



# What makes child labour harmful and what it means for the cocoa sector?

A review of the effects of child labour and other adverse childhood experiences on child development and the implications for protecting children.

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## Protecting children and their families in cocoa growing communities

ICI is a non-profit foundation that works to ensure a better future for children in cocoa-growing communities. We are a multi-stakeholder partnership advancing the elimination of child labour and forced labour, by uniting the forces of the cocoa and chocolate industry, civil society, farming communities, governments, international organizations and donors. We innovate, catalyse and support the development, implementation and scale-up of effective practices and policies that promote child rights and that prevent and remediate child labour and forced labour in cocoa.

SUPPORTED BY:



The study was written by Laurent Foubert (ICI). It builds upon an earlier review of literature [How does child work affect education and health?](#) commissioned by ICI and written by Marine Jouvin and Delphine Boutin. This project was supported by funding from the Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ.

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## Executive summary

Much progress has been made in recent decades to reduce the prevalence of child labour worldwide. Yet, children's exposure to harmful work remains a persistent global issue, particularly in Sub-Saharan Africa, where around one in ten children was still involved in child labour in 2020 (ILO, 2021). In cocoa-growing areas of Côte d'Ivoire and Ghana, 1.56 million children aged 5-17 (45% of children living in agricultural households) were estimated to be involved in cocoa-related child labour alone (Sadhu, 2020).

All forms of child labour should be eliminated. Nevertheless, **children's working conditions and overall situation vary greatly, with different consequences**. We use the term *the severity of child labour*, to describe the extent to which child labour causes (irreversible) harm.

A better understanding of the factors that lead to or prevent harm in the cocoa sector can help us to:

- Better protect working children from harm and support them to reach their full potential
- More effectively target interventions based on vulnerability and needs
- Measure incremental progress in terms of reduced harm, in addition to measuring reductions in child labour prevalence.

ICI commissioned a literature review of existing causal evidence on the links between child labour and harm, [How does child work affect education and health?](#), which examined the short- and long-term effects of work on a child's physical and mental health, in addition to education and socioeconomic outcomes in adulthood. The available empirical studies, however, did not allow us to answer some important questions, such as: *How does child labour cause harm? How applicable is this evidence to cocoa growing communities in West-Africa? How does harm differ, depending on gender? Which factors protect children from harm?*

This paper aims to fill these gaps. By drawing on 152 empirical papers on the detrimental effects of adverse childhood experiences on child development, it presents:

1. How child labour can cause harm
2. An operational definition of the severity of child labour for the cocoa sector
3. An overview of the implications for efforts to prevent and address child labour.

## Results

### What determines the extent to which child labour is harmful?

- **Child labour** can be considered an *adverse childhood experience* and can harm children's development in the same ways as other forms of abuse and neglect.
- The severity of the situation of a child in child labour is determined by the **type of experience** induced by working as a child (abuse/threat, deprivation/neglect<sup>1</sup>), the **duration and timing** of exposure to work, the **accumulation** of adverse work experiences, the **characteristics of the child**, the **child's environment**, and the presence or absence of **protective factors**.
- **The extent of harm depends on the context:** child labour can **add** to other factors that can negatively affect children's development (e.g., other work, violent discipline, poverty and parental

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<sup>1</sup> See section "Adversity: when is child work detrimental to children?" for the definition of these terms.

neglect). Child labour can be harmful to child development on its own, but even more so when it **interacts with other negative factors** that harm a child's development.

### What types of harm can child labour cause?

Child labour can cause the same types of short-term and long-term harm as other forms of abuse and neglect. These include:

- **During childhood:** impaired cognitive development, lower wellbeing, poor learning and physical / mental health, girls' reproductive health issues.
- **During adulthood:** impaired cognitive functions, poor academic achievement, lower-paid occupations, lower overall socioeconomic status, poor health behaviours and status, low wellbeing, impaired social skills, and maladaptive behaviours.
- **These negative outcomes can be transmitted to the next generation** and contribute to the **perpetuation of poverty and child labour**.
- **Gender differences** are mostly due to differences in the intensity and context of exposure to adverse experiences, but not to specific biological vulnerabilities of girls and boys.

### How does child labour cause harm?

Harm is caused by the **interaction** between the child's **environment**, the child's **experience** (including of work) and the child's **biology**. The biological imprint of experiences is often "silent" but leads to far-reaching negative effects: adverse childhood experiences can alter a child's DNA, accelerate cellular aging, alter the child's brain structure and performance, and **disrupt the normal functioning** of a child's stress and immune systems. These changes are responsible for the short- and long-term harm caused to children's physical and mental wellbeing.

Harm is caused both **directly**, including by exposure to work (e.g., as a result of abusive/threatening working conditions), as well as **indirectly**, by **depriving** children of experiences needed for a healthy development (e.g., neglect). This "indirect" harm – **child labour as a form of neglect** – has so far been **overlooked** and is an important dimension to consider when it comes to protecting from harm and remediating harm caused.

### Which factors can protect children from harm from child labour?

**Safe, stable and nurturing relationships** across all the layers of the child's environment (jointly referred to as "the child's ecology") can help protect children from harm. One dysfunctional layer of the child's ecology can be compensated for by another supportive layer (e.g., a quality education can help mitigate the negative effects of unsupportive parents and excessive work).

**Reinforcing the skills, capacities and behaviour of caregivers** creates a more supportive environment for children, increasing their resilience to harm. Examples of this include supporting parents to improve their socio-economic conditions and their parenting skills, as well as improving the quality of children's education and giving them opportunities to participate in decisions that affect them.

**Early intervention and reduced exposure to harmful experiences** can help protect children from harm:

- Early supportive and nurturing relationships lay solid foundations for healthy child development, equipping children to cope better with adversity and stay protected from harm.
- Developmental time-windows (early childhood, middle childhood, adolescence) can be used to target interventions according to the opportunities these specific periods allow.

- Early interventions are the most cost-efficient in improving outcomes for children – the later the intervention, the greater the investment required to achieve the same outcomes.
- Providing long-term access to protective environments is more efficient than one-off interventions.

