USP)





**School of Arts, Sciences and Humanities
São Paulo - Brazil**



EACH | USP
LESTE

Escola de Artes, Ciências e Humanidades
Universidade de São Paulo



EACH is one of the youngest units within the University of São Paulo (founded at 2005)

It has a unique organizational structure without any academic departments.

It is based on a strict commitment to the development of **inter-, multi- and trans-disciplinary** perspectives as well as the search for knowledge innovation.

Two of its key features include:

- the Basic Cycle, a series of studies common to all 10 undergraduate programs
(Problem Based Learning – PBL methodology)
- the establishment of a strong connection with local low-income communities through research projects and extension activities.



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Undergraduate Courses

Environmental Management

Gerontology

Information Systems

Leisure and Tourism

Marketing

Natural Sciences

Obstetrics

Physical Activity Sciences

Public Policy Management

Textile and Fashion





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Graduate Programs

Nowadays, EACH has **eleven** *Stricto Sensu* courses:

- Biochemistry and Molecular Biology (master and PhD)
- Cultural Studies
- Gerontology
- Information Systems
- Modeling Complex Systems
- Public Policy Management
- Physical Activity Science
- Social Change and Political Participation
- **Sustainability (master and PhD)**
- Textile and Fashion
- Tourism



B) What are the main findings of your previous research related to the workshop topics



