

ANNEXES

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ANNEXURE 1:

TERMS AND DEFINITIONS

A

Acre:

A unit of area equal to 4,840 square yards or 43,560 square feet. Approximately 0.4 hectares.

Atmospheric stability:

Is the resistance of the atmosphere to vertical motion. A large decrease of temperature with height indicates an unstable condition which promotes up and down air currents. A small decrease with height indicates a stable condition which inhibits vertical motion. Where the temperature increases with height, through an inversion, the atmosphere is extremely stable. Indicators of atmospheric instability include fast moving cumulus clouds and the build-up of thunderstorms.

B

Bale:

A unit of compacted cotton lint ready for shipping to the spinning mill generally wrapped in a protective covering and tied with bands or wires. By convention, a 'statistical' bale weighs 480 pounds. However, nominal cotton bale weights vary depending on the country of origin; for example, a standard bale weighs 227 kilograms (500 pounds) in Australia, 180 kilograms (396.6 pounds) in Brazil, and 170 kilograms (375 pounds) in India and Pakistan. Actual or physical bale weights will vary around the standard weight.

Beneficial insects:

Predators and parasitoids of pests.

Bio-control agents:

Parasites, predators or pathogens used to control the population of a pest. They may occur naturally in the field, or may be reared in a laboratory and released in the field as required.

Biodiversity:

"Biological diversity" or "Biodiversity" is defined as the variability among living organisms from all sources including, amongst others, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part. This includes diversity within species, between species and of ecosystems (Source: Convention on Biological Diversity 1992, Article 2).

Boll:

The fruit or seedpod of the cotton plant. Bolls typically have 4 or 5 segments (locks) that each contain 6 – 10 seeds, from which the cotton fibres grow.

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Bract:

The opened segments of the boll, encasing the seed cotton.

C

Colour:

Colour is a measure of the whiteness and brightness of the cotton fibre. Colour is directly affected by the weather, and length of exposure to the weather of the open boll. Colour will start to deteriorate as soon as the boll opens and the lint is exposed to moisture and light. Other factors that may affect colour include: pest damage, green leaf at harvest, seed cotton with too high a moisture content, incorrect storage and transport of cotton on dusty roads. Abnormal colour may indicate deterioration in quality, and variations in the colour of the raw cotton may lead to variations in the colour of the dyed fabric made from it.

Conservation tillage:

A tillage system that leaves at least 30 % of the soil surface covered with crop residue / plant matter.

Contamination:

Any foreign matter, i.e. any material in a lot of cotton other than cotton lint or trash (cotton leaf). It may be either man-made (e.g. grease, plastic, cloth, hair, machinery parts) or natural (bark, grass, seed coat fragments). Contamination can occur during picking, transportation and ginning, and include items such as jute, cloth/clothing, thread pieces, polyethylene, pieces of polypropylene string, human and animal hairs, metal items, birds' feathers, paper, cigarette packages, etc.

Continuous improvement

A systematic process of continually improving management policies and practices by learning from the outcomes of existing measures.

Conversion (of land)

Land conversion in the Cotton production context refers to altering the landscape in a way that changes natural or semi-natural state for the purpose of growing Better Cotton.

Cotton lint (raw cotton):

The cotton fibre separated from the seed cotton during the ginning process. Each cotton fibre is a single cell that arises from the cotton seed.

Criteria:

The Criteria listed under the Production Principles provide a greater level of detail as to the specific areas required to be addressed within each Production Principle.

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Cultivar:

An assemblage of plants that has been selected for a particular attribute or combination of attributes, and that is clearly distinct, uniform and stable in those characteristics and that, when propagated by appropriate means, retains those characteristics. (International Code of Nomenclature for Cultivated Plants).

Cut-off date

BCI does not wish to be seen licensing illegal or irresponsible land use conversion. Accordingly, any conversion of land from its natural state after January 1, 2016 shall not be accepted for licensing purposes unless it complies with the requirements of this Standard. (Note, land conversion occurring prior to 2016 shall be considered for the BCI license, subject to compliance with local legal requirements for land use change in existence at the time of conversion. This allowance is consistent with the requirement of the BCI Standard at that time.)

D

Decent Work:

Decent Work is understood by the BCI as the International Labour Organisation (ILO) concept which describes work that provides opportunities for women and men to work productively in conditions of freedom, equity, security and human dignity. This concept is understood to encompass respect for the ILO core labour standards and national labour legislation, alongside the promotion of safe and productive work, social protection, and social dialogue.

Defoliation:

The removal of leaves from the cotton plant in preparation for harvest.

Denitrification:

The loss of plant available nitrogen through conversion of soil nitrates to nitrogenous gases through microbial action.

E

Eutrophication:

An increase in nutrients (especially nitrogen and / or phosphorus) in water; leads to excessive plant growth and decay that in turn may lead to algal blooms and a decline in water quality. An algal bloom can deplete the oxygen available for fish to breathe, and lead to their death.

F

Fibre length:

See Length.

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Free, Prior and Informed Consent:

'Free, prior and informed consent' is defined as a legal condition whereby a person or community can be said to have given consent to an action prior to its commencement, based upon a clear appreciation and understanding of the facts, implications and future consequences of that action, and the possession of all relevant facts at the time when consent is given. Free, prior and informed consent includes the right to grant, modify, withhold or withdraw approval

G

Gender equality:

Gender equality or gender equity means that women and men have equal conditions for realizing their full human rights and for contributing to, and benefiting from, economic, social, cultural and political development

Genotype:

The genetic make-up of an organism.

Ginning:

The process whereby the cotton lint (fibres) are removed from the cotton seed.

Grade:

Is the overall appearance of a sample of cotton, primarily based on a classer's assessment of colour, visible trash and preparation (ginning), where preparation describes the degree of smoothness or roughness with which the cotton is ginned and the relative neppiness and nappiness of the ginned lint. Longer cottons normally will have rougher appearance after ginning than shorter cottons. Naps are relatively easier for classers to detect, but they are not as detrimental to cotton quality as neps. OR Cotton classification by grade is defined as the art and science of describing cotton quality in terms of grade according to official standards. Grading is based on a visual inspection and evaluation of raw cotton quality.

H

Hectare:

A unit of area, equal to 10,000 square metres. Approximately 2.47 acres.

High Conservation Value

□ HCV1: Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels.

E.g. the presence of several globally threatened bird species.

□ HCV2: Large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.

E.g. a large tract of Mesoamerican flooded grasslands and gallery forests with healthy populations of Hyacinth Macaw, Jaguar, Maned Wolf, and Giant Otter, as well as most smaller species.