## What are the operational implications for efforts to prevent and address child labour in the cocoa sector?

### Identifying children at risk and monitoring progress

**Granular information** about a child's situation and environment, including protective factors, can help to assess the likelihood of harm, identify appropriate support, and better monitor the impact of interventions over time. Efforts should be made to measure:

- **The total time children spend on all types of work**, including household chores, hazardous tasks and other work. This *does not* mean that hours for each different type of work should be counted separately.
- **A wider range of child outcomes, beyond participation in child labour**, such as child wellbeing, learning and health.
- The **indirect effects of working**, such as disrupted capacity to attend school or do homework, social isolation, and limited positive interaction with adults.
- **Protective factors** such as the child's access to quality education, parents' education level and skills, community-level child protection services, etc.

Some of these indicators are already being collected and could be exploited more systematically to inform prevention and remediation activities, as well as helping to capture **the positive impacts of interventions on children's ability to reach their full potential**, beyond child labour participation.

**Longitudinal data**, such as that collected through panel studies or Child Labour Monitoring and Remediation Systems (CLMRS), is key to monitor changing exposure to harm over time and to assess the impact of interventions.

### Prioritizing and targeting support

- **Young children are most vulnerable to harm** from adverse events and early intervention is more cost-efficient than acting later. **Extending support to parents and children under five** is therefore both a relevant and cost-effective means of preventing harm from child labour.
- **Developmental time-windows should be used to prioritize and target different types of support according to the specific opportunities they offer**: younger children and their parents should be prioritised for preventative support to build resilience, while support for adolescents should aim to mitigate and repair harm that has already occurred to children's development, as well as to prevent the transmission of harm to future generations.
- While boys are more likely than girls to do hazardous child labour in cocoa, **girls' overall workload is systematically underestimated when household chores are not taken into account**. Girls in cocoa growing communities are also less likely to complete school and more likely to have lower levels of wellbeing. **Supporting adolescent girls** (future mothers) is also key in fighting the transmission of vulnerability to the next generation.
- **Quality education plays a crucial role in preventing harm** and promoting positive outcomes for children. **Out-of-school children** should be prioritized for support, regardless of their involvement in child labour.

- **Consistency across the different layers of a child's environment is key.** Care should be taken to deliver consistent actions and information campaigns to adults at home, in schools and communities.
- **Blanket interventions to promote healthy child development can have positive and lasting effects on children,** regardless of a child's involvement in child labour. In a context of high child labour risk, delivery of interventions to reach all children, families or the community as a whole can also speed up the provision of support, help build trust, and introduce cost savings when conducted at scale.

### Provision of support

- **The longer exposure to an adverse experience, the greater the harm caused. Reducing delays** between the identification of a child at risk and the provision of support can help prevent (further) harm.
- **Withdrawing a child from adverse forms of work is not enough to reverse harm that has already occurred. Ongoing support is needed,** especially for older children, to mitigate and reverse harm and prevent long-term negative consequences for children (such as activities aiming at developing non-cognitive skills, encouraging adolescents' participation and transformative understanding of gender roles, strengthening parental skills and sexual health behaviour).
- **Child labour tends to co-occur with other adverse childhood experiences, with which it shares the same root causes.** Integrating strategies to tackle child labour and related harm into a broader framework, rather than focusing only on work-related activities, could result in a greater and more lasting impact on children.
- **Integrated strategies to promote healthy child development and prevent harm from child labour could include** focus on **quality education** (improving the quality of teaching and learning, combatting violence by teachers, preventing child labour at school), **health** (such as health insurance for parents and children to improve access to preventative and emergency healthcare, in the case of injury), **parenting interventions** (to build parents' skills and capacity to nurture their children's healthy development and protect children from harm), **gender equality** (including promotion of adult literacy, action to combat gender stereotypes, promotion of joint decision-making and sharing of work, as well as tailored interventions for teenage girls).

## Introduction: current insights and gaps

Despite recent progress, children's exposure to detrimental forms of child work remains a persistent global issue, particularly in Sub-Saharan Africa, where around one in ten children were still involved in child labour in 2020 (ILO, 2021). According to a recent survey of child labour in cocoa in Côte d'Ivoire and Ghana (Sadhu, 2020), 1.56 million (45%) children aged 5-17 living in agricultural households in cocoa growing areas of Côte d'Ivoire and Ghana were involved in child labour in cocoa in 2018/19.

A thorough understanding of the negative consequences of child work and how to mitigate them is necessary to strengthen public and private policies aimed at protecting children from harm and supporting them to reach their full potential.

The idea of harm to children's health and development is an integral part of the definition of child labour, as are some of the ways that harm is caused.

**According to the International Labour Organization, child labour is “work that deprives children of their childhood, their potential, and their dignity, and that is harmful to physical and mental development, and/or interferes with their schooling by: depriving them of the opportunity to attend school; obliging them to leave school prematurely; or requiring them to attempt to combine school attendance with excessively long and heavy work.”<sup>2</sup>**

All forms of child labour should be eliminated, nevertheless, **children's working conditions and overall situation may vary greatly, with different consequences on children's development.** We use the term *the severity of child labour*,<sup>3</sup> to describe the extent to which child labour causes harm.

In the cocoa sector, where child labour is a salient human rights risk, a better understanding of the factors that lead to and prevent harm can help us to:

- Better protect working children from harm and support them to reach their full potential
- More effectively target interventions based on vulnerability and needs
- Measure incremental progress in terms of reduced harm, in addition to measuring reductions to child labour prevalence.

ICI commissioned a literature review of existing causal evidence on the links between child labour and harm. It covers the short- and long-term effects of work on the child's physical and mental health, education and socioeconomic outcomes in adulthood.<sup>4</sup>

The main findings of this literature review are summarized below:

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<sup>2</sup> See <http://www.ilo.org/ipecc/facts/lang--en/index.htm> for further details.

<sup>3</sup> The severity of adverse human rights impacts is a key concept in the [UN Guiding Principles for Business and Human Rights](#), which require companies to prioritize their actions based on the severity of these impacts, and where delayed response would make them irremediable (principle 24).

<sup>4</sup> ICI (2022) [How does child work affect education and health?](#)

## Key learnings from the literature review

### *Child work has substantive negative impacts on health, schooling and adult life*

- Disrupted school attendance, fewer years of education completed, lower level of numeracy and literacy
- Lower self-assessed physical health in the short and long run (adult life), but no effect on anthropometric measures (height, body mass index)
- Negative impact on mental health status (mainly depression) in the short and long run (adult life)
- Lower job status and incomes in adult life

### *The more the hours worked, the greater the likelihood of harm*

- The total burden of work (including chores) must be accounted for
- There is a threshold in the intensity of child work, beyond which harm occurs, and below which working may not cause harm. This nuance is largely captured by the delineation between “light work”, “child labour” and “hazardous child labour” in ILO definitions.
- Not all forms of work are harmful, but outcomes range from harmless to potentially “irrecoverable”. Domestic chores, which often constitute a large amount of a child’s total work burden, should not be discounted.