The locus for
Waste pickers

Production chain - consumption

Product Design

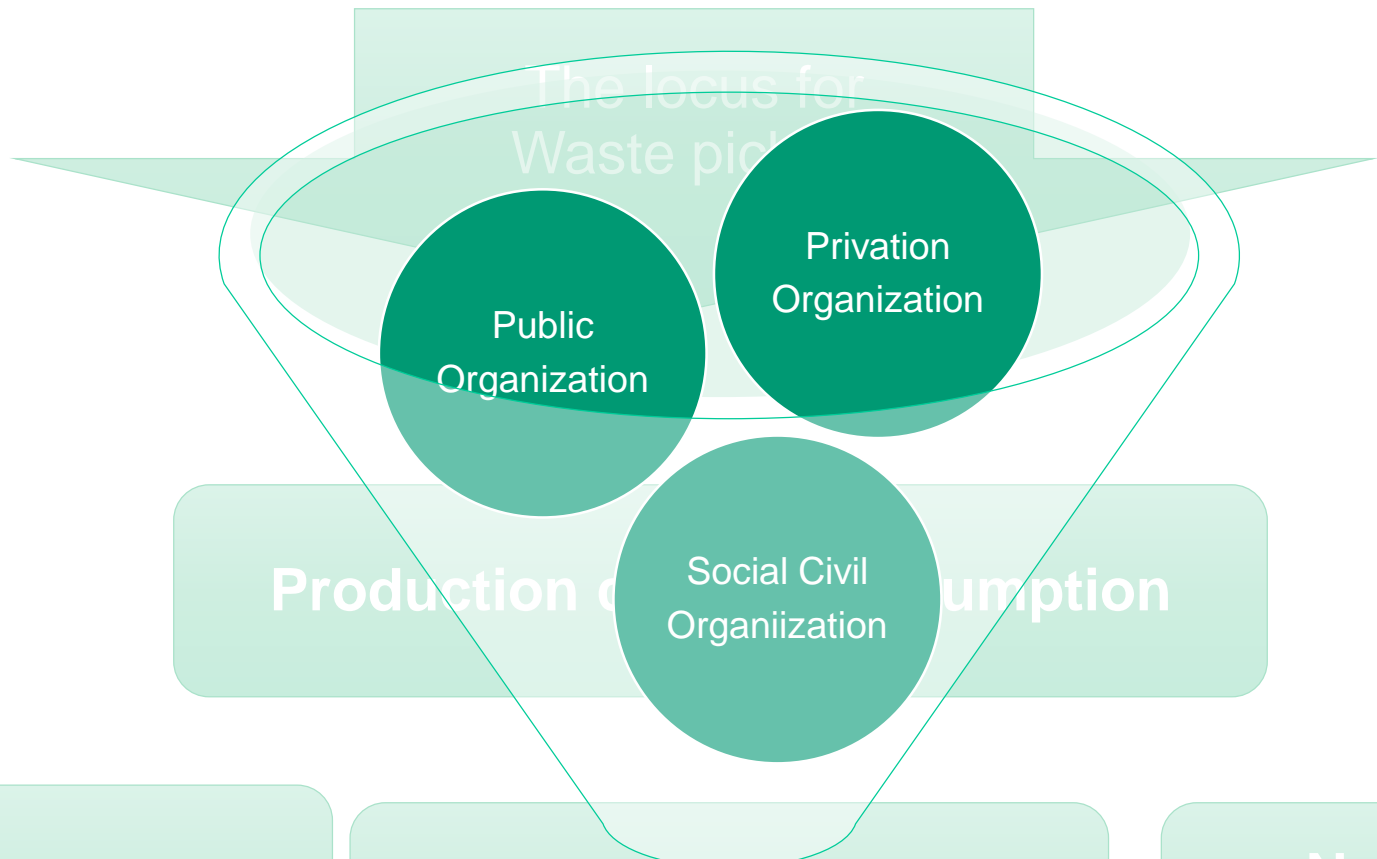
Operational functions

New market
Development

Waste Prevention
Product
Dismantle
LCA

procurement
Manufacture- Remanufacture
Reverse Logistics
Distribution - transport
Waste Management
Commercialization

My research issues are consumption , supply chain and waste management.



Production of Consumption

Product Design

Operation Functions

New market Development

Product Dismantle LCA

Public Policy

- Production
- Manufacture
- Remanufacture
- Reverse Logistics
- Distribution/transport
- Waste Management
- Commercialization



Brazil - the world champion recycling



No selective collection??

How??



Estimation of municipality selective collection program

material	Amount recycled (1.000 ton/year)	Amount recovery by the selective collection in official programs (1.000 ton/year)	Participation in municipality selective collection in the total amount recycled
Metal	9.817,8	72,3	0,7%
Paper/cardboard	3.827,9	285,7	7,5%
Plastic	962,0*	170,3	17,7%
Glass	489,0	50,9	10,4%

Note: * Data of 2007
Source: IPEA, 2012

Packaging – production e recycling Brazil - 2010

materials	(1) national apparent consumption (ton)	(3) Recycling volume (ton)	% recycling
printing paper	3.654.000	998.000	27%
cardboard	4.372.000	3.031.000	69%
tetrapak packaging	200.000	50.000	25%
glass	980.000	470.000	47%
plastics	5.900.000	951.000	19%
PET botle	505.000	282000 (4)	56%
metal. [Aluminium]	243980	239100	98%
metal. [steel]	604000	330000	49%
total	15953980	6069100	38%

Source: (1) BRACELPA (2010), ABIPLAST (2010). ABIQUIM (2010), ABAL (2010), Abralatas (2010), Abeco (2010), Abividro (2010), CEMPRE (2012)

Informality and precariousness in the selection and recovery of waste in Brazil

Selective collection programs: who does it? Waste pickers by manual traction



90% of recyclables collected is
made by waste pickers
(CEMPRE, 2010)