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- HCV3: Rare, threatened, or endangered ecosystems, habitats or refugia.
E.g. patches of a regionally rare type of freshwater swamp.

- HCV4: Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.
E.g. forest on steep slopes with avalanche risk above a town.

- HCV5: Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (for livelihoods, health, nutrition, water, etc.), identified through engagement with these communities or indigenous peoples.
E.g. key hunting areas for communities living at subsistence level.

- HCV6: Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples.
E.g. sacred burial grounds within a forest management area or new agricultural plantation.

Honeydew:

A sticky, sugar rich waste excreted by aphids and whiteflies when feeding on the cotton plant. Can adversely affect crop growth, and when present on lint, cause difficulties in fibre processing (spinning).

I

Integrated Pest Management:

The careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment. IPM emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms. FAO's International Code of Conduct on the Distribution and Use of Pesticides (Revised Version, 2002).

L

Large farms:

BCI defines large farms as those farmers which are structurally dependent on permanent hired labour. Farm size is above 200ha of cotton.

Length:

The length of the cotton fibre. As with strength, generally the longer the better. While staple length is primarily determined by variety, seasonal factors may limit the ability of the variety to produce its maximum possible staple length. Critical stress factors for staple length are high temperatures, severe moisture stress and potassium deficiency.

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Length uniformity:

Length uniformity is the ratio of the mean fibre length and upper half mean fibre length. The more uniform the fibre length, the better the cotton is for spinning, as variability makes it more difficult to produce yarns of uniform strength and quality. The lower the value of the measurement for length uniformity, the higher the percentage of short fibres in the sample, and spinning mill efficiency decreases, as the amount of waste fibre (i.e. raw cotton that does not end up in yarn) increases.

M

Maturity:

As the cotton fibre grows and matures, the cell wall thickens. Fibre maturity is determined by the degree of thickening of the cell wall of the cotton fibre relative to its perimeter. Fibre maturity can be affected by lower than normal temperatures during fibre development and timing of harvest.

Medium farm:

BCI defines medium farms as Producer Units where farmers are structurally dependent on permanent hired labour. Farm size in the Producer Unit is between 20 to 200ha of cotton.

Micronaire:

Micronaire is a combined measure of two different fibre attributes:

1. the thickness (fineness) of the fibre, i.e. its diameter; and
2. the thickness (maturity) of the fibre wall (cotton being a hollow tube) Fibre diameter is largely determined by genetics, while fibre wall thickness is determined by environmental factors, such as late season stress. Fibre fineness is important to the spinner as fine cotton allows more fibres per given cross-sectional area of yarn, making for a stronger yarn. Low micronaire (immature) fibre creates problems as it cause neps, and is likely to result in more short fibres and a lower length uniformity, all of which have a detrimental effect on spinning mill efficiency, and on the quality of the yarn and fabric produced from that cotton.

N

Natural habitat:

A natural habitat is an area where the original biodiversity remains largely undisturbed by human activities. It may also include areas where once-disturbed biodiversity has been restored or regenerated by human or natural forces.

Naps:

Large, relatively loose clumps of fibres or matted masses of fibres (cf. neps). Generally the term 'nappy' describes lint that is rough in appearance. The formation of naps is often pronounced when seed cotton is wet and when the seed roll in the gin is too tight causing faulty removal of fibres.

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Neps:

Neps are small clusters or entanglements of fibres, and may fall into 1 of 3 categories:

1. biological neps
2. mechanical neps
3. white specks.

Neps may be caused by environmental factors or processing; the exact level of contribution from each source is unknown. The list of potential causes is extensive, and includes immature fibres, poor staple length, moisture content, fineness, mechanical handling by the cotton picker and or gin, once-over harvesting practices, premature defoliation, disease and frost.

Longer and finer cotton fibres are more prone to form neps than shorter and coarser fibres. Neps in the cotton lint can translate into neps in the spun yarn, which in turn can reduce the quality of the yarn, as neps can result in white dots or specks in finished fabric.

No Net Loss:

While all conversion of natural landscapes will involve some impact on biodiversity and ecosystems, it is essential that projects seeking the BCI license be able to demonstrate No Net Loss of High Conservation Value(s). No Net Loss in the BCI context is defined as the point at which project-related impacts on biodiversity are balanced by measures taken to avoid and minimize the project's impacts. Note that it is the High Conservation Value that must be protected, not necessarily a defined parcel of land.

O

Organic matter:

Carbon containing material in the soil derived from living organisms.

P

Parasite:

An organism that lives in or on another organism.

Parasitoid:

Parasites of insects that kill the host insect.

Personal Protective Equipment:

Any special clothing, material or equipment designed to provide protection against exposure to (PPE) pesticides.

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Pesticide:

Any substance or mixture of substances intended for preventing, destroying or controlling any pest. The term includes substances intended for use as a plant growth regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit, and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport. FAO International Code of Conduct on the Distribution and Use of Pesticides (Revised Version), 2002. The term includes insecticides, herbicides, fungicides and acaricides, growth regulators, defoliants, conditioners and desiccants, as well as bio-pesticides. No distinction is made between synthetic or natural substances that are applied for any of these purposes.

pH:

A measure of acidity or alkalinity. Cotton prefers soils with a pH of between 6 and 8.

Pheromone:

A substance secreted by an organism that affects the behaviour of the opposite sex of the same species.

POP:

Persistent Organic Pollutant (per the Stockholm Convention), considered to constitute a serious environmental hazard as they are extremely stable, persist in the environment, accumulate in high concentrations in fatty tissues, are bio-magnified through the food chain, are transported in the environment over long distances and have toxic and chronic effects on humans and animals.

Preparation:

A measure of the degree of roughness or smoothness of ginned lint cotton. Generally, smooth cotton will produce a smoother and more uniform yarn, with less waste, than rougher cotton

Producer:

'The Producer' is defined as the person or entity holding or applying for licencing and therefore responsible for demonstrating compliance with the requirements upon which BCI licencing is based. It can be either the Producer Unit or Implementing Partner for smallholders/Medium farms; or Farming organizations in the case of Large farms.

Production Principles:

Broad areas under the control of the farmer that are required to be addressed by the farmer for the production of Better Cotton.

Production Unit:

A spatial area or areas submitted for BCI licencing with clearly defined boundaries managed according to a set of management objectives which are expressed in a management plan. This area or areas include(s) all facilities and area(s) within or adjacent to this spatial area or areas under legal title or management control of, for the purpose of contributing to the management objectives (BCI 2015)

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Pupa / pupae:

The life stage of an insect undergoing transformation, e.g. between the caterpillar (larval) and moth (adult) stages of the life cycle of the cotton bollworm (plural: pupae).