### *Child labour causes harm through a cumulative process*

- Impairments accumulate over time and negatively shape education outcomes, adult health, socioeconomic status and opportunities
- Certain forms of harm from child labour are only visible in the longer term

### *Younger children are more vulnerable to harm from work than older children*

- Many far-reaching negative effects arise only when exposure to work takes place during middle childhood (i.e., the same exposure during adolescence won’t result in such a harm).

These findings are **in line with what is known about child development and the impact of adverse experiences during** childhood. But given the focus on causal studies of the impacts of child labour in rural contexts, several important gaps and unanswered questions remained.

These include: *How does child labour cause harm? How applicable is this evidence to cocoa growing communities in West-Africa? How does harm differ, depending on gender? Which factors protect children from harm?*

This paper aims to fill these gaps. It draws on a broader set of literature on the detrimental effects of adverse childhood experiences on child development. These include empirical research from a wide range of disciplines, including economics, public health, epidemiology, paediatrics, child development, developmental psychopathology, clinical psychology, genetics, immunology, neurology, and endocrinology, and covers harm caused through a range of situations, including domestic violence, abuse, exposure to stress, poverty, trafficking and deprivation.

Building on this broader body of evidence, this paper presents:

1. How child labour can cause harm
2. An operational definition of the severity of child labour for the cocoa sector
3. An overview of the implications for efforts to prevent and address child labour

## What can child development sciences tell us about harm from child work?

Evidence about the negative effects of child work demonstrates that certain forms of child work, in certain circumstances, disrupt children's development.

Exploring the key mechanisms and determinants of child development can help us better understand:

- **when and how** child work can be more harmful
- what is the **nature and the extent of harm** it may cause
- and which factors can **prevent or mitigate negative outcomes**.

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### Development is driven by the interplay of experience, environment, and biology at different ages

Childhood is a crucial period when experience and biology interact. Experiences during childhood, both positive and negative, lay the foundations of an individual's health, skills and capacities, as well as shaping their wealth as an adult. Child work is one of these experiences.

### Experiences shape the course of development

Development is determined by a set of expected experiences for all individuals during specific periods of childhood (Gottlieb, 2002; Shonkoff & Phillips, 2000; Kundakovic & Champagne, 2014; Reh, et al., 2020). These expected experiences are necessary to develop key skills, including language, the capacity to make associations, to control one's behaviour, to build social relationships, to cope with adversity. Adverse experiences – such as abuse, threats or violence of the parents towards the child – as well as the absence of expected experiences – such as neglect by parents or being deprived from going to school – disrupt a child's healthy development and may lead to impairments (Hauser, 2020; Davis, et al., 2017). The consequences include increased likelihood of poor mental health, such as depression, anxiety and other disorders, increased risk of poor physical health, including cardiovascular diseases, diabetes, cancers, autoimmune disorders, premature mortality, as well as poor socioeconomic outcomes in adult life<sup>5</sup> (Bellis, et al., 2019; Miller, Chen, & Parker, 2011).

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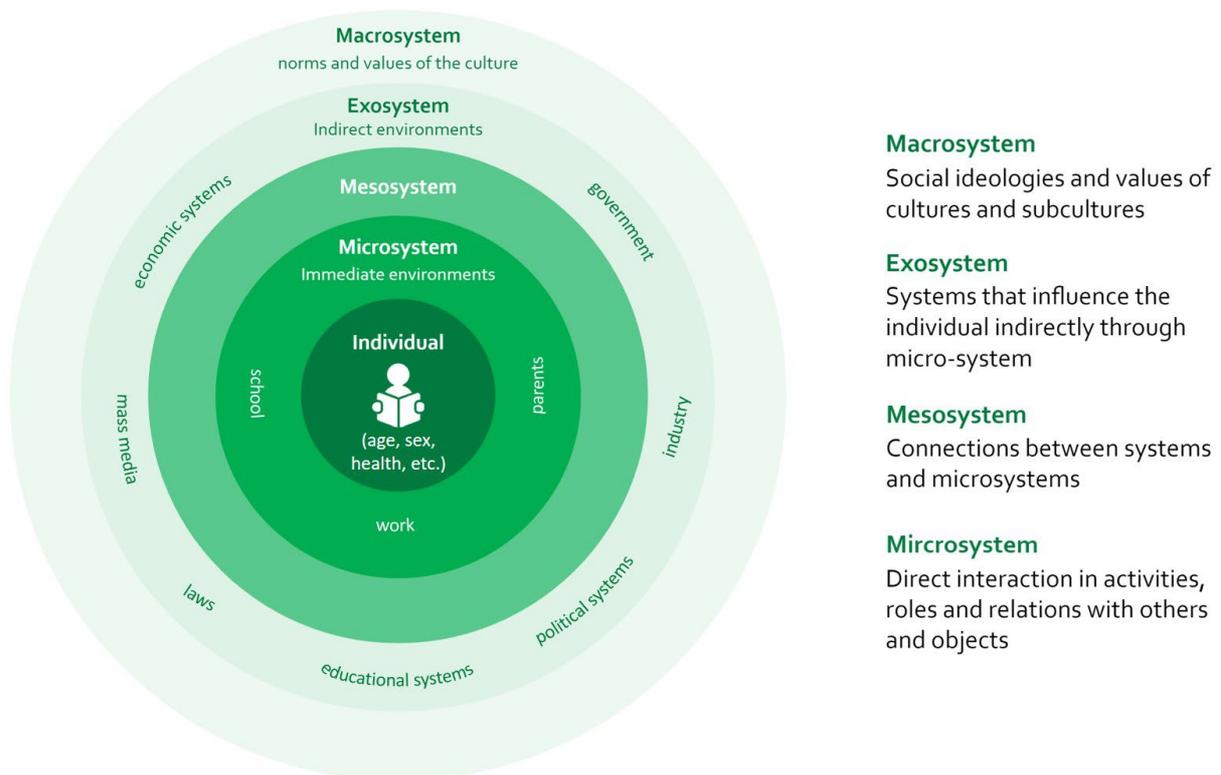
<sup>5</sup> At least 50% of the variability of lifetime earnings between people comes from attributes of the individual determined by the age of 18 (Heckman J. J., *The Economics of Human Development and Social Mobility*, 2014).

