D13.40 Sub-committee on Sustainability in Textiles

1st Meeting

Jayanti Mishra

Jan 31st 2012




Introduction of attendees

Rising temperature & Disappearing Rain forests

Disappearing Rainforest

- .

Rising temperatures affecting Fresh water availability

Species migration and extinction

- Gray Whale
- Birds
- Frogs
- Fishes

World scenario

- Climate change
- Toxic chemicals
- ‘fast fashion’
- Water consumption

World scenario contd..

- Recycling
- Consumer choice.
- Technology.

Water consumption

14000 to 20000

1450-1750

World scenario contd..

- Social concern
- Environmental performance dependency
- Energy Use
- life of the product

Impact of textiles

- Resource depletion
- Pollution
- Energy use
- Biological Environment

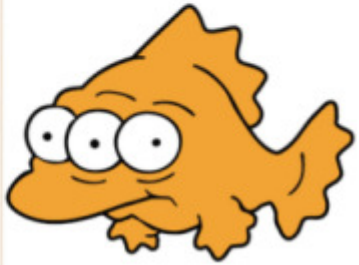
300 Gigatons of CO_2 released into the atmosphere

Textile industry contributes 10% of total impact

60 million tons of annual textiles global usage

9 trillion liters of water used annually...

Large parts of Toxicity added during use



A significant quantity of used textiles goes into landfills.

The Growing Importance of Sustainability in Textiles

Eco labels out there

- **430 ecolabels in 246 countries, and 25 industry sectors.**

Agenda

- **Meeting Agenda**
  D13.40 on Sustainability of Textiles
- Mishra, Jayanti
- **Date:**January 31,2012 **Time:** 8.30 am to 10.30am
- **Place:** Atlanta, GA
- Call to order and introduction of attendees 10minutes
- Approval of Agenda 2 minutes
- Approval of Previous Meeting Minutes Presentation 25 minutes
- Membership Updates 5minutes
- Ballot Results (since last meeting)
- a) Main/Concurrent Items
  *** None ***
- b) Subcommittee Items
  *** None ***
- Outstanding Negatives Needing Resolution (prior to last meeting)
- Main/Concurrent Items
  *** None ***
- Subcommittee Items
  *** None ***
- Standards Requiring Review
  *** None ***

Agenda contd..

- New Standard and Reinstatement Work Items (Not Currently on Ballot)
  - WK33688 New Standard Guide For Fibers Sustainability (Technical Contact: Mishra, Jayanti)
- To discuss the members interested and discuss the objectives of the Task Group
- Revision and Withdrawal Work Items (Not Currently on Ballot)

  *** None ***
- Task Group Reports (Other than Work Items) None yet
- Liaison Reports
- With Textile Exchange and Sustainable Apparel Coalition 5 minutes presentation
- Old Business
- Workshop in June . To discuss the agenda and outline of the workshop and Speaker confirmations. Presentation 10 minutes
- New Business/Committee Correspondence
- TRSA Proposed Standard Discussion 10 minutes
- Administrative Deadlines
- Open to discussion and feedback- 30 minutes
- Future Meetings
- Event Name: June 2012 Committee Week
  Dates: Sunday, June 24th 2012 - Wednesday, June 27th 2012
  Location: Sheraton San Diego Hotel & Marina; San Diego, CA US.

Agenda contd..

Planned conference to cover;

- **General Objectives** –The Objectives laid down are -
  - To draw the technical minds already associated with D13 for a focused workshop on sustainable fiber standards development.
  - To attract Senior Management/ Buyers / Designers to associate with ASTM D13 and D13.40 through a highly interactive, strategic workshop on sustainable business.

The workshop can be called "Vision in Action" and will include two exclusive workshops

- On Sustainable textile fiber standards - An Insight into available global sustainable fiber guidelines and standards and future development. Participation of Subject matter experts, material specialists, technologists from producers, retailers, testing agencies, industry organizations & research analysts

  &

  From Concept to consumption- Create a powerful, holistic, integrated sustainable textile business strategy. Lead management consultants will facilitate a unique, highly interactive workshop bringing together business strategists, brand managers, buyers, designers, material specialists, technologist and CSR to create a blueprint for success.

- Event Name: January 2013 Committee Week
  Dates: Sunday, January 27th 2013 - Wednesday, January 30th 2013
  Location: Hyatt Regency Jacksonvile Riverfront; Jacksonville, FL US
- Meeting Adjournment
- For a complete list of standards see
  http://www.astm.org/COMMIT/SUBCOMMIT/D1340.htm

The earlier defined objective were

- The need of sustainability in production and consumption of Textiles.
- Provide a venue for networking among participants and sharing of best practices
- To draw the technical minds already associated with D13 for a focused workshop on sustainable fiber standards development.
- To attract Senior Management/ Buyers / Designers to associate with ASTM D13 and D13.40 through a highly interactive, strategic workshop on sustainable business.

Objectives Today

- **Currently established standards, test methods, specifications**

  Cotton and polyester- 2 most consumed fibers- Need to study the standards in depth and work on establishing the test methods/filling in gaps in existent standards

  Review GRS Standard and establish guidelines/test methods filling gaps in the existent standard
- **Test Methods for recycle content**
- **Measuring footprint**
- **Rating basis**
- **Organic seed cultivation Test methods**
- **SAC/Nike Fiber grading and rating methodology**
- **Why the scoring is the way it is and are test methods identified/specifications laid down**
- **Review current certifications, training certifiers help create/improve standards**
- **New standards for Polyester Recycling and Organic Cotton**

Gaps today

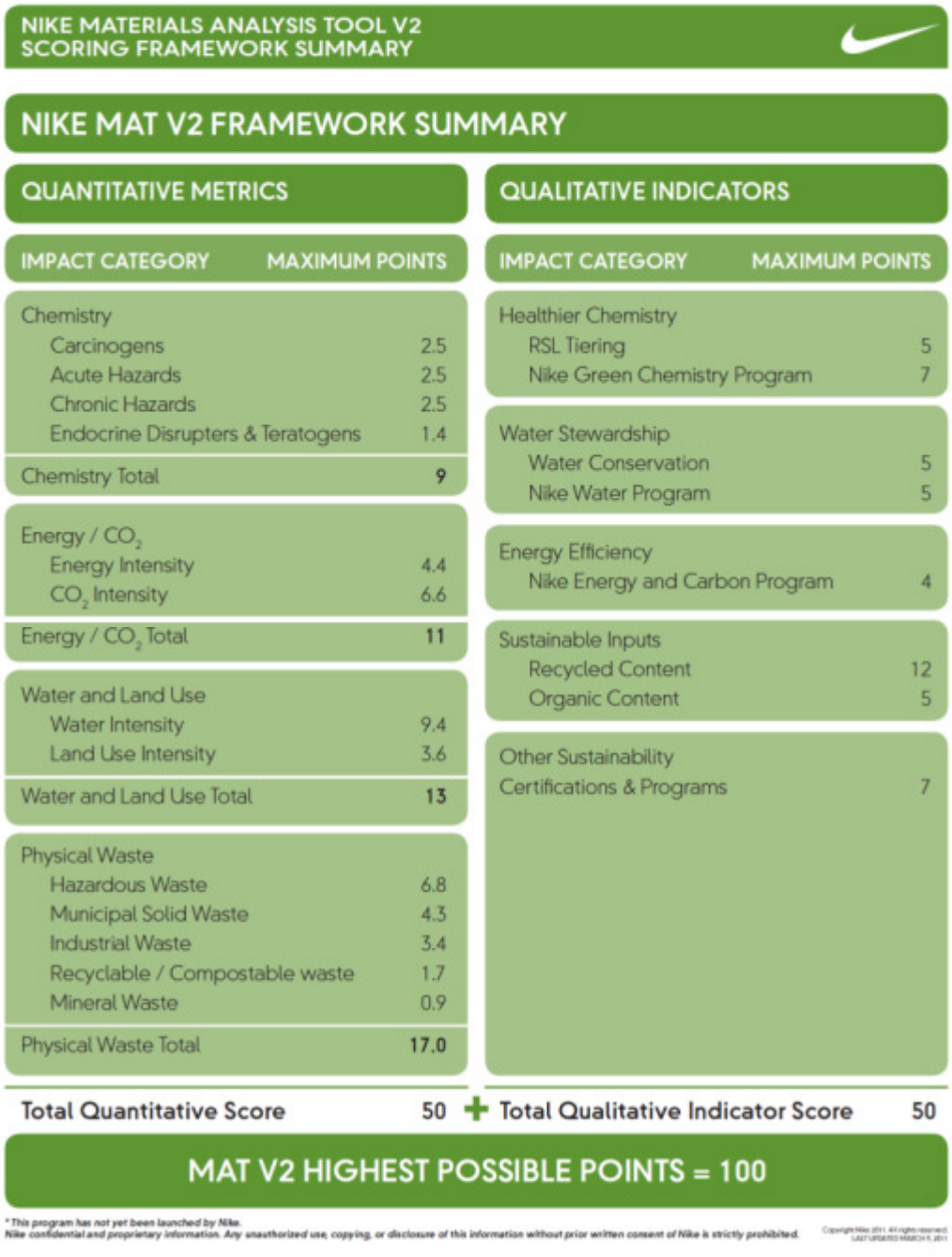
- **Organic Cotton**
  1) No measurement /rating of the processes involved
  2) Current ensure traceability and basic environmental compliances
  3) No scoring/evaluation of the integrity- currently based on audit system max twice a year
  4) No test methods to confirm authenticity- adulteration not traceable in current standard

Recycle Standard

1) Stress on traceability
2) No rating or measurement of processes
3) Current standard asks for basic environmental performance of organization but does not evaluate the efficiency or performance of the manufacturing process specific to recycle
4) No scoring/evaluation
5) No test methods to confirm authenticity-adulteration not traceable in current standard

Long Range Planning

- Standards on Fibers
  - A look at the Material Index By Nike
  - Eco Index by Sustainable Apparel Coalition
- Standards on Processes- Identifying the major impacts and devising standards to improve them.
- Sharing Of Best Practices
- Regular Conferences
- Not duplicating work being done outside ASTM



NIKE MATERIALS ANALYSIS TOOL V2
SCORING FRAMEWORK SUMMARY

NIKE MAT V2 FRAMEWORK SUMMARY

QUANTITATIVE METRICS

IMPACT CATEGORY	MAXIMUM POINTS
Chemistry	
Carcinogens	2.5
Acute Hazards	2.5
Chronic Hazards	2.5
Endocrine Disrupters & Teratogens	1.4
Chemistry Total	9
Energy / CO_2	
Energy Intensity	4.4
CO_2 Intensity	6.6
Energy / CO_2 Total	11
Water and Land Use	
Water Intensity	9.4
Land Use Intensity	3.6
Water and Land Use Total	13
Physical Waste	
Hazardous Waste	6.8
Municipal Solid Waste	4.3
Industrial Waste	3.4
Recyclable / Compostable waste	1.7
Mineral Waste	0.9
Physical Waste Total	17.0

QUALITATIVE INDICATORS

IMPACT CATEGORY	MAXIMUM POINTS
Healthier Chemistry	
RSL Tiering	5
Nike Green Chemistry Program	7
Water Stewardship	
Water Conservation	5
Nike Water Program	5
Energy Efficiency	
Nike Energy and Carbon Program	4
Sustainable Inputs	
Recycled Content	12
Organic Content	5
Other Sustainability	
Certifications & Programs	7

Total Quantitative Score 50 + **Total Qualitative Indicator Score** 50

MAT V2 HIGHEST POSSIBLE POINTS = 100

* This program has not yet been launched by Nike.