Q

Quality:

The suite of characteristics of a lot of cotton that influences its suitability for yarn and textile processing. For the purposes of BCI, it includes both intrinsic fibre characteristics relating to its length, strength, fineness, maturity and colour, as well as extrinsic properties, in particular contamination.

R

Raw cotton (cotton lint):

The cotton fibre separated from the seed cotton during the ginning process. Each cotton fibre is a single cell that arises from the cotton seed.

Riparian buffer:

A riparian buffer is a vegetated area (a “buffer strip”) near a stream, usually forested, which helps shade and partially protect a stream from the impact of adjacent land uses. It plays a key role in increasing water quality in associated streams, rivers, and lakes, thus providing environmental benefits. With the decline of many aquatic ecosystems due to agricultural production, riparian buffers have become a very common conservation practice aimed at increasing water quality and reducing pollution.

Riparian land:

The land surrounding water bodies, rivers, streams etc.

Rotterdam Convention:

Rotterdam Convention on the Prior Informed Consent Procedure (PIC) for certain hazardous chemicals and pesticides was introduced in 1998, and is designed to ensure that any international trade of a substance that has been banned or had its use severely restricted in any country does not proceed without the prior consent of the government of the country that the substance is being exported to. Information on the particular hazards associated with the substance, and methods for controlling the hazards have to be provided prior to consent being given.

S

Saline / Salinisation:

Soil with a high salt content (the process of becoming saline), especially sodium chloride. While cotton is a relatively salt tolerant crop, very saline soils will affect yields. The ability to grow some rotation crops (for example legumes) may also be adversely affected by saline soils. Indicators of salinity include: poor crop growth, increasing numbers of salt tolerant weeds and prolonged soil wetness.

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Seed coat fragments (SCF):

Parts of the seed coat that remain attached to the fibre after ginning. Are undesirable.

Seed cotton:

The cotton lint, still attached to the cotton seed, as harvested from the plant and prior to ginning.

Short fibre content (SFC):

Short fibre content is a measure of the number of fibres below 12.7 mm / 0.5 inches in length. As with length uniformity, the fewer short fibres, the less waste cotton that is generated, and the better the efficiency of the spinning mill. Yarn quality is also improved with reduced short fibre content. Mechanically harvested cotton is more susceptible to having unacceptable levels of short fibres than hand-harvested cotton.

Smallholders:

BCI defines smallholders as Producer Units where farmers are not structurally dependent on permanent hired labour. Farm size in the producer unit does not exceed 20ha of cotton.

Social and Environmental Impact Assessment (SEIA):

The core process which ensures these key issues are given appropriate consideration is the commissioning of an expert Social and Environmental Impact Assessment (SEIA) (including a HCV assessment). The assessment(s) should be conducted by an independent body widely recognized for its subject matter expertise. It is recommended to utilize assessors licensed by an accreditation scheme such as that provided by the High Conservation Value Resource Network. The assessment should, of course, ensure compliance of the conversion project with applicable local legislation, but also internationally recognized standards where such practice exceeds the requirements of local law.

Landscapes suitable for the production of cotton, notably savannahs, are often rich in wildlife and/or flora that should be taken into consideration prior to implementing any land use change program. It is expected that the Environmental Impact Assessment would contain an analysis of the wildlife (and vegetation) in the extended region of planned conversion, and appropriate safeguards for rare, threatened or endangered species put into place, wildlife corridors established, access to water anticipated, workers provided training to protect such species, etc.

Sodic:

Soil with excessive level of sodium. Sodic soils are at an increased risk of structural instability, and may adversely affect crop growth. Indicators of sodicity include dispersion (the separation of sand silt and clay) on wetting, waterlogging, and crusting when dry.

Soil structure:

Describes the arrangement of the soil particles: their size, shape and stability, as well as the size, shape and continuity of the spaces (pores) between the soil particles.

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Staple length:

See Length.

Stickiness:

Stickiness is caused by sugary deposits on the fibre left by either insects (e.g. honey dew from aphids, whitefly), or produced by the plant itself.

Spinning mills have nearly zero tolerance for stickiness due the significant damage sticky cotton may cause to a spinning mill. The sugary deposits adhere to the surfaces of the machinery in the spinning mill, necessitating the shutdown of the mill to clean the machinery, and thereby increasing production costs.

Stockholm Convention:

The Stockholm Convention on Persistent Organic Pollutants (POPs) provides for the phasing out of production and use of persistent organic pollutants. The following pesticides are included on the list: aldrin, chlordane, chloredecone, dieldrin, dichlorodiphenyltrichloroethane (DDT), endosulfan, endrin, heptachlor, hexachlorobenzene, hexachlorocyclohexane, lindane, mirex and toxaphene.

Strength:

Strength is a measure of a fibre sample's resistance to longitudinal stress and the stronger the fibre the better as there is a direct correlation between fibre strength and yarn and fabric quality. Strong fibres are required to allow today's high-speed spinning mills to operate at maximum capacity and efficiency. Fibre strength is a varietal characteristic, and is less influenced by adverse growing conditions than length and micronaire.

T

Tailwater:

Water that has drained from the surface of the cotton field.

Tillage:

Mechanical manipulation of the soil.

Trash, trash content:

Cotton leaf material found in seed cotton or cotton lint. Trash content refers to the level of leaf in the ginned cotton. A balance needs to be struck between the level of trash removed during ginning and the subsequent adverse effects on fibre quality of increased cleaning to remove more trash. The more cleaning cycles employed, the greater the damage to the fibre, in particular fibre breakage, which leads to increased short fibre content. Poor defoliation is a major contributor to excess trash in the cotton, and rank growth needs to be managed to minimise the risk of excess trash content. Seed cotton usually contains various amounts of trash depending on harvesting method; hand-picked cotton is much less contaminated by trash than mechanically harvested cotton. Even when cotton is carefully harvested under ideal field conditions, it is very difficult not to include at least some trash. Although much of the trash is removed in the cleaning and drying processes during ginning, it is impossible to remove all trash. Minimizing trash content is important as it must be removed as waste, accompanied by a loss of

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fibre. Further, small fine particles of trash that cannot be removed detract from the quality and appearance of the manufactured yarns and fabrics. In general, cottons that contain the least amount of trash, other conditions being equal, are those with the highest spinning value.