### A child's development is influenced by the environment around them

Children are exposed to different experiences across the layers of the environment around them, known as the “**child's ecology**” (Bronfenbrenner & Morris, 2007; Bronfenbrenner, 1979). These layers include exposure to material realities (climate, pollution), social relationships (relationship with parents, family, teachers and social and cognitive stimulation at school), characteristics of local culture and institutions.

Each layer is important, but the closer the layer to child, the greater the influence on their development. The environment around the child can both promote and hinder a child's healthy development. Different layers interact and their effects stack up across layers and over time, **either mitigating or reinforcing each other** to contribute to the overall effect on the child.

Figure 1: The child's ecology can positively or negatively influence a child's development



Adapted from Bronfenbrenner, 1979 and Bronfenbrenner and Morris, 2007

The relationship with the primary caregiver is by far the most important layer of the child's ecology, especially for younger children.<sup>6</sup> **Parental support** promotes healthy development and may protect from the negative effects of adverse experiences. Conversely, adverse relationships within this first layer (violence, neglect, exposure to excessive work) are also highly detrimental. As a child grows older, for example during puberty and adolescence, relationships with peers and adults outside the family circle have an increasing influence (Grusec, Chaparro, Johnston, & Sherman, 2012). Likewise,

<sup>6</sup> For detailed explanations, see this video gathering some of the most prominent experts of the topic: <https://charlierose.com/episodes/28329>.

research shows that **school and teachers** contribute to the child's development (Heckman & Kautz, 2013) and may promote resilience, by compensating for other dysfunctional layers – typically, the family context (Vandenbroucke, Spilt, Verschueren, & Baeyens, 2017). Other community structures, like children's groups, youth groups or community child protection committees, may also contribute to resilience. Finally, laws, policies and regulations may have an impact on the child's development, helping to ensure access to protective and stimulating environments at different levels, or failing to include provisions that protect children from harm.

Since most child labour in cocoa happens on family farms, the microsystem is particularly relevant to a cocoa context, encompassing, among others, the primary **caregivers** (usually **parents**), immediate family and **school**.

### Experiences are embedded in a child's biology, affecting development and vulnerability

The link between experience and developmental outcomes is mainly the **brain**<sup>7</sup>, which ensures the **integration of experience in the biology** of the individual (genes, brain structures, stress, immune and endocrine systems) during development. This process, called "**biological embedding**" (Berens, Jensen, & Nelson, 2017; Miller, Chen, & Parker, 2011), is a **double-edged process: supportive** experiences will promote a **healthy development and assets** (e.g., high cognitive skills, school attainment, resistance to stressful situations), while **adverse experiences** will create **vulnerability** (e.g., poor health or capacity to cope in the face of adversity).

These mechanisms remain often "**silent**" until their negative effect appear years after. They may also be **transmitted to the next generation** and extend the reach of adversity to children of parents who experienced adversity during childhood (Sawyer S. M., et al., 2012; Hammen, Hazel, Brennan, & Najman, 2011).

### Key concept: biological embedding

A process through which experiences and environment "get under the skin" in ways that alter human biological and developmental processes and create stable individual differences which have an impact on health, well-being, learning/skills, behaviour and wealth over the life course. (Berens, Jensen, & Nelson, 2017; Hertzman, 2012)

### When experiences occur makes a difference

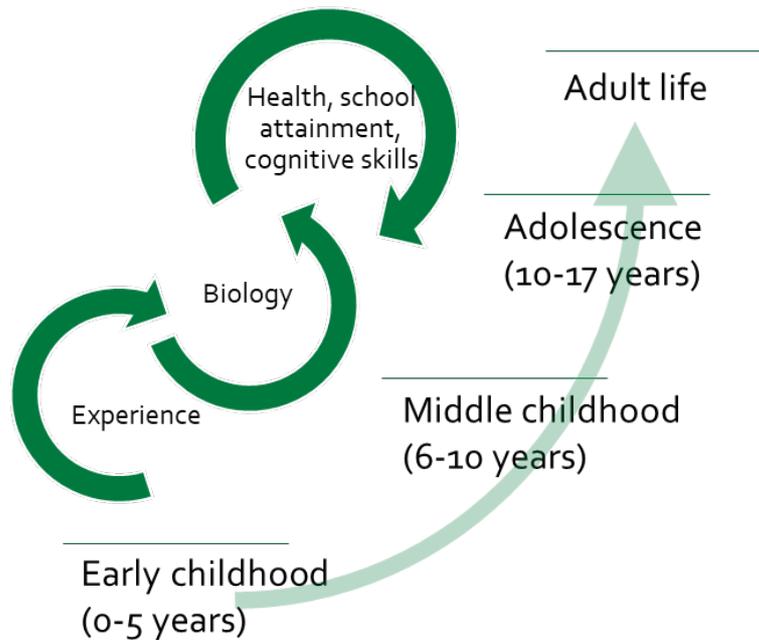
Biological embedding occurs across several "critical" and "sensitive" time-windows<sup>8</sup> during which certain skills can be acquired, and after which the acquisition of the same skills is compromised. **Time and timing** are therefore another key dimension of development, accounting for the fact that **the same kind of experience may have different effects depending on the age** of the child, and that the outcomes of experience **stack up** over childhood to form adult health, skills, behaviour, and socioeconomic life. If the much researched first 1000 days of life (from conception till 3 years) are

<sup>7</sup> See this video for a detailed overview of the impact of adversity on brain development: <https://charlierose.com/collections/3/clip/29983>.

<sup>8</sup> *Sensitive periods* are biologically defined phases where some experiences are necessary for building species-specific capacities; in the absence of experience, the capacity may not or poorly develop. *Critical periods* are phases of development, where in the absence of experience, the capacity simply fails to develop. The impact is thus permanent. (Hauser, 2020) At the end of these periods, the window of opportunity closes, and the outcome of experience (good or bad) is encapsulated into the brain by molecular "brakes" to protect it from further alteration, insults, - or improvement (Kalish, et al., 2020; Werker & Hensch, 2015).

foundational, **middle childhood** (6-10 years) and **adolescence** (10-17 years) are also time-windows where experience shapes key areas of development (Black, et al., 2021; Dow-Edwards, et al., 2019; Patton, et al., 2016; Sawyer S. M., et al., 2012; Lupien, McEwen, Gunnar, & Heim, 2009; Power, Kuh, & Morton, 2013; Troop-Gordon, Sugimura, & Rudolph, 2016; Mah & Ford-Jones, 2012; Ho & King, 2021; Shalev, et al., 2012). Experiences in each period either reinforce or mitigate the human capital or vulnerabilities formed earlier.