NIKE MATERIALS ANALYSIS TOOL V2
SCORING FRAMEWORK SUMMARY

MAT V2 QUALITATIVE INDICATOR POINTS SCORING CRITERIA

CATEGORY	METRIC	POINTS	APPLICATION LEVEL	SCORING CRITERIA				
HEALTHIER CHEMISTRY	RSL TIERING	5	VENDOR	5 Meets RSL green criteria (>95% pass for 25 samples)	0 Meets RSL yellow criteria (100% pass for <25 samples)	-5 Meets RSL red criteria (<95% pass for any number of samples)		
	NIKE GREEN CHEMISTRY	7	MATERIAL	7 Best in class Material greening effort validated by Nike	4 Incremental improvement in material greening effort validated by Nike			
			VENDOR			0 Signed commitment to self-evaluate all chemicals	-2 No participation in Nike Green Chemistry Program	
WATER STEWARDSHIP	WATER CONSERVATION	5	VENDOR		5 ≥50% of water recycled with documentation	3 10-49% of water recycled with documentation	1 ≥10% of water recycled	0 <10% of water recycled
			MATERIAL		Waterless Coloration	Reduced Water Coloration		No Alternative Coloration
	NIKE WATER PROGRAM	5	VENDOR	5 Green or blue rating	3 Yellow rating	0 Not Rated	-3 Red rating (needs improvement)	-5 Red rating (insufficient data or no response)
ENERGY EFFICIENCY	NIKE ENERGY AND CARBON PROGRAM	4	VENDOR	4 ECAT score of four, 10% improvement of energy KPIs	3 ECAT Score of three, 5% improvement in energy KPIs	2 ECAT score of two, Completed energy assessment	1 Meets minimum energy management definition	
SUSTAINABLE INPUTS	RECYCLED CONTENT	12	MATERIAL	12 100% recycled content		0 No recycled content		
	ORGANIC CONTENT	5	MATERIAL	5 100% organic content		0 No organic content		
SUSTAINABLE CERTIFICATIONS AND PROGRAMS*		7	VENDOR	4		2		1
				TIER 1		TIER 2		TIER 3
	Comprehensive Input Stream Management System			bluesign® approved fabrics		bluesign® implementation phase		bluesign® screening process
	Organic Certification			OE 100 Standard certified, OE Blended Standard certified, GOTS certified				
	Sustainable Cotton Agriculture			BCI member & buyer				BCI member
	Recycled Certification			SCS Recycled Content Certification, Global Recycle Standard certified, Intertek Product Conformity Certification				
				Zero Waste Material Process		CLM Finished Component -Internal waste recovery		Nike CLM participant
	Sustainable Leather Production			LWG Gold rated		LWG Silver rated		LWG Bronze rated
	Sustainable Forestry Certification			FSC Chain of Custody Certification				
	Climate Change Transparency							CDP participant
	Environmental Management System							ISO 14001certified
	Green Building Impacts					Platinum LEED certified, Gold LEED certified		Silver LEED certified, LEED certified
OTHER RESOURCE IMPACTS	BLENDING/COMPOSITING	0	MATERIAL	0 Single fiber/polymer		-3 Blend of 2 fibers/polymers		-5 Blend/composite of more than 2 fibers/polymers
TOTAL POSSIBLE QUALITATIVE INDICATOR POINTS		50						

** Awarding points in any certification or program type is never in lieu of any Nike mandatory programs.*

NIKE MATERIALS ANALYSIS TOOL V2 SUMMARY

WHAT IS IT?

SCORING SYSTEM: Measures the environmental impacts of materials used in Nike products

IMPACTS COVERED: Energy & CO_2 intensity, water intensity & quality, land use, chemistry, & physical waste

POINTS STRUCTURE: Up to 100 points awarded using LCA based data (50 points) & qualitative indicator points (50 points)

SCORING CRITERIA: Combines material-specific data with vendor performance in Nike & third-party programs

LIFE CYCLE PHASE: Cradle to gate – from farm/wellhead to finished material

WHY IS IT NEEDED?

ALIGN FW & AP INDEX:
Provides a common framework to score materials for all Considered product indexes.

INCENT & RECOGNIZE VENDORS:
Rewards vendors for participation in sustainability programs & gives clear direction on Nike priorities.

EASE OF USE:
Reduces costs and time required for MAT maintenance by streamlining LCA based methodology.

WHO IS AFFECTED?

CATEGORIES:
Updates guidance on EPMs for Index goals & product strategies.

PRODUCT CREATION:
May alter EPM scores for Considered Index scoring.

MATERIALS DEVELOPERS (LO/HO):
Facilitates scoring materials-in-development & vendor education on Nike EPM priorities.

MATERIALS OPERATIONS:
New processes for collecting & reporting sustainability information from vendors.

MATERIALS SOURCING:
New vendor approval process must include MAT V2 program & process guidance to vendors.

NLOs:
NLOs will serve as liaisons between Considered and vendors to collect & record program data.

VENDORS:
Performance in sustainability programs directly affects material scores.

QUICK REFERENCE

	MAT V1	MAT V2
FRAMEWORK	QUANTITATIVE SCORE (100 points)	QUANTITATIVE SCORE (50 points); QUALITATIVE INDICATOR SCORE (50 points)
WEIGHTING	CHEMISTRY 40%; ENERGY 24%; WASTE 20%; WATER 16%	CHEMISTRY 25%; ENERGY 25%; WASTE 25%; WATER 25%
INDEX	MAT V1 → AP INDEX V1; EPM RULES → FW INDEX V1	MAT V2 → AP INDEX V2; FW INDEX V2

MAT V2 FRAMEWORK

QUANTITATIVE METRICS	MAX POINTS
CHEMISTRY	9
ENERGY/CO_2	11
WASTE	13
WATER	17
QUANTITATIVE SCORE	50

QUALITATIVE INDICATORS	MAX POINTS
RECYCLED INPUTS	12
ORGANICALLY GROWN CONTENT	5
RSL TIERING	5
NIKE GREEN CHEMISTRY PROGRAM	7
WATER CONSERVATION	5
NIKE WATER PROGRAM	5
NIKE ENERGY PROGRAM	4
CERTIFICATION AND VENDOR PROGRAMS	7
BLENDING/COMPOSITING	0
QUALITATIVE INDICATOR SCORE	50

HOW AND WHEN WILL IT BE ROLLED OUT?

PHASE 1 March 11 – JUNE 11: Train NLOs and vendors on data collection processes. Ramp up period for vendors to participate in MAT v2 programs. April 7 vendors begin uploading program documents to Vendor Certifications & Programs Portal. Complete MAT V2 systems development.

PHASE 2 JUNE 11 & BEYOND: Roll-out vendor-specific MAT V2 points for Index scoring. Implement decisions to apply points in unique sourcing scenarios. Refresh scores biannually every December 1 and June 1. Continue engaging vendors in MAT v2 program participation.