W

Waterlogging:

A prolonged period of the plant roots being under water and which prevents oxygen being available to the roots. Results in impaired water and nutrient uptake by the plant, which in turn can adversely affect crop growth and yield.

Water table:

The point at which the ground is completely saturated. Below this level the pore spaces between every grain of soil and rock crevice completely fill with water.

WHO Class I:

World Health Organisation Class 1 a and 1 b: Those pesticides classified by the World Health Organisation as either Extremely (1 a) or Highly (1 b) hazardous, based on their acute toxicity.

Withholding period:

The time that must be allowed to elapse after the application of a pesticide before the crop can be harvested.

Workers:

BCI defines workers as all waged employees of cotton farmers, including migrant, temporary, seasonal, sub-contracted and permanent workers. Where family members are employed directly by cotton farmers, the term 'workers' also includes them.

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Question 1:

Is there any definition you would like to add to the Terms and Definition?

- Yes
- No
- I don't have an opinion

If, yes please enumerate which ones [Click here to enter text.](#)

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ANNEXURE 2:

GUIDANCE ON CHEMICALS INCLUDED IN CATEGORIES WHO CLASS 1, STOCKHOLM AND ROTTERDAM CONVENTIONS

The following lists are provided for guidance only, and not all compounds detailed in the relevant lists are included (for example, rodenticides have not been included in the WHO Class I lists). The original sources should be consulted for specific details, context and references.

Please also note that listing of a chemical in this annexure does not mean that that chemical is necessarily used in cotton production.

For WHO classification, the lists below are of the active ingredient; the final classification of any product depends on its formulation. As noted in The WHO Recommended Classification of Pesticides by Hazard (2004), with 2006 corrigenda, “The final classification of any product is intended to be by formulation. The classification given in the tables below is of active ingredients, and only forms the starting point for the final classification of an actual formulation.”

WHO Class I a

Common Name	Notes
Aldicarb	
Brodifacoum	
Bromadiolone	
Bromethalin	
Calcium cyanide	
CaptafoL	Listed in Rotterdam Convention
Chlorethoxyfos	
Chlormephos	
Chlorophacinone	
Difenacoum	
Difethialone	
Disulfoton	
Diphacinone [ISO]	
EPN	
Ethoprophos	
Flocoumafen	
Hexachlorobenzene	Listed in Rotterdam Convention
Mercuric chloride	Listed in Rotterdam Convention
Mevinphos	
Parathion	Listed in Rotterdam Convention
Parathion-methyl	Listed in Rotterdam Convention

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Phenylmercury acetate

Phorate

Phosphamidon

Listed in Rotterdam Convention

Sulfotep

Tebupirimfos

Terbufos

Source:

World Health Organisation http://www.who.int/ipcs/publications/pesticides_hazard_2009.pdf [pages 19-20]

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WHO Class I b

Common Name	Notes
Acrolein	
Allyl alcohol	
Azinphos-ethyl	
Azinphos-methyl	
Blasticidin-S	
Butocarboxim	
Butoxycarboxim	
Cadusafos	
Calcium arsenate	
Carbofuran	<i>Listed in Rotterdam Convention</i>
Chlorfenvinphos	
3-Chloro-1,2-propanediol	
Coumaphos	
Zeta-cypermethrin	
Demeton-S-methyl	
Dichlorvos	
Dicrotophos	
Dinoterb	
DNOC	<i>Listed in Rotterdam Convention</i>
Edifenphos	
Ethiofencarb	
Famphur	
Fenamiphos	
Flucythrinate	
Formetanate	
Furathiocarb	
Heptenophos	
Isoxathion	
Lead arsenate	
Mecarbam	
Mercuric oxide	<i>Listed in Rotterdam Convention</i>
Methamidophos	<i>Listed in Rotterdam Convention</i>
Methidathion	
Methiocarb	
Methomyl	
Monocrotophos	<i>Listed in Rotterdam Convention</i>
Nicotine	
Omethoate	
Oxamyl	

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Oxydemeton-methyl
Paris green
Pentachlorophenol *Listed in Rotterdam Convention*
Propetamphos
Sodium arsenite
Sodium cyanide
Strychnine
Tefluthrin
Thallium sulfate
Thiofanox
Thiometon
Triazophos
Vamidotion
Warfarin
Zinc phosphide

Source:

World Health Organisation. World Health Organisation
http://www.who.int/ipcs/publications/pesticides_hazard_2009.pdf [pages 20-23]

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Rotterdam Convention (Prior Informed Consent)

Common Name	Notes
2,4,5-T and its salts and esters	
Alachlor	
Aldicarb	
Aldrin	<i>Listed in Stockholm Convention</i>
Binapacryl	
Captafol	
Chlordane	<i>Listed in Stockholm Convention</i>
Chlordimeform	
Chlorobenzilate	
DDT	<i>Listed in Stockholm Convention</i>
1,2-Dibromoethane (EDB)	
Dieldrin	<i>Listed in Stockholm Convention</i>
Dinitro-ortho-cresol (DNOC) and its salts	
Dinoseb and dinoseb salts	
DNOC and its salts (such as ammonium salt, potassium salt and sodium salt)	
Endosulfan	<i>Listed in Stockholm Convention</i>
Ethylene dichloride	
Ethylene oxide	
Fluoroacetamide	
HCH (mixed isomers)	
Heptachlor	<i>Listed in Stockholm Convention</i>
Hexachlorobenzene	<i>Listed in Stockholm Convention</i>
Lindane	<i>Listed in Stockholm Convention</i>
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	
Pentachlorophenol 2,4,5-T	
Toxaphene	<i>Listed in Stockholm Convention</i>
All tributyltin compounds including: Tributyltin oxide, Tributyltin fluoride, Tributyltin methacrylate, Tributyltin benzoate, Tributyltin chloride, Tributyltin linoleate. Tributyltin naphthenate	
Dustable powder formulations containing a combination of: Benomyl at or above 7%, Carbofuran at above 10%, Thiram at or above 15%	
Methamidophos (soluble liquid formulations of the substance that exceed 600 g active ingredient/L)	
Methyl-parathion (emulsifiable concentrates (EC) at or above 19.5%, active ingredient and dusts containing 1.5%, 2% and 3% active ingredient	
Monocrotophos (all formulations)	
Parathion (all formulations – aerosols, dustable powder (DP), emulsifiable concentrate (EC), granules (GR) and	

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wettable powders (WP) of this substance are included, except capsule suspensions (CS)

Phosphamidon (soluble liquid formulations of the substance that exceed 1000 g active ingredient/L)