Figure 2: Experiences, biology and skills interact throughout childhood and shape adult life.



**Development is a cumulative and dynamic process.**<sup>9</sup> When adverse experiences **hinder** the healthy development of biological systems and skills at earlier stages of development, this builds *fragile foundations*, which compromise health and skill acquisition later on. Conversely, supportive inputs during earlier stages can help **protect** children from the negative impacts of adverse experience later.

Functions impaired during early stages of development may not be immediately visible. Impairments caused during early and middle childhood may only be apparent at later stages of development, such as during adolescence, adulthood, when the social context demands certain skills or behaviour, leading to a pathology, poor capacity to cope, and distress.

<sup>9</sup> The skills produced at one stage persist and reinforce the skills attained at later stages. This is termed *self-productivity*. For example, self-control and emotional security may reinforce intellectual curiosity and promote stronger cognitive skills. Skills produced at one stage raise the productivity of investment at subsequent stages. This is termed *complementarity* (Cunha, Heckman, Lochner, & Masterov, 2005).

## Adversity: when is child work detrimental to children?

### What do we know about adversity in general and how does this apply to child work?

The causal link between some forms of child work and negative developmental outcomes allows us to consider child work as a “toxic” experience (Nelson, Bhutta, Harris, Danese, & Samara, 2020), or a form of **adversity** (see Annex 1 for more details).

Adversity is defined by **several dimensions**, which are helpful to capture **when** child work may be detrimental:

- **Type of adversity**

Work can be considered as **abuse or threat**, when it directly exposes the child to *negative experiences*, such as serious injury, verbal or physical violence, sexual assault, pesticides or other harmful substances; or as **neglect or deprivation**, when work *prevents access* to the experiences or environment needed for a healthy development, such as a lack of food, shelter, stimulation, nurturing, education and supervision.

- **Duration or chronicity of adversity**

The **length or frequency of exposure** to adverse working conditions or unmet needs increases the likelihood of negative impacts.

- **Timing of adversity**

**When** children are exposed to work matters: younger children are more vulnerable to adverse experiences than older children.

- **Number of adverse experiences**

The more adverse experiences a child is exposed to, the higher the probability of negative outcomes. Negative impacts of adverse working conditions interact and **accumulate** over time.<sup>10</sup>

- **Child characteristics and background**

A child's **gender, health, developmental state, past adverse experiences**<sup>11</sup> can increase their vulnerability to negative impacts of adversity.

- **Presence or absence of protective factors**

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**The effects of adversity are consistently observed across cultures. In other words, adverse experiences never result in positive developmental outcomes, even in cultural contexts where such practices are socially accepted or widespread.**

Cross-cultural studies illustrate the crucial role of experiences occurring in the microsystem, notably in the family context, in positively or negatively shaping child development. Annex 3 provides an overview of these studies.

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<sup>10</sup> Abuse and neglect tend to co-occur, and adversity tends to accumulate in the most vulnerable fringes of population (Businelle, et al., 2013; Lantz, House, Mero, & Williams, 2005; Reiss, et al., 2019; Crielaard, Nicolaou, Sawyer, Quax, & Stronks, 2021).

<sup>11</sup> This includes maternal depression, stress, and maternal exposure to agro-chemicals or other toxic substances during pregnancy.

Table 1: Examples of factors contributing to the severity of child work in a cocoa context

Examples	
<i>Type of adversity</i>	<ul style="list-style-type: none"> <li>• Work exposes a child to violence or humiliation, either directly, for example being scolded, or indirectly, when work carries a social stigma</li> <li>• Hazardous tasks cause injury or other physical harm, such as back pain from carrying heavy loads, intoxication from pesticides, cuts from sharp tools</li> <li>• Work prevents children from attending school, depriving them of the stimulation of a school environment and peer relationships</li> <li>• An excessive work burden deprives children of sleep or causes sleep disturbance</li> </ul>
<i>Duration of adversity</i>	<ul style="list-style-type: none"> <li>• Working hours regularly conflict with school time, preventing or disrupting access to education</li> <li>• Repeated exposure to child work (ie. a few hours every week after school) is more harmful than one-off exposure, for example a full day worked during school holidays</li> </ul>
<i>Timing of adversity</i>	<ul style="list-style-type: none"> <li>• Younger children doing hazardous work, such as carrying water for spraying pesticides, face greater potential damage to health than older children</li> <li>• The earlier work causes a child to drop out from school, the greater the potential harm</li> </ul>
<i>Number of adverse experiences</i>	<ul style="list-style-type: none"> <li>• Different types of work accumulate (chores, farm work, other family business) creating an excessive burden on the child</li> <li>• Long working hours during weekdays conflict with school hours, resulting in overload</li> </ul>
<i>Child characteristics and background</i>	<ul style="list-style-type: none"> <li>• Gender stereotypes regarding the division of household chores result in a greater workload for girls compared to boys</li> <li>• Children cannot attend school due to injury, poor health or developmental delay caused by working in the past</li> <li>• Child work interacts with other forms of adversity: domestic violence, poverty, limited access to food, healthcare and education</li> </ul>

### What determines the severity of child work?

In line with the dynamics of child development, **harm** resulting from exposure to work during childhood must be understood as **cumulative and dynamic process** (see Annex 2 for more details). The timing and duration of exposure are crucial dimensions which can exacerbate negative outcomes. However, different children may not be affected by child work in the same way. Harm as a result of child work occurs in **context**. This includes individual child characteristics, past experience, and the broader environment around the child. The presence of protective factors at different levels of a child's ecology can increase resilience to harm, as well as to compensate for or mitigate harm caused by adverse experiences.

### Key concept: defining the severity of child work

The severity of child work depends on the extent to which work causes negative effects on the child (short-term to medium-term effects), the future adult (long-term effects), and future generations (intergenerational effects) in several areas: physical and mental health, cognitive and non-cognitive development, school attainment, economic and professional life, income, socioemotional life.

These negative effects depend on the type, intensity, duration and timing of exposure to child work, but also on the characteristics of the child and on presence of protective or exacerbating factors in the environment around the child.

The following diagram describes some of the elements determining the severity of child work.