NIKE MATERIALS ANALYSIS TOOL V2
SCORING FRAMEWORK DETAIL FOR SUPPLIERS

Application Level	NIKE MAT V2 POINTS CATEGORY	Min points	Max points	BASIS FOR POINTS/EXPLANATION OF PROGRAM	CAN VENDOR INFLUENCE?	WHAT DOES VENDOR HAVE TO DO?	MATERIAL TYPE RELEVANCE	PROGRAM CONTACT INFORMATION	APPROXIMATE COST TO SUPPLIER
MATERIAL SPECIFIC	Life cycle assessment points (LCA)	0	50	LCA score for each raw material based on supply chain data.	No; Nike assigns based on raw material type	Nothing.	FW & AF materials	N/A	N/A
	Recycled content	0	12	Based on material specifications.	No; Nike assigns based on materials specified in product.	Develop capacity to supply recycled content materials.	FW & AF materials	N/A	Depends on material type and recycling technology.
	Organic content	0	5	Based on material specifications.	No; Nike assigns based on materials specified in product.	Develop capacity to supply materials with organically grown content.	FW & AF materials	N/A	Depends on material type, location, etc.
	Nike Green Chemistry (material level)	0	7	Based on toxicology results of materials submitted for Green Chemistry Program.	Yes; vendor can submit material-specific green chemistry achievements for consideration.	Submit green chemistry material formulations for evaluation by Nike-approved toxicologist and convey results to Nike Green Chemistry Program Manager.	FW & AF materials	www.nikeresponsibility.com/ml	$300-$2000+, depending on changes to material chemistry formulation.
	Water conservation - dye method	0	5	Based on material specifications.	No; Nike assigns based on materials specified in product.	Develop capacity to use alternative dye methods & technologies.	AF materials FW future participation TBD	Heather Rippman, heather.rippman@nike.com	Depends on material type & technology.
	Blending/Compositing	-5	0	Based on material specifications.	No; Nike assigns based on materials specific in product	Develop capacity to supply single fiber/composite	FW & AF materials	N/A	Depends on material type
VENDOR SPECIFIC	Nike Green Chemistry (vendor level)	-2	0	Based on vendor's self-reported participation in Green Chemistry Program.	Yes; vendor can commit to evaluating all chemicals used in facility.	Sign Nike Green Chemistry letter and return to Nike Green Chemistry Program Manager.	FW & AF materials	www.nikeresponsibility.com/ml	Negligible cost; only signed letter is required in addition to staff resources to self-evaluate all chemicals.
	Nike RSL program	-5	5	Based on results of testing for materials against the appropriate Nike RSL Test package.	Yes; vendor must comply with Nike RSL.	Send material samples to Nike-Approved Laboratories with Nike & Affiliates Test Request Form (TRF).	FW & AF materials	www.nikeresponsibility.com/ml	Approximately $145-$425 per test for most materials.
	Nike Water Program	-5	5	Based on vendor performance in Nike Water Program.	Yes; vendor can report water management & performance through Nike Water Program.	Participate in Nike Water Program.	All AF materials & FW textiles	waterprogram@nike.com	Approximately $200-$400 for wastewater effluence testing.
	Water conservation - vendor facility water recycling	0	5	Based on information provided by vendor and validated by Nike via Nike Water Program.	Yes; vendor can practice water recycling in facilities.	Submit water recycling data and documentation through Nike Water Program database.	FW & AF materials	waterprogram@nike.com	Depends on technology used to recycle water.
	Nike Energy and Carbon Program	0	4	Develop an energy and carbon management program with Nike's Energy and Carbon Manager.	Yes, upon contact from Nike's Energy and Carbon Program Manager vendor can participate in assessment, select and implement energy savings projects.	Nike Energy Program Manager will contact strategic vendors directly.	FW & AF materials	Nike Energy Program Manager to contact vendors	No costs to engage with Nike Energy and Carbon program. Cost of implementation of energy savings will vary.
	Recycled certification Nike Closed Loop Material Program	0	1	Based on participation in Nike Closed Loop Material Program.	Yes; vendor can participate in CLM program.	Contact NLO or Nike CLM Program Manager for more details on how to set up the CLM program.	FW materials	Primary NLO contact or Kevin O'Donnell, kevin.odonnell@nike.com	Depends on material and technology type required for material segregation and take back.
	Input-stream management bluesign® standard	0	4	Based on certification against third-party standard that evaluates all inputs, processes, and technologies, via "input stream management," in order to address resource productivity, consumer safety, air emission, water emission, and occupational health & safety.	Yes; vendor can achieve certification through bluesign®.	Complete Vendor Certifications & Programs Portal application & upload bluesign certificate. Re-screening dates vary (about every 2 years).	Applies to all textile-related products, including yarns, fabrics, and finishing.	www.bluesign.com Asia: singbin_lim@bluesign.com Europe: info@bluesign.com	Fees depend on complexity and amount of chemical components used.
	Organically grown content - Organic certification or Global Organic Textile Standard	0	4	Based on certification against third-party organic traceability & handling standards. Accepted certifications include Organic Exchange 100, Organic Exchange Blended, and Global Organic Textile Standard.	Yes; vendor can achieve certifications through a third-party certifier.	Complete Vendor Certifications & Programs Portal application & submit scope certificate to nikeConnect.	OE applies to cotton only; GOTS applies to all natural materials	www.textileexchange.org www.global-standard.org	Depends on size and location of facility. Average fee for certification in Asia-based supplier is $3500 (US $700 per day; 5-6 days for average certification).
	Sustainable cotton agriculture - Better Cotton Initiative	0	4	Based on level of BCI involvement (buyer vs. member).	Yes; suppliers throughout the cotton supply chain can pay to join BCI and demonstrate compliance with BCI criteria.	Complete Vendor Certifications & Programs Portal application.	Cotton; applies to ginners, spinners, mills, and cut & sew facilities.	www.bettercotton.org; http://bettercotton.org/index/168/applying_for_membership.html	Depends on volume of cotton lint traded annually. Ranges from €200-€5000 per year per company (individual facilities are covered under the company fee).
	Recycled certification - SCS Recycled Certification	0	4	Based on certification against third-party standard that verifies verifies % of recycled content in a specific material. Covers traceability, performance, product formulation, and product processing for materials with post- or pre-consumer recycled content.	Yes; vendor can achieve certifications through a third-party certifier (www.scscertified.com/gbci/recycled-materials.php).	Complete Vendor Certifications & Programs Portal application & submit SCS Recycled Content Certificate. Indicates name of company & specific certified product. Requires on-site audit for initial certificate & annual desk audit for renewal.	Applies to finished products or materials that use any percentage of recycled content inputs.	Scientific Certification Systems Samantha Poblete, Account Manager 2200 Powell Street, Suite 725 Emeryville, CA 94608 USA (510) 452-8858 spoblete@scscertified.com	Approximately $9,000-18,000 for initial certification and $4,800 for renewals.
	Recycled certification - Global Recycle Standard	0	4	Based on certification against third-party standard that verifies % recycled content in a specific material or in-process product. Covers traceability, processing, worker health & safety, workers' rights, & environmental management. Eligible inputs must hav e one of the following: Taiwan & Japan National Recycling Standard, Ecomark Certification, SCS Recycled Certification, or Control Union certification.	Yes; vendor can achieve certifications through a third-party certifier.	Complete Vendor Certifications & Programs Portal application & submit Global Recycled Content Standard certificate. Indicates name of company & specific certified product. Requires annual on-site audit by certifying body.	Applies only to finished goods or in-process materials using raw material inputs that have one of the following: Taiwan or Japan National Recycling Standard, Ecomark Certification, SCS Recycled Certification, or Control Union certification.	http://organicexchange.org/oecone/Global-Recycle-Standard.html (Control Union Certifications Robert J. Demianew, Programmer Manager rdemianew@controlunion.com http://certification.controlunion.com/)	Average fee is $3,750-$4,800 (US $750-$900 per day; 5-6 days per mill).
	Recycled polyester certification - Intertek PCC	0	4	Applicable to material vendors producing any percentage of recycled polyester fabrics, garments and trims/accessories, in order to prove that the material vendors are capable of producing recycled polyester products. PCC does test for percentage integrity. Material vendors must first confirm that their yarn suppliers are Intertek MSC-certified before going forward with PCC certification.	Yes; vendor can achieve certification through Intertek.	Complete Vendor Certifications & Programs Portal application & upload certificate. Certification is valid for two years.	Applies only to vendors producing recycled PET fabrics, garments and trim/accessories.	Jason Chen, jason.chen@intertek.com Elizabeth Turnbull, elizabeth.turnbull@intertek.com	Approximate cost is $1,500 USD (25,000 yards for fabrics; 1,000 dozens for garments) for Application & Pre-evaluation Fee, On-site Auditing Fee, Certification Fee, and Logo (a certificate) Fee. Excludes travel expenses.
	Recycled certification - FSC Chain of Custody Certification	0	4	Based on certification against third-party standard that verifies % recycled content of wood or other forest-based inputs used in materials in all stages of sourcing, processing, transformation, manufacturing, and distribution. Applies to all materials that use recycled wood, pulp, cellulose, or other FSC-certified forest inputs as a raw material.	Yes; vendor can achieve certifications through a third-party certifier (List of accredited certifying bodies: www.fscus.org/certifiers/ www.accreditation-services.com/ accreditation_of_cbs.html.)	Complete Vendor Certifications & Programs Portal application & submit invoice for an FSC-certified product (see page X). Invoice must include the suppliers' FSC CoC code & FSC - Recycled claim. Certificates are valid for 5 years but require annual renewals.	Applies to finished goods or in-process materials using FSC-certified recycled wood, chip, or fiber materials.	To learn more: (US) www.fscus.org, (International) www.fsc.org To see US certification bodies: www.fscus.org/certifiers To see international certification bodies: www.accreditation-services.com/ accreditation_of_cbs.html Contact: Emily Crumley (emily@fscus.org)	Approximate cost is $2,000-$5,000, but varies from certifier to certifier. Material vendors should complete applications for 2-3 certifying bodies before selecting one to compare cost, timing, and customer service.
	Sustainable forestry certification - FSC Chain of Custody Certification	0	4	Based on certification against third-party standard that verifies % content of sustainable wood or other forest-based inputs used in materials in all stages of sourcing, processing, transformation, manufacturing, and distribution. Applies to all materials that use recycled wood, pulp, cellulose, or other FSC-certified forest inputs as a raw material.	Yes; vendor can achieve certifications through a third-party certifier (List of accredited certifying bodies: www.fscus.org/certifiers/ www.accreditation-services.com/ accreditation_of_cbs.html.)	Complete Vendor Certifications & Programs Portal application & submit invoice for an FSC-certified product (see page X). Invoice must include the suppliers' FSC CoC code & FSC claim. Certificates are valid for 5 years but require annual renewals.	Applies to finished goods or in-process materials using FSC-certified recycled wood, chip, or fiber materials.	To learn more: (US) www.fscus.org (International) www.fsc.org To see US certification bodies: www.fscus.org/certifiers To see international certification bodies: www.accreditation-services.com/accreditation_of_cbs.html Contact: Emily Crumley (emily@fscus.org)	Approximate cost is $2,000-$5,000, but varies from certifier to certifier. Material vendors should complete applications for 2-3 certifying bodies before selecting one to compare cost, timing, and customer service.
	Sustainable leather production - LWG environmental stewardship protocol.	0	4	Based on assessment of sustainable leather tanning practices.	Yes; vendor can be audited by a third-party certifier. (BLC Leather Technology Centre Ltd.)	Participate in LWG audit, complete Vendor Certifications & Programs Portal application, & submit LWG certificate in nikeConnect.	Leather	info@leatherworkinggroup.com for program information. adam@blcleathertech.com for audit information www.blcleathertech.com	$4200 per tannery audit (excluding expenses such as economy flights, transfers, accommodation, subsistence), $4,200 for renewal every 18 months.
	Climate change transparency - Carbon Disclosure Project	0	1	Based on vendors' participation in Carbon Disclosure Project.	Yes; vendor can report GHG emissions and management programs through CDP.	Complete Vendor Certifications & Programs Portal application & submit CDP Questionnaire to nikeConnect. Contact respond@cdproject.net to request a questionnaire.	FW & AF materials	www.cdproject.net; www.cdproject.net/en-US/Respond/Pages/CDP-Supply-Chain-and-Public-Procurement.aspx	No fee for participating.
	ISO 14001 Certification	0	1	Based on certification against third-party environmental management system standard.	Yes; vendor can achieve certification through a third-party certifier.	Complete Vendor Certifications & Programs Portal application & submit ISO 14001 certificate to nikeConnect.	FW & AF materials	www.iso.org/iso/catalogue_detail?csnumber=31807	CHF 104.00 to purchase standard. Certification costs vary among certification bodies.
	Green building - LEED	1	4	Based on certification against third-party standard that ensures that a building or community was designed/built/maintained using strategies that improve performance in energy savings, water efficiency, CO2 emissions reductions, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.	Yes; vendor can achieve certification through Green Building Certification Institute.	Complete Vendor Certifications & Programs Portal application & upload certificate. Indicates name & address of company, project ID number, project name, and level of certification. In most cases, certification renewal is not necessary.	Applies to all buildings (e.g., factories) or communities.	www.gbci.org	Depends on project size. Average fee for certification is $2,000. Project Registration Fee is a flat fee of $900 (USGBC members) or $1,200 (non-members).