~~As noted in The WHO Recommended Classification of Pesticides by Hazard (2004), “According to the PIC Convention, export of a chemical can only take place with the prior informed consent of the importing Party. The PIC procedure is a means for formally obtaining and disseminating the decisions of importing countries as to whether they wish to receive future shipments of a certain chemical and for ensuring compliance to these decisions by exporting countries. The aim is to promote a shared responsibility between exporting and importing countries in protecting human health and the environment from the harmful effects of such chemicals (further information can be found at: <http://www.pic.int/>)”~~

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Source:

World Health Organisation

Stockholm Convention

(Annex A – ELIMINATION - Part I and Annex B-RESTRICTION- Part I)

Common Name

Notes

Aldrin

Chlordane

Chloredecone

Dieldrin

Dichlorodiphenylt-richloroethane (DDT)

Endrin

Heptachlor

Hexachlorobenzene

Hexachlorocyclohexane

Lindane

Mirex

Pentachlorobenzene

Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride

Technical endosulfan and its related isomers

Tetrabromodiphenyl ether and pentabromodiphenyl ether

Toxaphene

Source:

<http://chm.pops.int>

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Question 2:

Is there any definition you would like to add/remove/amend on “Guidance on chemicals” annex?

- Yes
- No
- I don't have an opinion

If, yes please precise : [Click here to enter text.](#)

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ANNEXURE 3: SUMMARY OF RELEVANT ILO CONVENTIONS

CORE CONVENTIONS

The ILO has declared eight conventions as fundamental to workers' rights worldwide: these are summarised below. The eight conventions basically come down to four international labour standards:

1. Workers everywhere should have the right to organise in trade unions and negotiate their working conditions collectively.
2. Workers should be free from any form of forced labour, such as slavery, servitude, compulsory labour for political re-education, or debt indenture.
3. Children, meaning persons below the age of 15 (or as defined by national law), should not work so that they have the opportunity to learn and develop freely.
4. Discrimination on the grounds of gender, race, nationality, religion, political opinion or social origin is banned, as is discrimination in remuneration on the grounds of gender.

The eight ILO core conventions are international standards that apply to industrial countries as much as to developing countries (but are addressed to member states, not private sector actors). Because the ILO core conventions are essential labour standards, they have been integrated in a range of guidelines for companies, such as the UN Global Compact and the OECD Guidelines for Multinational Enterprises.

Freedom of Association

Freedom of Association and Protection of the Right to Organise Convention, 1948 (No.87)

This fundamental convention sets forth the right for workers and employers to establish and join organisations of their own choosing without previous authorisation. Workers' and employers' organisations shall organise freely and not be liable to be dissolved or suspended by administrative authority, and they shall have the right to establish and join federations and confederations, which may in turn affiliate with international organisations of workers and employers.

Right to Organise and Collective Bargaining Convention, 1949 (No. 98)

This fundamental convention provides that measures appropriate to national conditions shall be taken, where necessary, to encourage and promote the full development and utilisation of machinery for voluntary negotiation between employers or employers' organisations and workers' organisations, with a view to the regulation of terms and conditions of employment by means of collective agreements.

The Abolition of Forced Labour

Forced Labour Convention, 1930 (No. 29)

This fundamental convention prohibits all forms of forced or compulsory labour, which is defined as 'all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily'. Exceptions are provided for work required by compulsory military service, normal civic obligations, as a consequence of a conviction in a court of law (provided that the work or service in question is carried out under the supervision and control of a public authority and that the person carrying it out is not hired

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to or placed at the disposal of private individuals, companies or associations), in cases of emergency, and for minor communal services performed by the members of a community in the direct interest of the community. The convention also requires that the illegal extraction of forced or compulsory labour be punishable as a penal offence, and that ratifying states ensure that the relevant penalties imposed by law are adequate and strictly enforced.

Abolition of Forced Labour Convention, 1957 (No. 105)

This fundamental convention prohibits forced or compulsory labour as a means of political coercion or education or as a punishment for holding or expressing political views or views ideologically opposed to the established political, social or economic system; as a method of mobilising and using labour for purposes of economic development; as a means of labour discipline; as a punishment for having participated in strikes; and as a means of racial, social, national or religious discrimination. Additionally, forced or compulsory labour is considered as one of the worst forms of child labour in the Worst Forms of Child Labour Convention, 1999 (No. 182).

Equality

Equal Remuneration Convention, 1951 (No. 100)

This fundamental convention requires ratifying countries to ensure the application to all workers of the principle of equal remuneration for men and women workers for work of equal value. The term “remuneration” is broadly defined to include the ordinary, basic or minimum wage or salary and any additional emoluments payable directly or indirectly, whether in cash or in kind, by the employer to the worker and arising out of the worker’s employment.

Discrimination (Employment and Occupation) Convention, 1958 (No. 111)

This fundamental convention defines discrimination as any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation. It requires ratifying states to declare and pursue a national policy designed to promote, by methods appropriate to national conditions and practice, equality of opportunity and treatment in respect of employment and occupation, with a view to eliminating any discrimination in these fields. This includes discrimination in relation to access to vocational training, access to employment and to particular occupations, and terms and conditions of employment.

The Elimination of Child Labour

Minimum Age Convention, 1973 (No. 138)

This fundamental convention sets the general minimum age for admission to employment or work at 15 years (13 for light work) and the minimum age for hazardous work at 18(16 under certain strict conditions). It provides for the possibility of initially setting the general minimum age at 14 (12 for light work) where the economy and educational facilities are insufficiently developed.

Worst Forms of Child Labour Convention, 1999 (No. 182)

This fundamental convention defines as a ‘child’ a person under 18 years of age. It requires ratifying states to eliminate the worst forms of child labour, including all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict; child prostitution and pornography; using children for

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illicit activities, in particular for the production and trafficking of drugs; and work which is likely to harm the health, safety or morals of children. The convention requires ratifying states to provide the necessary and appropriate direct assistance for the removal of children from the worst forms of child labour and for their rehabilitation and social integration. It also requires states to ensure access to free basic education and, wherever possible and appropriate, vocational training for children removed from the worst forms of child labour.

ILO Conventions applicable solely to agriculture

In addition to the core conventions cited above, there are some conventions which relate only to agricultural work.

Plantations Convention, 1958 (No.110)

This convention covers the recruitment and engagement of migrant workers and affords protection to plantation workers in respect of employment contracts, wages, working time, medical care, maternity protection, employment accident compensation, freedom of association, labour inspection, and housing.