Figure 3: How work and contextual factors stack up to harm or protect children

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**Not all factors determining the severity of a child's situation are equally easy to measure, nor is it necessary to have information about them all to have a "good-enough" grasp of a child's vulnerability to harm.**

Work-related parameters provide a strong starting point to assess the severity of a child's situation, including the total workload (total hours worked), the age of first exposure, the frequency of work, and working conditions. When further information is available, for example about schooling, family situation, child health and well-being, this can be taken into account to get an even more accurate picture of a child's situation.

### Protective factors

Child development sciences have identified factors likely to increase an individual's resilience to adverse experiences and protect them from negative impacts.

## Understanding “protective factors” can inform the design of more effective interventions to reduce children’s vulnerability to adversity.

The main protective factors can be grouped as follows:

- Safe, stable and nurturing relationships
- Skills and capacity strengthening
- Time and timing

### Safe, stable and nurturing relationships

**Relationships** play the greatest role in protecting children from adversity and promoting resilience (Odgers & Jaffee, 2013; Crouch, Radcliff, Strompolis, & Srivastav, 2018; Robinson, Leeb, Merrick, & Forbes, 2015). A protective relationship is a social or institutional link between the child and her/his environment, which prevents, buffers or reduces the impact of factors at risk of compromising her/his development. To play a protective role, relationships at all levels of the child’s ecology must have three **necessary** characteristics (Black, et al., 2021; Robinson, Leeb, Merrick, & Forbes, 2015; Nelson, Bhutta, Harris, Danese, & Samara, 2020):



Protective relationships at different layers of the child’s ecology may compensate for other dysfunctional layers. For example, supportive teachers may counterbalance the negative effect of a harsh child-parent relationship on learning (Vandenbroucke, Spilt, Verschueren, & Baeyens, 2017); protective assets in the community (being treated fairly, supportive childhood friends, being given opportunities to use one’s abilities, access to a trusted adult and having someone to look up to) can drastically reduce the prevalence of poor health during childhood among the children most exposed to adverse experiences (Bellis, et al., 2018); children in primary school benefitting from a better protective school environment experience greater improvements to their literacy and numeracy skills during the school year than children exposed to less protective school environment (ICI, 2021); children benefitting from quality early childhood programs transmit the positive effects of these programs to their own children (higher levels of education and employment, lower participation in crime) (Heckman J. J., 2019).

### Examples of interventions based on safe, stable, nurturing relationships:

- **promoting positive discipline** by teachers and parents, to protect children from threats, physical or psychological violence at school and at home
- **raising awareness** about child labour among parents and teachers, to reduce children's exposure to hazardous work at home and at school
- **promoting (re)enrolment and regular attendance** at school both for children and teachers, to increase children's access to a safe and supportive environment
- **providing cash transfers, health insurance** or other types of social protection, to buffer the effects of shocks on households and ensuring continued access to essential services
- **providing adaptive teaching methods** (eg. child-paced learning) and **extra-curricular activities**, to nurture children's healthy cognitive, social and emotional development.

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Combined and consistent efforts within families, at school and in communities to prevent and mitigate exposure to harmful work may have an increased positive impact on the child.

### Strengthening skills and capacity

Relationships, especially in a family context, are heavily influenced by the capacity and life conditions of caregivers. Reinforcing **caregivers' skills and capacity** (beyond provision of information) and supporting parents to improve their socioeconomic conditions can create a more supportive environment for the child, promoting resilience (Richter, et al., 2017; Shonkoff, 2012). Poverty shapes poor parental decisions: families of lower socioeconomic status are more risk averse, increasing the likelihood of child labour (Frempong & Stadelmann, 2021).<sup>12</sup> Conversely, parenting programs and income increases have been shown to break the transmission of parental rejection, even in cultures where this behaviour is highly normative (Rothenberg, et al., 2022).

### Examples of interventions aiming at strengthening skills and capacities:

- **Parenting skills programmes and parenting workshops**, to promote parental skills of parents (especially mothers) with young children
- **Behaviour-oriented radio broadcasts, community messaging campaigns** to promote positive parenting and protection skills
- **Cash transfers, savings groups and other forms of social protection** to fight household multidimensional poverty
- **Adult literacy training** to promote gender equality and help (future) parents to encourage and support their children's learning
- **Couple sessions focused on breaking gender stereotypes and promoting joint decision-making** to promote gender equality

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<sup>12</sup> This finding is in line with the broader understanding that poverty hampers people's decision-making capacity (Mani, Mullainathan, Shafir, & Zhao, 2013; Haushofer & Fehr, 2014).

- **Activities/clubs for adolescents** (eg. youth-led community radio, youth clubs, sexual and reproductive health support) to strengthen adolescents' life-skills and break the transmission of vulnerability to the next generation.

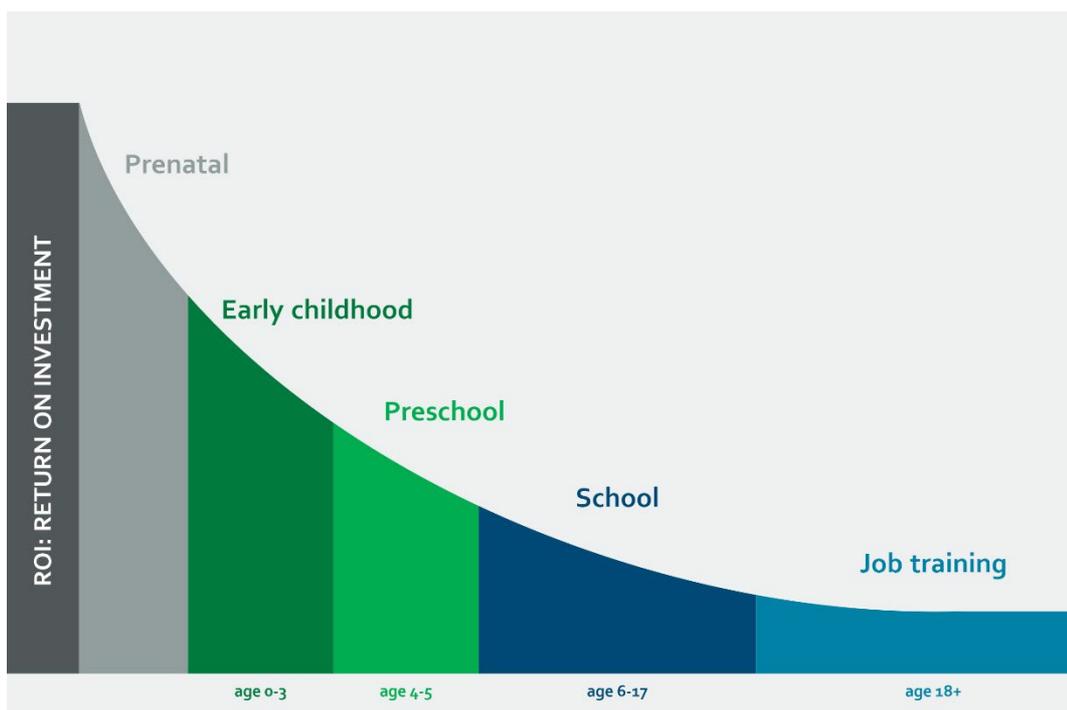
Focusing only on stopping detrimental behaviours, such as using child labour or violent discipline at home or at school, is challenging, if the need for such behaviour persists and no alternatives are provided. For sustainable behaviour change to happen, strengthening existing and new skills, as well as building capacities must be a key component of interventions to ensure that individuals have access to alternative ways of coping with difficulties, without resorting to behaviour that can harm children.