Three Index Building Blocks

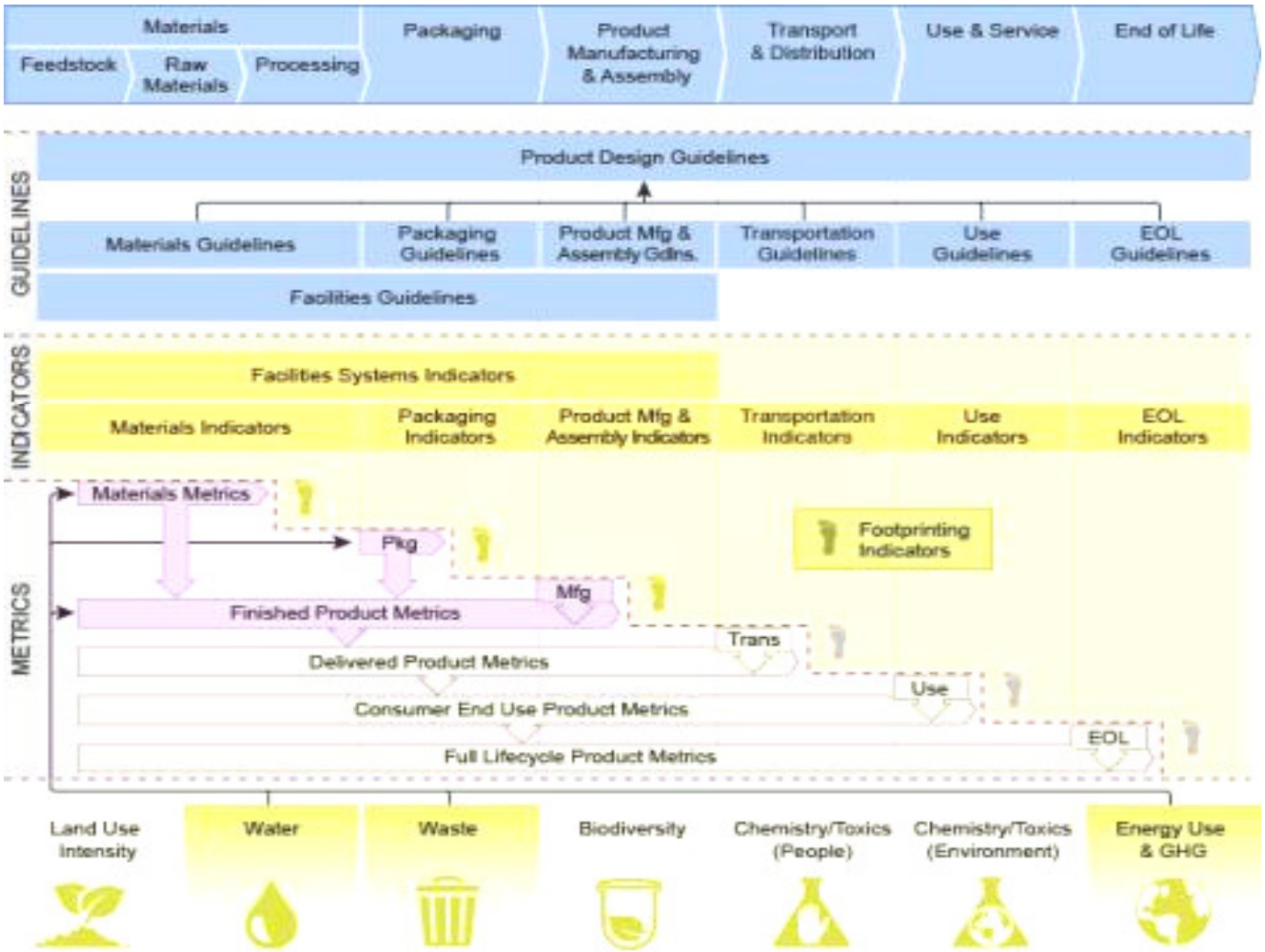
Sustainable Apparel Coalition

V1.0 Apparel Index

- OIA Eco Index
- Materials Sustainability Index
- Social/Labor Indicators*

*** Under development;** based on best available frameworks

OIA Eco Index



PRODUCT MODULE			
Section	**Score (out of 100)**	**Weight**	**Weighted Score**
Materials	X of 100	16.67%	Y of 16.67
Packaging	X of 100	16.67%	Y of 16.67
Manufacturing	X of 100	16.67%	Y of 16.67
Transportation	X of 100	16.67%	Y of 16.67
Use & Service	X of 100	16.67%	Y of 16.67
End of Life	X of 100	16.67%	Y of 16.67
	Total	**100%**	**Z of 100**

ASTM Committee
D134000
Membership Report

NAME	COMPANY	CLASS	VOTE
Amardeep, Dheendayal	ASK Consulting Inc	General Interest	Yes
Basheer, Abul Hassan	Global Resources Mgmt Group	General Interest	Yes
Berg, Becky M	Costco Wholesale	General Interest	Yes
Bhajekar, Vidyadhar	Texanlab Laboratories Pvt. Ltd.	General Interest	Yes
Bide, Martin	University Of Rhode Island	General Interest	Yes
Boyter, Henry A	CESTAB	General Interest	Yes
Carrier, Jeffrey	The Carpet and Rug Institute	Producer	Yes
Cendrowska, Teresa J	ASTM International	General Interest	Yes
Chaudhary, Shreyaskar	Pratibha Syntex Pvt. Ltd	Producer	Yes
Clarke, Dena	Aegis Environmental Management	Producer	Yes
Cole, Timothy R	FORBO INDUSTRIES INC	Producer	Yes
Cox, Cecele	Alsco Inc.	General Interest	Yes
Dempsey, Patrick J	Dempsey Uniform	General Interest	Yes
Gillespie, Anne	Textile Exchange	General Interest	Yes
Gopalakrishnan, Jayakumar		General Interest	Yes
Gramp, Gary D	Textile Rental Services Association	General Interest	Yes
Guy, Henry	Eec	General Interest	Yes
Hashemi, Nastaran	Intertek	General Interest	Yes

NAME	COMPANY	CLASS	VOTE
Helmstetler, Doug	ARAMARK Uniform Services	General Interest	Yes
Ichhaporia, Pratik K	INTERTEK CONSUMER GOODS	Unclassified	Yes
Ji, Won-Ha	Fiti Testing & Research Inst	General Interest	Yes
Joshi, Mayank	Changed Employer	Producer	No, NV
Kallenbach, Steve	American Dawn Inc.	Producer	Yes
Kirke, Bob J	Caf	General Interest	Yes
Kubler, Charley	G&K Services, Inc.	General Interest	Yes
Leukhardt,III, Howard A	Safariland, LLC	Producer	Yes
Lewis, Mark L	Dempsey Uniform	Unclassified	No, PD
List, Jennifer	Nike, Inc	User	Yes
Madsen, Eric L	Extended Producer Responsibility	General Interest	Yes
Mehta, Vishal		General Interest	Yes
Mishra, Jayanti	Pratibha Syntex Pvt. Ltd	Producer	No, NV
Pariti, Siva Rama Kumar	DyStar India Private Limited	Producer	Yes
Ryan, David T	Wearbest Sil-Tex Mills	Producer	Yes
Schneider, Joanna Z	3m	Producer	Yes
Shaw, Anugrah	UNIV. OF MARYLAND EASTERN SHORE	General Interest	Yes
Simonson, Steve	Burlington Industries Inc	Producer	Yes
Smith, Ian C	Coloursmith, Ltd	General Interest	Yes
Somasundaram, Jaganathan	M/S India Dyeing Mills P Ltd	Producer	Yes
Sperduto, Kathleen H		General Interest	No, NV

NAME	COMPANY	CLASS	VOTE
Srinivasan, Srivatsa	E&T Textiles	General Interest	Yes
Subramaniam, Sundari	Global Resources Mgmt Group	General Interest	Yes
Taylor, Vicky J	INVISTA Company	Producer	Yes
Thangavelu, Ramkumar	Intertek	General Interest	No, RI
Tibbitts, David		General Interest	Yes
Trivedi, Rahul	Pratibha Syntex Pvt. Ltd	Producer	No, NV
Turner, Richard	Mohawk Ind.	Producer	Yes
Wallace, Michele L	Cotton Incorporated	General Interest	Yes
zhuo, zhang	Guangdong Inspection and Quarantine Technology Center	General Interest	Yes
Carrasco, Sherry	Carhartt	Producer	Yes
Delhom, Chris	USDA	General Interest	Yes
Lake, Barbara	ASTM International	Unclassified	No, NV
Rodgers, Jennifer	ASTM International	Unclassified	No, NV

Committee Balance

Producer Votes Available: 16

	Producer	User	Consumer	General Interest	Unclassified	Total
Official Voting Member	13	1	0	28	1	43
Non official Voting Member	3	0	0	2	1	6
Total	**16**	**1**	**0**	**30**	**2**	**49**

Liaison report

- Textile Exchange
- Sustainable Apparel Coalition

Ballot result

- Nothing To ballot Yet

Outstanding –ve ballots

- Nothing in Ballot Yet

Standard requiring review

- No standard made as yet

Revision and withdrawal of work item

- Not applicable

Task group report

- Suggested New Task Group To Be Formed on studying available Standards on Sustainable Textile Fibers and gaps in the same
- Task Group Formation
  - Interested members
    - Matthew Thurston (REI sustainability analyst)
    - Jing Chung (Dupont)
    - Tim Cole (Forbo Flooring System, Director-Envo Initiatives
    - Beth Jenson (Outdoor Industry)
    - Pratik Ichhporia (Intertek USA)
    - Anne Gillespie (TE)
    - Michele Wallace

Workshops in June'12

2 Workshops

- On Sustainable textile fiber standards
- From Concept to Consumption

Potential Identified Speakers

- Earlier we had outlined speakers as follow from ;
  - Textile Exchange
  - USA's EPA
  - Nike Representative
  - Walmart Representative
  - Toyota
  - AATCC
  - NCSU
  - Outdoor Industry Association/Sustainable Apparel Coalition
  - WWF
  - Apple
  - FTC
- Considering representations from leading consultants to moderate the workshops and experts on fibers

New Business: TRSA

Purpose

To identify, define, and rate Green Best Management Practices (BMPs) which are used in commercial laundry facilities.