Rural Workers' Organisations Convention, 1975 (No.141)

All categories of rural workers, whether they are wage earners or self-employed, shall have the right to establish and, subject only to the rules of the organisation concerned, to join organisations, of their own choosing without previous authorisation. The principles of freedom of association shall be fully respected; rural workers' organisations shall be independent and voluntary in character and shall remain free from all interference, coercion or repression. National policy shall facilitate the establishment and growth, on a voluntary basis, of strong and independent organisations of rural workers as an effective means of ensuring the participation of these workers in economic and social development.

Indigenous and tribal people rights

Indigenous and Tribal Peoples Convention, 1989 (No. 169)

Convention No.169 is a legally binding international instrument open to ratification, which deals specifically with the rights of indigenous and tribal peoples. Today, it has been ratified by 20 countries. Once it ratifies the Convention, a country has one year to align legislation, policies and programmes to the Convention before it becomes legally binding. Countries that have ratified the Convention are subject to supervision with regards to its implementation

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Question 3:

Is there any definition you would like to add/remove/amend on “Summary of relevant ILO convention” annex?

- Yes
- No
- I don't have an opinion

If, yes please precise : [Click here to enter text.](#)

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ANNEXURE 4:

BCI CATEGORISATION OF FARMERS

DEFINITION

	Labour	Farm Size**	Learning Groups	Results Indicators	Self Assessment & licensing	2nd Party Credibility Check	3rd Party verification
Smallholders	Producer Unit where farmers are not structurally dependent on permanent hired labour*	Farm size in the Producer Unit does not exceed 20ha of cotton	Yes	sampling-based approach + Control groups	Producer Unit level (through Internal Management System)	Yes (sampling)	Yes (sampling)
Medium farms	Producer Unit where farmers are structurally dependent on permanent hired labour	Farm size in the Producer Unit is between 20 to 200ha of cotton	No	Data collected from all farms + control groups	Producer Unit level (through Internal Management System)	Yes (sampling)	Yes (sampling)
Large farms	Farmers which are structurally dependent on permanent hired labour	Farm size is above 200ha of cotton	No	Data collected from all farms + control groups	Individual level	No	Yes (all farms)

* Labour arrangements in smallholder category may include (by order of importance): Family/own labour (most common form), temporary/seasonal labour for specific activities, or permanent labour (in some limited cases) ** In the case where (1) there is an extreme minority of growers that are in a different category (for a particular Producer Unit, project or country), (2) cultivated area of a particular farmer change from year to year across categories: common sense should be applied by the partner for the categorisation of farmers and confirmed by BCI before the start of the growing season.

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Question 4:

Are you satisfied with current categorization of farmers?

- Yes
- No
- I don't have an opinion

Please explain your answer [Click here to enter text.](#)

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ANNEXURE 5:

DEFINITION OF BCI FARMERS AND WORKERS

1. Background

The Better Cotton Standard System directly addresses farm workers in two distinct ways. First, the standard includes requirements on occupational health and safety (e.g. safe pesticide application); and it has a Decent Work principle, which is concerned with the provision of opportunities for women and men to work productively in conditions of freedom, equity, security, and human dignity.

Within the sector, there are fluid boundaries between self-employment, family/community labour, and waged labour. It is a challenge for stakeholders to identify, in a consistent manner, what types of individuals are considered workers and therefore should be included as direct participants in BCI projects. It is also a challenge to determine which Standard criteria may apply to whom, especially when much of this labour operates informally, especially in small-scale agriculture. There is potential for individuals or entire groups of people to be excluded from training or other activities either required by or encouraged by the standard system. For example, the wife of a smallholder cotton farmer may perform key tasks (e.g. storing and disposing of pesticide containers), but may not be considered a worker and not reached with information that can keep her and the family safe and healthy.

BCI has therefore created an expanded and standardised set of categories for the farmers and workers active in cotton production around the world. The aim is to harmonise understanding and ensure the people who may be some of the most vulnerable participants in the cotton value chain are effectively included in the Better Cotton Standard System. This set of categories is for the purposes of improved consistency across partners and stakeholders in different countries and contexts, and are based on functional roles. The categories, while loosely based on International Labour Organisation recommendations, have no legal ramifications, i.e. legal landholding or official immigration status are not required to be disclosed by participants. The categories are envisioned to support partners in more fully identifying their participants to enable optimised programme planning and implementation.

The document will first describe the categories of farmers and workers, including tenant farmers and sharecroppers, then explain the process for categorising each and creating a labour profile.

2. The Categories

2.1 Farmers

The Better Cotton Standard System defines the farmer as the one individual with primary decision-making responsibility for the cultivation of the cotton crop on a farm, and officially registered to participate in BCI's Assurance Program.

- Land ownership is not a requirement.
- In large industrialised contexts, farm managers may participate as the farmer.

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- In some countries, a man and woman in a couple equally share the farming duties and decision-making responsibilities. One individual is named as the farmer and the other a co-farmer, which is to be reflected in the Producer's Farmer List.

2.2 Tenants and Sharecroppers

The ILO¹ defines these individuals as tenants and sharecroppers (the term used in this document to cover all similar types) if they meet any of the following criteria:

- Pay a fixed rent in cash, in kind, in labour, or in a combination of these.
- Pay rent in kind consisting of an agreed share of the product.
- Are remunerated by a share of the product, insofar as they are not covered by laws or regulations applicable to wage earners, when they work the land themselves or with the help of their family, or when they engage outside help within limits prescribed by national laws or regulations.

Tenants and sharecroppers are considered to have a profile distinct from that of farmers or workers, but participate in the Standard System as either a farmer or worker depending on the extent to which they have decision-making power over the cotton production practices. Generally, a tenant or sharecropper participating as a farmer will share input costs and be primarily responsible for production practices; one participating as a worker will contribute minimal financial resources and have limited decision making power.

- If classified as a **farmer**, the tenant or sharecropper is accountable for ensuring labour rights of any workers assisting in cotton production on their rented land as outlined in the Decent Work Principle.
- If classified as a **worker**, this will require the landowner (or land manager) to participate in the BCI project as a farmer and that individual is responsible for ensuring the tenant's or sharecropper's labour rights as outlined in the Decent Work Principle (along with ensuring the labour rights of all other workers of various profiles on the farm).

The responsibility of categorising tenants and sharecroppers as either a Farmer or Worker rests with the Producer Unit Manager for PUs. BCI secretariat staff can advise in cases that are not easily categorised.

2.3 Workers

According to the International Labour Organisation, waged agricultural workers are women and men who labour in crop fields to produce the world's food and fibres. They are employed on small- and medium-sized farms as well as large industrialised farms and plantations. They are waged workers because they do not own or rent the land on which they work nor the tools and equipment they use and so are a group distinct from farmers².