### Time and timing

The existence of sensitive time-windows and the cumulative and dynamic nature of development offers opportunities to prevent and mitigate harm caused by work during childhood.

**Early intervention** produces the best lasting outcomes, since early skills pave the way to the acquisition of more complex skills. Supportive and nurturing care (parenting, quality education) during early childhood lays solid foundations for the child's development, and may contribute to protect her/him against later insults related to work and reinforce her/his capacity to cope in the face of adversity (Britto, et al., 2017; Daelmans, et al., 2017; Black, et al., 2017; Heckman, Holland, Makino, Pinto, & Rosales-Rueda, 2017). Interventions on parenting may also shape a parenting style and awareness about children's needs that will later prevent parents to expose their children to neglectful or abusive working conditions, or help them decide to retrieve their children from such conditions. Finally, the amount of effort (and cost) needed for an intervention to obtain positive effects increases with the age, while the magnitude of these effects decreases, as illustrated below. This is due to the drastic decline of the brain's capacity to change and recover from adverse experience. This heavily influences the return on investment of interventions (García, Heckman, Leaf, & Prados, 2017).

Figure 4: The cost-efficiency of interventions varies over time



The diagram above, after Heckman (2019), illustrates that the cost efficiency of interventions varies as a function of individuals' capacity for change (plasticity) and the quantity of efforts needed to trigger this change (inverse function of plasticity). The first continuously declines and demands increasingly more intensive interventions. Therefore, the return on investment of interventions declines with the age of the individual.

Knowledge about the sensitive **time-windows can also inform the targeting of interventions** to make them more relevant and efficient. Early/middle childhood is highly suited for preventative actions and to build resilience, while adolescence provides the opportunity to mitigate the negative effects of previous exposure to work and other adverse experiences, as well as to prevent the transmission of vulnerability to the next generation. The timing of interventions, therefore constitutes a key element in a protection strategy.

Given the cumulative nature of development, **enduring actions or services** are more likely to benefit children than one-off interventions (Cunha, Heckman, Lochner, & Masterov, 2005).

### Examples of interventions using time and timing as a protective factor:

- **Parenting skills programmes**, to help primary caregivers nurture children's healthy development, use non-violent discipline, and support children's resilience
- **Improving access to affordable quality pre-primary education**, to support children's healthy development through access to nurturing and stimulating environments and reducing the childcare burden on parents
- **Youth centres or clubs for adolescents**, focused on child participation, the development of social and emotional skills, reproductive rights/health, to prevent transmission of vulnerability to the next generation
- **Tailored interventions for different age groups** (eg. early childhood development programmes; improvements to the quality of primary education; and remedial education and skills-building programmes for adolescents) to support healthy development, prevent and mitigate harm from child labour.

Given the importance of enduring supportive conditions, interventions should consist of a range of services covering from early childhood through to adolescence, and making the most of the different opportunities offered by these (prevention, resilience building in early childhood; mitigation, social skills and prevention of transmission during adolescence).

## Conclusions, implications, and next steps

The evidence gathered in this paper is fully aligned with the ILO definition of child labour. The idea of harm to children's health and development is a central concept and the crucial point at which *child work* becomes *child labour* and should be targeted for elimination.

Drawing on a broad body of evidence across child development sciences has allowed us to provide a detailed picture of the links between exposure to different forms of child work, short term and longer-term harm. It has also allowed us to address previously identified gaps in relation to how harm occurs, and illustrate what this can look like in the context of cocoa-growing communities.

Using a child development framework illustrated clearly why child labour is a major public policy concern, highlighted the serious consequences of not addressing the issue and offered a fruitful framework to answer the following questions:

### What determines the extent to which child labour is harmful?

- **Child labour** can be considered an *adverse childhood experience* and can harm children's development in the same ways as other forms of abuse and neglect.
- The severity of the situation of a child in child labour is determined by the **type of experience** induced by working as a child (abuse/threat, deprivation/neglect<sup>13</sup>), the **duration and timing** of exposure to work, the **accumulation** of adverse work experiences, the **characteristics of the child**, the **child's environment**, and the presence or absence of **protective factors**.
- **The extent of harm depends on the context:** child labour can **add** to other factors that can negatively affect children's development (e.g., other work, violent discipline, poverty and parental neglect). Child labour can be harmful to child development on its own, but even more so when it **interacts with other negative factors** that harm a child's development.

### What types of harm can child labour cause?

Child labour can cause the same types of short-term and long-term harm as other forms of abuse and neglect. These include:

- **During childhood:** impaired cognitive development, lower wellbeing, poor learning and physical / mental health, girls' reproductive health issues.
- **During adulthood:** impaired cognitive functions, poor academic achievement, lower-paid occupations, lower overall socioeconomic status, poor health behaviours and status, low wellbeing, impaired social skills, and maladaptive behaviours.
- **These negative outcomes can be transmitted to the next generation** and contribute to the **perpetuation of poverty and child labour**.
- **Gender differences** are mostly due to differences in the intensity and context of exposure to adverse experiences, but not to specific biological vulnerabilities of girls and boys.