Reason/Need for proposed standard

The commercial laundry industry has made a commitment to sustainability. We are looking to further reduce our carbon footprint and enhance our environmental stewardship by developing this voluntary standard. Our goal is to encourage the implementation of these green BMPs at all laundry facilities.

Scope of proposed work

This standard describes a methodology for assessing and rating green BMPs used in the commercial laundry industry. The proposed BMP list includes water reuse technology, boiler heat recovery, wastewater heat recovery, environmentally friendly detergents, wastewater pre-treatment (mechanical), advanced wastewater treatment, energy efficient lighting, solar energy, recycling, fleet optimization, spill-prevention plan, and preventative boiler maintenance.

Stakeholder Groups

Commercial laundry facilities

Users of reusable textiles, e.g. companies in the hospitality, healthcare, and industrial industries

Case studies

- Patagonia
- Pratibha Syntex

patagonia®

1% For the Planet

- Policy of contributing 1% of all sales to environmental organizations since 1985, the 1,486 members of 1% For the Planet each contribute 1% of their total sales to over 2,000 different environmental organizations every year.
- Patagonia has committed ;
- Social Activism- USD 243,976
- Water Marine –USD 720,217
- Sustainable Agriculture- USD 71,240
- Forests- USD 170,314
- Alternative Energy-USD 24,408
- Resource Extraction-USD 34,630
- Toxics /Nuclear-USD103,559
- Biodiversity USD 704,798
- GRANTS: USD 4,280,585 in 2011

Pratibha

Carbon, Water & Waste Profile Footprints

Pratibha SYNTEX PVT. LTD.

COOL EARTH

Pratibha Syntex

- Is one of the world's largest full vertically integrated textile supplier.
- Works with over 20 renowned brands worldwide.
- Commitment to Sustainability & Social Responsibility is unquestionable with active involvement in many initiatives.
- Certifications include: OHSAS 18001, Oe100, GOTS, NOP, USDA, Fair Trade, Oeko Tex 100, WRAP, NPOP, ISO 14001

* Source: Pratibha; Info unverified by Cool Earth

Pratibha Syntex Initiatives – Farm side *

Organic Cotton Farming

- Initiated in 1999.
- Conscious Choice taken with foresight of helping People, Planet and better Profits.
- Pratibha see themselves as pioneers in the country , initiating this even before the international demand arose.

Fair Trade

- Was also Initaited in 1999
- Encouragement & support provided to Farmers registered as Fair Trade Cotton Producer Group.
- Initially had 26 villages with 126 farmers grown in 2011 to 140 villages with 3885 farmers
- Majority of the farmers are experienced in organic cultivation practices.

Better Cotton Initiative

- Initiated in one of the backward & poorer regions of India (Rayagarha,Orissa), 2011 in areas inhabited by Tribal societies.
- First step in direction of Organic Farming.
- Slowly converts farmers and their mindsets from conventional to Clean cotton and then move towards in transition organic to gradually Organic farming.

* Source: Pratibha; Info unverified by Cool Earth

Pratibha Syntex Initiatives – Farm side *

- 19000 farmers in Organic Cotton, Fair Trade & BCI practices.
- Farmers are provided with expert support, advice on organic cotton farming practices (five out of six regions).
- Farmers are supervised to ensure that no conventional fertilizers, pesticides, insecticides are used and only organic methods which help conserve the ecology are followed.
- Farmers are provided with training to produce and procure these organic implements

Organic Fertilizers

PSL Farm Team on inspection

A demonstration of a Farm Bug trap for a farmer. Used in place of spraying pesticides on the crop

* Source: Pratibha; Info unverified by Cool Earth

Good Initiatives from Pratibha *

- Zero discharge facility and makes good efforts to conserve water.
  Rain Water Harvesting
- Training to manufacture organic manures.
- Some farmers have been trained to even generate power on a small scale from a cow dung gas plant (seen in pic)

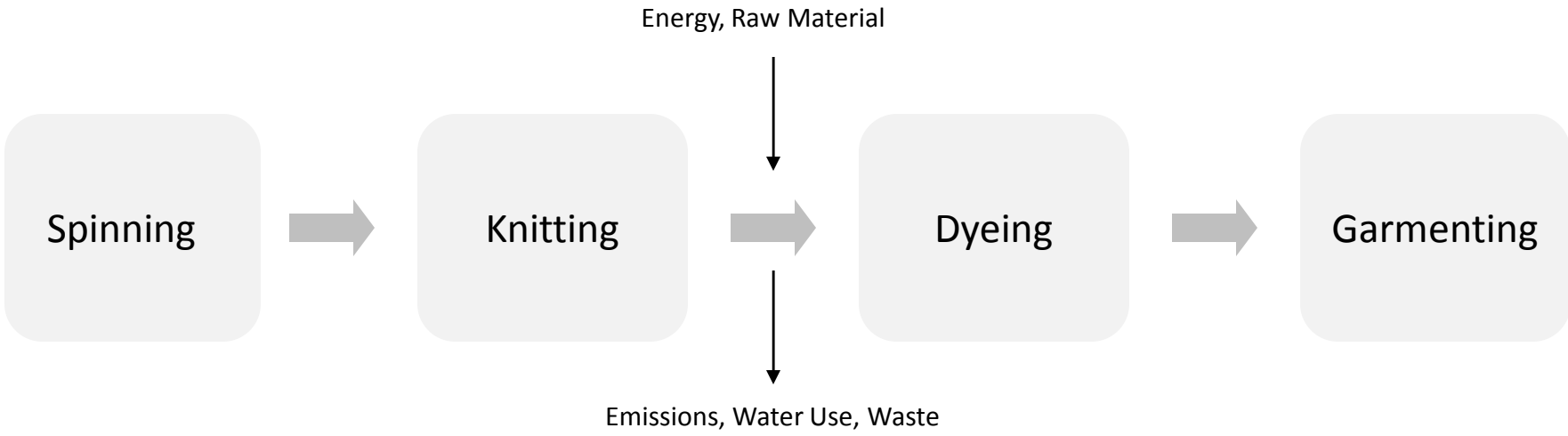
* Source: Pratibha; Info unverified by Cool Earth

Pratibha Syntex's New Initiative & Vision

- embraced the concept of Sustainability Management whole-heartedly.
- pledged to go 'Carbon Neutral' in the near future.
- Other areas of concern include – reducing Water consumption and waste generation.

Factory Units

- Pratibha Syntex is a vertically integrated Textile company having Spinning, Knitting, Dyeing & Garmenting sections.
- Each of these sections require energy, usage of fossil fuels, consume water & generate waste.






Carbon Footprint

- The Carbon Footprint of any entity is a measure of the total set of Greenhouse gases that are released into the atmosphere, as a result of existence of a country, company, event or person.

- A number of materials contribute to GHG emissions, some of which are fossil fuels and refrigerant gases. Emission Factors for each contributor, maintained in the verified database was used for the calculations.

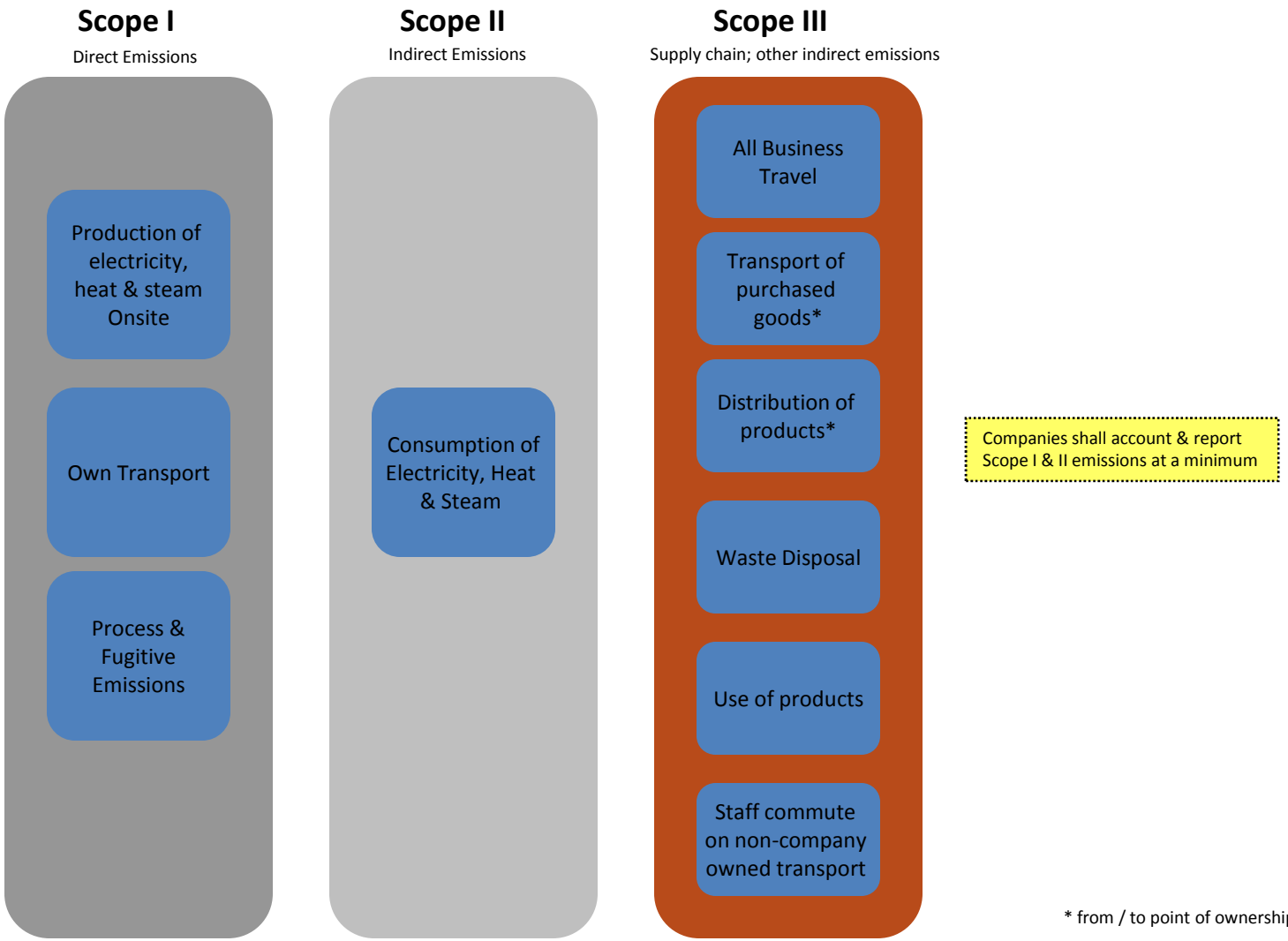
- In this exercise, the Carbon Footprint was calculated as per the Greenhouse Gas Protocol using a CDP certified Tool 'Our Impacts'.