¹ ILO document discussing Recommendation 132 (1968) on Tenants and Sharecroppers.

http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312470

² International Labour Organisation, http://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---actrav/documents/publication/wcms_113732.pdf_page_23.

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BCI also includes unpaid family labourers in its definition of workers; the Better Cotton Standard requires certain health and safety conditions for anyone performing tasks on the cotton field (e.g. pesticide application or harvesting seed cotton), regardless of whether or how they are remunerated. This will enable a more nuanced and accurate understanding of the people involved in cotton production globally across varied contexts, and suitably covered by the Standard.

People who work in cotton production come from diverse backgrounds and varying terminology is used around the world to describe farm workers. To better understand the cotton labour landscape at the global level, BCI considers three factors to help standardise how the labour force is discussed:

1. Length and timing of work
2. Relation to farming community
3. Work arrangement

In addition, for appropriate program planning and data gathering purposes, BCI also distinguishes between males and females in the labour force.

2.3.1 Length and Timing of Work

The descriptions in the table below apply to any farm, regardless of BCI farm category - smallholder, medium, or large. They also apply to any range of tasks performed by the worker, including but not limited to sowing, applying pesticides, nutrient management, trimming, weeding, or harvesting.

Type	Description
Permanent	Working 12 months a year. May or may not be 100% dedicated to cotton. Some such workers will support production of other crops within the wider farm area.
Seasonal	Working during the cotton season – 3-7 months a year.
Temporary	Working on a short-term basis, normally paid a daily or hourly wage (or piece-rate in the case of picking). In some countries, ‘Temporary’ and ‘Casual’ workers have different legal statuses. For BCI purposes, these are one category, which is labelled Temporary.

2.3.2 Relation to Farming Community

Beyond the types of workers listed in the table above, workers fall into different categories based on their role in the community: family, member of the local community, or migrant. BCI stakeholders should take these categories into consideration in order to ensure, for example, that family members are included in appropriate training (especially wives or adult sons or daughters of farmers in smallholder contexts), or that migrants or other potentially vulnerable groups do not experience discrimination.

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Family

Family workers can include the spouse (husband of a female farmer or the wife of a male farmer) or extended family, like cousins. Family workers may live permanently or temporarily with the farmer. Exceptionally, in the case of family smallholdings, children 13 years or older may help on their family's farm provided that the work does not threaten their health, safety, well-being, education, or development, and that they are supervised by adults and given appropriate training. Children under 18 cannot participate in hazardous tasks (including pesticide application)³.

In smallholder and some medium farms, family workers may or may not receive remuneration. Members of the nuclear family typically contribute to the family farming enterprise and do not receive cash wages, while more distant relatives might work for cash or other in-kind support.

If a family member is formally employed by a farm s/he would not be considered an 'unpaid family worker', rather counted as an official employee from the local community. This is an important distinction as it may affect farm categorisation, i.e. whether a farm is considered dependent on permanent hired labour.

Member of Local Community

These are workers who live in the cotton producing area. They may work on their own land to grow crops and perform casual or temporary work on others' cotton fields to supplement their income. They may be skilled workers operating farming machinery or acting in a management capacity. They may also be landless community members performing unskilled or semi-skilled tasks, working in fields to earn their livelihood.

In some contexts, smallholder cotton farmers participating in BCI projects may work on others' cotton fields at specific points during the season. While they may not constitute a group requiring additional training or services because they access those as a farmer, it is important to capture what is an important factor in a local labour force. BCI does therefore consider them in the labour profile of an area, as a separate group called 'In-kind shared labour'). An assumption is made that in a BCI Producer Unit location, the majority of smallholder farmers providing in-kind shared labour would also be participating as BCI farmers.

Migrant

Migrant workers are found in all types of employment relationships as temporary, seasonal, or full-time permanent workers. They may be migrant workers from a different part of a country, or foreign workers. BCI's intent behind identifying workers as migrants, when pertinent, is to ensure their visibility in the system so they have access to relevant training and services. In some cases, migrants may be disadvantaged in terms of pay, social protection, housing, and medical care. For BCI's purposes, the distinction of migrant does not need to match official immigration status. For example, a full-time permanent worker originally from one country who has been employed on the same cotton farm for 15 years will likely be categorised as a member of the local community, even if s/he holds the nationality of his or her country of origin.

³ For a detailed explanation of the intention behind the family smallholder exception for children participating in light farm work, see pages 36-39 of Better Cotton Production Principles and Criteria Explained.

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2.3.3 Work Arrangement

Pertaining only to wage labour (not unpaid family labour), there are two ways workers may be hired – directly by the farmer or sub-contracted through a labour contractor.

Direct

These workers are hired directly by the farmer, or in large operations, by an employee of the farmer. In either case, the worker communicates directly with the farmer (or delegated employee) and receives remuneration from them.

Sub-Contracted

Sub-contracted workers are organised by an external labour contractor who acts as an intermediary between the farmer and the workers on issues of pay negotiation and possibly others. This situation may concern both workers from the local community and migrants who travel to another area for work.

3. Process for Categorising Farmers and Workers

3.1 Farmers

Consistent with the definition in section 2.1 above, an individual is considered a farmer participating in the Better Cotton Standard System if s/he is:

- The primary decision-maker on the farm, and
- The person who interacts with the BCI Assurance Program to be considered for a Better Cotton Licence (e.g. for PUs, the farmer may be selected for a visit during external assessment by BCI, the Implementing Partner, or third party verifiers; for large farms, conducts the self-assessment and is interviewed as the farmer by third party verifiers).

If an individual does not meet these criteria, but s/he participates in the cultivation of cotton on the farm registered with BCI, the person is likely a worker and will be categorised based on the below process.

3.2 Tenants and Sharecroppers

Consistent with section 2.2 above, tenants and sharecroppers are individuals who are engaged in cotton cultivation and rent the land on which they operate with cash, in kind work, or by sharing a portion of the cotton produced. They are distinct from farmers and workers, but are considered by the Better Cotton Standard System as either a farmer or a worker.

- Farmer – include the individual in the Farmer List (for PUs) or register directly with BCI (for large farms)
- Worker – include the individual (or group) in the process for categorising workers outlined below.