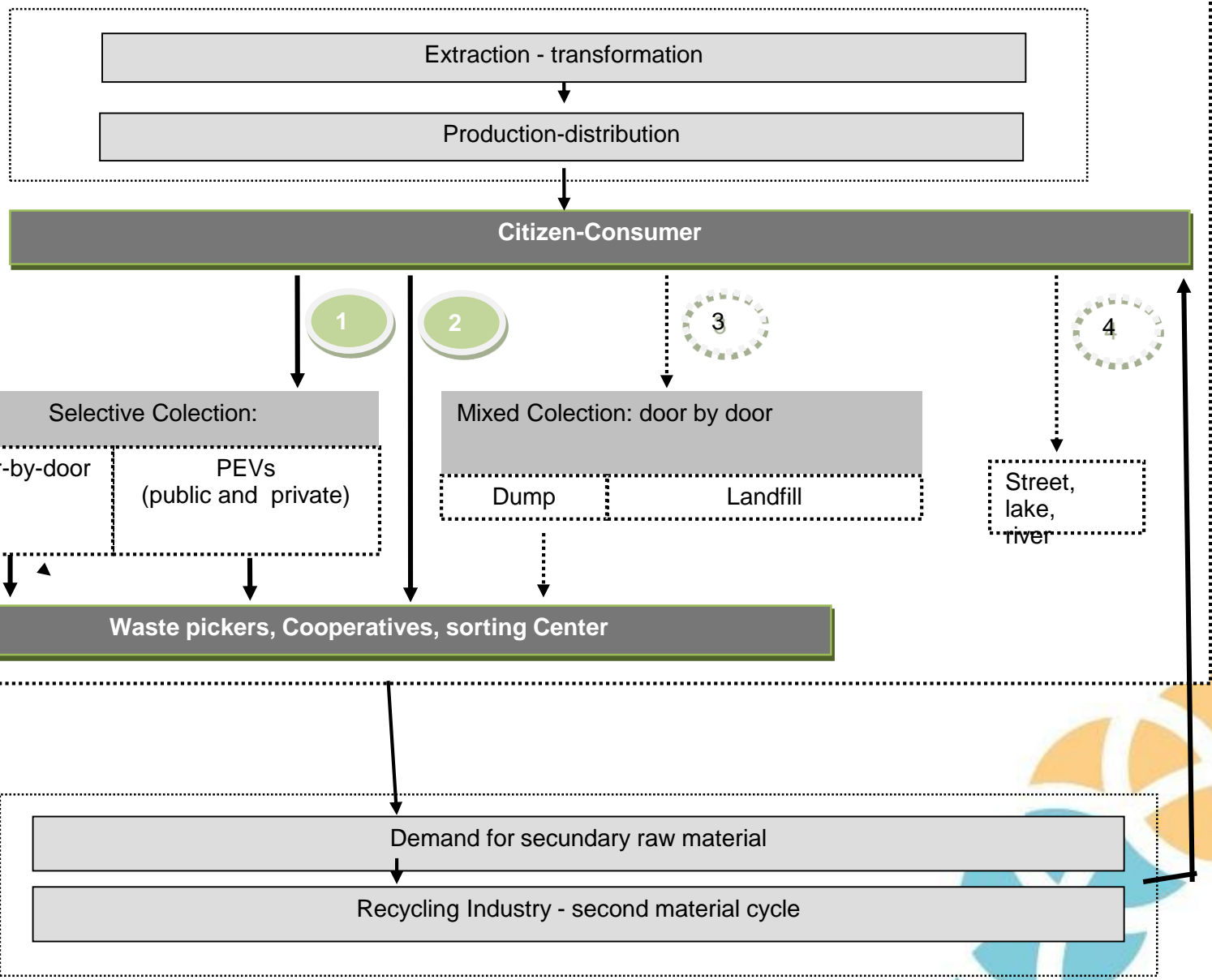


In addition to this, it considers the drawbacks and opportunities for the formulation of more systemic public policies.



Public Policy related to production-consumption

INSTITUCIONAL STRATEGY
INFORMACIONAL STRATEGY
MOTIVACIONAL STRATEGY



São Paulo show us a paradox:
the work of the waste pickers is similar to the
slaves of the nineteenth century as "Vassals of
modernity"

and on the other hand, the challenge of
sustainability seems to be the key issue of the
cities in the XXI Century.

Gonçalves-Dias (2009)



C) What are your current projects related to the topic

- **Discipline** at Environmental Science Graduate Program

Solid waste: management, policies and socio-environmental impacts (6th edition in 2017)



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- **Discipline** at Environmental Science Graduate Program

Solid waste: management, policies and socio-environmental impacts (6th edition in 2017)



My current projects

Urban solid waste and waste pickers: health, work and the environment.

Medical School
Faculty of Architecture and Urbanism
Environmental Management

Food waste (fresh fruit and vegetables): a case study at the street market in São Paulo City

Energy
Food engineer
Chemistry engineer
Nutritional
Environmental Management
Law
Public Policy



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Consumption

Sustainable Production and Consumption Policy

Supply chain

Textile industry
Footwear industry

Waste Prevention

Waste Food
Waste of Electro Electronic Equipment

Public Policy

National and local implementation
Instruments of implementation
Indicators of management

Waste Pickers (catadores)

Work condition (Health, Work Security; Equipment, Vulnerability, etc.)
Poor, Gender, Ethnical and Environment (intersectoriality)
The waste pickers and the city, policy, etc.

My current projects

New Economic Sociology

Institutional Theory;
Institutional logics
Ostrom, Lounsbury

Theory of field
(Fligstein and colleagues)

Theory of practice
Jarzabkowski

Public Policy Theory
(Sabbatier and colleagues)



D) What avenues for collaboration with colleagues in the workshop you will like to explore.

.... the need to re-think the generation of solid waste, from the conception of products, the consumption behaviour, the use and post-consumption to looking for the solutions for waste prevention, treatment and final disposal, in accordance to our National Policy.

The university is aware that this situation presents us challenges and opportunities for interdisciplinary research; and

I will be very grateful if I could count on your cooperation.

Thank you very much.



Obrigada !!

Thanks!!

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