World Business Council for Sustainable Development

WORLD RESOURCES INSTITUTE

Carbon Footprint

- As per guidelines laid down in the GHG Protocol, the Carbon Footprint measurements there are various scopes of a Carbon Footprint. The diagram helps explain:



Snapshot of Tool

- The Carbon Footprinting for Pratibha Syntex was done using a CDP certified software called ‘Our Impacts’. Snapshots of the tool below

Cool Earth Ideate

Key Performance Indicators:

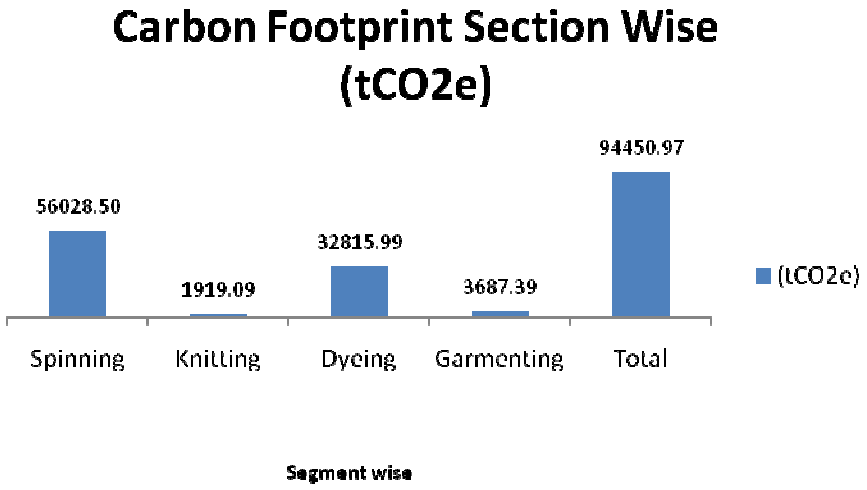
Carbon Footprinting and Sustainability Metrics are a new concept, and while the norm in the industry is to measure Scope I, II & III of the Carbon Footprint, absolute measurements are not a true measure year on year.

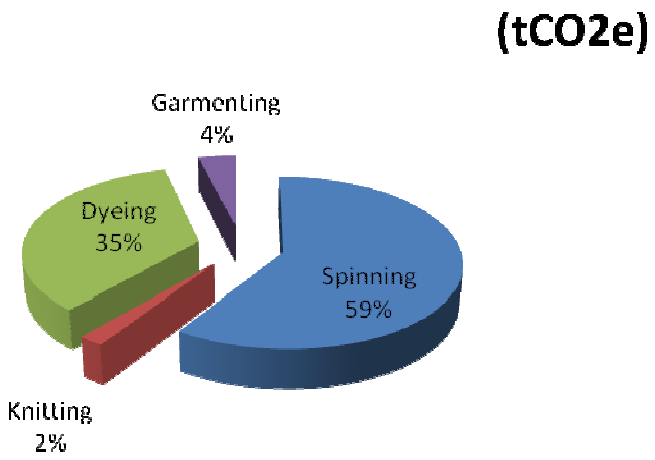
If the Carbon Footprint were to increase it may also be due to expansion of the organisation and is unavoidable. If any reduction activities have been undertaken, they fail to get highlighted.

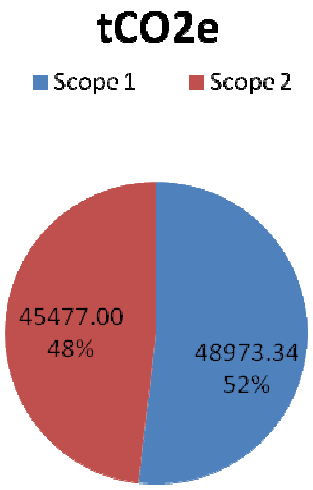
In such cases KPI's help provide a per unit basis measurement of the Carbon footprint of an entity and help discern whether the reduction activities are reflecting in the performance of an organisation.