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3.3 Workers

This set of standardised descriptions of types of workers can be compared within and across countries. The Better Cotton Standard and associated capacity building can reach workers more consistently around the world. Using this process, we can therefore understand that in a particular Producer Unit or Large Farm, the labour force engaged in cotton cultivation may consist of any combination of these types of workers:

1. Unpaid family workers
2. Permanent workers from the local community hired directly by farmers
3. Permanent migrant workers hired directly by farmers
4. Seasonal workers from the local community hired directly by farmers
5. Seasonal workers from the local community who are sub-contracted
6. Seasonal migrant workers hired directly by farmers
7. Seasonal migrant workers who are sub-contracted
8. Temporary workers from the local community hired directly by farmers
9. Temporary workers from the local community who are sub-contracted
10. Temporary migrant workers hired directly by farmers
11. Temporary migrant workers who are sub-contracted
12. In-kind shared labour

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Question 5:

Are you satisfied with current definition of workers and farmers?

- Yes
- No
- I don't have an opinion

Please explain your answer [Click here to enter text.](#)

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ANNEXURE 6:

CLIMATE CHANGE MITIGATION AND ADPTATION IN BCI PRINCIPLE AND CRITERIA

A - Background

Responding to and offering solutions to tackle climate change is being increasingly expected from all sectors of the society and the economy. Agriculture in particular has come into focus due to the critical role that soil play in regulating the Earth's climate. By removing carbon dioxide (CO₂) from the atmosphere, it forms the world's largest terrestrial storage of atmospheric carbon. Equally, when soils are degraded, large amounts of carbon are released into the atmosphere. The destruction and degradation of soil through unsustainable farming worldwide accounts for a higher share of global CO₂ emissions than the entire transport sector. Likewise, bad management of fertilizers also generate considerable amount of nitrous oxide emissions in addition to the GHG emissions associated with the production of fertilizers and biocides. Biomass burning are also responsible for a large amount of methane emissions. Large open fires get used by farmers to destroy crop waste and clear land for agricultural or other uses. These emissions contribute to the greenhouse effect, increasing the risk of climate change.

Besides, relationships between climatic variability and yield are quite strong in the context of cotton farming. Cotton production is vulnerable to climate change. Higher temperatures will eventually reduce yields and increase the prevalence of pests and diseases. Changes in precipitation are likely to lead to crop failures and production declines. While there will be some gains depending on crops grown and regions, the overall impacts on agriculture are expected to be negative, thus threatening global cotton production.

Sustainable cotton production can make a very significant contribution to a low-cost global mitigation agenda that provides synergies with adaptation and sustainable development. Mitigation options include managing soil, water, energy, nutrients, tillage, inputs and residues more sustainably, improving agronomic and IPM practices as well as enhancing the sequestration of carbon in soils, while adaptation measures entail technical measures like changing intensification of production, alternative tillage and irrigation, socio-economic measures such as improved access to finance, insurance, (horizontal) organization of producers and (vertical) partnerships in the supply chain as well as ultimately diversifying crops and/or livelihoods.

Therefore, sustainable agriculture is as well about considering carbon cycles and should aim at maintaining or restoring carbon stocks. Well-managed cotton production areas are more resilient, can more readily adapt to climate change and provide a wide range of social, environmental and economic benefits. It is therefore imperative for farmers to manage cotton farms in a responsible manner. Protecting non-agricultural lands from conversion to other land uses such as agriculture when relevant, introducing management practices that maintain the integrity of soils, as well as restoring largely degraded soils and vegetation in critical habitats (riversides, slopes) contribute to both reduction of GHG emissions and adaptation to climate change.

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B - How BCI addresses Climate Change

1. Climate change adaptation in BCI Principle and Criteria

Climate change adaptation is the adjustment in natural or human systems in response to actual or expected climatic evolution and its effect.

BCI acknowledge that it is a necessity for cotton farmers to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences, as they are exposed to more unexpected or unforeseen changes in rainfall patterns and availability of (irrigation) water. As they are exposed to increased risk, more robust adaptation plans are required to manage those additional risk.

Main adaptation strategies are:

Technical

- Using management systems that do well under a broad range of soil and climatic conditions thanks to requires systematic measurement of inputs and their GHG footprints as well as environmental resources mapping leading to real climate smart management decisions / production. **(criteria 2.1, 3.1, 4.1)**
- Reversing land degradation through the adoption of a sustainable Land Use change approach. so that high carbon density areas are protected from significant loss. **(criterion 4.2)**
- Promoting the efficient capture, storage and utilization of rainfall through the adoption of appropriate water conservation practices, the provision of irrigation, and the use of systems and practices with high use efficiency including upstream natural vegetation and aquifer / groundwater recharge areas in cotton growing regions; **(Criterion 2.1)**
- Maintaining soil fertility and productivity by arresting nutrient mining and building or sustaining soil fertility. Increased levels of soil organic matter can help make agricultural soils resilient to the stresses from climate change. In particular, the moisture and nutrient retention properties of soils with higher carbon content can help agricultural lands remain productive as climates become drier. Higher soil carbon content also reduces the erodibility of soils and the presence of a mulch or straw cover conserves moisture, fosters healthy soil organisms and reduces raindrop impact and therefore erosion. **(Criteria 3.1 to 3.3)**
- Guarding against pest and disease pressure using early warning systems and IPM, as well as crop rotation and diversification; **(Criterion 1.1)**

Socio-economical

- Enhancing the resilience of communities by encouraging producer organization and improving their efficiency **(criterion 6.9)**
- Ensuring (BCI) farmers integrate and participate with other natural resources users, government and civil society into collective actions **(criteria 2.1, 3.1, 4.1, 4.2)**

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2. Climate change mitigation in BCI Principle and Criteria

Climate change mitigation involves reducing the amount of greenhouse gases (GHG) in the atmosphere or enhancing their sinks, e.g. by reducing the use of fossil fuels, planting trees, or enhancing mineralization of organic matter into soil organic carbon.

In the context of cotton production, the use of good management practices can substantially reduce GHG emission:

- Improve Fertilizer management to ensure optimal Nitrogen Oxide use and ultimately mitigate resulting emission. Increasing the nitrogen efficiency also decreases leakage into the environment and contamination of surface and ground water (**criteron 3.2**)
- Manage soil carbon to increase carbon stocks through appropriate practices: Tillage, residue management, erosion control. Increasing the soil organic matter of soils also improve the soil fertility, reduces erosion, increases moisture retention and can lead to increased yields. (**criteria 3.1, 3.3**)

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Question 6:

Are you satisfied with the annex describing how BCI addresses climate change mitigation and adaptation?

- Yes
- No
- I don't have an opinion

If, yes please enumerate which ones [Click here to enter text.](#)