### How does child labour cause harm?

Harm is caused by the **interaction** between the child's **environment**, the child's **experience** (including of work) and the child's **biology**. The biological imprint of experiences is often "silent" but leads to far-reaching negative effects: adverse childhood experiences can alter a child's DNA,

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<sup>13</sup> See section "Adversity: when is child work detrimental to children?" for the definition of these terms.

accelerate cellular aging, alter the child's brain structure and performance, and **disrupt the normal functioning** of a child's stress and immune systems. These changes are responsible for the short- and long-term harm caused to children's physical and mental wellbeing.

Harm is caused both **directly**, including by exposure to work (e.g., as a result of abusive/threatening working conditions), as well as **indirectly**, by **depriving** children of experiences needed for a healthy development (e.g., neglect). This "indirect" harm – **child labour as a form of neglect** – has so far been **overlooked** and is an important dimension to consider when it comes to protecting from harm and remediating harm caused.

### Which factors can protect children from harm from child labour?

**Safe, stable and nurturing relationships** across all the layers of the child's environment (jointly referred to as "the child's ecology") can help protect children from harm. One dysfunctional layer of the child's ecology can be compensated for by another supportive layer (e.g., a quality education can help mitigate the negative effects of unsupportive parents and excessive work).

**Reinforcing the skills, capacities and behaviour of caregivers** creates a more supportive environment for children, increasing their resilience to harm. Examples of this include supporting parents to improve their socio-economic conditions and their parenting skills, as well as improving the quality of children's education and giving them opportunities to participate in decisions that affect them.

**Early intervention and reduced exposure to harmful experiences** can help protect children from harm:

- Early supportive and nurturing relationships lay solid foundations for healthy child development, equipping children to cope better with adversity and stay protected from harm.
- Developmental time-windows (early childhood, middle childhood, adolescence) can be used to target interventions according to the opportunities these specific periods allow.
- Early interventions are the most cost-efficient in improving outcomes for children – the later the intervention, the greater the investment required to achieve the same outcomes.
- Providing long-term access to protective environments is more efficient than one-off interventions.

## What are the operational implications for efforts to prevent and address child labour in the cocoa sector?

### Identifying children at risk and monitoring progress

**Granular information** about a child's situation and environment, including protective factors, can help to assess the likelihood of harm, identify appropriate support, and better monitor the impact of interventions over time. Efforts should be made to measure:

- **The total time children spend on all types of work**, including household chores, hazardous tasks and other work. This *does not* mean that hours for each different type of work should be counted separately.
- **A wider range of child outcomes, beyond participation in child labour**, such as child wellbeing, learning and health.
- The **indirect effects of working**, such as disrupted capacity to attend school or do homework, social isolation, and limited positive interaction with adults.

- **Protective factors** such as the child's access to quality education, parents' education level and skills, community-level child protection services, etc.

Some of these indicators are already being collected and could be exploited more systematically to inform prevention and remediation activities, as well as helping to capture **the positive impacts of interventions on children's ability to reach their full potential**, beyond child labour participation.

**Longitudinal data**, such as that collected through panel studies or Child Labour Monitoring and Remediation Systems (CLMRS), is key to monitor changing exposure to harm over time and to assess the impact of interventions.

### Prioritizing and targeting support

- **Young children are most vulnerable to harm** from adverse events and early intervention is more cost-efficient than acting later. **Extending support to parents and children under five** is therefore both a relevant and cost-effective means of preventing harm from child labour.
- **Developmental time-windows should be used to prioritize and target different types of support according to the specific opportunities they offer:** younger children and their parents should be prioritised for preventative support to build resilience, while support for adolescents should aim to mitigate and repair harm that has already occurred to children's development, as well as to prevent the transmission of harm to future generations.
- While boys are more likely than girls to do hazardous child labour in cocoa, **girls' overall workload is systematically underestimated when household chores are not taken into account.** Girls in cocoa growing communities are also less likely to complete school and more likely to have lower levels of wellbeing. **Supporting adolescent girls** (future mothers) is also key in fighting the transmission of vulnerability to the next generation.
- **Quality education plays a crucial role in preventing harm** and promoting positive outcomes for children. **Out-of-school children** should be prioritized for support, regardless of their involvement in child labour.
- **Consistency across the different layers of a child's environment is key.** Care should be taken to deliver consistent actions and information campaigns to adults at home, in schools and communities.
- **Blanket interventions to promote healthy child development can have positive and lasting effects on children,** regardless of a child's involvement in child labour. In a context of high child labour risk, delivery of interventions to reach all children, families or the community as a whole can also speed up the provision of support, help build trust, and introduce cost savings when conducted at scale.

### Provision of support

- **The longer exposure to an adverse experience, the greater the harm caused. Reducing delays** between the identification of a child at risk and the provision of support can help prevent (further) harm.
- **Withdrawing a child from adverse forms of work is not enough to reverse harm that has already occurred. Ongoing support is needed,** especially for older children, to mitigate and reverse harm and prevent long-term negative consequences for children (such as activities aiming at developing non-cognitive skills, encouraging adolescents' participation and transformative understanding of gender roles, strengthening parental skills and sexual health behaviour).

- **Child labour tends to co-occur with other adverse childhood experiences, with which it shares the same root causes.** Integrating strategies to tackle child labour and related harm into a broader framework, rather than focusing only on work-related activities, could result in a greater and more lasting impact on children.

**Integrated strategies to promote healthy child development and prevent harm from child labour could include** focus on **quality education** (improving the quality of teaching and learning, combatting violence by teachers, preventing child labour at school), **health** (such as health insurance for parents and children to improve access to preventative and emergency healthcare, in the case of injury), **parenting interventions** (to build parents' skills and capacity to nurture their children's healthy development and protect children from harm), **gender equality** (including promotion of adult literacy, action to combat gender stereotypes, promotion of joint decision-making and sharing of work, as well as tailored interventions for teenage girls).

## Next steps

The conclusions above raise several questions, which can inform immediate action, innovation, and future research:

- How best to strengthen the capacities of cocoa sector stakeholders, to support the roll out of child development-centred approaches?
- How can interventions to support healthy child development be most effectively integrated into current policies and efforts to eradicate child labour?
- Which tools should be used to assess the severity of a child's situation and support a common approach to: identify children/communities/areas at higher risk of harm, determine optimal support, and measure the impact of interventions?
- Which interventions are most effective at preventing and addressing harm from child labour for children of different age groups and genders?
- What is the optimum balance between interventions to prevent, mitigate and reverse harm from child labour?

How effective are preventative approaches at breaking the transmission of the root causes of child labour to the next generation and reducing the prevalence of child labour in the longer term?