Carbon Footprint

~Factory*~



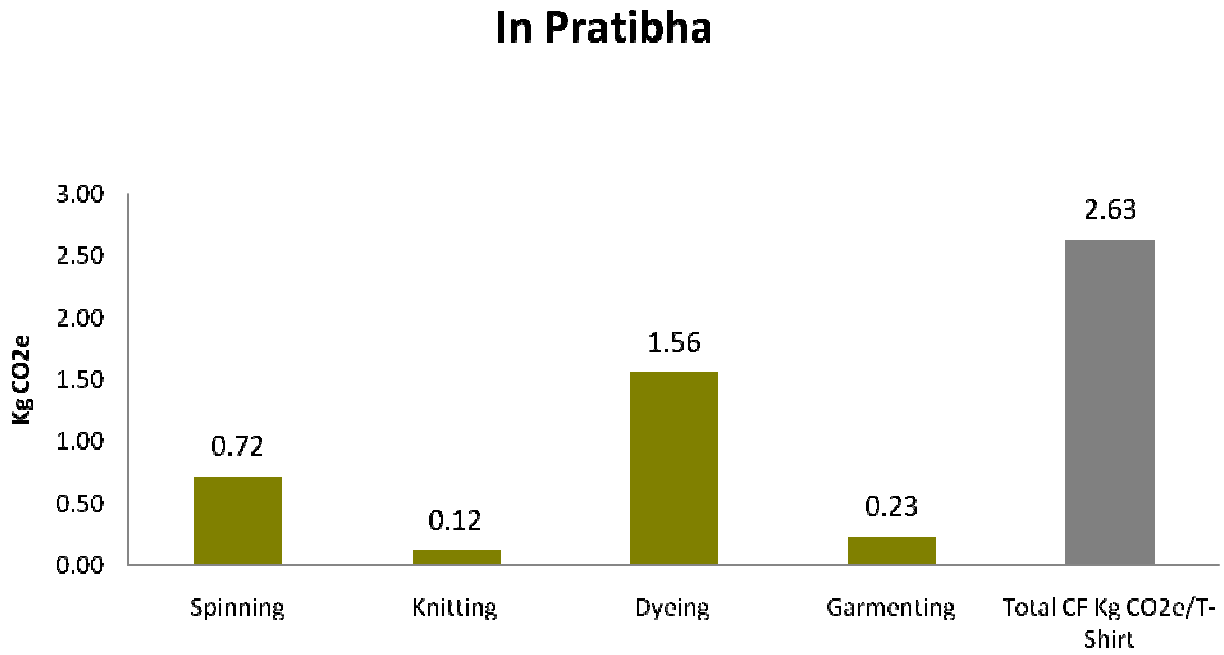




* Only Scope I & II

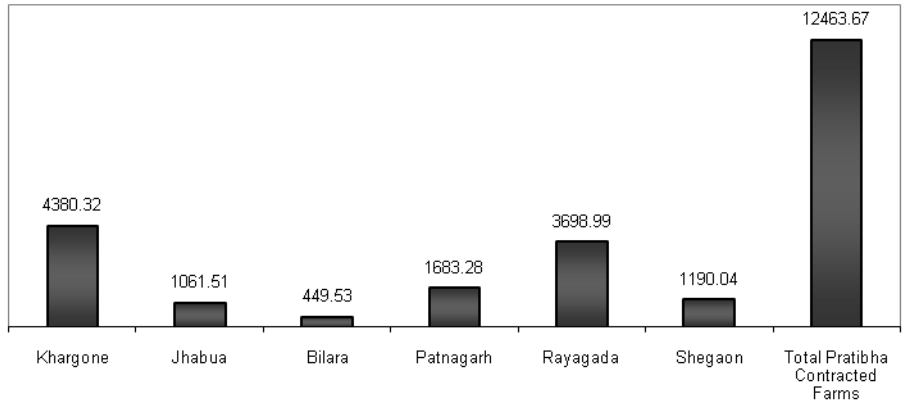
Carbon Footprint

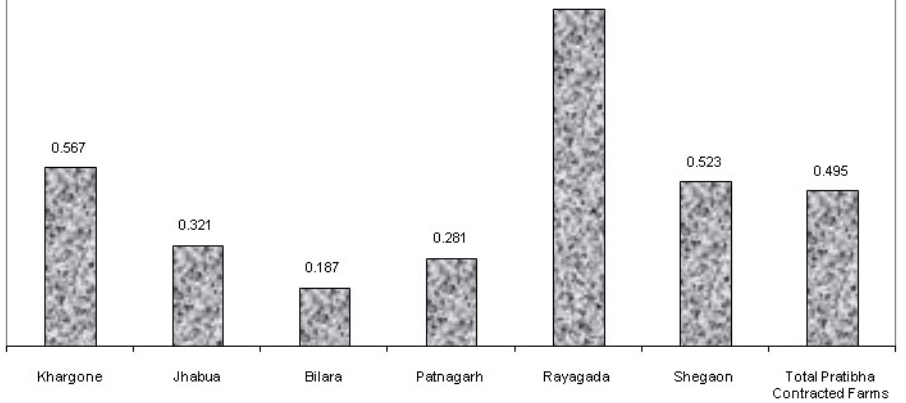
~per T-shirt~

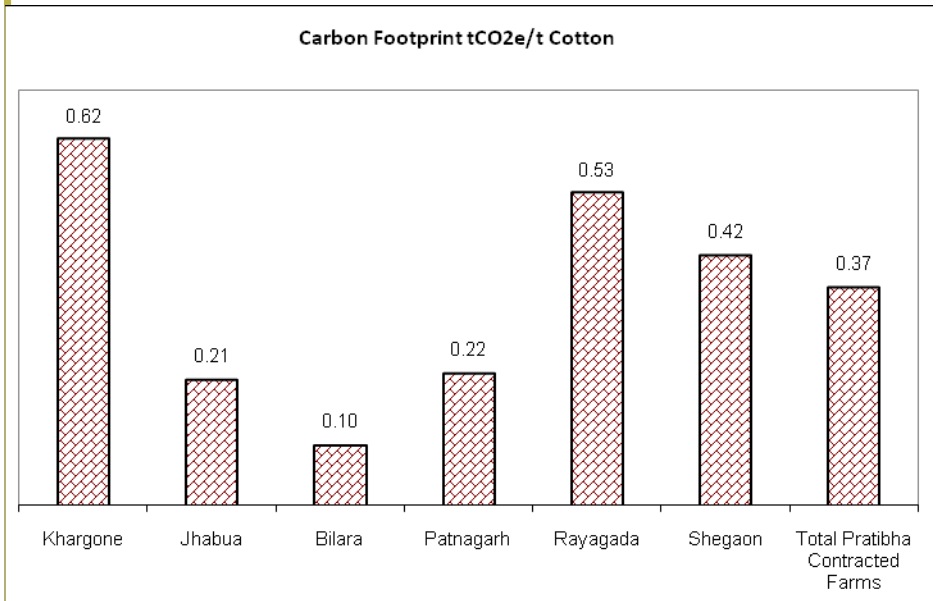


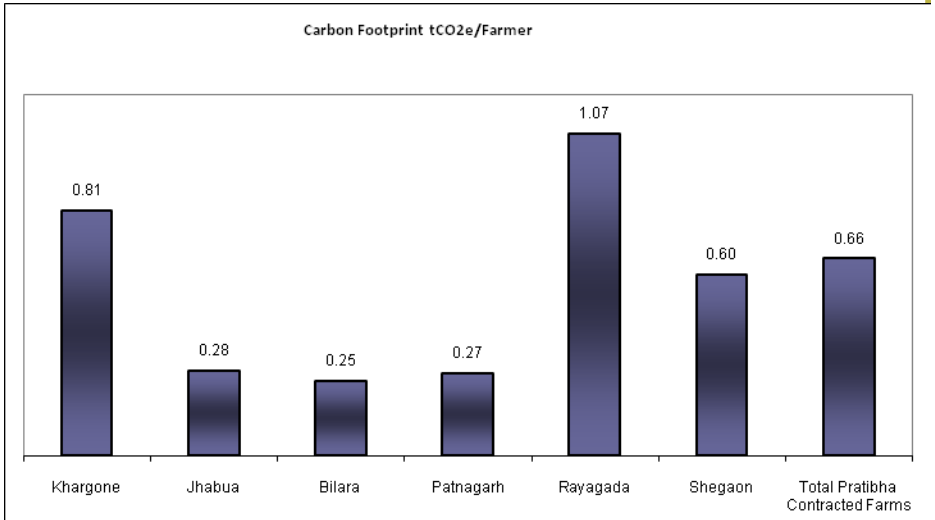
Carbon Footprint

~Farm~









Water Footprint

- Water Footprinting is a novel concept which is slowly gaining acceptance among a number of companies across the globe.

- The corporate community is yet to give its broad based consensus of performing Water Footprints as there are different methods of performing calculations.

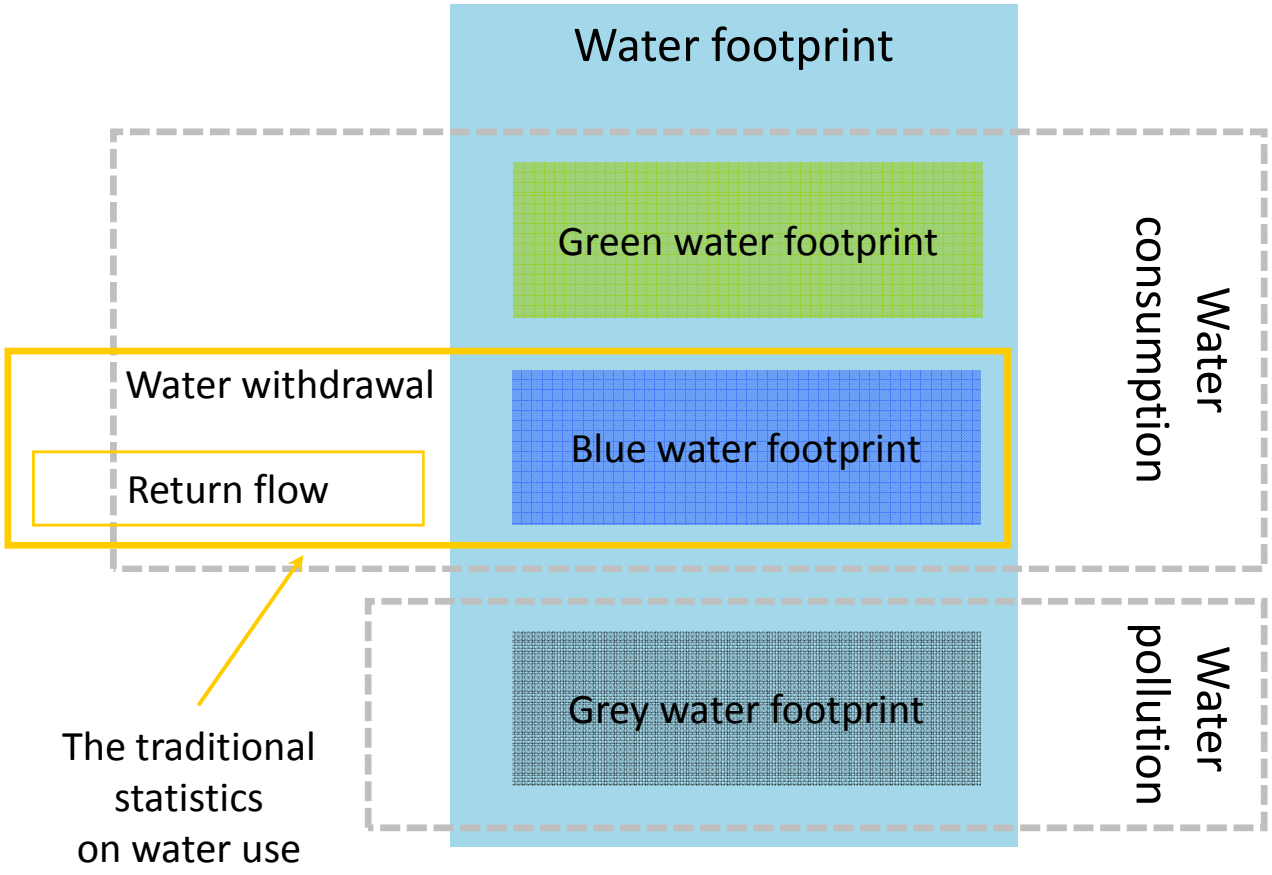
- However the guidelines for a water footprint developed by the Water Footprint Network (University of Twente & United Nations Environment Programme) is slowly gaining more recognition and acceptance. It is also more complex in performing.

- The Components of calculation include Green, Blue and Grey Water Footprints.

$$WF_{proc} = WF_{proc,green} + WF_{proc,blue} + WF_{proc,grey}$$

Water Footprint

- Green Water Footprint – Rainwater consumed so far as water doesn't become run-off
- Blue Water Footprint – Water consumed from surface sources
- Grey Water Footprint – Water consumed in assimilating load of pollutants from the plant



Water Footprint

~Factory Units~

$$WF_{Business} = WF_{Business\text{-}Operations} + WF_{Business\text{-}Supply\ chain}$$

$$WF_{Busi\ –Ops} = WF_{Busi\text{-}\ Op\ Inputs} + WF_{Busi\text{-}\ Op\ Overheads}$$

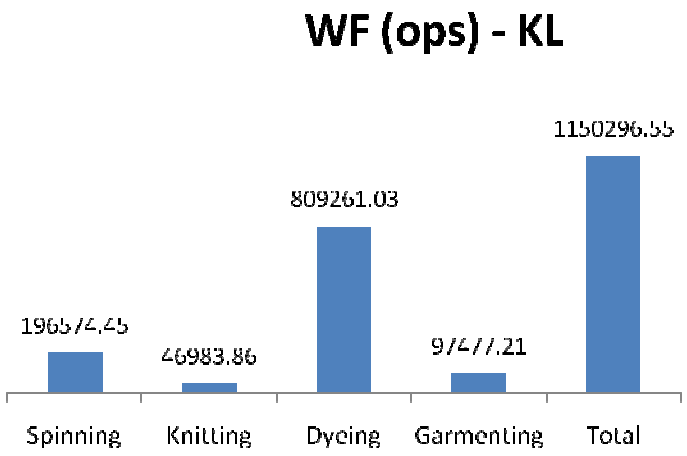
$$WF_{Pratibha\ –\ Syntex\ Busi\ Ops} = WF_{\ Blue} = 1150296.549\ Kl$$

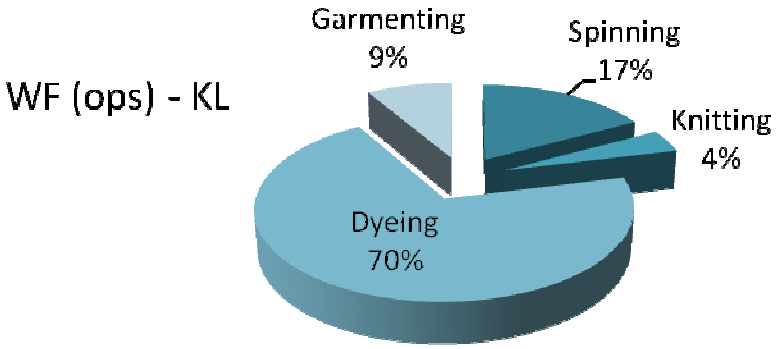
As we can see from above the Water footprint of a Business Unit is given by the summation of the Water Footprint of business operations and Supply Chain (which includes water footprint of all the products / ingredients used by the Business – excluded from this study)

The Water Footprint of the business operations is the summation of the water footprint directly associated with the operations of the organisation and overheads Related to consumption in Kitchens, Toilets, gardening, etc.

Water Footprint

~Factory Units Break-up~



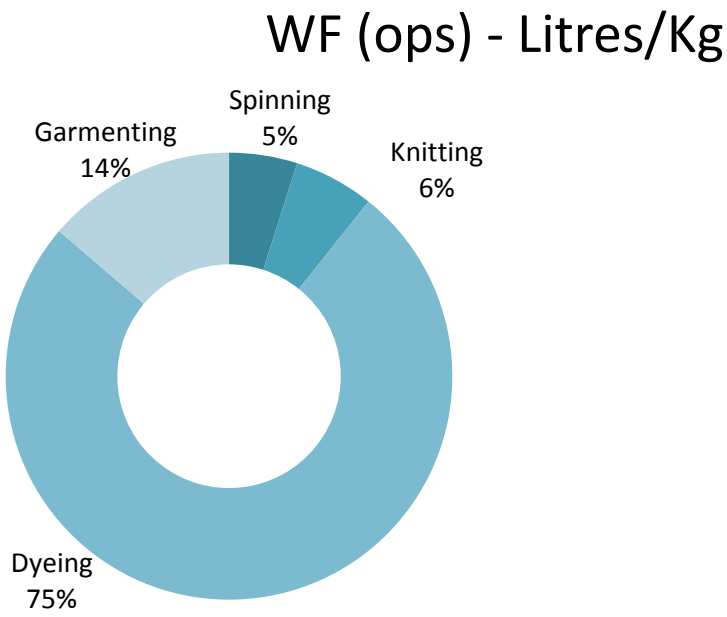


Water Footprint per Tonne of Garment

(Total Consumption)

$$(WF_{Spinning})+(WF_{Knitting})+(WF_{Dyeing})+ WF_{Gar.}$$

Unit Wise Break-up	WF (ops) – L/Kg
Spinning	9.86
Knitting	11.61
Dyeing	150.95
Garmenting	27.50
Total	**199.92**



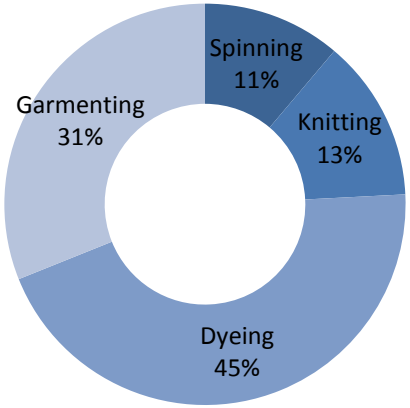
Water Footprint per Tonne of Garment

(Freshwater Use Only)

$$(WF_{Spinning})+(WF_{Knitting})+(WF_{Dyeing})+ WF_{Gar.}$$

Unit Wise Break-up	WF (ops) Freshwater - L/Kg
Spinning	8.63
Knitting	10.09
Dyeing	34.56
Garmenting	24.03
Total	**77.31**

WF (ops) - Freshwater Litres/Kg



Excluding Recovered Water

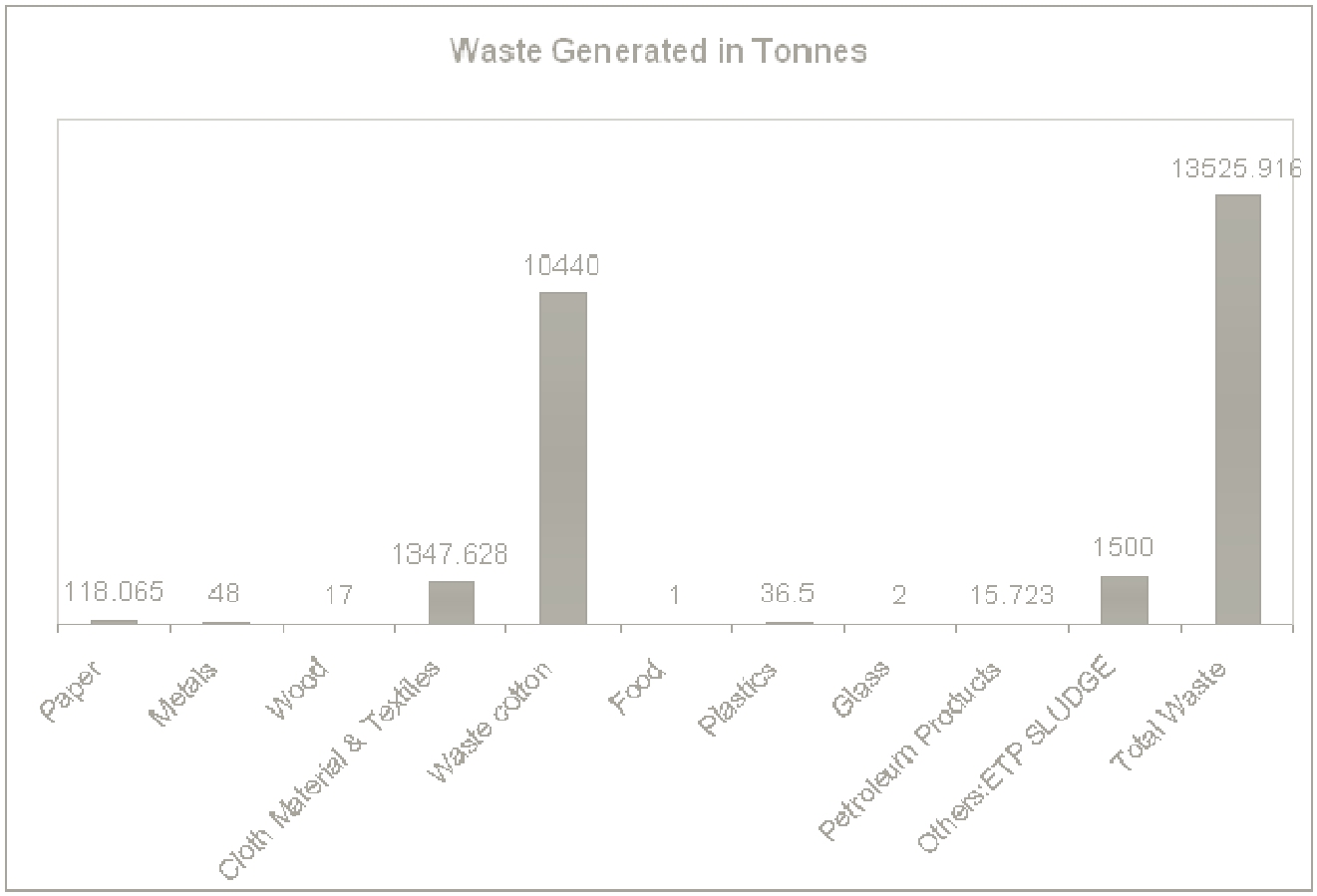
Water Footprint

~per T-shirt~

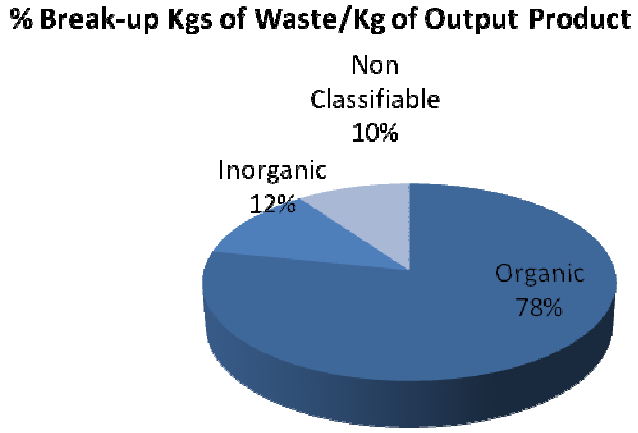
Total Water consumption (L)		Freshwater Consumption only (L)
WF bus ops / T-Shirt		**WF bus ops / T-Shirt**
50.98		**19.71**

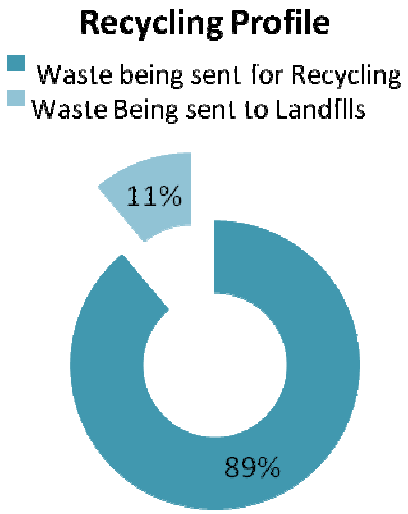
Waste Profile

There are no laid down guidelines or methodology for waste profile footprinting, so Cool Earth has helped broadly bifurcate the waste content into different Components:



Waste Profile





Improvements

~Factory~

The Improvements that we suggest for Pratibha Syntex are three–fold:

a. Process Changes / Efficiency Improvements

b. Energy Efficiency Improvements

c. Sustainability Switches

Energy Efficiency

The ideas for energy efficiency can be subdivided into two components:

- Ideas obtained by the Energy Auditors on a walk through all three facilities of Pratibha Syntex at Pithampur (Main Factory, PSL-4 & SEZ) – Part A

- Additional ideas that we have obtained information upon from external sources & other observations – Part B

Part B

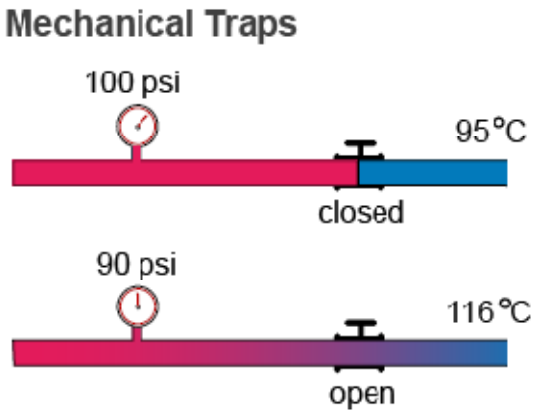
Research Ideas:

- Steam Traps
- Heat Recovery Systems
- Lighting Solutions
- Air Conditioning Solutions

Steam Traps

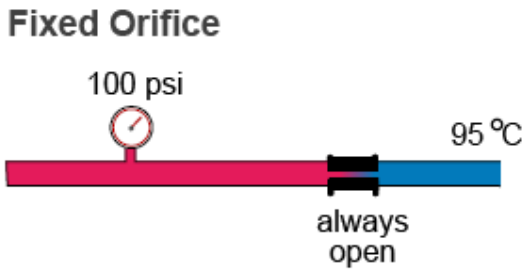
- Mechanical type Steam Traps discharge steam condensate to the return system. These traps must continually cycle between open and closed positions in order to properly release condensate to the return system.

- With this opening and closing cycle typically taking place thousands of times a day, wear and corrosion of moving parts take their toll, resulting in high maintenance; a need to purchase spare parts and replacements to reduce steam loss.



Steam Trap Solution

Use of Orifice Steam Trap:



* As claimed by Vendor

Steam Trap Case Study

* As claimed by Vendor

Heat Recovery Systems

Heat Recovery Systems hold immense potential:

- Indigenous Technology developed by prestigious IIT, Bombay
- Technology developed in collaboration with Union Textile Ministry, India
- Used from heat sources: Exhaust of Engines & Gensets Diesel / Gas / FO / Biogas, Turbines Gas / Biogas, Furnaces, Stenters, etc.
- Practically deployed so far ranging from 50 kW to 7.5 MW Gas Turbines, 135 kW to 6 MW DG Sets
- Applications: Heating Air / Water / Thermic Fluid, Generating Steam / NH_3/H_2O Solution / Liquid Desiccants
- Multi-Utility – Water Heating, Potable Water Cooling, Air Conditioning

Lighting Solutions

- LEDs & Induction Lamps
- Nano Reflectors
- Light Pipes

Discussions

Questions


Thank you